



**ATTACHMENT C**

**City of Phoenix**

PLANNING & DEVELOPMENT DEPARTMENT

**To:** Departments Concerned  
**From:** Joshua Bednarek  
Planning & Development Department Director  
**Date:** April 10, 2023  
**Subject:** **P.H.O. APPLICATION NO. PHO-2-23--Z-18-10-1** – Notice of Pending Actions  
by the **Planning Hearing Officer**

1. Your attention is called to the fact that the **Planning Hearing Officer** will consider the following case at a public hearing on **May 17, 2023**.
2. Information about this case is available for review at the Zoning Counter in the Planning and Development Department on the 2nd Floor of Phoenix City Hall, telephone 602-262-7131, Option 6.
3. Staff, please indicate your comments and respond electronically to [pdd.pho@phoenix.gov](mailto:pdd.pho@phoenix.gov) or you may provide hard copies at the Zoning Counter in the Planning and Development Department on the second floor of Phoenix City Hall by **April 17, 2023**.

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Planning Hearing Officer (Adam Stranieri, Chase Hales), 2nd Floor  
Village Planner (Matteo Moric, Deer Valley Village)  
Village Planning Committee Chair (Joseph A. Grossman, Deer Valley Village)



# City of Phoenix

PLANNING AND DEVELOPMENT DEPARTMENT

## APPLICATION FOR PLANNING HEARING OFFICER ACTION

**APPLICATION NO: PHO-2-23--Z-18-10**

**Council District: 1**

**Request For:** Stipulation Modification

**Reason for Request:** Request to modify Stipulation 1 regarding general conformance. Request to modify Stipulation 3 regarding right-of-way improvements.

| Owner  | Applicant   | Representative   |
|--|---|--|
| Deer Valley Industrial Venture LLC   | Opus Development Company, LLC   | Jason Morris, Withey Morris Baugh, PLC   |
| 2555 East Camelback Road, Suite 100<br>Phoenix AZ 85016<br>(602) 260-0600<br>hannah@witheymorris.com | 2555 East Camelback Road, Suite 100<br>Phoenix AZ 85016<br>(602) 648-5077<br>matthew.visnansky@opus-group.com | 2525 East AZ Biltmore Circle, Ste A-212<br>Phoenix AZ 85016<br>P: (602) 260-0600 F:<br>hannah@witheymorris.com |

**Property Location:** Southeast corner of 13th Avenue and Parkview Lane alignments

|   |                               |                        |                      |
|---|-------------------------------|------------------------|----------------------|
| Zoning Map: <u>O-7</u>                                  | Quarter Section: <u>46-25</u> | APN: <u>210-07-002</u> | Acreage: <u>5.17</u> |
| Village: <u>Deer Valley</u>                             |                               |                        |                      |
| Last Hearing: <u>CC HEARING</u>                         |                               |                        |                      |
| Previous Opposition: <u>No</u>                          |                               |                        |                      |
| Date of Original City Council Action: <u>12/15/2010</u> |                               |                        |                      |
| Previous PHO Actions: <u>01/26/2022 230 PM</u>          |                               |                        |                      |
| Zoning Vested: <u>CP/GCP DVAO</u>                       |                               |                        |                      |
| Supplemental Map No.: _____                             |                               |                        |                      |
| Planning Staff: <u>081754</u>                           |                               |                        |                      |

An applicant may receive a clarification from the city of its interpretation or application of a statute, ordinance, code or authorized substantive policy statement. To request clarification or to obtain further information on the application process and applicable review time frames, please call 602-262-7131 (option 6), email [zoning.mailbox@phoenix.gov](mailto:zoning.mailbox@phoenix.gov) or visit our website at <http://phoenix.gov/pdd/licensetimes.html>.

A Filing Fee had been paid to the City Treasurer to cover the cost of processing this application. The fee will be retained to cover the cost whether or not the request is granted

| Fee        | Fee Waived | Fee Date   | Receipt    | Purpose             |
|------------|------------|------------|------------|---------------------|
| \$1,080.00 | \$0.00     | 03/29/2023 | 23-0023100 | Original Filing Fee |

Signature of Applicant: \_\_\_\_\_ DATE: \_\_\_\_\_

### Hearing Results

| Planning Hearing Officer | Planning Commission | City Council     |
|--------------------------|---------------------|------------------|
| Date: <u>05/17/2023</u>  | Date: _____         | Date: _____      |
| Appealed?: _____         | Appealed?: _____    | Appealed?: _____ |
| Action: _____            | Action: _____       | Action: _____    |



March 29, 2023

**VIA HAND DELIVERY**

Adam Stranieri  
Planning Hearing Officer  
Phoenix Planning & Development Department  
200 West Washington Street, 2nd Floor  
Phoenix, Arizona 85003

Re: Stipulation Modification – Z-18-10 – Southeast corner of 13<sup>th</sup> Avenue and Parkview Lane alignments

Dear Mr. Stranieri:

This firm represents Opus Development Company (the “Developer”) regarding its proposal to develop a light industrial project on CP/GCP zoned property located at the southeast corner of 13<sup>th</sup> Avenue and Parkview Lane alignments, Phoenix, which is also known as Maricopa County APN 210-08-007 (the “Property”). Please see attached **Exhibit A** for an aerial view of the Property and surrounding area. As explained herein, the proposed development requires modification of stipulations for approval, which the Phoenix City Council last modified on January 26, 2022 with case PHO-1-21—Z-18-10-1. This request is also running concurrently with an adjacent PHO case that will modify the stipulations for Z-129-07, as both of these PHO cases encompass the project boundaries. See **Exhibit B** showing the zoning map with the two cases outlined.

**BACKGROUND**

On January 26, 2022, the Phoenix City Council approved the PHO case to modify the stipulations to allow an industrial project on this site. However, since that time the Developer has done additional analysis on the traffic flows and site conditions on the Property. The prepared traffic analysis (**Exhibit C**) determines that the Parkview Lane alignments and associated ROW improvements to the east of 15<sup>th</sup> Avenue will be a “road to nowhere” and will not serve the site or the surrounding land effectively. In addition, there are conflicts with the County properties to the north that would deter this roadway to be constructed fully. The analysis also determined that the Alameda Road alignment improvements and constructed roadway, located on the southern portion of the Property, will be sufficient to move traffic east and west and would better serve the traffic flows to and from this Property. The Alameda connection stretches from 19<sup>th</sup> Street to 7<sup>th</sup> Street and will be fully improved. Please find the updated site plan and elevations at **Exhibit D**.

Opus Development Company looks forward to developing a highly demanded Class A industrial project on this site. In order to allow this quality development, we are requesting modifications to the previously approved stipulations on the Property.

**STIPULATION MODIFICATION**

To allow the proposed development of the Property, we propose the following modification of stipulations approved for Z-18-10:

1. The development shall be in general conformance with the site plan **DATE STAMPED X, 2023** and elevations date stamped ~~October 22, 2021,~~ **X, 2023** as modified by the following stipulations and approved by the Planning and Development Department.

Rationale: Due to the modification of the Parkview Lane roadway and more details with the site plan and elevation, we are proposing a new version of the site plan and elevations for this proposal.

2. The developer shall dedicate minimum 40 feet of right-of-way and construct the north side of Alameda Road, as approved by the Planning and Development and Street Transportation Departments.

No change.

3. The development shall dedicate minimum 30 feet right-of-way ~~and construct the south side of Parkview Lane,~~ as approved by the Planning and Development and Street Transportation Departments.

Rationale: As noted in the traffic analysis, the removal of the Parkview Lane alignment on the east side of 15<sup>th</sup> Avenue was not serving the site. In addition the full improvements of Alameda Rd has better connectivity to the east and west of the Property. The previous iteration showing the Parkview Lane roadway had a road to nowhere and was not effective in moving traffic.

4. The developer shall construct all streets within and adjacent to the development with paving, curb, gutter, sidewalk, curb ramps, streetlights, landscaping, and other incidentals as per plans approved by the Planning and Development Department. All improvements shall comply with all ADA accessibility standards.

No change.

5. The property owner shall record a Notice of Prospective Purchasers of Proximity to Airport in order to disclose the existence, and operational characteristics of Deer Valley Airport to future owners or tenants of the property. The form and content of such documents shall be according to the templates and instructions provided which have been reviewed and approved by the City Attorney.

No change.

Very truly yours,

WITHEY MORRIS P.L.C.

By 

Jason Morris

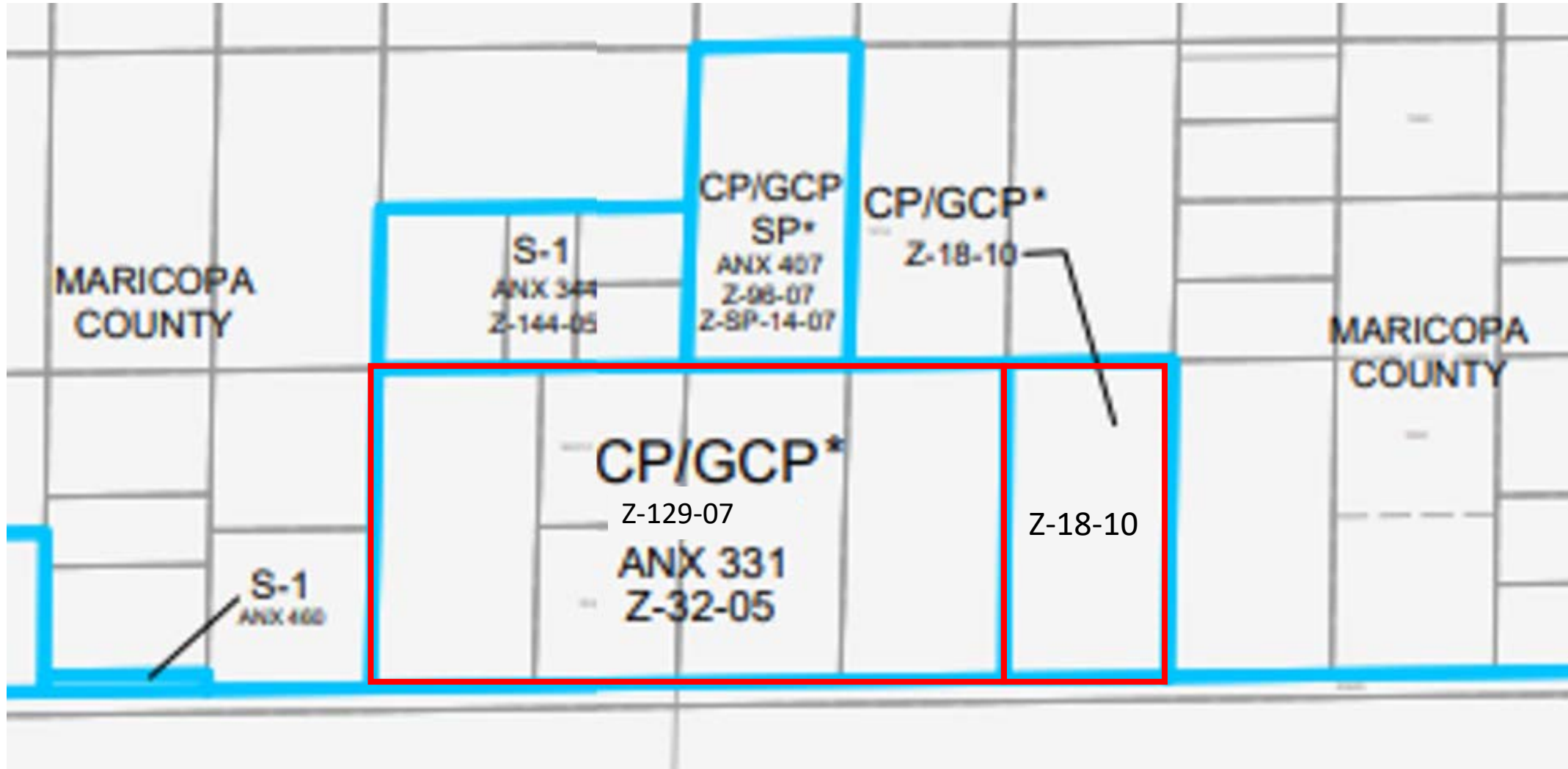
Attachments

# Exhibit A

# Map



Exhibit B





# Exhibit C

# Deer Valley 30

Traffic Impact Study  
3rd Submittal

North of Alameda Road and  
East of 19th Ave  
Phoenix, Arizona

March 2023  
Project No. 21-1430

Prepared For:  
**Opus Development Company, LLC**  
2555 E. Camelback Road, Suite 100  
Phoenix, Arizona 85016

For Submittal to:  
**City of Phoenix**

Prepared By:



10605 North Hayden Road  
Suite 140  
Scottsdale, Arizona 85260  
480-659-4250

**DEER VALLEY 30  
TRAFFIC IMPACT STUDY  
3<sup>RD</sup> SUBMITTAL**

**North of Alameda Road and East of 19<sup>th</sup> Avenue  
Phoenix, Arizona**

**Prepared for:**  
Opus Development Company, LLC  
2555 E Camelback Road, Suite 100  
Phoenix, Arizona 85016

**For Submittal to:**  
City of Phoenix

---

**Prepared By:**



**CivTech Inc.**

10605 North Hayden Road  
Suite 140  
Scottsdale, Arizona 85260  
Office: (480) 659-4250  
Fax: (480) 659-0566



*Dawn D. Cartier*

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**March 2023**

CivTech Project No. 21-1430

## TABLE OF CONTENTS

|   |           |
|---|-----------|
| <b>EXECUTIVE SUMMARY .....</b>                | <b>1</b>  |
| <b>INTRODUCTION AND PURPOSE .....</b>         | <b>7</b>  |
| Study Requirements .....                      | 7         |
| Study Area.....                               | 8         |
| Horizon Years .....                           | 8         |
| <b>EXISTING CONDITIONS .....</b>              | <b>11</b> |
| Existing Land Use.....                        | 11        |
| Surrounding Land Use .....                    | 11        |
| Existing Roadway Network.....                 | 11        |
| Existing Intersection Configurations.....     | 13        |
| Existing Traffic Volumes.....                 | 14        |
| Existing Capacity Analysis .....              | 17        |
| <b>PROPOSED DEVELOPMENT.....</b>              | <b>19</b> |
| Site Location .....                           | 19        |
| Site Density/Intensity .....                  | 19        |
| Site Access .....                             | 19        |
| Trip Generation.....                          | 21        |
| Vehicle Trip Distribution And Assignment..... | 23        |
| Future Background Traffic.....                | 27        |
| Total Traffic Volumes.....                    | 28        |
| <b>TRAFFIC AND IMPROVEMENT ANALYSIS.....</b>  | <b>33</b> |
| Traffic Signal Warrant Analysis.....          | 38        |
| Turn Lane Queue Length Analysis .....         | 39        |
| <b>CONCLUSIONS .....</b>                      | <b>44</b> |
| <b>LIST OF REFERENCES .....</b>               | <b>48</b> |
| <b>TECHNICAL APPENDICES .....</b>             | <b>49</b> |

## LIST OF TABLES

|   |           |
|---|-----------|
| <b>Table 1 – Level of Service Criteria for Controlled Intersections .....</b>       | <b>17</b> |
| <b>Table 2 – Existing Peak Hour Levels of Service.....</b>                          | <b>18</b> |
| <b>Table 3 – Trip Generation .....</b>  | <b>21</b> |
| <b>Table 4 – Site Trip Distribution.....</b>  | <b>23</b> |
| <b>Table 5 – 2024 Peak Hour Intersection Levels of Service Scenario A.....</b>      | <b>33</b> |
| <b>Table 6 – 2024 Peak Hour Intersection Levels of Service Scenario B.....</b>      | <b>37</b> |
| <b>Table 7 – Volume-Based Traffic Signal Warrant Analysis Results Summary .....</b> | <b>39</b> |
| <b>Table 8 – Turn Lane Queue Storage Lengths .....</b>                              | <b>40</b> |

## LIST OF FIGURES

|   |           |
|---|-----------|
| <b>Figure 1 – Vicinity Map .....</b>  | <b>10</b> |
| <b>Figure 2 – Existing Lane Configurations and Stop Controls.....</b>                 | <b>15</b> |
| <b>Figure 3 – Existing Peak Hour Traffic Volumes .....</b>                            | <b>16</b> |
| <b>Figure 4 – Site Plan and Access.....</b>   | <b>20</b> |
| <b>Figure 5 – Trip Distribution .....</b>   | <b>24</b> |
| <b>Figure 6A – Site Generated Traffic Volumes – Scenario A .....</b>                  | <b>25</b> |
| <b>Figure 6B – Site Generated Traffic Volumes – Scenario B .....</b>                  | <b>26</b> |
| <b>Figure 7A – 2024 Background Traffic Volumes – Scenario A .....</b>                 | <b>29</b> |
| <b>Figure 7B – 2024 Background Traffic Volumes – Scenario B .....</b>                 | <b>30</b> |
| <b>Figure 8A – 2024 Total Traffic Volumes – Scenario A .....</b>                      | <b>31</b> |
| <b>Figure 8B – 2024 Total Traffic Volumes – Scenario B .....</b>                      | <b>32</b> |
| <b>Figure 9A – Proposed Lane Configurations and Traffic Control – Scenario A.....</b> | <b>42</b> |
| <b>Figure 9B – Proposed Lane Configurations and Traffic Control – Scenario B.....</b> | <b>43</b> |

## EXECUTIVE SUMMARY

The Deer Valley 30 (DV30) “Project” will develop two non-contiguous rectangular land tracts located on the north side of the Alameda Road alignment, east of 19<sup>th</sup> Avenue and west of 7<sup>th</sup> Avenue, in the Deer Valley Village area of north Phoenix. Both sites, the smaller and more westerly of the two (the “DV30 West” site) containing 5.14 acres and the larger and more easterly of the two (the “DV30 East” site) containing 25.71 acres, are currently undeveloped and vacant. The DV30 West site begins approximately 500 feet east of 19<sup>th</sup> Avenue and has an almost 690-foot-long Alameda Road edge. The DV30 East site begins approximately 1820 feet east of 19<sup>th</sup> Avenue, ends 1,650 feet west of 7<sup>th</sup> Avenue and has an almost 1,700-foot-long Alameda Road edge.

Both DV30 sites are zoned CP/GCP (Commerce Park/General Commerce Park). Consistent with this zoning designation, current development plans for the DV30 West site call for a single, 62,800 square foot shell industrial building surrounded by surface parking and development plans for the DV30 East site call for two shell industrial buildings, collectively containing 290,600 square feet of industrial space.

CivTech, Inc. has been retained by Opus Development Company, LLC to prepare the traffic impact study (TIS) required by the City as a condition of site plan approval for Deer Valley 30. The purpose of the analysis documented in this report is to recognize and account for the trip generation of the proposed development, the impact this new traffic will have on the surrounding streets and intersections, and any off-site traffic impact mitigation likely to be warranted by the Project. The format and content of this report, and the approach and methodology used to reach the conclusions documented in this report are consistent with guidance provided in City of Phoenix *Street Planning and Design Guidelines Section 12.1.2 Traffic Impact Studies, December 2009*.

Over the past year, CivTech has completed traffic impact studies to support rezoning requests that have since been approved by the City of Phoenix for three other significantly sized sites in the immediately surrounding area, Arizona State Land Department (ASLD) Supplier Site A, ASLD Supplier Site B, and ASLD Supplier Site C. Following the rezoning, development rights for the three supplier sites were acquired by MREG DV Land LLC (aka Mack Real Estate (or, “Mack”) for whom CivTech has since completed an update to the original TIS for the largest and most proximate to the Deer Valley 30 sites, Supplier Site A. Supplier Site A borders the south side of the Alameda Road alignment and extends west to 19<sup>th</sup> Avenue, east to 7<sup>th</sup> Avenue and south to Sara Bass Place (the halfway point between Alameda Road and Pinnacle Peak Road. The updated Supplier Site A TIS accounts for a more trip generation intense land use plan than did the original TIS for that site. The updated TIS for Supplier Site A was recently approved by the City of Phoenix. The relevance of Supplier Site development plans to the Deer Valley TIS is that it is anticipated that a significant portion of Supplier Site development and all of the associated off-site roadway and traffic control improvements will have occurred by the time the first building on either of the Deer Valley 30 sites is ready to open.

This report considers the traffic impact of Deer Valley 30 as currently proposed under each of two pairs of future (horizon year) scenarios, each pair in turn having both “Build” scenario and a “No-Build” scenario. The two pairs are referred to throughout the report, as “Scenario A’s” and the “Scenario B’s”. All horizon year scenarios share the following characteristics:

1. The year is 2024.
2. Local and regional growth collectively, exclusive of that which may be caused by development of what are referred to throughout this report as the “Supplier Site” projects, has caused traffic volumes within the study area to grow at an average annual rate of 3.6% since 2021.

The primary difference between the Scenario A’s and the Scenario B’s is the extent to which the Supplier Site projects, three other significant planned future development projects in the immediately surrounding area have proceeded in advance of Deer Valley 30 development. In other words,

1. both Build Scenario A and No-Build Scenario A have Supplier Site traffic accounted for in the background traffic volumes and have anticipated Supplier Site off-site roadway improvements accounted for in the assumed pre-existing roadway network; and
2. neither Build Scenario B nor No-Build Scenario B has any Supplier Site traffic accounted for in its background traffic volumes nor any study area roadway improvements by others accounted for in its assumed pre-existing roadway network.

The analysis documented in this report for Scenario A reflects the following assumptions regarding changes that are anticipated to occur in conjunction with the development of Supplier Site A, prior to vertical development occurring on either of the DV30 sites:

1. It has been assumed for Scenario A that Alameda Road will have been improved to an interim two-lane, (i.e., “south side half-street”) condition, from 19th Avenue to 7th Avenue.
2. It has been assumed for Scenario A that the intersection of 19th Avenue and Alameda Road will have been improved, as part of the above-cited half street improvements or otherwise, to include the full northeast and southeast quadrants of the intersection in their respective ultimate geometric configuration within the limits of the intersection corner returns.
3. It has been assumed for Scenario A that 7<sup>th</sup> Avenue will have been improved as necessary to provide at least two continuous travel lanes, one northbound lane and one southbound lane, from Happy Valley Road to Pinnacle Peak Road.

The analysis documented in this report for Scenario B reflects the assumption that all Deer Valley 30 development will be fully built out prior to any development on any Supplier Site having occurred (at least in advance of any of that development generating more than a nominal amount of traffic within the study area) and without any significant study area roadway improvements having been made by others.

Off-site improvements to be completed with Deer Valley 30 development, under both Build Scenario A and Build Scenario B, include the following:

1. constructing and dedicating to the City of Phoenix, the DV30 East and DV 30 West site-adjacent segments of the ultimate north half of Alameda Road.
2. constructing and dedicating to the City of Phoenix a full street segment of 15<sup>th</sup> Avenue, the planned future alignment of which runs north-south through the DV 30 East site,

approximately 660 feet east of its western edge. This improvement will effectively split the DV30 East site into two, the more westerly site having a resultant net area of 8.6 acres and the more easterly site having a resultant net area of 13.2 acres. This improvement is required for consistency with the City's current street classification map which depicts 15<sup>th</sup> Avenue, from Happy Valley Road to Williams Drive (i.e., the back side of Deer Valley Airport) as a single continuous segment of minor collector street.

3. constructing and dedicating to the City of Phoenix, the DV30 East site-adjacent south side half of Parkview Lane, the alignment of which coincides with the northern edge of the DV30 East site. This will include approximately 650 lineal feet of half street west of 15<sup>th</sup> Avenue.
4. constructing direct access driveways on the north side of Alameda Road and the east side and west side respectively on 15<sup>th</sup> Avenue, as depicted in Figure 4 of this report.

Additional off-site improvements to be completed with Deer Valley 30 development under Scenario B include constructing additional half street segments of Alameda Road, as necessary to provide two continuous travel lanes (one eastbound lane and one westbound lane) from 19<sup>th</sup> Avenue to the eastern limit of the DV30 East site, plus additional pavement as necessary to provide vehicle turnaround provisions at the eastern limit of the half-street improvements and as further necessary to provide two westbound lanes, one to be a westbound left turn lane and the other to be a shared through/right turn lane at the intersection of 19<sup>th</sup> Avenue and Alameda Road.

Under either Scenario A or Scenario B, the Deer Valley 30 development will be responsible for installing a signal at the intersection of 19<sup>th</sup> Avenue and Alameda Road if the signal is warranted in the opening year or, depositing in escrow 25% of the signal cost if the signal is not warranted in the opening year.

Under either Scenario A or Scenario B, the Deer Valley 30 development will be responsible for installing a signal at the intersection of 7<sup>th</sup> Avenue and Alameda Road if the signal is warranted in the opening year or, depositing in escrow 25% of the signal cost if the signal is not warranted in the opening year.

The following conclusions have been documented in this study:

#### GENERAL

- Deer Valley 30 is anticipated to generate a maximum of 1,748 vehicle trips over the course of a typical weekday, with approximately 210 of those trips occurring during the AM peak hour (182 in/28 out) and 143 trips occurring during the PM peak hour (20 in/123 out). This conclusion was reached using trip generation equations obtained from the Institute of Transportation Engineers (ITE) Trip Generation Manual for "light industrial" and "general office" land use classifications. This approach was taken as a conservative measure because "light industrial" it has the highest peak hour trip rates of any ITE-recognized industrial land use category for which a 37-foot-tall industrial shell building would likely be appropriate, and because the general office use has peak hour trip rates that are anywhere from three to nine times those of the comparable period trip rates for light industrial uses. In short, should the ultimate uses of any of the proposed DV30



buildings be something more like a high-cube warehouse type facility, actual trip generation values will likely be considerably lower.

### EXISTING CONDITIONS

- Results of the existing conditions analysis indicate that all existing study intersections are operating with acceptable levels of service (LOS D or better) on all approaches under current lane configurations and traffic control.

### BUILDOUT YEAR 2024

- “Build” and “No-Build” conditions have been analyzed for each of two horizon year scenarios. All “No-Build” horizon year scenarios are ones in which it is 2024 and existing traffic volumes have continued to grow at an average annual rate of 3.6% since 2021.
- All Horizon Year “Build” scenarios are additionally characterized by both Deer Valley 30 sites having been fully developed and generating traffic at full buildout levels, north side half-street segments of Alameda Road having been built adjacent to both Deer Valley 30 sites, 15<sup>th</sup> Avenue having been improved to a full street condition from Alameda Road to Parkview Lane, and Parkview Lane having been improved to a south side half street condition east and west of 15<sup>th</sup> Avenue within the limits of the DV30 East sites.
- All Horizon Year Scenario A’s are additionally characterized by all Supplier Sites having been fully developed and generating traffic at full buildout levels in accordance with current land use assumptions about those sites as detailed in the most current versions of the City of Phoenix-approved traffic impact studies for those sites, Alameda Road has been improved to a two-lane south side half street condition from 19<sup>th</sup> Avenue to 7<sup>th</sup> Avenue, the intersection of 19<sup>th</sup> Avenue and Alameda Road has been improved to its ultimate configuration, at least to the limits of all four intersection returns, and 7<sup>th</sup> Avenue has been improved to a two-lane half street (minimum) condition from Alameda Road to Pinnacle Peak Road.
- Horizon Year “Build” Scenario B is uniquely characterized by Alameda Road having been constructed to at least a half street condition, from 19<sup>th</sup> Avenue east to the eastern limit of the DV30 East site, only.
- Results of the Horizon Year Scenario A analysis indicate the following improvements will be warranted with or without development having occurred on either of the Deer Valley 30 sites and, if implemented will allow acceptable levels of service to be achieved (or, if already being achieved, maintained) through 2024 and buildout of all ASLD/Mack Supplier Site and Deer Valley 30 development as currently proposed:
  - At the already signalized intersection of **19<sup>th</sup> Avenue and Happy Valley Road**, dual left turn lanes and protected left turn phasing on/for all four approaches will both be warranted and are therefore recommended to maintain acceptable levels of service during both peak hours through 2024, with or without Deer Valley 30 development. In addition, since the addition of protected left turn phases will take

away some green time from the through movements, it is also recommended that the cycle length be changed from 96 seconds to 105 seconds. The intersection appears to be configured to accommodate dual left turns of roughly equal length of what are now striped as single turn lanes (about 250 feet) such that dual left turn lanes can be created through pavement marking modifications. The extent of the traffic signal equipment improvements necessary to add the protected only phases is not fully known but will require at a minimum, new left turn signal heads on all four approaches. With the recommended turn lane and signal improvements, this intersection should provide acceptable levels of service on all approaches during both peak hours through buildout of all ASLD/Mack Supplier Site and Deer Valley 30 development as currently proposed.

- At the minor approach stop-controlled intersection of **19<sup>th</sup> Avenue and Alameda Road**, the introduction of an east leg and westbound approach volumes of the magnitude projected with or without Deer Valley 30 development will cause traffic signal control to be both warranted per applicable *Manual on Uniform Traffic Control Devices* (MUTCD) standards, and necessary to maintain acceptable levels of service on all approaches. It is recommended that the signal pole foundations, conduit, pull boxes and all other underground and ground level features necessary to signalize the intersection be in place before any development that is dependent on the east leg of this intersection for access is open to everyday traffic (i.e., before this segment of Alameda Road needs to be more than a construction access road). It is further recommended that exclusive left turn lanes be provided on all four approaches to this intersection to maximize the efficiency of the intersection. The northbound and southbound left turn lanes should provide the City's standard minimum of 150 feet of queue storage length. Two-way left turn lanes already exist along 19<sup>th</sup> Avenue in this vicinity and can just be restriped near the intersection to convert them to single direction turn lanes. It is recommended that the westbound left turn lane provide at least 75 feet of queue storage from the start, and provide 250 feet of queue storage length before both Supplier Site A and Deer Valley 30 sites are fully developed. Width to provide 250 feet of queue storage length is not likely to exist until such time as the property on the northeast corner of the intersection develops and with that development the site-adjacent segment of the ultimate north half of Alameda Road gets constructed and dedicated. The eastbound approach currently provides enough width immediately west of the intersection to provide a short eastbound left turn only lane (enough for 1-2 vehicles to queue while still allowing an upstream vehicle wanting to turn right (and/or through in the proposed/with east leg condition) to pass them. While 150 feet of turn lane queue storage is the City's standard and should ultimately be provided, until such time as considerably more development occurs along Alameda Road west of 19<sup>th</sup> Avenue, the existing queue storage provisions should be adequate. Once signalized and improved as necessary to provide an exclusive left turn lane on all approaches, this intersection should provide acceptable levels of service on all approaches during both peak hours through buildout of all ASLD/Mack Supplier Site and Deer Valley 30 development as currently proposed.

- At the already signalized intersection of **19<sup>th</sup> Avenue and Pinnacle Peak Road**, continued traffic growth, with or without Deer Valley 30 development, is likely to cause need for traffic signal timing adjustments in order for acceptable levels of services to continue to be achieved on all approaches. Efforts to optimize the signal timing to achieve acceptable levels of service under both Build and No Build scenarios, indicate significant reductions in driver delay on both northbound and southbound approaches, under both scenarios could be achieved by making the following signal timing adjustments:
  - Extend the northbound through phase from 45 seconds to 51 seconds and the northbound left turn phase from 14 seconds to 21 seconds.
  - Extend the southbound through phase from 30 seconds to 31 seconds.
- At the currently stop sign controlled (northbound approach only) intersection of **7<sup>th</sup> Avenue and Happy Valley Road**, continued growth in background traffic, even without any ASLD/Mack Supplier Site or Deer Valley 30 development, is likely to cause need for widening of Happy Valley Road to provide traffic signal control an exclusive westbound left turn lane before the end of 2024. Deer Valley 30 is not expected to add any traffic to this intersection until Happy Valley Rd and Desert Peak Pkwy connect to provide an east-west arterial alternative to L101, Deer Valley Drive and Sonoran Boulevard.
- At the intersection of **7<sup>th</sup> Avenue and Alameda Road**, traffic signal control is not anticipated to be warranted and necessary to provide acceptable levels of service until growth in traffic, beyond that caused by ASLD/Mack Supplier Site and Deer Valley 30 development.
- At the intersection of **7<sup>th</sup> Avenue and Pinnacle Peak Road**, continued growth in background traffic, even without any ASLD/Mack Supplier Site or Deer Valley 30 development, is likely to cause need for traffic signal control before the end of 2024. Under traffic signal control with a 100-second cycle length, this intersection should provide acceptable levels of service on all approaches during both peak hours through buildout of all ASLD/Mack Supplier Site and Deer Valley 30 development as currently proposed.

## INTRODUCTION AND PURPOSE

The Deer Valley 30 (DV30) “Project” will develop two non-contiguous rectangular land tracts located on the north side of the Alameda Road alignment, east of 19<sup>th</sup> Avenue and west of 7<sup>th</sup> Avenue, in the Deer Valley Village area of north Phoenix. Both sites, the smaller and more westerly of the two (the “DV30 West” site) containing 5.14 acres and the larger and more easterly of the two (the “DV30 East” site) containing 25.71 acres, are currently undeveloped and vacant. The DV30 West site begins approximately 500 feet east of 19<sup>th</sup> Avenue and has an almost 690-foot-long Alameda Road edge. The DV30 East site begins approximately 1820 feet east of 19<sup>th</sup> Avenue, ends 1,650 feet west of 7<sup>th</sup> Avenue and has an almost 1,700-foot-long Alameda Road edge. A vicinity map identifying the two DV30 sites is provided in **Figure 1**.

Both DV30 sites are zoned CP/GCP (Commerce Park/General Commerce Park). Consistent with this zoning designation, current development plans for the DV30 West site call for a single, 62,800 square foot shell industrial building surrounded by surface parking and development plans for the DV30 East site call for two shell industrial buildings, collectively containing 290,600 square feet of floor area.

CivTech, Inc. has been retained by Opus Development Company, LLC to prepare the traffic impact study (TIS) required by the City as a condition of site plan approval for Deer Valley 30. The purpose of the analysis documented in this report is to recognize and account for the trip generation of the proposed development, the impact this new traffic will have on the surrounding streets and intersections, and any off-site traffic impact mitigation likely to be warranted by the Project.

Over the past year, CivTech has completed traffic impact studies to support rezoning requests that have since been approved by the City of Phoenix for three other significantly sized sites in the immediately surrounding area, Arizona State Land Department (ASLD) Supplier Site A, ASLD Supplier Site B, and ASLD Supplier Site C. Following the rezoning, development rights for the three supplier sites were acquired by MREG DV Land LLC (aka Mack Real Estate (or, “Mack”) for whom CivTech has since completed an update to the original TIS for the largest and most proximate to the Deer Valley 30 sites, Supplier Site A. Supplier Site A borders the south side of the Alameda Road alignment and extends west to 19<sup>th</sup> Avenue, east to 7<sup>th</sup> Avenue and south to Sara Bass Place (the halfway point between Alameda Road and Pinnacle Peak Road. The updated Supplier Site A TIS accounts for a more trip generation intense land use plan than did the original TIS for that site. The updated TIS for Supplier Site A was recently approved by the City of Phoenix.

The relevance of Supplier Site development plans to the Deer Valley TIS is that it is anticipated that a significant portion of Supplier Site development and all of the associated off-site roadway and traffic control improvements will have occurred by the time the first building on either of the Deer Valley 30 sites is ready to open.

## STUDY REQUIREMENTS

The content of this report, and the approach and methodology used to reach the conclusions documented in this report are consistent with guidance provided in *City of Phoenix Street Planning and Design Guidelines Section 12.1.2 Traffic Impact Studies*, December 2009.

## STUDY AREA

The study area considered in this analysis includes the following intersections:

- 19<sup>th</sup> Avenue and Happy Valley Road
- 19<sup>th</sup> Avenue & Parkview Lane
- 19<sup>th</sup> Avenue and Alameda Road
- 15<sup>th</sup> Avenue and Happy Valley Road
- 7<sup>th</sup> Avenue and Happy Valley Road
- 19<sup>th</sup> Avenue and Optum Driveway
- 19<sup>th</sup> Avenue and Sarah Bass Place
- 19<sup>th</sup> Avenue and Pinnacle Peak Road
- 7<sup>th</sup> Avenue and Pinnacle Peak Road

## HORIZON YEARS

Per the above-referenced, City of Phoenix *Traffic Impact Studies* guidance, a traffic impact study for a development project anticipated to generate fewer than 1,000 trips during either peak hour is generally only required to analyze existing conditions and a single horizon year, typically the opening year or anticipated earliest year in which full buildout will be reached. As will be discussed in more detail later in this report, Deer Valley 30 is expected to generate fewer than 500 trips during either peak hour and could very likely be fully developed and occupied by 2024. For this reason and for consistency with the Supplier Site A TIS, this report documents peak hour level of service analysis for a single horizon year of 2024, the same horizon year for which analysis is documented in the City of Phoenix-approved Supplier Site A TIS. Horizon year analysis has been performed for each of two pairs of horizon year scenarios, a pair of Horizon Year Scenario A's and a pair of Horizon Year Scenario B's". All horizon year scenarios share the following characteristics:

3. The year is 2024.
4. Local and regional growth collectively, exclusive of that which may be caused by development of what are referred to throughout this report as the "Supplier Site" projects, has caused traffic volumes within the study area to grow at an average annual rate of 3.6% since 2021.

The primary difference between the Scenario A's and the Scenario B's is the extent to which the Supplier Site projects have proceeded in advance of Deer Valley 30 development. In other words,

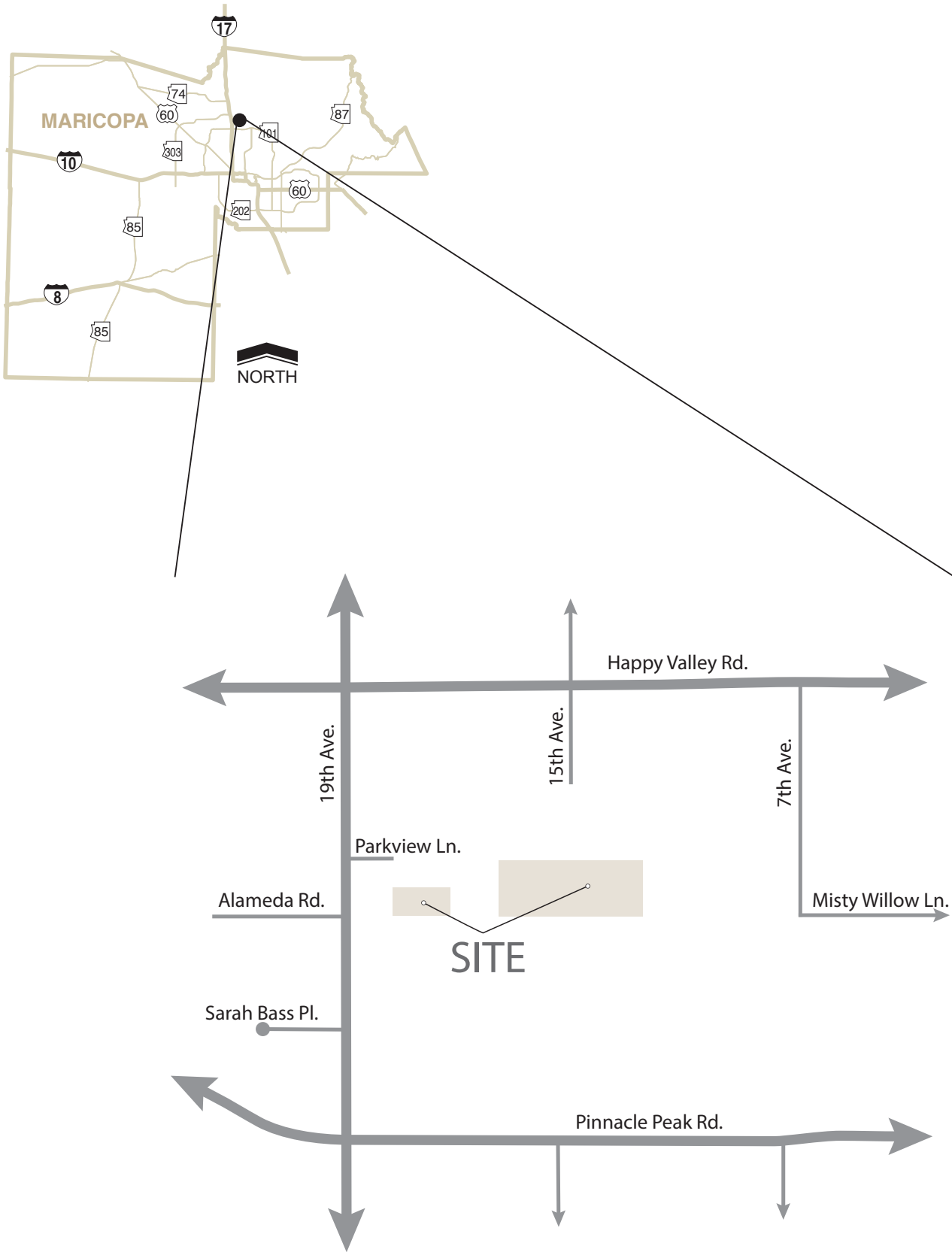
3. both Build Scenario A and No-Build Scenario A have Supplier Site traffic accounted for in the background traffic volumes and have anticipated Supplier Site off-site roadway improvements accounted for in the assumed pre-existing roadway network; and
4. neither Build Scenario B nor No-Build Scenario B has any Supplier Site traffic accounted for in its background traffic volumes nor any study area roadway improvements by others accounted for in its assumed pre-existing roadway network.

The analysis documented in this report for Scenario A reflects the following assumptions regarding changes that are anticipated to occur in conjunction with the development of Supplier Site A, prior to vertical development occurring on either of the DV30 sites:

4. It has been assumed for Scenario A that Alameda Road will have been improved to an interim two-lane, (i.e., "south side half-street") condition, from 19th Avenue to 7th Avenue.

5. It has been assumed for Scenario A that the intersection of 19th Avenue and Alameda Road will have been improved, as part of the above-cited half street improvements or otherwise, to include the full northeast and southeast quadrants of the intersection in their respective ultimate geometric configuration within the limits of the intersection corner returns.
6. It has been assumed for Scenario A that 7<sup>th</sup> Avenue will have been improved as necessary to provide at least two continuous travel lanes, one northbound lane and one southbound lane, from Happy Valley Road to Pinnacle Peak Road.

The analysis documented in this report for Scenario B reflects the assumption that all Deer Valley 30 development will be fully built out prior to any development on any Supplier Site having occurred (at least in advance of any of that development generating more than a nominal amount of traffic within the study area) and without any significant study area roadway improvements having been made by others.



**Figure 1:** Vicinity Map

## EXISTING CONDITIONS

### EXISTING LAND USE

Both Deer Valley 30 sites, the smaller and more westerly of the two (the “DV30 West” site) containing 5.14 acres and the larger and more easterly of the two (the “DV30 East” site) containing 25.71 acres, are currently undeveloped and vacant. The DV30 West site begins approximately 500 feet east of 19<sup>th</sup> Avenue and has an almost 690-foot-long Alameda Road edge. The DV30 East site begins approximately 1820 feet east of 19<sup>th</sup> Avenue, ends 1,650 feet west of 7<sup>th</sup> Avenue and has an almost 1,700-foot-long Alameda Road edge.

### SURROUNDING LAND USE

The majority of land in the immediately surrounding area is either undeveloped and vacant or developed for generally heavy industrial type uses. West of 19<sup>th</sup> Avenue between Pinnacle Peak Road and Happy Valley Road development begins to generally transition to lighter industrial/business park use, followed by (further to the west and closer to I-17/Black Canyon Freeway) further transition to commercial retail, office and multi-family residential uses. North of Happy Valley Road and west of 19<sup>th</sup> Avenue is the USAA corporate office campus and south of Pinnacle Peak Road is generally more light industrial and business park development, south of which is Deer Valley Airport.

### EXISTING ROADWAY NETWORK

The existing roadway network within the study area includes the following streets and intersections.

**Pinnacle Peak Road** is a generally east-west aligned arterial street that is continuous within the City of Phoenix from 59<sup>th</sup> Avenue on the west to 7<sup>th</sup> Street on the east, and then again, east of the Central Arizona Project (CAP) Canal from Cave Creek Dam Road to Scottsdale Road. Between I-17 and 19<sup>th</sup> Avenue, Pinnacle Peak Road provides two travel lanes in each direction separated by a two-way left turn lane (TWLTL), and bike lanes on both sides. Between 19<sup>th</sup> Avenue and Central Avenue, Pinnacle Peak Road narrows to a single travel lane in each direction, only until it crosses Central Avenue where it flares back out to provide a TWLTL all the way to 7<sup>th</sup> Street. Pinnacle Peak Road provides direct access to the I-17 Black Canyon Freeway via a grade separated interchange, a mile west of 19<sup>th</sup> Avenue. Within the study area, the posted speed limit along Pinnacle Peak Road is 35 miles per hour (mph) east of 19<sup>th</sup> Avenue, and 40 mph hour to the west.

**Happy Valley Road** is an east-west aligned major arterial road within the City of Phoenix. There are three lanes and a bike lane in each direction of travel separated by a raised median. East of 19<sup>th</sup> Avenue the raised median transitions into a TWLTL and the road narrows to two lanes in each direction of travel. East of 17<sup>th</sup> Avenue, Happy Valley Road narrows even further to one lane in each direction of travel with no median or TWLTL. Happy Valley Road begins just west of the Loop 303 and continues east until curving to the south and transitioning into 7<sup>th</sup> Street. Within the vicinity of the site, the posted speed limit along Happy Valley Road is 45 mph.



**19<sup>th</sup> Avenue** is a north-south aligned major arterial roadway that is continuous as 19<sup>th</sup> Avenue from Dobbins Road to the south, to Jomax Road to the north and then, as North Valley Parkway, from Jomax Road to the Westland Road (half-mile south of Carefree Highway) to the north. Within the study area, 19<sup>th</sup> Avenue generally provides three travel lanes in the northbound direction, two travel lanes in the southbound direction, a two-way left turn lane (TWLTL) between travel directions, and striped bike lanes on both sides. The posted speed limit along 19<sup>th</sup> Avenue within the study area is 45 mph. 19<sup>th</sup> Avenue provides access to the Loop 101/Agua Fria Freeway via a grade-separated interchange, approximately two miles south of Pinnacle Peak Road.

**15<sup>th</sup> Avenue** is a north-south aligned minor collector roadway that, exists within a dedicated public right of way, from Pinnacle Peak Road south to Williams Drive (north side of Deer Valley Airport) and from 900 feet north of the DV 30 East site, north to Parsons Road. North of Parsons Road, 15<sup>th</sup> Avenue continues across private property to just south of the Central Arizona Project (CAP) canal. 15<sup>th</sup> Avenue is not striped within the study area. The posted speed limit along 15<sup>th</sup> Avenue within the study area is 25 mph. 15<sup>th</sup> Avenue is represented as a future minor collector street within the study area where it does not exist today, including across both the DV 30 East site and the Supplier Site A site to the south.

**7<sup>th</sup> Avenue** is a north-south aligned roadway that exists within the study area from Happy Valley Road on the north (just south of the CAP canal) to a quarter-mile south of the Alameda Road alignment on the south, and again for the first 850 feet +/- south of Pinnacle Peak Road, just north of Deer Valley Airport. The speed limit is no posted along either of these segments. While other existing segments of 7<sup>th</sup> Avenue are functionally classified by the City of Phoenix as arterial streets, the study area segments of 7<sup>th</sup> Avenue are not recognized on the most current version of the City's Street Classification Map.

**Sarah Bass Place** is an east-west aligned local commercial street within the study area that runs from 19<sup>th</sup> Avenue on the east to a cul-de-sac turnaround, approximately 850 feet to the west. Sara Bass Place provides a single travel lane (though they are not striped) in each direction and allows on-street parking along both sides. There are no speed limit signs along this segment.

**Alameda Road** is an east-west aligned, collector street within the study area. It currently runs from 23<sup>rd</sup> Avenue on the west to 19<sup>th</sup> Avenue on the east and again (as Misty Willow Lane), from 7<sup>th</sup> Avenue on the west to Central Avenue on the east. There are no speed limit signs along either study area segment of Alameda Road/Misty Willow Lane.

**Parkview Lane** is an east-west aligned local street within a dedicated public right of way from 19<sup>th</sup> Avenue to a point approximately 900 feet to the east of 19<sup>th</sup> Avenue. From 900 east of 19<sup>th</sup> Avenue to approximately 150 feet west of the DV30 East site, Parkview Lane exists as minimally improved, varying width roadway. Parkview Lane does not exist at all from 150 feet west of the DV 30 East site to 7<sup>th</sup> Avenue. There are no speed limit signs along the study area segment of Parkview Lane.

## EXISTING INTERSECTION CONFIGURATIONS

The intersection of **19<sup>th</sup> Avenue and Pinnacle Peak Road** is signalized with permissive-protected left turn phasing on the northbound approach and permissive (only) left turn phasing on the southbound, eastbound and westbound approaches. The northbound approach consists of a dedicated left turn lane, two through lanes, a shared through/right turn lane and a bicycle lane. The southbound approach consists of a dedicated left turn lane, one through lane, a shared through/right turn lane and a bicycle lane. The eastbound approach consists of a dedicated left turn lane, one through lane, a shared through/right turn lane and a bicycle lane. The westbound approach consists of a dedicated left turn lane, one through lane and a shared through/right turn lane. There are signalized pedestrian crosswalks across all legs of the intersection.

The intersection of **19<sup>th</sup> Avenue and the Optum Driveway** is stop sign controlled on the eastbound approach. The northbound approach consists of a dedicated left turn lane, three through lanes and a bicycle lane. The southbound approach consists of one through lane, one shared through/right turn lane and a bicycle lane. The eastbound approach consists of one shared left/right turn lane.

The intersection of **19<sup>th</sup> Avenue and Parkview Lane/Today's Patio Driveway** is stop sign controlled on the eastbound and westbound approaches. The westbound approach consists of a single right turn egress-only lane. The northbound approach consists of a two way left turn lane (TWLTL), two through lanes, a shared through/right turn lane and a bicycle lane. The southbound approach consists of a dedicated left turn lane, two through lanes and a bicycle lane. The eastbound approach consists of a single shared left/right turn lane.

The intersection of **19<sup>th</sup> Avenue and Sarah Bass Place** is stop sign controlled on the eastbound approach. The northbound approach consists of a dedicated left turn lane, three through lanes and a bicycle lane. The southbound approach consists of a through lane, a shared through/right turn lane and a bicycle lane. The west leg is not currently striped; however it is wide enough to provide separate eastbound left turn and eastbound right turn lanes in addition to a single westbound travel lane immediately west of 19<sup>th</sup> Avenue.

The intersection of **19<sup>th</sup> Avenue and Alameda Road** is stop sign controlled on the eastbound approach. The northbound approach consists of a dedicated left turn lane, three through lanes and a bicycle lane. The southbound approach consists of a through lane, a shared through/right turn lane and a bicycle lane. The eastbound approach is not explicitly striped, however once fully improved to its ultimate collector street configuration, there will be adequate pavement width to provide two eastbound approach lanes, one striped as a left turn only lane and the other to function as a shared through/right turn lane.

The intersection of **19<sup>th</sup> Avenue and Happy Valley Road** is signalized intersection with protected/permissive left turn phasing on all approaches. The northbound and southbound approaches are striped to designate a single exclusive left turn lane, two through lanes, a bicycle lane and a single exclusive right turn lane. The eastbound and westbound approaches are each striped to designate a single exclusive left turn lane, two through lanes, a shared through/right turn lane and a bicycle lane. There pedestrian crosswalks across all four legs of the intersection.

The intersection of **7<sup>th</sup> Avenue and Happy Valley Road** is an unsignalized intersection with stop sign control on the northbound approach. The northbound approach is not currently striped, however there is adequate pavement width on the south leg to provide an exclusive left turn lane and an exclusive right turn lane on the northbound approach. The eastbound approach striped to provide a shared through/right turn lane and a bicycle lane. The westbound approach is striped to provide a shared through/left turn lane and a bicycle lane.

The intersection of **7<sup>th</sup> Avenue and Pinnacle Peak Road** is unsignalized with stop sign control on the northbound approach. The northbound approach consists of a single shared left turn/right turn lane. The eastbound approach consists of one through lane and a dedicated right turn lane. The westbound approach consists of a shared left turn/through lane.

The intersection of **15<sup>th</sup> Avenue and Happy Valley Road** is unsignalized with stop sign control on the northbound and southbound approaches only. All four approaches provide a single shared left turn/through/right turn lane. The north leg of the intersection is not currently paved.

Existing intersection lane configurations and traffic controls are illustrated in **Figure 2**.

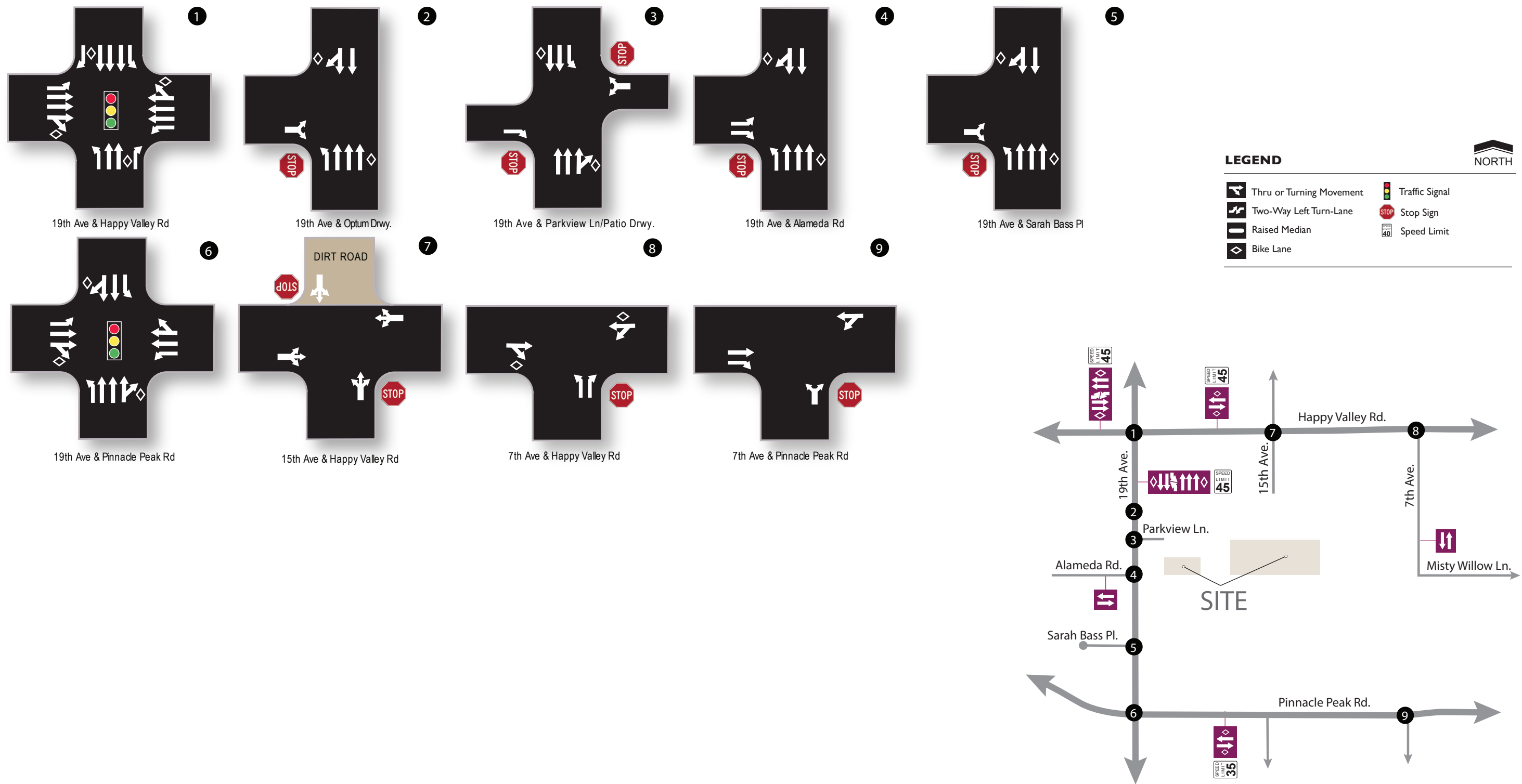
## EXISTING TRAFFIC VOLUMES

With permission from Mack Real Estate, traffic count data collected by Field Data Services of Arizona, Inc. for the ASLD/Mack Supplier Site A TIS was re-used for the Deer Valley 30 TIS. The utilized turning movement counts were recorded at the following nine (9) study intersections, from 7:00-9:00 AM and 4:00-6:00 PM on Thursday, July 15, 2021:

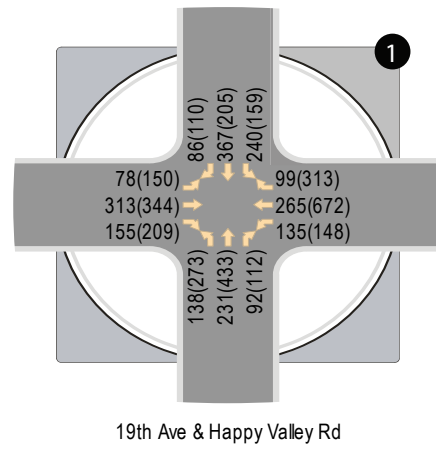
- 19<sup>th</sup> Avenue and Happy Valley Road
- 19<sup>th</sup> Avenue & Parkview Lane
- 19<sup>th</sup> Avenue and Alameda Road
- 15<sup>th</sup> Avenue and Happy Valley Road
- 7<sup>th</sup> Avenue and Happy Valley Road
- 19<sup>th</sup> Avenue and Optum Driveway
- 19<sup>th</sup> Avenue and Sarah Bass Place
- 19<sup>th</sup> Avenue and Pinnacle Peak Road
- 7<sup>th</sup> Avenue and Pinnacle Peak Road

Due to the COVID-19 pandemic, traffic patterns have changed and traffic volumes were lower in 2021 than what is typically seen in this area. Many of the effects of COVID-19 have diminished in this area, however, in order to remain conservative and in recognition also that most local schools were on summer break in July, a 15% adjustment factor was applied to the traffic count data recorded at the above-referenced intersections.

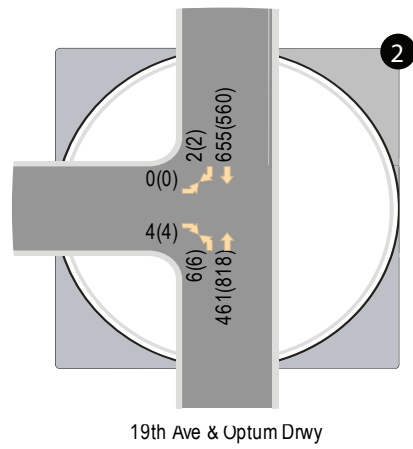
In addition to the traffic count data collected in July 2021, peak hour traffic count data was recorded in October 2021 at two additional intersections along 19<sup>th</sup> Avenue between Happy Valley Road and Alameda Road, one at 19<sup>th</sup> Avenue and Parkview Lane/Today's Patio driveway just north of Alameda Road and the other at 19<sup>th</sup> Avenue and the Optum driveway, just north of Parkview Lane. The October counts were not adjusted and were used as a check against the adjusted July counts to determine whether further adjustments were warranted, as well as to balance volumes between intersections along 19<sup>th</sup> Avenue. The resultant adjusted and balanced traffic volumes used for the remainder of this analysis are presented in **Figure 3**. Unadjusted traffic volume data obtained for this study have been included in **Appendix B**.



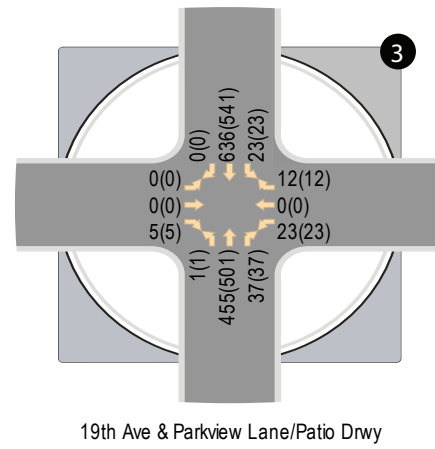
**Figure 2: Existing Lane Configurations and Traffic Controls**



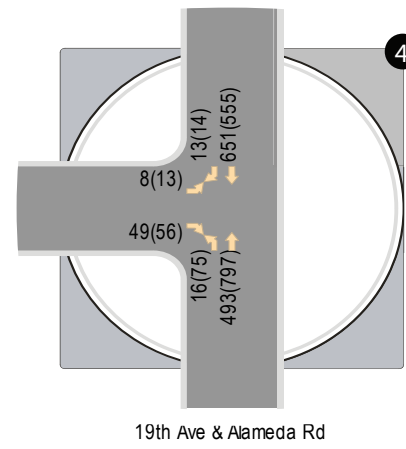
19th Ave & Happy Valley Rd



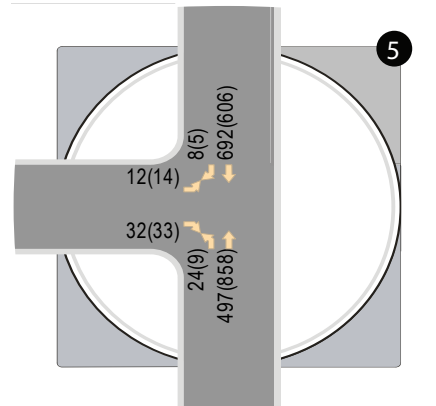
19th Ave & Optum Drwy



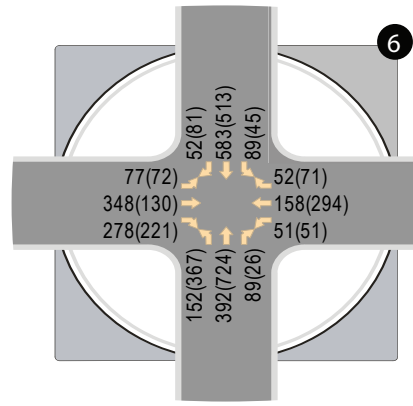
19th Ave & Parkview Lane/Patio Drwy



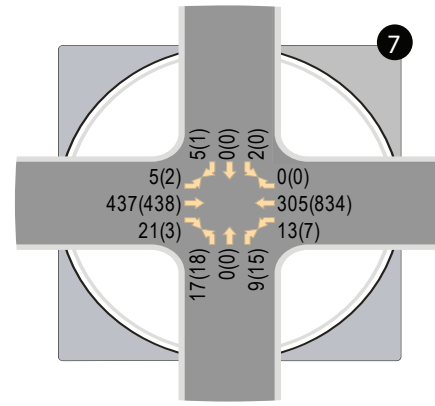
19th Ave & Alameda Rd



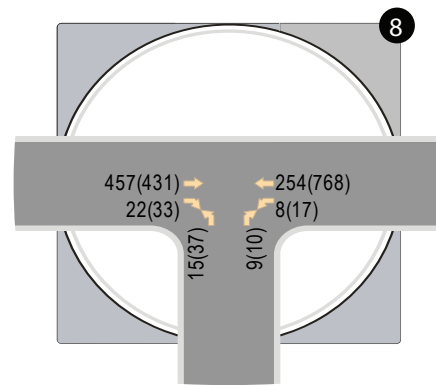
19th Ave & Sarah Bass Pl



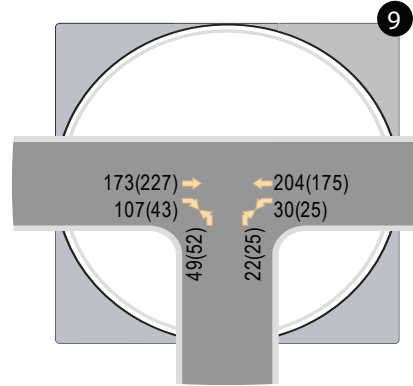
19th Ave & Pinnacle Peak Rd



15th Ave & Happy Valley Rd



7th Ave & Happy Valley Rd



7th Ave & Pinnacle Peak Rd

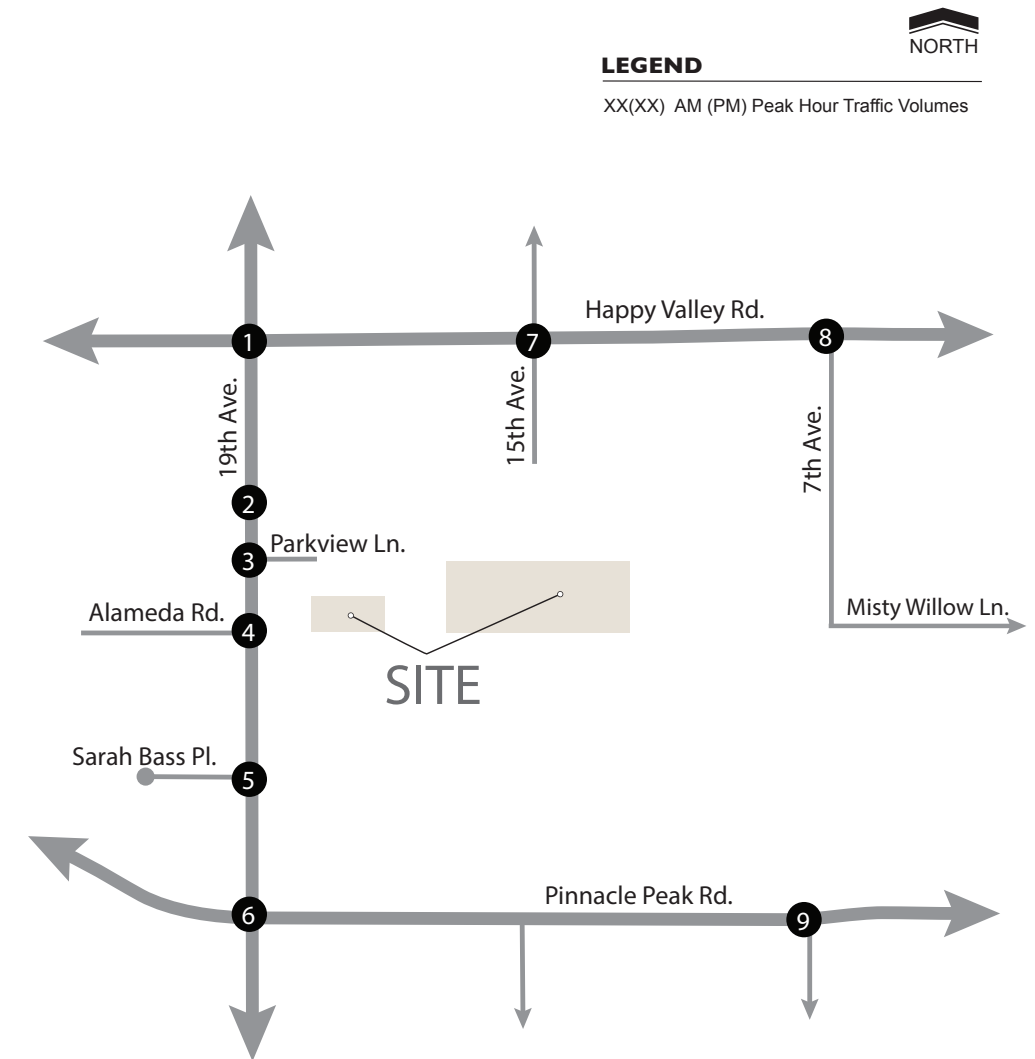


Figure 3: Existing Traffic Volumes

## EXISTING CAPACITY ANALYSIS

Peak hour capacity analyses have been conducted for the study intersections based on existing intersection configurations and traffic volumes. All intersections have been analyzed using the methodologies presented in the *Highway Capacity Manual (HCM), Special Report 209*, and Updated 2016 and using Synchro software, version 11.0 under the HCM 6<sup>th</sup> edition (2016) methodology.

The concept of level of service (LOS) uses qualitative measures that characterize operational conditions within the traffic stream. The individual levels of service are described by factors that include speed, travel time, freedom to maneuver, traffic interruptions, and comfort and convenience. Six levels of service are defined for each type of facility for which analysis procedures are available. They are given letter designations A through F, with LOS A representing the best operating conditions and LOS F the worst. Each level of service represents a range of operating conditions. Levels of service for intersections are defined within ranges of average control delay per vehicle, the number of seconds a vehicle can expect to wait due to the presence of a traffic control device. **Table 1** lists the level of service criteria for signalized and unsignalized intersections, respectively.

**Table 1 – Level of Service Criteria for Controlled Intersections**

| Level-of-Service | Signalized<br>Control Delay (sec/veh) | Unsignalized<br>Control Delay (sec/veh) |
|------------------|---------------------------------------|---|
| A                | ≤ 10                                  | ≤ 10                                    |
| B                | > 10-20                               | > 10-15                                 |
| C                | > 20-35                               | > 15-25                                 |
| D                | > 35-55                               | > 25-35                                 |
| E                | > 55-80                               | > 35-50                                 |
| F                | > 80 (or v/c > 1)                     | > 50 (or v/c > 1)                       |

*Source: Exhibits 19-8, 20-2, 21-8, and 22-8, Highway Capacity Manual, 6<sup>th</sup> Edition (2016)*

Synchro 11.0 software calculates the LOS per the HCM 6<sup>th</sup> edition (2016) methodology. The 6<sup>th</sup> edition HCM documents the signalized LOS calculation methodology which takes into account lane geometry, traffic volumes and cycle length/phasing to compute LOS. Synchro analysis worksheets report individual movement delay/LOS and overall delay/LOS for signalized intersections; unsignalized intersection worksheets report the worst-case delay/LOS and the average overall intersection delay. Signal timing for the existing signalized intersections was obtained from the City of Phoenix. Results of the existing level of service analyses are shown in **Table 2** for both AM and PM peak hours. The existing conditions analysis worksheets and existing signal timing sheets have been included in **Appendix C**.

**Table 2 – Existing Peak Hour Levels of Service**

| ID | Intersection   | Intersection Control | Approach/<br>Movement | Existing LOS   |
|----|--|----------------------|-----------------------|----------------|
|    |  |                      |                       | AM (PM)        |
| 1  | 19 <sup>th</sup> Avenue & Happy Valley Road            | Signal               | NB                    | B (B)          |
|    |  |                      | SB                    | B (B)          |
|    |  |                      | EB                    | B (C)          |
|    |  |                      | WB                    | C (C)          |
|    |  |                      | <b>Overall</b>        | <b>B (C)</b>   |
| 2  | 19 <sup>th</sup> Avenue & Optum Driveway               | 1-way stop (EB)      | NB Left<br>EB Shared  | A (A)<br>B (B) |
| 3  | 19 <sup>th</sup> Avenue & Parkview Lane/Patio Driveway | 2-way stop (EB/WB)   | NB Left               | A (A)          |
|    |  |                      | SB Left               | B (B)          |
|    |  |                      | EB Shared             | B (B)          |
|    |  |                      | WB Shared             | C (C)          |
| 4  | 19 <sup>th</sup> Avenue & Alameda Road                 | 1-way stop (EB)      | NB Left               | A (A)          |
|    |  |                      | EB Left               | C (C)          |
|    |  |                      | EB Right              | B (B)          |
| 5  | 19 <sup>th</sup> Avenue & Sarah Bass Place             | 1-way stop (EB)      | NB Left               | A (A)          |
|    |  |                      | EB Left               | C (C)          |
|    |  |                      | EB Right              | B (B)          |
| 6  | 19 <sup>th</sup> Avenue & Pinnacle Peak Road           | Signal               | NB                    | B (D)          |
|    |  |                      | SB                    | C (D)          |
|    |  |                      | EB                    | B (B)          |
|    |  |                      | WB                    | B (B)          |
|    |  |                      | <b>Overall</b>        | <b>C (C)</b>   |
| 7  | 15 <sup>th</sup> Avenue & Happy Valley Road            | 2-way stop (NB/SB)   | NB Shared             | C (D)          |
|    |  |                      | SB Shared             | B (C)          |
|    |  |                      | EB Left               | A (A)          |
|    |  |                      | EB Through            | A (A)          |
|    |  |                      | WB Left               | A (A)          |
|    |  |                      | WB Through            | A (A)          |
| 8  | 7 <sup>th</sup> Avenue & Happy Valley Road             | 1-way stop (NB)      | NB Shared             | B (D)          |
|    |  |                      | WB Left               | A (A)          |
|    |  |                      | WB Through            | A (A)          |
| 9  | 7 <sup>th</sup> Avenue & Pinnacle Peak Road            | 1-way stop (NB)      | NB Shared             | B (B)          |
|    |  |                      | WB Left               | A (A)          |
|    |  |                      | WB Through            | A (A)          |

The results of the existing conditions analysis summarized in **Table 2** indicate that all study intersections operate with acceptable levels of service (LOS D or better).

## PROPOSED DEVELOPMENT

### SITE LOCATION

The site consists of two parcels located north of the Alameda Road alignment and east of 19<sup>th</sup> Avenue in the City of Phoenix, Arizona.

### SITE DENSITY/INTENSITY

The site consists of approximately 360,800 square feet (SF) of industrial building area. The western parcel consists of a single building with 70,200 SF. The eastern parcel consists of two industrial buildings totaling 106,200 SF and 184,400 SF respectively. The two parcels do not connect.

### SITE ACCESS

The DV30 West site development will include construction of two full movement driveways along Alameda Road. The DV30 East site development will include construction of two full movement driveways along Alameda Road, and four full movement driveways, two on each side of the street, along 15<sup>th</sup> Avenue.

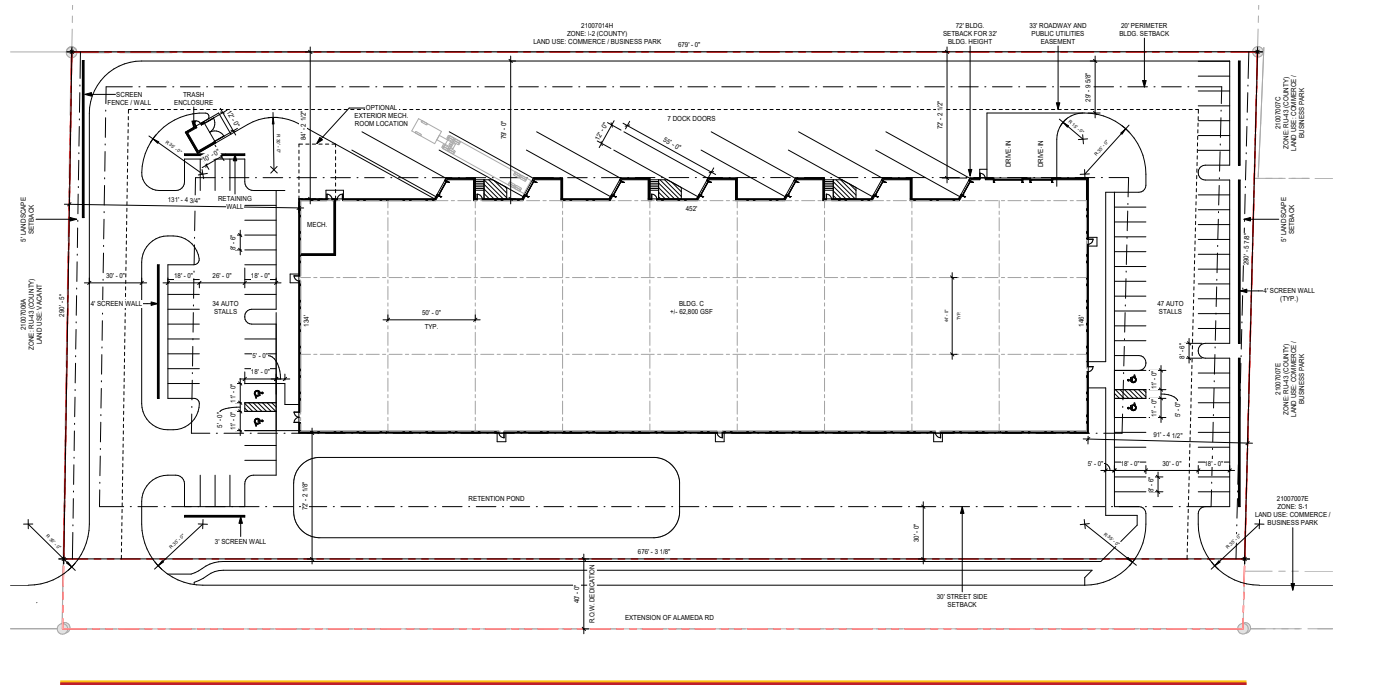
The DV30 site-generated traffic volumes are low enough that a single point of access to and from the existing arterial street network is all that is needed until such time as other development occurs along Alameda Road, to accommodate all the site traffic without causing excessive delays at any study intersection.

Supplier Site A is anticipated to construct Alameda Road further to the east to connect with 7<sup>th</sup> Avenue. Although this connection is not necessary for the DV30 site volumes alone, since Supplier Site A will also be contributing traffic to the intersection of 19<sup>th</sup> Avenue and Alameda Road, this extension of Alameda Road will allow for alternate routes for both sites. 15<sup>th</sup> Avenue currently exists from Happy Valley and extends approximately 0.3 miles south. The 15<sup>th</sup> Avenue alignment will be constructed on-site; however, it will not connect to the existing alignment since the anticipated site volumes generated by the Deer Valley 30 development are low and the access along Alameda Road along with the improvements to 7<sup>th</sup> Avenue provided by the Supplier Site A development will accommodate the site generated volumes.

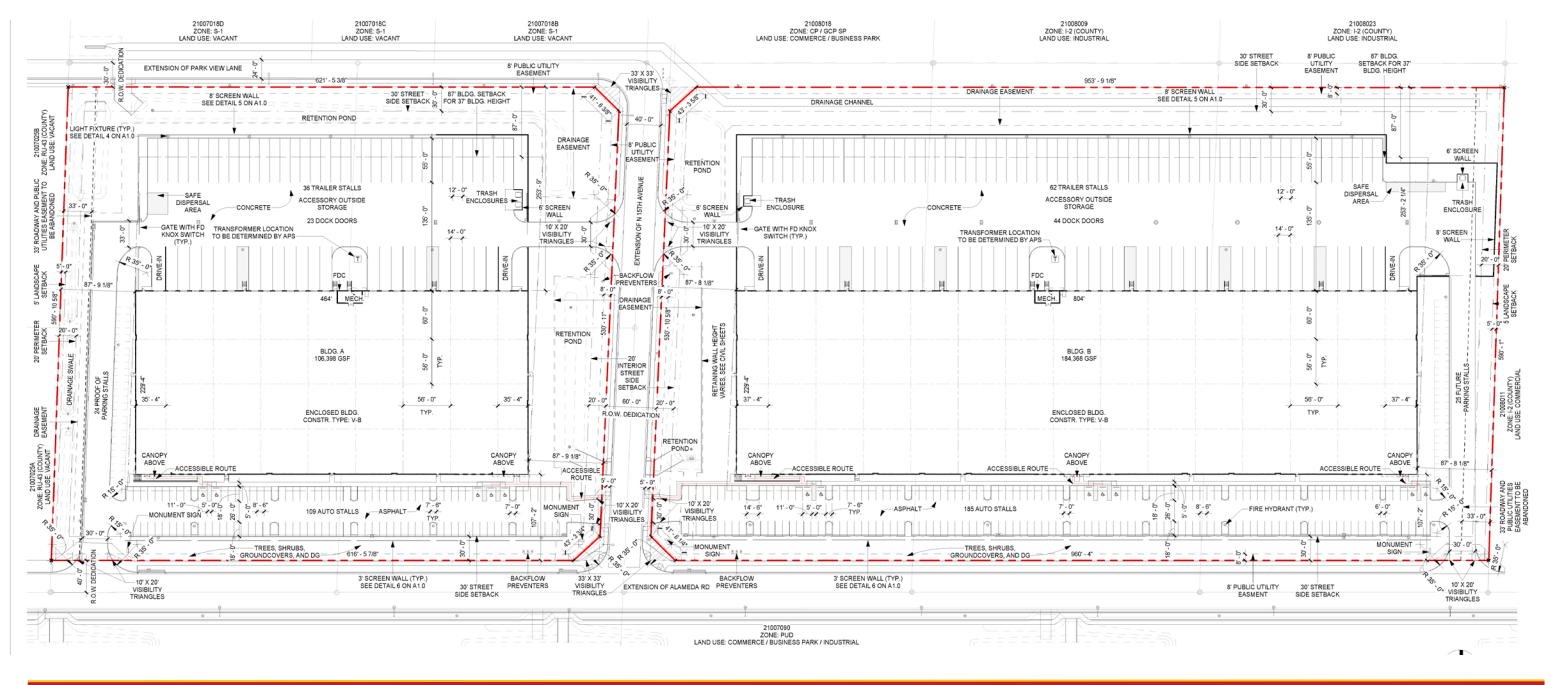
The current site plans for Deer Valley 30 are presented in in **Figure 4**.



**West Site**



**East Site**



\* Gross Acreage, before dedications

**Figure 4: Site Plan and Access**

## TRIP GENERATION

The potential trip generation for the proposed development was estimated utilizing the Institute of Transportation Engineers (ITE) *Trip Generation Manual, 10<sup>th</sup> Edition* and *Trip Generation Handbook, 3<sup>d</sup> Edition*. The ITE *Trip Generation Manual* contains data collected by various transportation professionals for a wide range of different land uses. The data are summarized in the report and average rates and equations have been established that correlate the relationship between an independent variable that describes the development size and generated trips for each categorized land use. The report provides information for daily and peak hour trips.

Deer Valley 30 will consist of three industrial buildings and each building will consist of some dedicated office space. The ITE land use code (LUC) used for the industrial portion of each building is LUC 110 for General Light Industrial and the LUC for the office space is LUC 710 for General Office Building. The anticipated trip generation is summarized in **Table 3** Detailed trip generation calculations are provided in **Appendix D**.

**Table 3 – Trip Generation**

| Proposed Use                               | ITE LUC | Size    | Units | Weekday Trips |              |           |              |           |            |            |
|--|---------|---------|-------|---------------|--------------|-----------|--------------|-----------|------------|------------|
|  |         |         |       | Daily         | AM Peak Hour |           | PM Peak Hour |           |            |            |
|  |         |         |       | Total         | In           | Out       | Total        | In        | Out        | Total      |
| <b>Building A &amp; B (DV30 East Site)</b> |         |         |       |               |              |           |              |           |            |            |
| General Light Industrial                   | 110     | 261,540 | SF    | 1,050         | 80           | 11        | 91           | 9         | 63         | 72         |
| General Office                             | 710     | 29,060  | SF    | 320           | 46           | 8         | 54           | 6         | 29         | 35         |
| <b>Building C (DV 30 West Site)</b>        |         |         |       |               |              |           |              |           |            |            |
| General Light Industrial                   | 110     | 63,180  | SF    | 298           | 28           | 4         | 32           | 4         | 23         | 27         |
| General Office                             | 710     | 7,020   | SF    | 80            | 28           | 5         | 33           | 1         | 8          | 9          |
| <b>Subtotal</b>                            |         |         |       | <b>1,748</b>  | <b>182</b>   | <b>28</b> | <b>210</b>   | <b>20</b> | <b>123</b> | <b>143</b> |

As summarized in **Table 3**, Deer Valley 30 is anticipated to generate up to 1,748 vehicle trips over the course of a typical weekday, with approximately 210 of those trips occurring during the AM peak hour (182 in/28 out) and 143 trips occurring during the PM peak hour (20 in/123 out). This conclusion was reached using trip generation equations obtained from the Institute of Transportation Engineers (ITE) *Trip Generation Manual, 10<sup>th</sup> Edition* for “light industrial” and “general office” land use classifications, respectively. This approach was taken as a conservative measure because “light industrial” it has the highest peak hour trip rates of any ITE-recognized industrial land use category for which a 37-foot-tall industrial shell building would likely be appropriate, and because the general office use has peak hour trip rates that are anywhere from three to nine times those of the comparable period trip rates for light industrial uses. In short, should the ultimate uses of any of the proposed DV30 buildings be something more like a high-cube warehouse type facility, actual trip generation values will likely be considerably lower.

It should be noted that the floor area values indicated in Table 3 for Building C are collectively approximately 10% higher than the 62,800 square feet indicate on the most current site plan for the DV30 West Site, that site plan for the DV30 West Site presented in **Figure 4** of this report. This is because the values in **Table 3** were obtained from a slightly older site plan, the site plan

that was current at the time of the first TIS submittal. As a consequence, the combined total building floor area proposed for Deer Valley 30 as a whole is slightly (approximately 2%) less than that represented in **Table 3** and the trip generation potential of Deer Valley 30 as a whole is likely to be slightly lower than that indicated in **Table 3** as well.

## VEHICLE TRIP DISTRIBUTION AND ASSIGNMENT

A single trip distribution pattern was assumed for the proposed development. It is expected that the proposed development will generate trips based on future population within a 7-mile radius of the site due to the close proximity to both the I-17 and Loop 101 freeways. Future total population within a 7-mile radius of the site, as projected by the 2030 socio-economic data compiled by the Maricopa Association of Governments (MAG), was used as a basis to estimate trip distribution. The resulting trip distribution percentages for the study area are shown in **Table 4**. The trip distribution calculations are included in **Appendix E**.

**Table 4 – Site Trip Distribution**

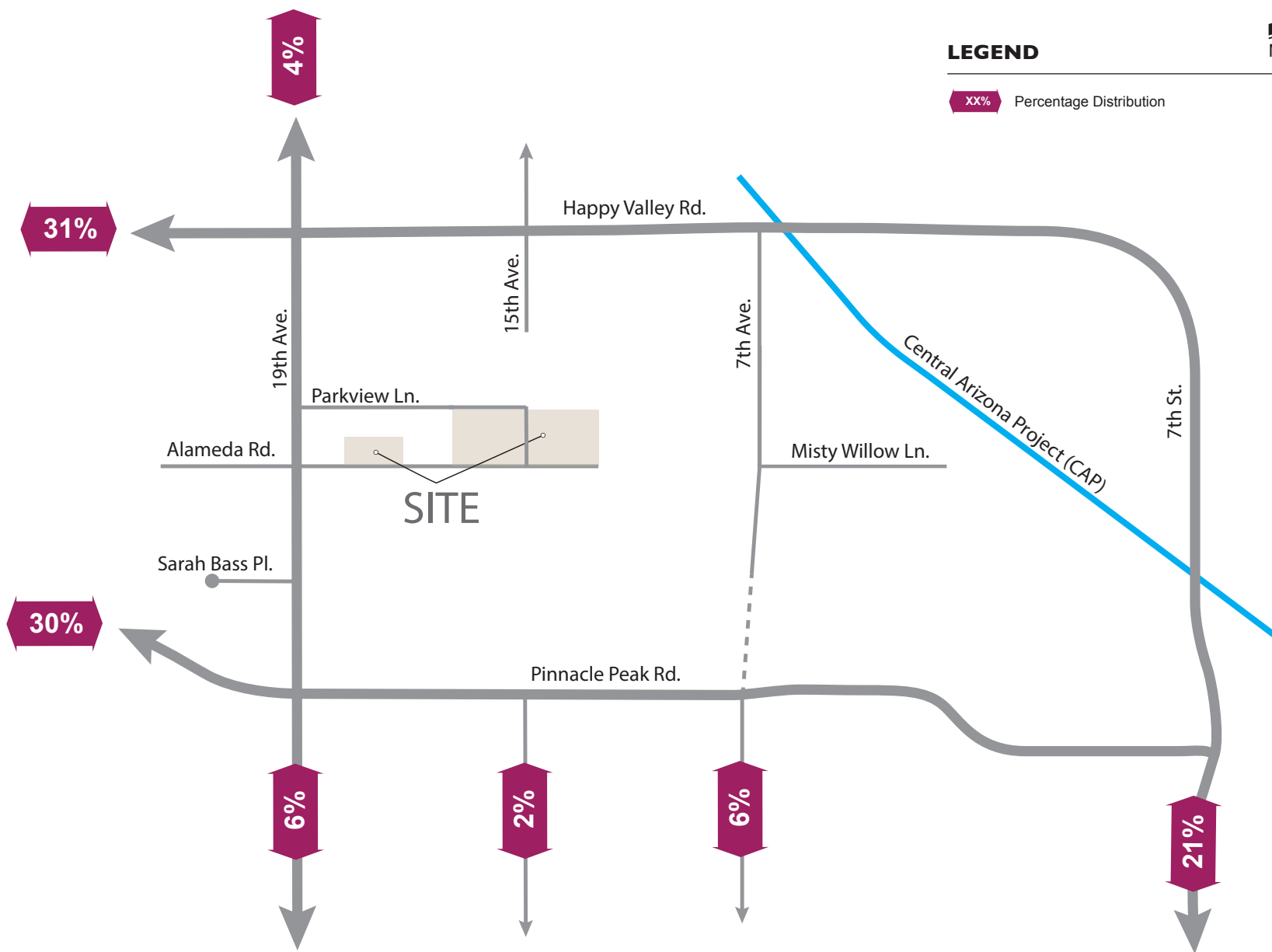
| Direction (To/From)  | Percentage  |
|--|-------------|
| North on 19 <sup>th</sup> Avenue (north of Happy Valley Road)  | 4%          |
| West on Happy Valley Road (west of 19 <sup>th</sup> Avenue)    | 31%         |
| West on Pinnacle Peak Road (west of 19 <sup>th</sup> Avenue)   | 30%         |
| South on 19 <sup>th</sup> Avenue (south of Pinnacle Peak Road) | 6%          |
| South on 15 <sup>th</sup> Avenue (south of Pinnacle Peak Road) | 2%          |
| South on 7 <sup>th</sup> Avenue (south of Pinnacle Peak Road)  | 6%          |
| South on 7 <sup>th</sup> Street (south of Pinnacle Peak Road)  | 21%         |
| <b>Total</b>   | <b>100%</b> |

**Figure 5** illustrates the trip distribution percentages noted in **Table 4** on the roadway network within the study area. The percentages presented in **Figure 5** were applied to the site trips generated to determine the AM and PM peak hour site traffic at the intersections within the study area. **Figure A and Figure 6B** present the resulting site generated traffic volumes for the proposed development under Horizon Year Build Scenario A .and Horizon Year Build Scenario B, respectively.

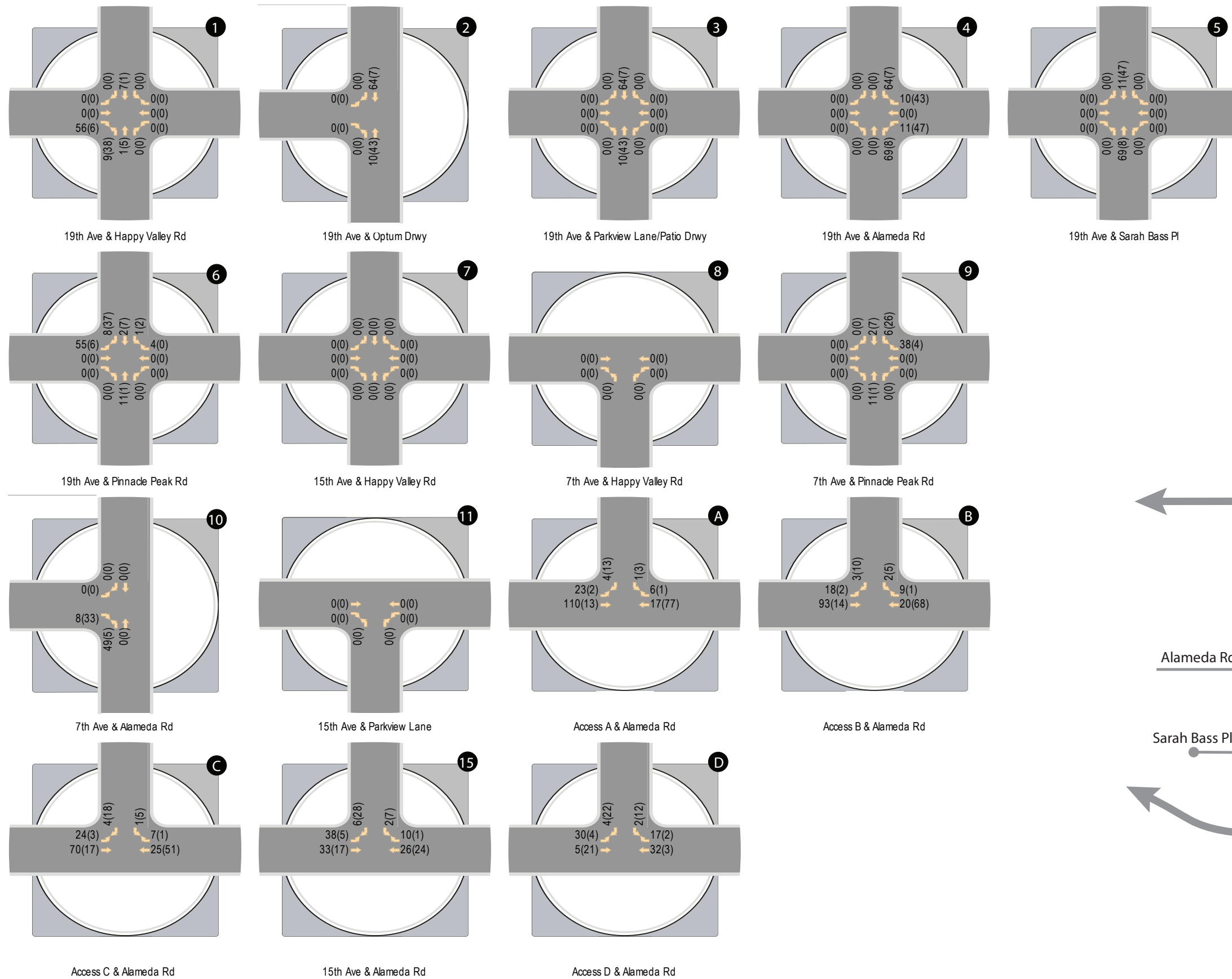


### LEGEND

XX% Percentage Distribution



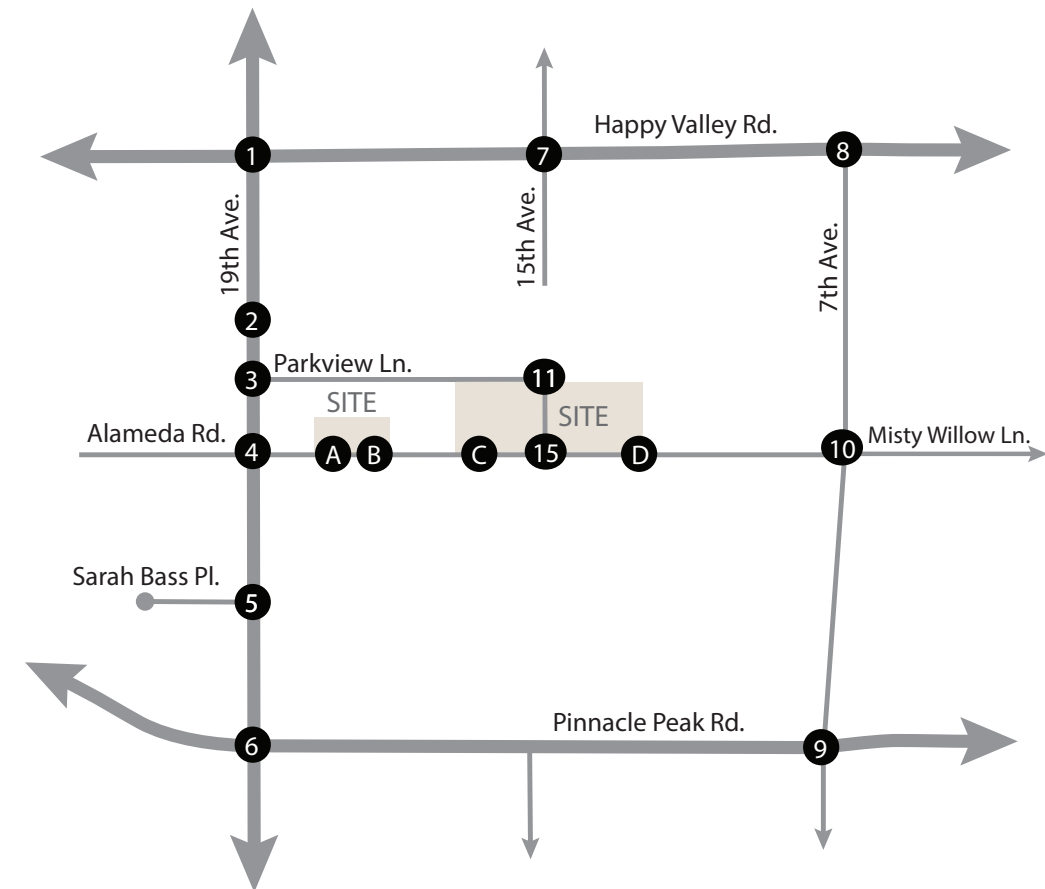
**Figure 5: Trip Distribution**



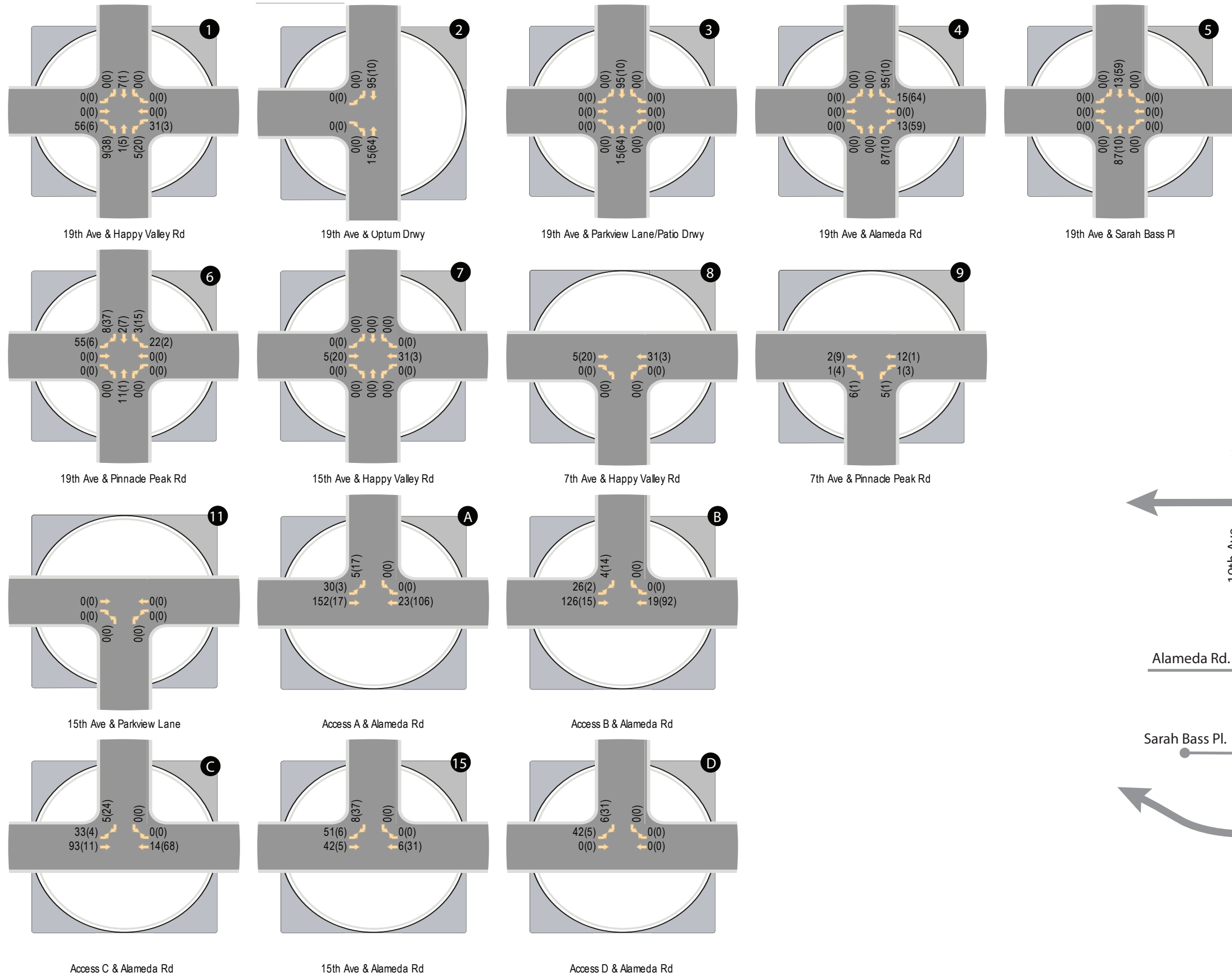
**LEGEND**

XX(XX) AM (PM) Peak Hour Traffic Volumes

NORTH

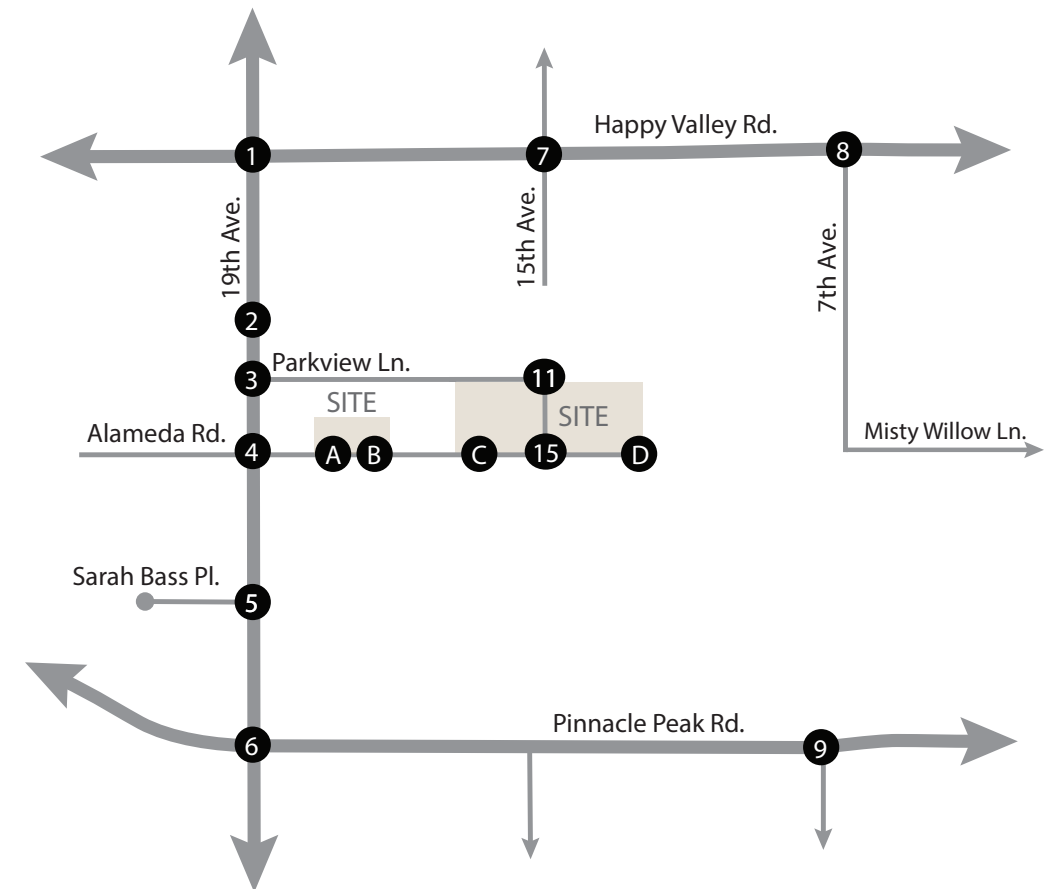


**Figure 6A: Site Generated Traffic Volumes Scenario A**



**LEGEND**  
 XX(XX) AM (PM) Peak Hour Traffic Volumes

**NORTH**



**Figure 6B: Site Generated Traffic Volumes Scenario B**

## FUTURE BACKGROUND TRAFFIC

For consistency with the manner in which existing traffic volumes were grown to establish horizon year base background traffic volumes for the ASLD/Mack Supplier Site A TIS, CivTech used an assumed average annual growth rate of 3.6% for the 2021-2024 time period, yielding a total background growth adjustment factor (the factor applied to existing traffic volumes to approximately 2024 base background traffic volumes) of 1.112. The source of information used to establish a growth rate for the Supplier Site A TIS was historical average annual daily traffic volume (AADT) data for I-17 between Deer Valley Road and Happy Valley Road obtained from the Arizona Department of Transportation (ADOT) website, <https://azdot.gov/planning/transportation-analysis/traffic-monitoring>. Base background traffic growth calculation backup documentation is provided in **Appendix F**.

In addition to accounting for regional growth cause increases in background traffic volumes between now and 2024, the traffic anticipated to be added to each study intersection by the full build-out of each of the ASLD/Mack Supplier Sites (A, B and C) was layered onto the 2024 base background traffic volumes to approximate what are effectively “all-in” 2024 background traffic volumes and the hereinafter referred to “No Build” condition for Scenario A. The land use assumptions upon which trip generation was estimated (and in turn, upon which development-generated peak hour traffic volumes were assigned to each study intersection) are briefly described below:

- For ASLD/Mack Supplier Site A, comprised of approximately the 157 acres bound by the Alameda Road alignment to the north, 7<sup>th</sup> Avenue to the east, the Sara Bass Place alignment to the south and 19<sup>th</sup> Avenue to the west, it was assumed that approximately 672,000 square feet of general office use and the trip generation equivalent of a 2.02 million square foot industrial park will have been developed on this site and become occupied by 2024,
- For ASLD/Mack Supplier Site B, comprised of 110 acres just northeast of the intersection of 7<sup>th</sup> Street and Alameda Road, it was assumed that 479,000 square feet of warehousing and the trip generation equivalent of a 1.44 million square foot industrial park will have been developed and become occupied by 2024.
- For ASLD/Mack Supplier Site C, comprised of 75 acres just southeast of the intersection of 7<sup>th</sup> Street and Pinnacle Peak Road, it was assumed that 327,000 square feet of warehousing and the trip generation equivalent of a 980,000 square foot industrial park will have been developed on this site and become occupied by 2024.

Scenario B does not include surrounding development site traffic and analyzes a scenario in which Deer Valley 30 is the first development to be constructed in the area. In order to compute 2024 background traffic volumes, or “No Build” volumes, the existing traffic volumes were grown by 3.6% per year, only.

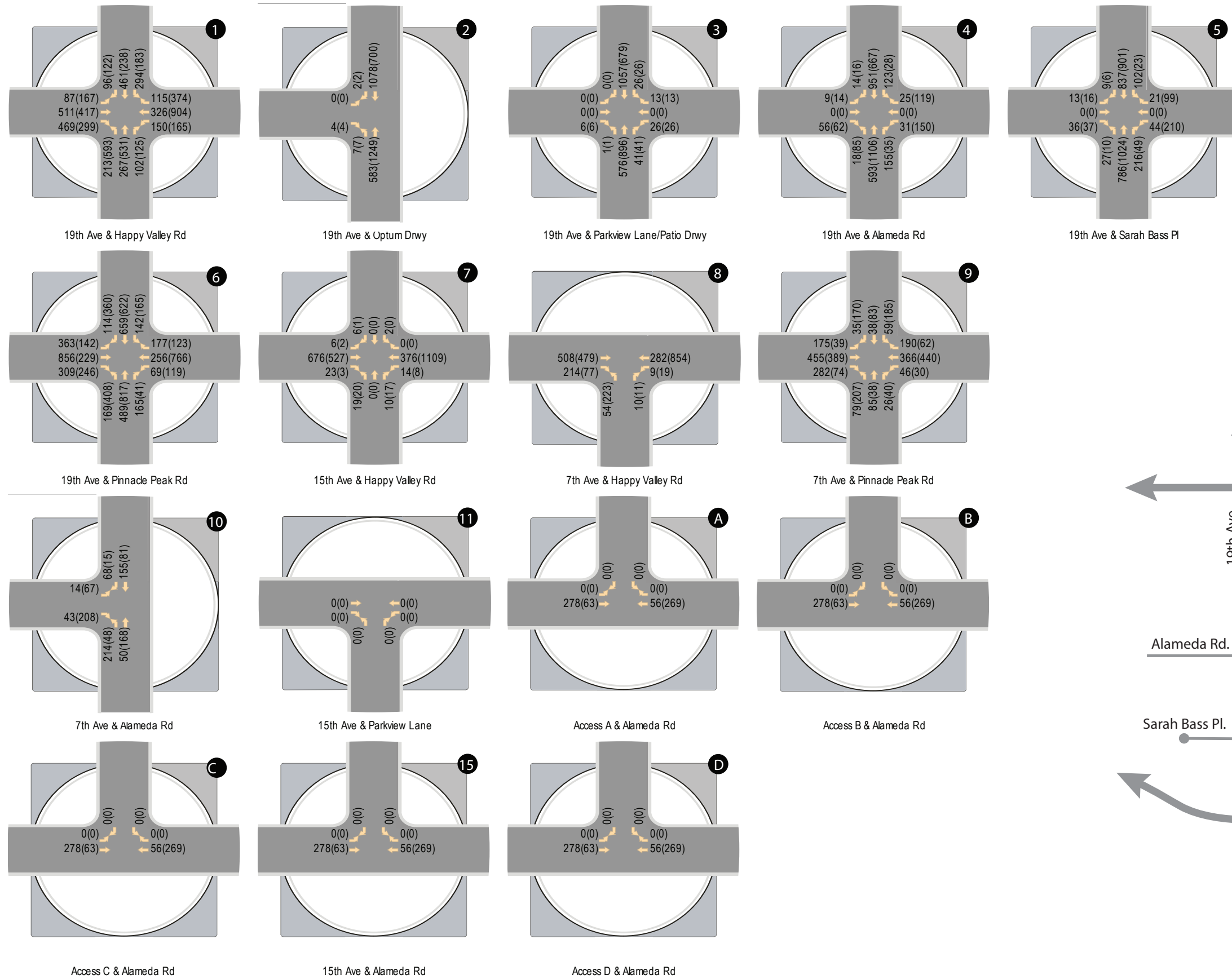
The resultant (all-in) background volumes for the buildout year of 2024 for Scenario A are presented in **Figure 7A**, the background traffic volumes for Scenario B are presented in **Figure**



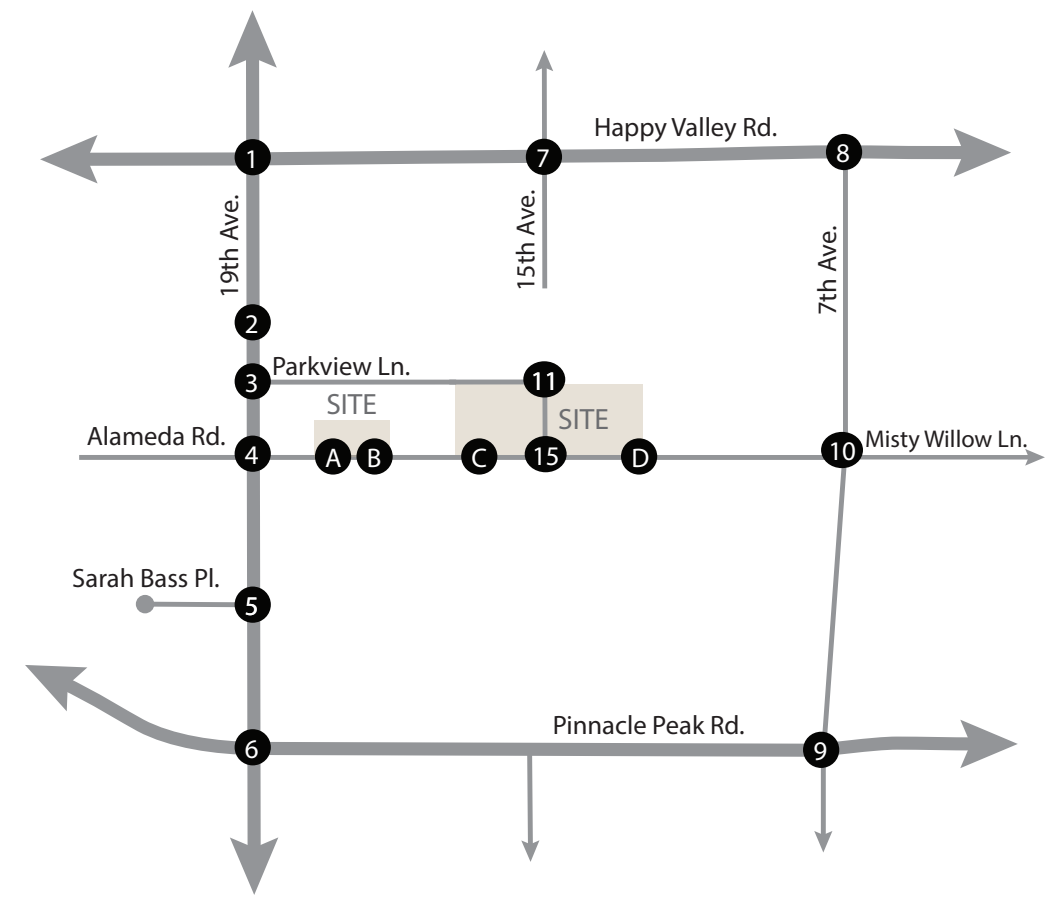
**7B.** Site traffic assignment figures obtained from the latest version of each of the three ASLD/Mach Supplier Site traffic impact studies to be included in Scenario A, are also provided in **Appendix F**.

### **TOTAL TRAFFIC VOLUMES**

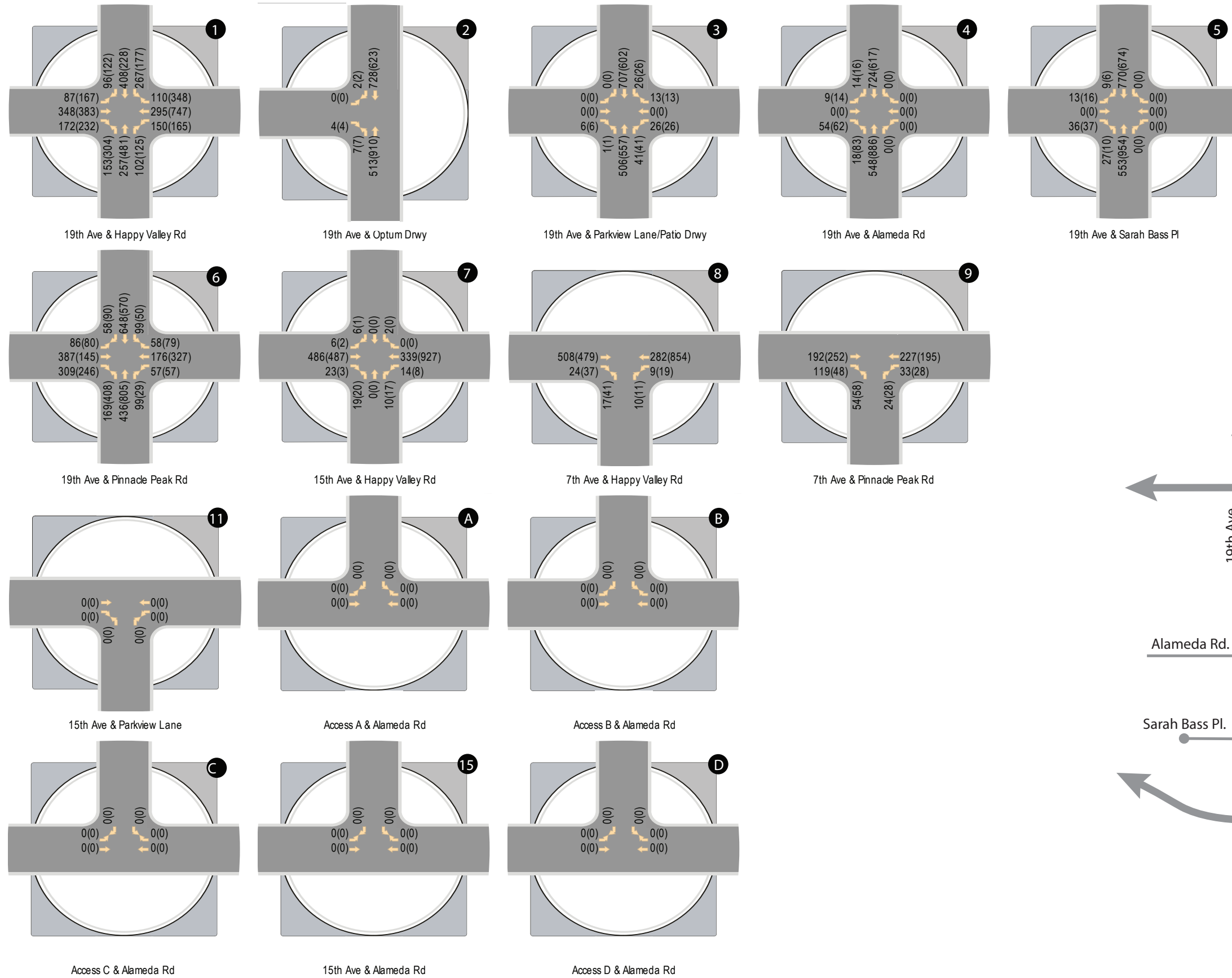
Total traffic volumes, the volumes used to analyze 2024 “Build” Conditions, were determined by adding Deer Valley 30 site-generated traffic volumes to the all-in background traffic volumes for both scenarios. Resultant 2024 AM and PM peak hour total traffic volumes for scenario A are presented in **Figure 8A**, for scenario B, the total traffic volumes are presented in **Figure 8B**.



**LEGEND**  
 XX(XX) AM (PM) Peak Hour Traffic Volumes

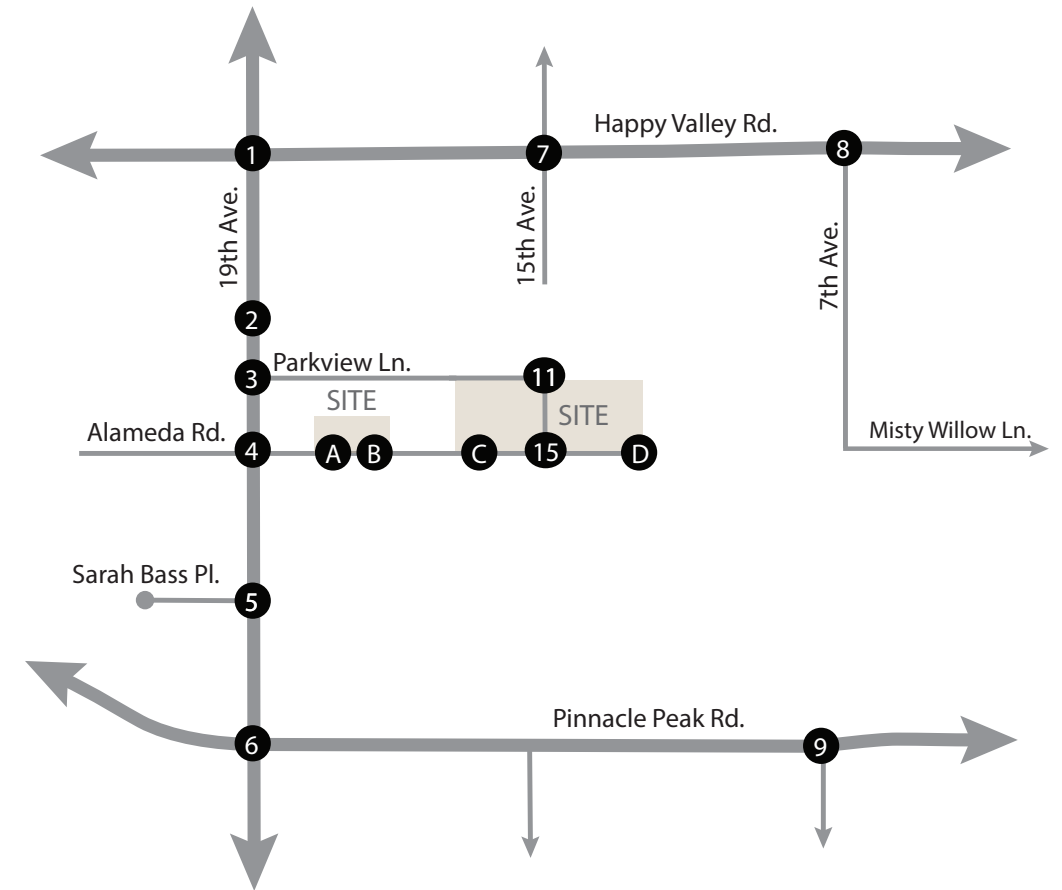


**Figure 7A: 2024 Background Traffic Volumes Scenario A**

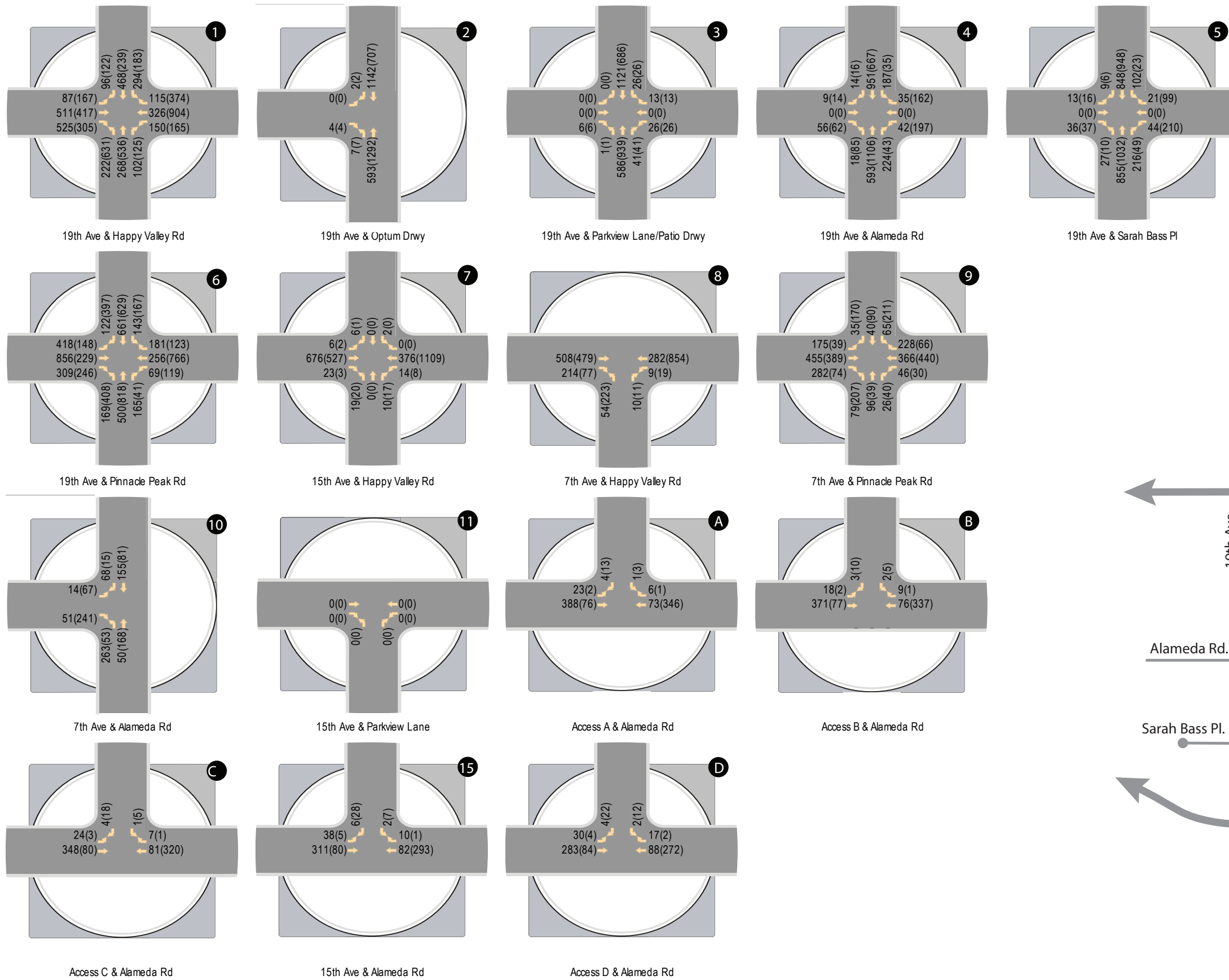


**LEGEND**

XX(XX) AM (PM) Peak Hour Traffic Volumes

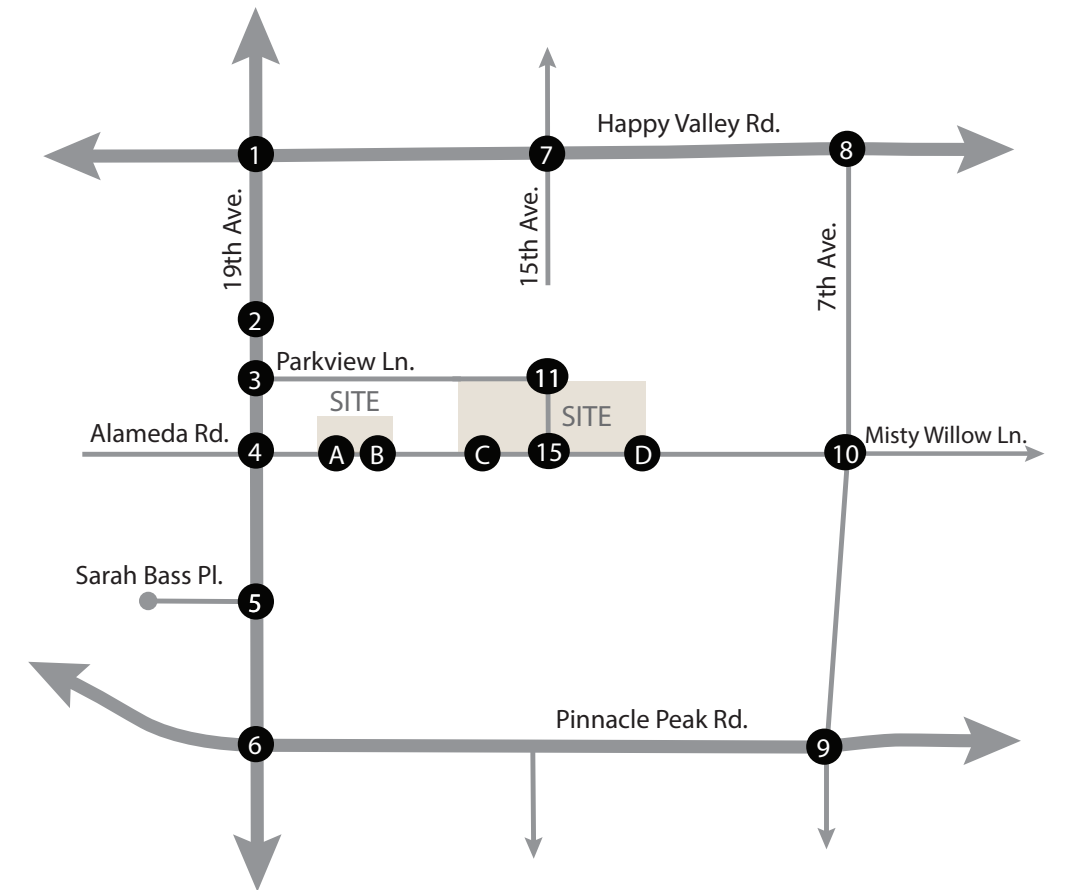


**Figure 7B: 2024 Background Traffic Volumes Scenario B**

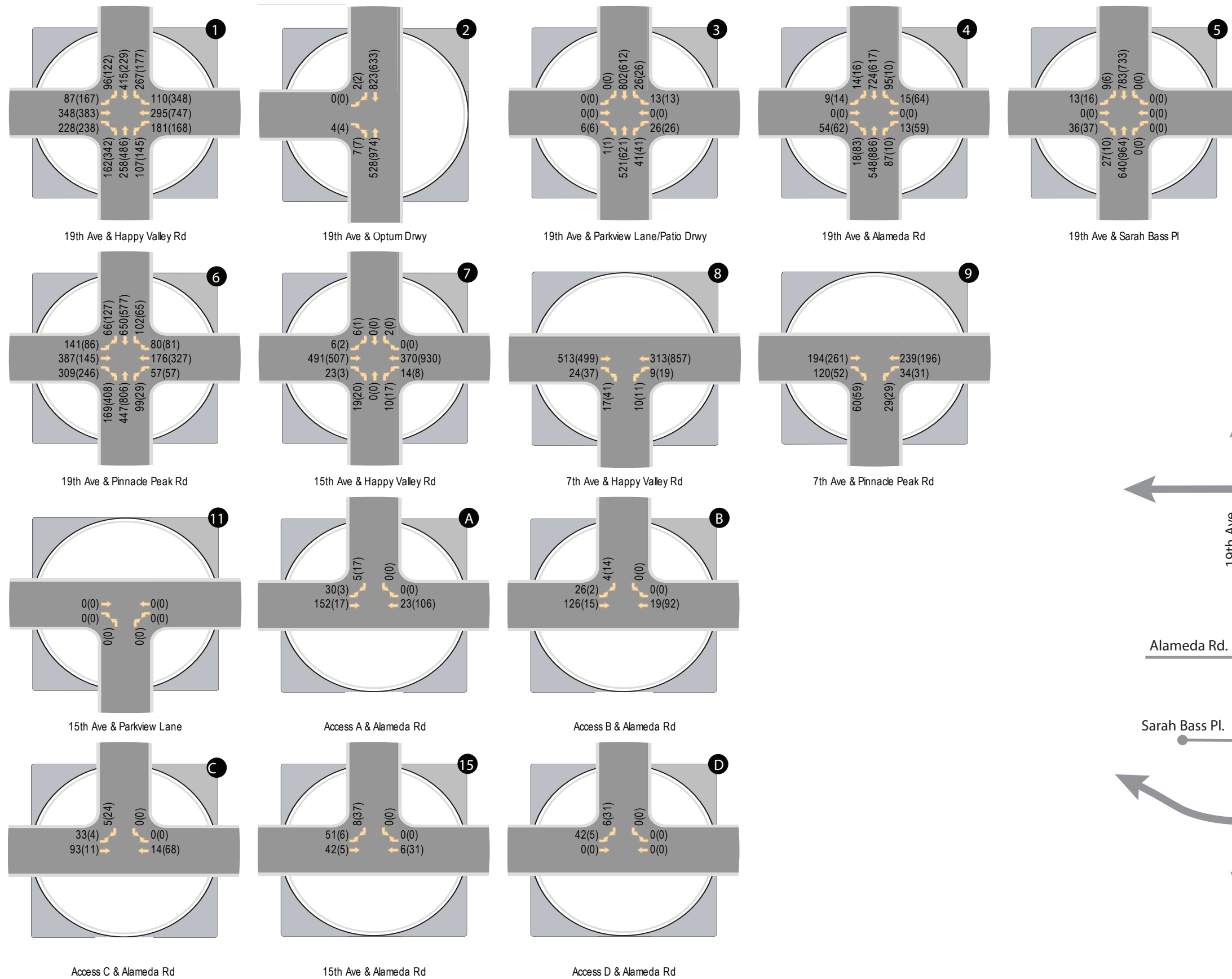


**LEGEND**

XX(X) AM (PM) Peak Hour Traffic Volumes



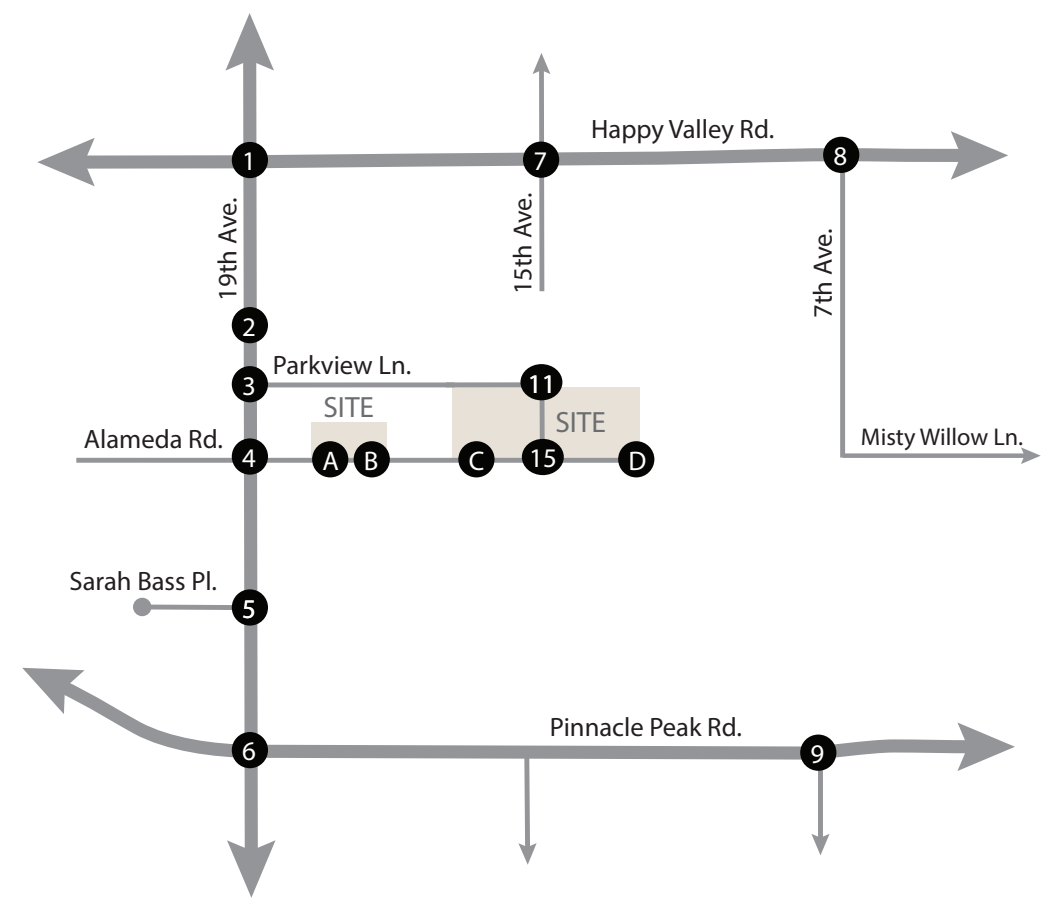
**Figure 8A: 2024 Total Traffic Volumes Scenario A**



**LEGEND**

XX(XX) AM (PM) Peak Hour Traffic Volumes

NORTH



**Figure 8B: 2024 Total Traffic Volumes Scenario B**

## TRAFFIC AND IMPROVEMENT ANALYSIS

The overall intersection and approach levels of service for Scenario A are summarized in **Table 5** for the 2024 background (No Build) and total (Build) traffic conditions. Detailed intersection capacity analysis and level of service reports for the No Build scenario are provided in **Appendix G** and reports for the Build scenario are provided in **Appendix H**.

The overall intersection and approach levels of service for Scenario B are summarized in **Table 6** for the 2024 background (No Build) and total (Build) traffic conditions. Detailed intersection capacity analysis and level of service reports for the No Build scenario are provided in **Appendix I** and reports for the Build scenario are provided in **Appendix J**.

### Scenario A

**Table 5 – 2024 Peak Hour Intersection Levels of Service Scenario A**

| ID | Intersection                                  | Intersection Control        | Approach/Movement | No Build LOS | Build LOS    |
|----|---|-----------------------------|-------------------|--------------|--------------|
|    |   |                             |                   | AM (PM)      | AM (PM)      |
| 1  | 19 <sup>th</sup> Ave & Happy Valley Rd        | Signal                      | NB                | D (D)        | D (D)        |
|    |   |                             | SB                | D (D)        | D (D)        |
|    |   |                             | EB                | D (D)        | D (D)        |
|    |   |                             | WB                | D (D)        | C (D)        |
|    |   |                             | <b>Overall</b>    | <b>D (D)</b> | <b>D (D)</b> |
| 2  | 19 <sup>th</sup> Ave & Optum Drwy             | 1-way stop (EB)             | NB Left           | B (A)        | B (A)        |
|    |   |                             | EB Shared         | B (B)        | B (B)        |
| 3  | 19 <sup>th</sup> Ave & Parkview Ln/Patio Drwy | 2-way stop (EB/WB)          | NB Left           | B (A)        | B (B)        |
|    |   |                             | SB Left           | B (C)        | B (C)        |
|    |   |                             | EB Shared         | B (B)        | B (D)        |
|    |   |                             | WB Shared         | D (E)        | D (E)        |
|    |   | Mitigated (Upstream Signal) | NB Left           | B (A)        | B (A)        |
|    | SB Left                                       | A (A)                       | A (A)             |              |              |
|    | EB Shared                                     | B (B)                       | B (B)             |              |              |
|    | WB Shared                                     | C (C)                       | C (C)             |              |              |
| 4  | 19 <sup>th</sup> Ave & Alameda Rd             | 2-way stop (EB/WB)          | NB Left           | B (A)        | B (A)        |
|    |   |                             | SB Left           | C (C)        | C (C)        |
|    |   |                             | EB Left           | F (F)        | F (F)        |
|    |   |                             | EB Thru/Right     | B (B)        | B (B)        |
|    |   |                             | WB Left           | F (F)        | F (F)        |
|    | WB Thru/Right                                 | B (B)                       | B (C)             |              |              |
|    | Mitigated (Signal)                            | NB                          | A (A)             | A (A)        |              |
| SB |   | A (A)                       | A (A)             |              |              |
| EB |   | D (D)                       | D (C)             |              |              |
|    |   | WB                          | C (D)             | C (D)        |              |
|    |   | <b>Overall</b>              | <b>A (B)</b>      | <b>A (B)</b> |              |
| 5  | 19 <sup>th</sup> Ave & Sarah Bass Pl          | 1-way stop (EB)             | NB Left           | B (B)        | B (B)        |
|    |   |                             | EB Left           | C (C)        | C (C)        |
|    |   |                             | EB Right          | B (B)        | B (B)        |
| 6  | 19 <sup>th</sup> Ave & Pinnacle Peak Rd       | Signal                      | NB                | C (D)        | C (D)        |
|    |   |                             | SB                | D (D)        | D (F)        |
|    |   |                             | EB                | D (D)        | E (D)        |
|    |   |                             | WB                | C (C)        | C (C)        |
|    |   |                             | <b>Overall</b>    | <b>D (D)</b> | <b>D (E)</b> |

| ID | Intersection                           | Intersection Control        | Approach/Movement  | No Build LOS                                       | Build LOS  |
|----|--|-----------------------------|--|--|--|
|    |  |                             |  | AM (PM)  | AM (PM)  |
|    |  | Mitigated (Signal Timing)   | NB<br>SB<br>EB<br>WB<br><b>Overall</b>                                     | -  | C (D)<br>D (D)<br>D (D)<br>C (C)<br><b>D (D)</b>   |
| 7  | 15 <sup>th</sup> Ave & Happy Valley Rd | 2-way stop (NB/SB)          | NB Shared<br>SB Shared<br>EB Left<br>EB Thru<br>WB Left<br>WB Thru         | D (F)<br>C (C)<br>A (B)<br>A (A)<br>A (A)<br>A (A) | D (F)<br>C (C)<br>A (B)<br>A (A)<br>A (A)<br>A (A) |
|    |  | Mitigated (Upstream Signal) | NB Shared<br>SB Shared<br>EB Left<br>EB Thru<br>WB Left<br>WB Thru         | D (B)<br>C (D)<br>A (C)<br>A (A)<br>A (A)<br>A (A) | D (B)<br>C (D)<br>A (C)<br>A (A)<br>A (A)<br>A (A) |
| 8  | 7 <sup>th</sup> Ave & Happy Valley Rd  | 1-way stop (NB)             | NB Shared<br>WB Left<br>WB Thru  | C (F)<br>A (A)<br>A (A)                            | C (F)<br>A (A)<br>A (A)                            |
|    |  | Mitigated (Signal)          | NB<br>EB<br>WB<br><b>Overall</b>   | B (C)<br>C (B)<br>B (C)<br><b>C (C)</b>            | B (C)<br>C (B)<br>B (C)<br><b>C (C)</b>            |
| 9  | 7 <sup>th</sup> Ave & Pinnacle Peak Rd | 2-way stop (NB/SB)          | NB Left<br>NB Thru/Right<br>SB Left<br>SB Thru/Right<br>EB Left<br>WB Left | F (F)<br>F (C)<br>F (F)<br>F (F)<br>A (A)<br>A (A) | F (F)<br>F (C)<br>F (F)<br>F (F)<br>A (A)<br>A (A) |
|    |  | Mitigated (Signal)          | NB<br>SB<br>EB<br>WB<br><b>Overall</b>                                     | C (C)<br>D (D)<br>D (C)<br>D (C)<br><b>D (C)</b>   | C (C)<br>D (D)<br>D (C)<br>C (C)<br><b>D (C)</b>   |
| 10 | 7 <sup>th</sup> Ave & Alameda Rd       | 1-way stop (EB)             | NB Left<br>EB Shared   | A (A)<br>B (B)                                     | A (A)<br>B (B)                                     |
| 11 | 15 <sup>th</sup> Ave & Parkview Ln     | 1-way stop (NB)             | NB Shared<br>WB Left   | -  | A (A)<br>A (A)                                     |
| A  | Access A & Alameda Rd                  | 1-way stop (SB)             | SB Shared<br>EB Left<br>EB Thru  | -  | A (B)<br>A (A)<br>A (A)                            |
| B  | Access B & Alameda Rd                  | 1-way stop (SB)             | SB Shared<br>EB Left<br>EB Thru  | -  | B (B)<br>A (A)<br>A (A)                            |
| C  | Access C & Alameda Rd                  | 1-way stop (SB)             | SB Shared<br>EB Left<br>EB Thru  | -  | A (B)<br>A (A)<br>A (A)                            |
| 15 | 15 <sup>th</sup> Ave & Alameda Rd      | 1-way stop (SB)             | SB Shared<br>EB Left<br>EB Thru  | -  | A (B)<br>A (A)<br>A (A)                            |

| ID | Intersection          | Intersection Control | Approach/Movement               | No Build LOS | Build LOS               |
|----|-----------------------|----------------------|---------------------------------|--------------|-------------------------|
|    |                       |                      |                                 | AM (PM)      | AM (PM)                 |
| D  | Access D & Alameda Rd | 1-way stop (SB)      | SB Shared<br>EB Left<br>EB Thru | -            | A (B)<br>A (A)<br>A (A) |

The results of the Synchro analysis summarized in **Table 5** indicate the following improvements will be warranted by a combination of traffic increases caused by regional growth and Supplier Site development, with or without development having occurred on either of the Deer Valley 30 sites and, if implemented will allow acceptable levels of service to be achieved (or, if already being achieved, maintained) through 2024 and buildout of all ASLD/Mack Supplier Site and Deer Valley 30 development as currently proposed:

At the already signalized intersection of **19<sup>th</sup> Avenue and Happy Valley Road**, dual left turn lanes and protected left turn phasing on/for all four approaches will both be warranted and are therefore recommended to maintain acceptable levels of service during both peak hours through 2024, with or without Deer Valley 30 development. In addition, since the addition of protected left turn phases will take away some green time from the through movements, it is also recommended that the cycle length be changed from 96 seconds to 105 seconds. The intersection appears to be configured to accommodate dual left turns of roughly equal length of what are now striped as single turn lanes (about 250 feet) such that dual left turn lanes can be created through pavement marking modifications. The extent of the traffic signal equipment improvements necessary to add the protected only phases is not fully known but will require at a minimum, new left turn signal heads on all four approaches. With the recommended turn lane and signal improvements, this intersection should provide acceptable levels of service on all approaches during both peak hours through buildout of all ASLD/Mack Supplier Site and Deer Valley 30 development as currently proposed.

At the minor approach stop-controlled intersection of **19<sup>th</sup> Avenue and Alameda Road**, the introduction of an east leg and westbound approach volumes of the magnitude projected with or without Deer Valley 30 development will cause traffic signal control to be both warranted per applicable *Manual on Uniform Traffic Control Devices* (MUTCD) standards, and necessary to maintain acceptable levels of service on all approaches. It is recommended that the signal pole foundations, conduit, pull boxes and all other underground and ground level features necessary to signalize the intersection be in place before any development that is dependent on the east leg of this intersection for access is open to everyday traffic (i.e., before this segment of Alameda Road needs to be more than a construction access road). It is further recommended that exclusive left turn lanes be provided on all four approaches to this intersection to maximize the efficiency of the intersection. The northbound and southbound left turn lanes should provide the City’s standard minimum of 150 feet of queue storage length. Two-way left turn lanes already exist along 19<sup>th</sup> Avenue in this vicinity and can just be restriped near the intersection to convert them to single direction turn lanes. It is recommended that the westbound left turn lane provide at least 75 feet of queue storage from the start, and provide 250 feet of queue storage length before both Supplier Site A and Deer Valley 30 sites are fully developed. Width to provide 250 feet of queue storage length is not likely to exist until such time as the property on the northeast corner of the intersection develops and with that development the site-adjacent segment of the



ultimate north half of Alameda Road gets constructed and dedicated. The eastbound approach currently provides enough width immediately west of the intersection to provide a short eastbound left turn only lane (enough for 1-2 vehicles to queue while still allowing an upstream vehicle wanting to turn right (and/or through in the proposed/with east leg condition) to pass them. While 150 feet of turn lane queue storage is the City's standard and should ultimately be provided, until such time as considerably more development occurs along Alameda Road west of 19<sup>th</sup> Avenue, the existing queue storage provisions should be adequate. Once signalized and improved as necessary to provide an exclusive left turn lane on all approaches, this intersection should provide acceptable levels of service on all approaches during both peak hours through buildout of all ASLD/Mack Supplier Site and Deer Valley 30 development as currently proposed.

At the already signalized intersection of **19<sup>th</sup> Avenue and Pinnacle Peak Road**, continued traffic growth, with or without Deer Valley 30 development, is likely to cause need for traffic signal timing adjustments in order for acceptable levels of services to continue to be achieved on all approaches. Efforts to optimize the signal timing to achieve acceptable levels of service under both Build and No Build scenarios, indicate significant reductions in driver delay on both northbound and southbound approaches, under both scenarios could be achieved by making the following signal timing adjustments:

- Extend the northbound through phase from 45 seconds to 51 seconds and the northbound left turn phase from 14 seconds to 21 seconds.
- Extend the southbound through phase from 30 seconds to 31 seconds.

At the currently stop sign controlled (northbound approach only) intersection of **7<sup>th</sup> Avenue and Happy Valley Road**, continued growth in background traffic, even without any ASLD/Mack Supplier Site or Deer Valley 30 development, is likely to cause need for widening of Happy Valley Road to provide traffic signal control an exclusive westbound left turn lane before the end of 2024. Deer Valley 30 is not expected to add any traffic to this intersection until Happy Valley Rd and Desert Peak Pkwy connect to provide an east-west arterial alternative to L101, Deer Valley Drive and Sonoran Boulevard.

At the intersection of **7<sup>th</sup> Avenue and Pinnacle Peak Road**, continued growth in background traffic, even without any ASLD/Mack Supplier Site or Deer Valley 30 development, is likely to cause need for traffic signal control before the end of 2024. Under traffic signal control with a 100-second cycle length, this intersection should provide acceptable levels of service on all approaches during both peak hours through buildout of all ASLD/Mack Supplier Site and Deer Valley 30 development as currently proposed.

Scenario B

**Table 6 – 2024 Peak Hour Intersection Levels of Service Scenario B**

| ID | Intersection                                  | Intersection Control | Approach/Movement | No Build LOS | Build LOS    |
|----|---|----------------------|-------------------|--------------|--------------|
|    |   |                      |                   | AM (PM)      | AM (PM)      |
| 1  | 19 <sup>th</sup> Ave & Happy Valley Rd        | Signal               | NB                | C (D)        | C (C)        |
|    |   |                      | SB                | D (C)        | C (C)        |
|    |   |                      | EB                | B (C)        | C (C)        |
|    |   |                      | WB                | B (B)        | C (D)        |
|    |   |                      | <b>Overall</b>    | <b>C (C)</b> | <b>C (C)</b> |
| 2  | 19 <sup>th</sup> Ave & Optum Drwy             | 1-way stop (EB)      | NB Left           | A (A)        | B (A)        |
|    |   |                      | EB Shared         | B (B)        | B (B)        |
| 3  | 19 <sup>th</sup> Ave & Parkview Ln/Patio Drwy | 2-way stop (EB/WB)   | NB Left           | A (A)        | A (A)        |
|    |   |                      | SB Left           | B (B)        | B (B)        |
|    |   |                      | EB Shared         | B (B)        | B (B)        |
|    |   |                      | WB Shared         | C (C)        | C (C)        |
| 4  | 19 <sup>th</sup> Ave & Alameda Rd             | 2-way stop (EB/WB)   | NB Left           | A (A)        | A (A)        |
|    |   |                      | SB Left           | A (A)        | A (B)        |
|    |   |                      | EB Left           | C (B)        | C (C)        |
|    |   |                      | EB Thru/Right     | B (B)        | B (B)        |
|    |   |                      | WB Left           | A (A)        | C (C)        |
|    |   |                      | WB Thru/Right     | A (A)        | A (B)        |
| 5  | 19 <sup>th</sup> Ave & Sarah Bass Pl          | 1-way stop (EB)      | NB Left           | B (A)        | B (A)        |
|    |   |                      | EB Left           | C (C)        | C (C)        |
|    |   |                      | EB Right          | B (B)        | B (B)        |
| 6  | 19 <sup>th</sup> Ave & Pinnacle Peak Rd       | Signal               | NB                | C (C)        | C (C)        |
|    |   |                      | SB                | D (D)        | D (D)        |
|    |   |                      | EB                | C (C)        | C (C)        |
|    |   |                      | WB                | B (C)        | B (C)        |
|    |   |                      | <b>Overall</b>    | <b>C (C)</b> | <b>C (C)</b> |
| 7  | 15 <sup>th</sup> Ave & Happy Valley Rd        | 2-way stop (NB/SB)   | NB Shared         | C (E)        | C (E)        |
|    |   |                      | SB Shared         | B (C)        | B (C)        |
|    |   |                      | EB Shared         | A (B)        | A (B)        |
|    |   |                      | WB Shared         | A (A)        | A (A)        |
| 8  | 7 <sup>th</sup> Ave & Happy Valley Rd         | 1-way stop (NB)      | NB Shared         | C (E)        | C (E)        |
|    |   |                      | WB Left           | A (A)        | A (A)        |
|    |   |                      | WB Thru           | A (A)        | A (A)        |
| 9  | 7 <sup>th</sup> Ave & Pinnacle Peak Rd        | 2-way stop (NB/SB)   | NB Left           | B (B)        | C (C)        |
|    |   |                      | NB Thru/Right     | A (B)        | A (B)        |
|    |   |                      | SB Left           | A (A)        | A (A)        |
|    |   |                      | SB Thru/Right     | A (A)        | A (A)        |
|    |   |                      | EB Left           | A (A)        | A (A)        |
|    |   |                      | WB Left           | A (A)        | A (A)        |
| 11 | 15 <sup>th</sup> Ave & Parkview Ln            | 1-way stop (NB)      | NB Shared         | -            | A (A)        |
|    |   |                      | WB Left           | -            | A (A)        |
| A  | Access A & Alameda Rd                         | 1-way stop (SB)      | SB Shared         | -            | A (A)        |
|    |   |                      | EB Left           | -            | A (A)        |
|    |   |                      | EB Thru           | -            | A (A)        |
| B  | Access B & Alameda Rd                         | 1-way stop (SB)      | SB Shared         | -            | A (A)        |
|    |   |                      | EB Left           | -            | A (A)        |
|    |   |                      | EB Thru           | -            | A (A)        |

| ID | Intersection                      | Intersection Control | Approach/Movement               | No Build LOS | Build LOS               |
|----|-----------------------------------|----------------------|---------------------------------|--------------|-------------------------|
|    |                                   |                      |                                 | AM (PM)      | AM (PM)                 |
| C  | Access C & Alameda Rd             | 1-way stop (SB)      | SB Shared<br>EB Left<br>EB Thru | -            | A (A)<br>A (A)<br>A (A) |
| 15 | 15 <sup>th</sup> Ave & Alameda Rd | 1-way stop (SB)      | SB Shared<br>EB Left<br>EB Thru | -            | A (A)<br>A (A)<br>A (A) |
| D  | Access D & Alameda Rd             | 1-way stop (SB)      | SB Shared<br>EB Left<br>EB Thru | -            | A (A)<br>A (A)<br>A (A) |

The results of the Synchro analysis summarized in **Table 6** indicate the following improvements will be warranted with development having only occurred for the Deer Valley 30 site.

At the already signalized intersection of **19<sup>th</sup> Avenue and Happy Valley Road**, permissive-protected phasing is currently being utilized and is recommended to continue being utilized with some minor green time adjustments. Dual left turn lanes are not needed on any of the approaches in this scenario since the permissive-protected phasing allows enough green time for the left turning vehicles to clear the intersection with minimal delays and queue lengths.

## TRAFFIC SIGNAL WARRANT ANALYSIS

CivTech completed a volume-based traffic signal warrant analysis in accordance with standard traffic signal warranting criteria found in the *Manual on Uniform Traffic Control Devices, 2009 Edition* (MUTCD) for four of the Deer Valley 30 TIS study intersections as part of the traffic impact analysis performed for the ASLD/Mack Supplier Site A TIS update currently under review by the City of Phoenix. The four analyzed intersections are 19<sup>th</sup> Avenue and Alameda Road, 7<sup>th</sup> Avenue and Pinnacle Peak Road, 7<sup>th</sup> Avenue and Happy Valley Road, and 7<sup>th</sup> Avenue and Alameda Road. The intersection of 7<sup>th</sup> Avenue and Alameda Road is only considered in Scenario A since the extension of Alameda Road is not necessary if only the DV30 development is present.

For scenario A, or the ultimate buildout scenario, the results of the traffic signal warrant analysis indicate that traffic signals will be warranted by 2024 at all of these intersections, with or without Supplier Site A development with the exception of 7<sup>th</sup> Avenue and Alameda Road. For this intersection, the minor street approach volume is not high enough to meet any of the three signal warrants. A comprehensive explanation of the applicable traffic signal warrant criteria and analysis approach is provided in the Supplier Site A TIS and is therefore has not been repeated in this report. However, for scope consistency with the ASLD/Mach Supplier Site A TIS, traffic signal warrant analysis has been repeated as part of the Deer Valley 30 TIS for what, in the Supplier Site A TIS is considered the 2024 "Build" scenario and in this TIS is considered the 2024 "No Build" scenario, and a separate traffic signal warrant analysis performed in the exact same manner has additionally been completed for the Deer Valley 30 "2024 Build" Scenario.

For Scenario B, only the intersection of 19<sup>th</sup> Avenue and Alameda Road meets the volume criteria for all three signal warrants. Signal warrants are not satisfied at the other two intersections and are therefore not warranted with only Deer Valley 30 traffic volumes.

**Table 7 – Volume-Based Traffic Signal Warrant Analysis Results Summary**

| Intersection                             | Posted Speed Limit on Major Road | Design Speed Limit on Major Road | Warrant Met Without Site Traffic (Background A) (Y/N)? | Warrant Met Without Site Traffic (Background B) (Y/N)? | Warrant Met with Site Traffic (Total A) (Y/N)? | Warrant Met with Site Traffic (Total B) (Y/N)? |
|--|----------------------------------|----------------------------------|--|--|--|--|
| 19 <sup>th</sup> Ave and Alameda Rd      | 45 mph                           | 50 mph                           | Y  | N  | Y  | N  |
| 7 <sup>th</sup> Ave and Happy Valley Rd  | 45 mph                           | 50 mph                           | Y  | N  | Y  | N  |
| 7 <sup>th</sup> Ave and Pinnacle Peak Rd | 35 mph                           | 40 mph                           | Y  | N  | Y  | N  |
| 7 <sup>th</sup> Ave & Alameda Rd         | 35 mph                           | 40 mph                           | N  | -  | N  | -  |

**Table 7** summarizes the volume-based warrant analysis results. For Scenario A, the scenario which includes Supplier Site A traffic volumes in the background traffic calculations, all three signal warrants are met for all three of the study intersections with or without the addition of DV30 site traffic.

For Scenario B, the scenario which does not include Supplier Site A traffic volumes and only includes DV30 site traffic, none of the signal warrants are met for the study intersections. The intersection of 19<sup>th</sup> Avenue and Alameda Road will be the main entry/exit for both Supplier Site A and DV30 once both are constructed; the signal warrant analysis results indicate that a signal is only warranted at this location if Supplier Site A is constructed. If only DV30 is constructed, a signal is not warranted at this location and not needed due to the adequate levels of service discussed previously. Detailed signal warrant analysis worksheets are provided in **Appendix I**.

## TURN LANE QUEUE LENGTH ANALYSIS

Adequate turn storage should be provided on any intersection approach where turn lanes are permitted and/or warranted. A queuing analysis was performed for all warranted/required intersection turn lanes using future total turning movement volumes. The turn lane queuing analysis was performed by applying (with the help of Synchro analysis software) HCM “95<sup>th</sup> Percentile Queue” methodology. The 95<sup>th</sup> Percentile methodology takes into account the intersection geometry, intersection traffic control, conflicting traffic flow and whether the movement is a left turn or a right turn.

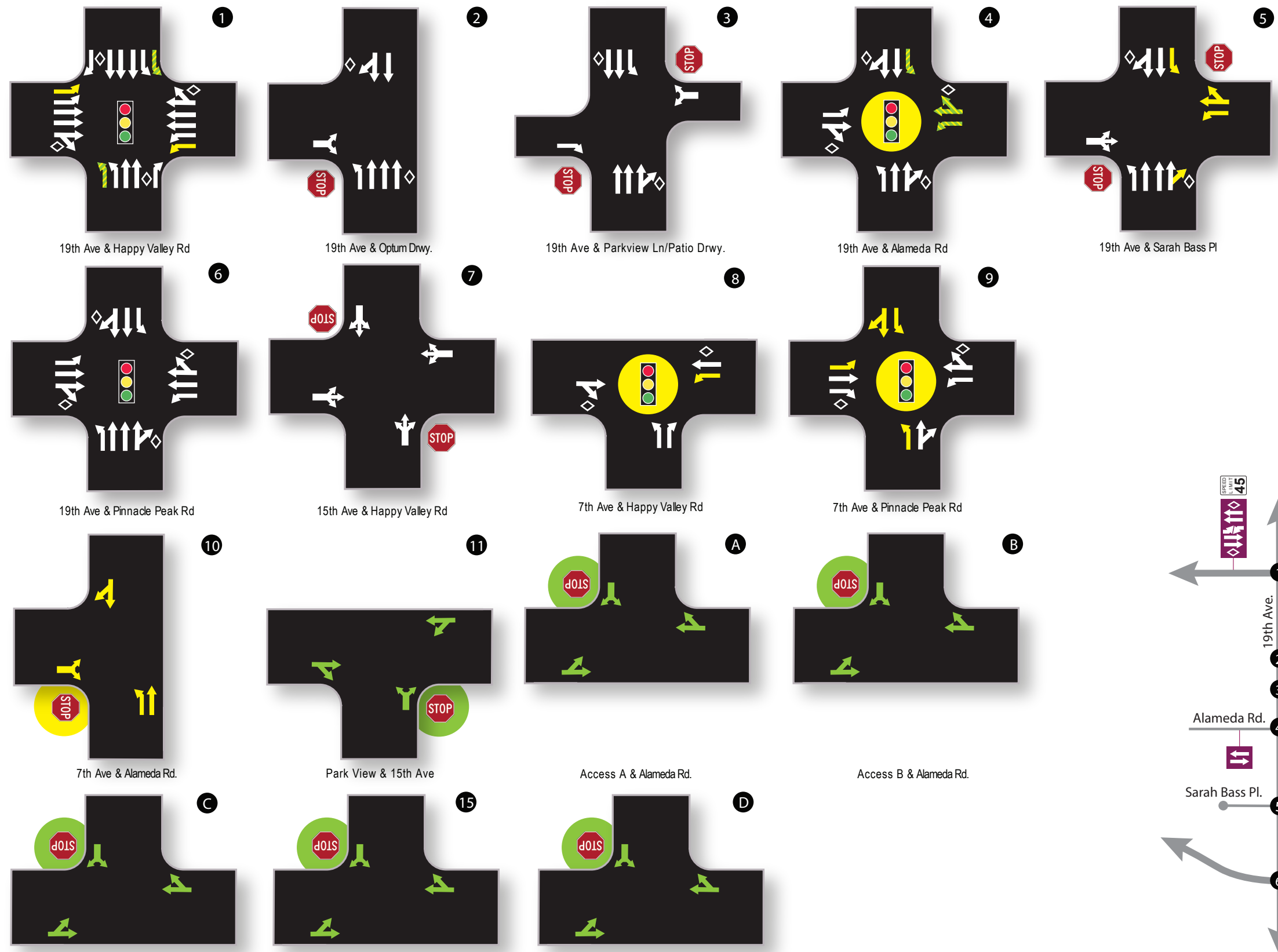
2024 total traffic volumes were utilized for the calculations. Results are summarized in **Table 8**. Calculations for the AASHTO queue storage length recommendations and the 95<sup>th</sup> percentile HCM 2016 queue storage length recommendations are provided in **Appendix J**. The 95<sup>th</sup> percentile queue storage lengths are given in vehicles and multiplied by 25 feet per vehicle to determine the storage length.

**Table 8 – Turn Lane Queue Storage Lengths**

| ID       | Intersection   | Intersection Control | Movement | Queue Storage |                    |                    |               |
|----------|--|----------------------|----------|---------------|--------------------|--------------------|---------------|
|          |  |                      |          | Existing (1)  | HCM Scenario A (3) | HCM Scenario B (3) | Recommended   |
| 1        | 19 <sup>th</sup> Avenue & Happy Valley Road            | Signal               | NB Left  | 265'          | 265'               | 255'               | (7)2@265'     |
|          |  |                      | SB Left  | 265'          | 205'               | 200'               | (7)2@265'     |
|          |  |                      | EB Left  | 350'          | 130'               | 220'               | (7)2@350'     |
|          |  |                      | WB Left  | 255'          | 95'                | 135'               | (7)2@255'     |
|          |  |                      | NB Right | 260'          | 35'                | 45'                | No Change     |
|          |  |                      | SB Right | 265'          | 30'                | 25'                | No Change     |
| 2        | 19 <sup>th</sup> Avenue & Optum Driveway               | 1-way stop (EB)      | NB Left  | TWLTL         | <25'               | <25'               | No Change     |
| 3        | 19 <sup>th</sup> Avenue & Parkview Lane/Patio Driveway | 2-way stop (EB/WB)   | NB Left  | TWLTL         | <25'               | <25'               | No Change     |
|          |  |                      | SB Left  | TWLTL         | <25'               | <25'               | No Change     |
| 4        | 19 <sup>th</sup> Avenue & Alameda Road                 | 2-way stop (EB/WB)   | NB Left  | TWLTL         | 45'                | <25'               | 150'          |
|          |  |                      | SB Left  | TWLTL         | 175'               | <25'               | 150'          |
|          |  |                      | EB Left  | --            | 25'                | <25'               | (4)150'       |
|          |  |                      | WB Left  | --            | 245'               | <25'               | (5) 250'      |
| 5        | 19 <sup>th</sup> Avenue & Sarah Bass Place             | 1-way stop (EB)      | NB Left  | TWLTL         | <25'               | <25'               | No Change     |
| 6        | 19 <sup>th</sup> Avenue & Pinnacle Peak Road           | Signal               | NB Left  | 210'          | 480'               | 440'               | (6) No Change |
|          |  |                      | SB Left  | 185'          | 255'               | 135'               | (6) No Change |
|          |  |                      | EB Left  | 270'          | 520'               | 105'               | (6) No Change |
|          |  |                      | WB Left  | 160'          | 130'               | 55'                | No Change     |
| 8        | 7 <sup>th</sup> Avenue & Happy Valley Road             | Signal               | NB Left  | --            | 255'               | -                  | 255'          |
|          |  |                      | WB Left  | --            | <25'               | -                  | (4)150'       |
| 9        | 7 <sup>th</sup> Avenue & Pinnacle Peak Road            | Signal               | NB Left  | --            | 255'               | -                  | 255'          |
|          |  |                      | SB Left  | --            | 285'               | -                  | 280'          |
|          |  |                      | EB Left  | --            | 295'               | -                  | 295'          |
|          |  |                      | WB Left  | --            | 45'                | -                  | (4)150'       |
|          |  |                      | EB Right | 175'          | 50'                | -                  | No Change     |
|          |  | 2-way stop (NB/SB)   | NB Left  | --            | --                 | <25'               | <25'          |
| SB Left  | --   | --                   | <25'     | <25'          | (4) 150'           |                    |               |
| EB Left  | --   | --                   | -        | <25'          | <25'               | (4) 150'           |               |
| WB Left  | --   | --                   | <25'     | <25'          | <25'               | (4) 150'           |               |
| EB Right | 175'   | --                   | <25'     | <25'          | <25'               | No Change          |               |
| 10       | 7 <sup>th</sup> Avenue & Alameda Road                  | 1-way stop (EB)      | NB Left  | --            | <25'               | <25'               | (4)150'       |

- (1) Striped length, actual storage capacity clear of adjacent through lane may be longer.
- (2) HCM 95<sup>th</sup> percentile queue reported feet/lane.
- (3) City of Phoenix minimum left turn lane storage on an arterial street approach to an arterial cross street is 250 feet; on an arterial street approach to a collector cross street is 150' and on an arterial street approach to a local street is 100'.
- (4) City of Phoenix right turn lane storage length on an arterial street approach to a driveway should be a minimum of 100 feet and a maximum of 250 feet.
- (5) Additional storage for left turning vehicles is available as TWLTL in advance of the striped single direction turn lane.
- (6) Existing left turn bay is striped for a single left turn lane but already configured (wide enough) for dual left turn lanes; re-stripe for dual lefts and adjust signal equipment as necessary to provide protected only left turn phase for this approach.

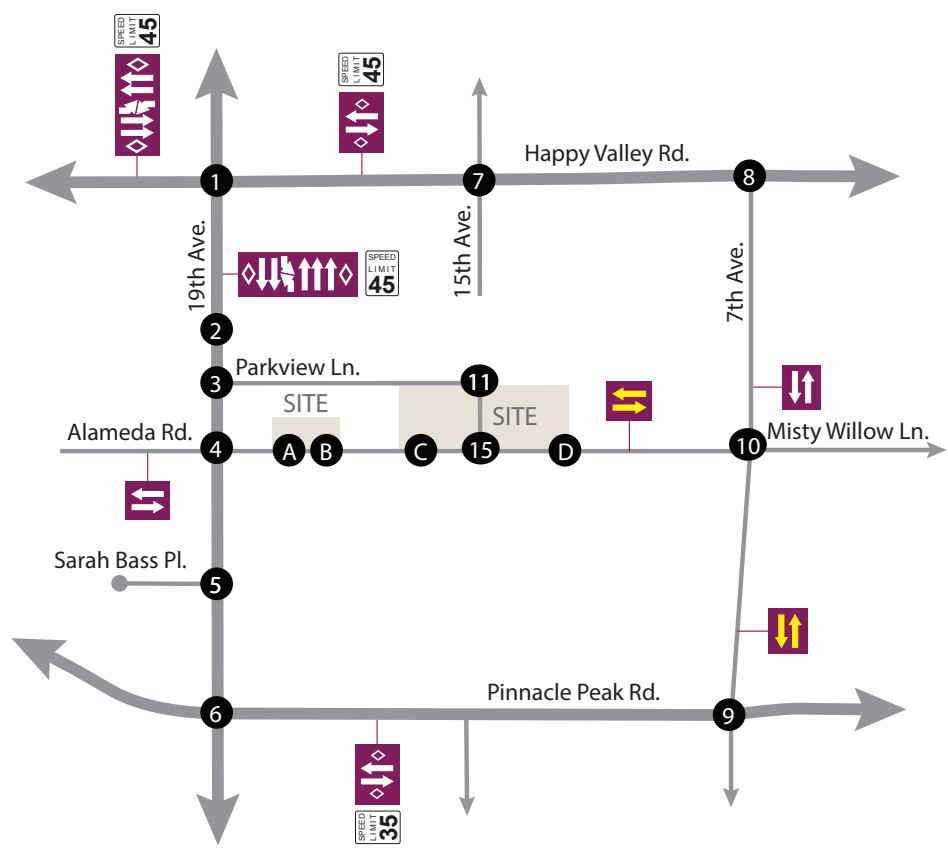
The recommended storage lengths in **Table 8** are provided for buildout year 2024 using the total traffic projections. Proposed lane configurations are shown in **Figure 9A** and **Figure 9B**, for Build Scenario A and Build Scenario B, respectively.



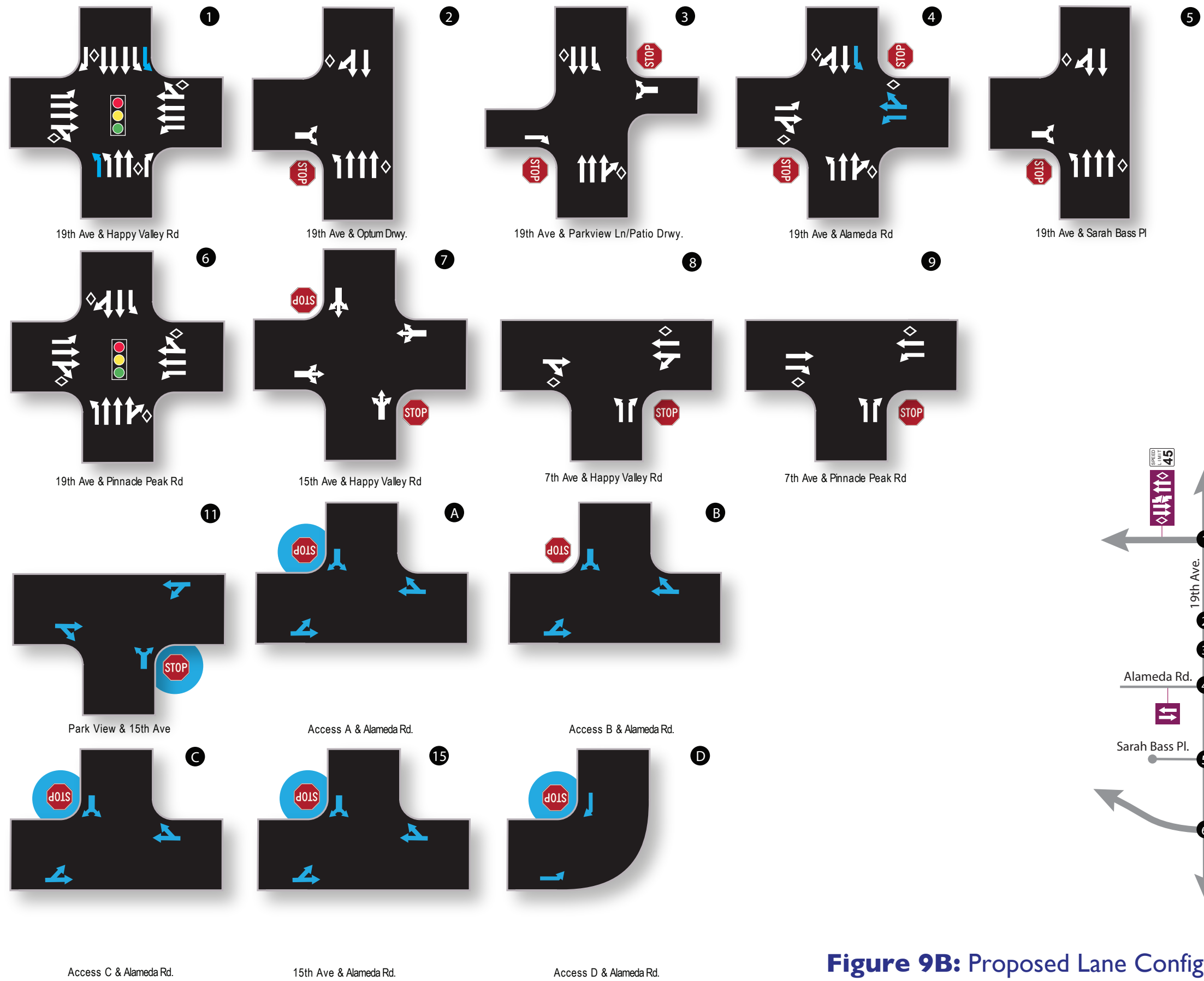
**LEGEND**

Thru or Turning Movement  
 Two-Way Left Turn-Lane  
 Raised Median  
 Bike Lane  
 Traffic Signal  
 Stop Sign  
 Speed Limit  
 Recommended Changes by Other Developers  
 Recommended Changes by DV 30

NORTH



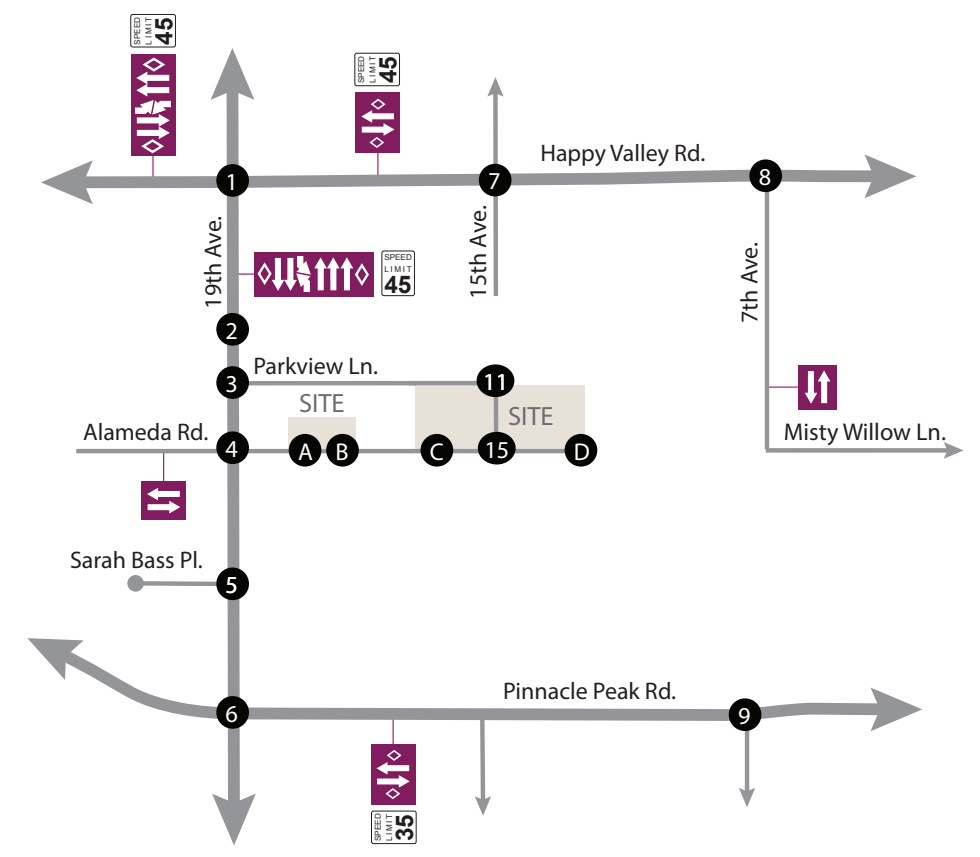
**Figure 9A: Proposed Lane Configurations and Traffic Controls Scenario A**



**LEGEND**

|                                      |                |
|--------------------------------------|----------------|
| Thru or Turning Movement             | Traffic Signal |
| Two-Way Left Turn-Lane               | Stop Sign      |
| Raised Median                        | Speed Limit    |
| Bike Lane                            |                |
| Recommended Changes by Full Buildout |                |

NORTH



**Figure 9B: Proposed Lane Configurations and Traffic Controls Scenario B**



## CONCLUSIONS

The following conclusions have been documented in this study:

### GENERAL

- Deer Valley 30 is anticipated to generate a maximum of 1,748 vehicle trips over the course of a typical weekday, with approximately 210 of those trips occurring during the AM peak hour (182 in/28 out) and 143 trips occurring during the PM peak hour (20 in/123 out). This conclusion was reached using trip generation equations obtained from the Institute of Transportation Engineers (ITE) Trip Generation Manual for “light industrial” and “general office” land use classifications. This approach was taken as a conservative measure because “light industrial” it has the highest peak hour trip rates of any ITE-recognized industrial land use category for which a 37-foot-tall industrial shell building would likely be appropriate, and because the general office use has peak hour trip rates that are anywhere from three to nine times those of the comparable period trip rates for light industrial uses. In short, should the ultimate uses of any of the proposed DV30 buildings be something more like a high-cube warehouse type facility, actual trip generation values will likely be considerably lower.

### EXISTING CONDITIONS

- Results of the existing conditions analysis indicate that all existing study intersections are operating with acceptable levels of service (LOS D or better) on all approaches under current lane configurations and traffic control.

### BUILDOUT YEAR 2024

- “Build” and “No-Build” conditions have been analyzed for each of two horizon year scenarios. All “No-Build” horizon year scenarios are ones in which it is 2024 and existing traffic volumes have continued to grow at an average annual rate of 3.6% since 2021.
- All Horizon Year “Build” scenarios are additionally characterized by both Deer Valley 30 sites having been fully developed and generating traffic at full buildout levels, north side half-street segments of Alameda Road having been built adjacent to both Deer Valley 30 sites, 15<sup>th</sup> Avenue having been improved to a full street condition from Alameda Road to Parkview Lane, and Parkview Lane having been improved to a south side half street condition east and west of 15<sup>th</sup> Avenue within the limits of the DV30 East sites.
- All Horizon Year Scenario A’s are additionally characterized by all Supplier Sites having been fully developed and generating traffic at full buildout levels in accordance with current land use assumptions about those sites as detailed in the most current versions of the City of Phoenix-approved traffic impact studies for those sites, Alameda Road has been improved to a two-lane south side half street condition from 19<sup>th</sup> Avenue to 7<sup>th</sup> Avenue, the intersection of 19<sup>th</sup> Avenue and Alameda Road has been improved to its ultimate configuration, at least to the limits of all four intersection returns, and 7<sup>th</sup> Avenue has been improved to a two-lane half street (minimum) condition from Alameda Road to Pinnacle Peak Road.

- Horizon Year “Build” Scenario B is uniquely characterized by Alameda Road having been constructed to at least a half street condition, from 19<sup>th</sup> Avenue east to the eastern limit of the DV30 East site, only.
- Results of the Horizon Year Scenario A analysis indicate the following improvements will be warranted with or without development having occurred on either of the Deer Valley 30 sites and, if implemented will allow acceptable levels of service to be achieved (or, if already being achieved, maintained) through 2024 and buildout of all ASLD/Mack Supplier Site and Deer Valley 30 development as currently proposed:
  - At the already signalized intersection of **19<sup>th</sup> Avenue and Happy Valley Road**, dual left turn lanes and protected left turn phasing on/for all four approaches will both be warranted and are therefore recommended to maintain acceptable levels of service during both peak hours through 2024, with or without Deer Valley 30 development. In addition, since the addition of protected left turn phases will take away some green time from the through movements, it is also recommended that the cycle length be changed from 96 seconds to 105 seconds. The intersection appears to be configured to accommodate dual left turns of roughly equal length of what are now striped as single turn lanes (about 250 feet) such that dual left turn lanes can be created through pavement marking modifications. The extent of the traffic signal equipment improvements necessary to add the protected only phases is not fully known but will require at a minimum, new left turn signal heads on all four approaches. With the recommended turn lane and signal improvements, this intersection should provide acceptable levels of service on all approaches during both peak hours through buildout of all ASLD/Mack Supplier Site and Deer Valley 30 development as currently proposed.
  - At the minor approach stop-controlled intersection of **19<sup>th</sup> Avenue and Alameda Road**, the introduction of an east leg and westbound approach volumes of the magnitude projected with or without Deer Valley 30 development will cause traffic signal control to be both warranted per applicable *Manual on Uniform Traffic Control Devices* (MUTCD) standards, and necessary to maintain acceptable levels of service on all approaches. Under either Scenario A or Scenario B, the Deer Valley 30 development will be responsible for installing a signal at the intersection of 19th Avenue and Alameda Road if the signal is warranted in the opening year or, depositing in escrow 25% of the signal cost if the signal is not warranted in the opening year. It is recommended that, even if signalization is not yet warranted in the opening year, the signal pole foundations, conduit, pull boxes and all other underground and ground level features necessary to signalize the intersection be in place before any development that is dependent on the east leg of this intersection for access is open to everyday traffic (i.e., before this segment of Alameda Road needs to be more than a construction access road). It is further recommended that exclusive left turn lanes be provided on all four approaches to this intersection to maximize the efficiency of the intersection. The northbound and southbound left turn lanes should provide the City’s standard minimum of 150

feet of queue storage length. Two-way left turn lanes already exist along 19<sup>th</sup> Avenue in this vicinity and can just be restriped near the intersection to convert them to single direction turn lanes. It is recommended that the westbound left turn lane provide at least 75 feet of queue storage from the start, and provide 250 feet of queue storage length before both Supplier Site A and Deer Valley 30 sites are fully developed. Width to provide 250 feet of queue storage length is not likely to exist until such time as the property on the northeast corner of the intersection develops and with that development the site-adjacent segment of the ultimate north half of Alameda Road gets constructed and dedicated. The eastbound approach currently provides enough width immediately west of the intersection to provide a short eastbound left turn only lane (enough for 1-2 vehicles to queue while still allowing an upstream vehicle wanting to turn right (and/or through in the proposed/with east leg condition) to pass them. While 150 feet of turn lane queue storage is the City's standard and should ultimately be provided, until such time as considerably more development occurs along Alameda Road west of 19<sup>th</sup> Avenue, the existing queue storage provisions should be adequate. Once signalized and improved as necessary to provide an exclusive left turn lane on all approaches, this intersection should provide acceptable levels of service on all approaches during both peak hours through buildout of all ASLD/Mack Supplier Site and Deer Valley 30 development as currently proposed.

- At the already signalized intersection of **19<sup>th</sup> Avenue and Pinnacle Peak Road**, continued traffic growth, with or without Deer Valley 30 development, is likely to cause need for traffic signal timing adjustments in order for acceptable levels of services to continue to be achieved on all approaches. Efforts to optimize the signal timing to achieve acceptable levels of service under both Build and No Build scenarios, indicate significant reductions in driver delay on both northbound and southbound approaches, under both scenarios could be achieved by making the following signal timing adjustments:
  - Extend the northbound through phase from 45 seconds to 51 seconds and the northbound left turn phase from 14 seconds to 21 seconds.
  - Extend the southbound through phase from 30 seconds to 31 seconds.
- At the currently stop sign controlled (northbound approach only) intersection of **7<sup>th</sup> Avenue and Happy Valley Road**, continued growth in background traffic, even without any ASLD/Mack Supplier Site or Deer Valley 30 development, is likely to cause need for widening of Happy Valley Road to provide traffic signal control an exclusive westbound left turn lane before the end of 2024. Deer Valley 30 is not expected to add any traffic to this intersection until Happy Valley Rd and Desert Peak Pkwy connect to provide an east-west arterial alternative to L101, Deer Valley Drive and Sonoran Boulevard.
- At the intersection of **7<sup>th</sup> Avenue and Alameda Road**, the Deer Valley 30 development will be responsible for installing a signal if the signal is warranted in

the opening year or, depositing in escrow 25% of the signal cost if the signal is not warranted in the opening year. A traffic signal control is not anticipated to be warranted at this intersection until growth in traffic, beyond that caused by ASLD/Mack Supplier Site and Deer Valley 30 development has occurred.

- At the intersection of **7<sup>th</sup> Avenue and Pinnacle Peak Road**, continued growth in background traffic, even without any ASLD/Mack Supplier Site or Deer Valley 30 development, is likely to cause need for traffic signal control before the end of 2024. Under traffic signal control with a 100-second cycle length, this intersection should provide acceptable levels of service on all approaches during both peak hours through buildout of all ASLD/Mack Supplier Site and Deer Valley 30 development as currently proposed.

## LIST OF REFERENCES

*Highway Capacity Manual, Sixth Edition: A Guide for Multimodal Mobility Analysis.* Transportation Research Board, Washington, D.C., 2018.

*Manual on Uniform Traffic Control Devices.* U.S. Department of Transportation, Federal Highway Administration, Washington, D.C., 2009.

*A Policy on Geometric Design of Highways and Streets, 7th Edition, American Association of State Highway and Transportation Officials, Washington, D.C., 2018.*

*Street Planning and Design Guidelines,* City of Phoenix Street Transportation Department, Phoenix, Arizona, December 2009.

*Trip Generation Manual, 10th Edition,* Institute of Transportation Engineers, Washington, D.C., 2017.

*Trip Generation Handbook, 3rd Edition, Institute of Transportation Engineers,* Washington, D.C., 2014.

## **TECHNICAL APPENDICES**

- APPENDIX A: REVIEW COMMENTS AND RESPONSES**
- APPENDIX B: EXISTING TRAFFIC COUNTS**
- APPENDIX C: EXISTING PEAK HOUR ANALYSIS**
- APPENDIX D: TRIP GENERATION CALCULATIONS**
- APPENDIX E: TRIP DISTRIBUTION CALCULATIONS**
- APPENDIX F: BACKGROUND GROWTH CALCULATIONS**
- APPENDIX G: 2024 NO BUILD PEAK HOUR ANALYSIS**
- APPENDIX H: 2024 BUILD PEAK HOUR ANALYSIS**
- APPENDIX I: TRAFFIC SIGNAL WARRANT ANALYSIS**
- APPENDIX J: QUEUE STORAGE ANALYSIS**

## **APPENDIX A**

### **REVIEW COMMENTS AND RESPONSES**



**City of Phoenix**  
STREET TRANSPORTATION DEPARTMENT

January 31, 2021

Tove Christina White, P.E.  
CivTech, Inc.  
10605 N Hayden Road  
Scottsdale AZ 85260

**RE: Comments - Deer Valley 30 TIA – KIVA 21-3801 – Second Submittal**

Ms. White,

The City of Phoenix Street Transportation Department has reviewed this submittal of the Traffic Impact Analysis for Deer Valley 30 project and has the comments listed below.

Please address all comments. Failure to address each comment may result in delays in the approval process. Please resubmit the revised traffic study to me. If you have any questions, please contact me at [Muhannad.zubi@Phoenix.gov](mailto:Muhannad.zubi@Phoenix.gov). Thank you.

Best Regards,

*Muhannad Zubi*

Muhannad Al Zubi, PE, PTOE  
Traffic Engineer III  
City of Phoenix  
Street Transportation Department

C: Chris Kowalsky

Derek Fancon





# City of Phoenix

STREET TRANSPORTATION DEPARTMENT

|  |                             |
|--|-----------------------------|
| <b>Project:</b> 21-3801  | <b>Name:</b> Deer Valley 30 |
| <b>Prepared by:</b> CivTech  | <b>Engineer:</b> Tove White |
| <b>Date of Study:</b> January 11, 2022                                     | <b>Submittal:</b> Second    |
| <b>Reviewed by:</b><br>City of Phoenix Street Transportation<br>Department | <b>Date:</b> 1-31-2022      |

| Comments |   |
|----------|---|
| 1.       | The purpose of the discussion of “no-build” scenario is not clear. The City requires that the development’s traffic impact including background traffic be analyzed, up to the horizon year and the impacts be mitigated by opening year, or the development shall present a commitment and schedule to construct the mitigations.  |
| 2.       | The TIA should clarify that warranted signals at the intersection of 19th Ave and Alameda Rd, 7th Ave and Pinnacle Peak, and 7th Ave and Happy Valley Rd, will require the development either to install the signal or deposit in escrow 25% of the signal cost, depending on if the warrant is met by opening or after. Please provide a clarification and a schedule for the warranted signals and the development’s commitment.  |
| 3.       | Please provide a signal warrant for the intersection of Alameda and 7 <sup>th</sup> Avenue. The development shall either install the signal or deposit in escrow 25% of the signal cost, depending on if the warrant is met by opening or after   |
| 4.       | The stipulated improvements to the adjacent roadway network shall be completed by the development by opening: <ol style="list-style-type: none"><li>1. The developer shall provide 40 feet of paving, from the face-of-curb to the face-of-curb, centered on the monument line on 15th Avenue.</li><li>2. The developer shall provide 20 feet of paving from the monument line to the face-of-curb and 4 feet of paving south of the monument line on Park View Lane for the entirety of the parcel. The developer shall provide a minimum of 24 feet of paving from the development connecting to the existing Park View Lane to the west and terminate in an approved cul-de-sac on the eastern end of site.</li><li>3. The developer shall provide 20 feet of paving from the monument line to the face-of-curb and 4 feet of paving south of the monument line on Alameda</li></ol> |



## City of Phoenix

STREET TRANSPORTATION DEPARTMENT

|    |  |
|----|--|
|    | <p>Road. The developer shall provide a ½ street connection of a cross section E with a minimum 24 feet of paving.</p> <p>4. Site plan to identify connection to either 19th Avenue or 7th Avenue, appropriate street termination in an approved cul-de-sac will be required at the opposite end.</p> |
| 5. | <p>Please use the more conservative lengths for queuing calculations provided in Table-8. Referenced technologies and methods mentioned in the Civtech comment response might not be implemented at all locations.</p>   |
| 6. | <p>Please resubmit a clearer image of figure 4</p>   |

Reviewer Name, Agency: Muhannad Al Zubi, P.E., City of Phoenix

| Item | Review Comment   | Response  |
|------|--|---|
| 1.   | The purpose of the discussion of “no-build” scenario is not clear. The City requires that the development’s traffic impact including background traffic be analyzed, up to the horizon year and the impacts be mitigated by opening year, or the development shall present a commitment and schedule to construct the mitigation.  | <b>Response to Review Comment No. 1:</b> The "no-build" scenario discussion has two purposes. One purpose is to document how existing year traffic volumes (presented in TIS Figure 3) were converted to horizon year background (future non-site) traffic volumes (presented in TIS Figure 7A and TIS Figure 7B, respectively). This is a City of Phoenix requirement, based on CivTech's interpretation of guidance provided in <i>Section 12.1.3.1.3 - Future Off-Site Traffic</i> of the City's <i>Street Planning and Design Guidelines - January 1, 2009</i> , specifically that portion of the guidance which reads, "If a future horizon year is included in the study, the method for estimating the future traffic volumes must be documented". The other/second purpose was to recognize traffic operational deficiencies that are likely to exist in the horizon year as a consequence of continued growth in traffic volumes within the study area independent of any new traffic the proposed development might add. The total traffic impact on the study area roadway network in the horizon year is a cumulative impact caused by background traffic and site traffic, collectively.   |
| 2.   | The TIA should clarify that warranted signals at the intersection of 19th Ave and Alameda Rd, 7th Ave and Pinnacle Peak, and 7th Ave and Happy Valley Rd, will require the development either to install the signal or deposit in escrow 25% of the signal cost, depending on if the warrant is met by opening or after. Please provide a clarification and a schedule for the warranted signals and the development’s commitment. | <p><b>Response to Review Comment No. 2, Part 1:</b> With regard to the intersection of 19th Avenue and Alameda Road, the <i>Executive Summary</i> and <i>Conclusions and Recommendations</i> sections of the TIS have each been updated to acknowledge that the Deer Valley 30 development will be responsible for installing a signal if the signal is warranted in the opening year or depositing in escrow 25% of the signal cost if the signal is not warranted in the opening year. Statements to this effect appear on pages 3 and 45 of the 3rd Submittal version of the TIS.</p> <p><b>Response to Review Comment No. 2, Part 2:</b> With regard to the intersections of 7th Avenue and Pinnacle Peak Road and 7th Avenue and Happy Valley Road, it has been acknowledged by the City of Phoenix that because (1) the Deer Valley 30 development is anticipated to generate fewer than 500 trips per hour during the highest volume peak hour; (2) both of these intersections are located well outside the (1/4 mile from the site) study area boundary generally required to be considered in a traffic impact study for a proposed development project of this size/intensity and (3) the Deer Valley 30 development is anticipated to contribute so little traffic to either of these intersections, the Deer Valley 30 development will not have any installation or cost participation responsibility for signals at either of these locations.</p> |

Reviewer Name, Agency: Muhannad Al Zubi, P.E., City of Phoenix

| Item | Review Comment   | Response   |
|------|--|--|
| 3.   | Please provide a signal warrant (analysis) for the intersection of Alameda (Road) and 7th Avenue. The development shall either install the signal or deposit in escrow 25% of the signal cost, depending on if the warrant is met by opening or after  | <b>Response to Review Comment No. 3:</b> The TIS has been updated to recognize both that traffic signal control is not anticipated to be warranted at this intersection until growth in traffic, beyond that caused by ASLD/Mack Supplier Site and Deer Valley 30 development has occurred and that the Deer Valley 30 development and that the Deer Valley 30 development will be responsible for installing a signal if the signal is warranted in the opening year or, depositing in escrow 25% of the signal cost if the signal is not warranted in the opening year. These statements appear on page 3 and on pages 46-47 of the 3rd submittal version of the TIS.          |
| 4.   | The stipulated improvements to the adjacent roadway network shall be completed by the development by opening:  | <b>Response to Review Comment No. 4 (generally):</b> See responses to individual components of this review comment, below.   |
| 4.a: | The developer shall provide 40 feet of paving, from the face-of-curb to the face-of-curb, centered on the monument line on 15th Avenue.  | <b>Response to Review Comment No. 4.a:</b> Acknowledged.   |
| 4.b: | The developer shall provide 20 feet of paving from the monument line to the face-of-curb and 4 feet of paving (north*) of the monument line on Park View Lane for the entirety of the parcel. The developer shall provide a minimum of 24 feet of paving from the development connecting to the existing Park View Lane to the west and terminate in an approved cul-de-sac on the eastern end of site. <i>*Original review comment states this as "south"; CivTech assumes the intent was to say "north".</i> | <b>Response to Review Comment No. 4.b:</b> Acknowledged. TIS figures 6A, 6B, 8A, 8B, 9A and 9B have been updated to show Park View Lane as a continuous segment from 19th Avenue to the eastern boundary of the DV30 East site.  |
| 4.c: | The developer shall provide 20 feet of paving from the monument line to the face-of-curb and 4 feet of paving south of the monument line on Alameda Road. The developer shall provide a ½ street connection of a cross section E with a minimum 24 feet of paving.   | <b>Response to Review Comment No. 4.c:</b> Acknowledged.   |
| 4.d: | Site plan to identify connection to either 19th Avenue or 7th Avenue, appropriate street termination in an approved cul-de-sac will be required at the opposite end.   | <b>Response to Review Comment No. 4.d:</b> It is CivTech's understanding that since these review comments were issued, OPUS and the City have reached agreement that on how the site plan will represent the off-site improvements to be provided along Alameda Road with the Deer Valley 30 project. The current, agreed upon site plans, one for the 5-acre (DV30 West) site/parcel, and one of the 25-acre (DV30 East) site/parcel are attached to this comment response document for immediate reference. These site plans are also represented (using higher resolutions copies than were used for earlier submittals) in Figure 4 of the 3rd Submittal version of the TIS. |

Reviewer Name, Agency: Muhannad Al Zubi, P.E., City of Phoenix

| Item | Review Comment  | Response   |
|------|---|--|
| 5.   | Please use the more conservative lengths for queuing calculations provided in Table-8. Referenced technologies and methods mentioned in the CivTech comment response might not be implemented at all locations. | <p><b>Response to Review Comment No. 5:</b> The queue lengths recommended in Table 8 of the TIS are supported by analysis performed in accordance with City of Phoenix accepted methods and in a manner consistent with that used for the City of Phoenix-approved TIS performed for the Supplier Site A development. The City of Phoenix standard storage length for new turn lanes is 150 feet on collector streets and 250 feet on arterial streets. Where a new turn lane has been recommended and the HCM calculated 95th-percentile queue length is shorter than the standard length, the standard length has still been recommended. Where the HCM calculated length is shorter than the existing striped length, no change is recommended and where the HCM calculated length is longer than the existing striped length, either the calculated length is recommended or an explanation as to why an alternate length has been recommend such as the existence of additional storage capacity in the upstream approach taper area and/or an upstream segment of two-way left turn lane) is provided in the footnotes of the table. As a side note and with regard to the intersection of 19th Avenue and Happy Valley Road, specifically, peak hour level of service analysis has been performed again, this time recognizing that the signal phasing has been upgraded since CivTech initially analyzed this intersection for the original Supplier Site A TIS, to include protected/permitted left turn phasing on all approaches. Under this phasing scheme, the intersection can accommodate full buildout of Deer Valley 30, under the Deer Valley 30 develops first scenario without warranting dual left turn lanes on any approach. Phase recall that the Deer Valley 30 develops first scenario (Scenario B in the 2nd Submittal version of the TIS) is the scenario under which we do not assume there will be any Supplier Site A (SSA) development nor any SSA-related off-site improvements to rely on in the horizon year and under which Deer Valley 30 would provide a half street connection along the Alameda Road alignment, from 19th Avenue east to and adjacent to the Deer Valley 30 sites.</p> |
| 6.   | Please resubmit a clearer image of Figure 4.  | <p><b>Response to Review Comment No. 6:</b> Figure 4 as it was presented in the 2nd Submittal version of the TIS has been updated with a higher resolution image of the two Deer Valley 30 site plans. The updated version appears as Figure 4 on page 20 in the 3rd Submittal version of the TIS.</p>   |

CONSULTANT

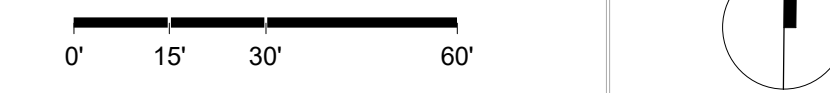
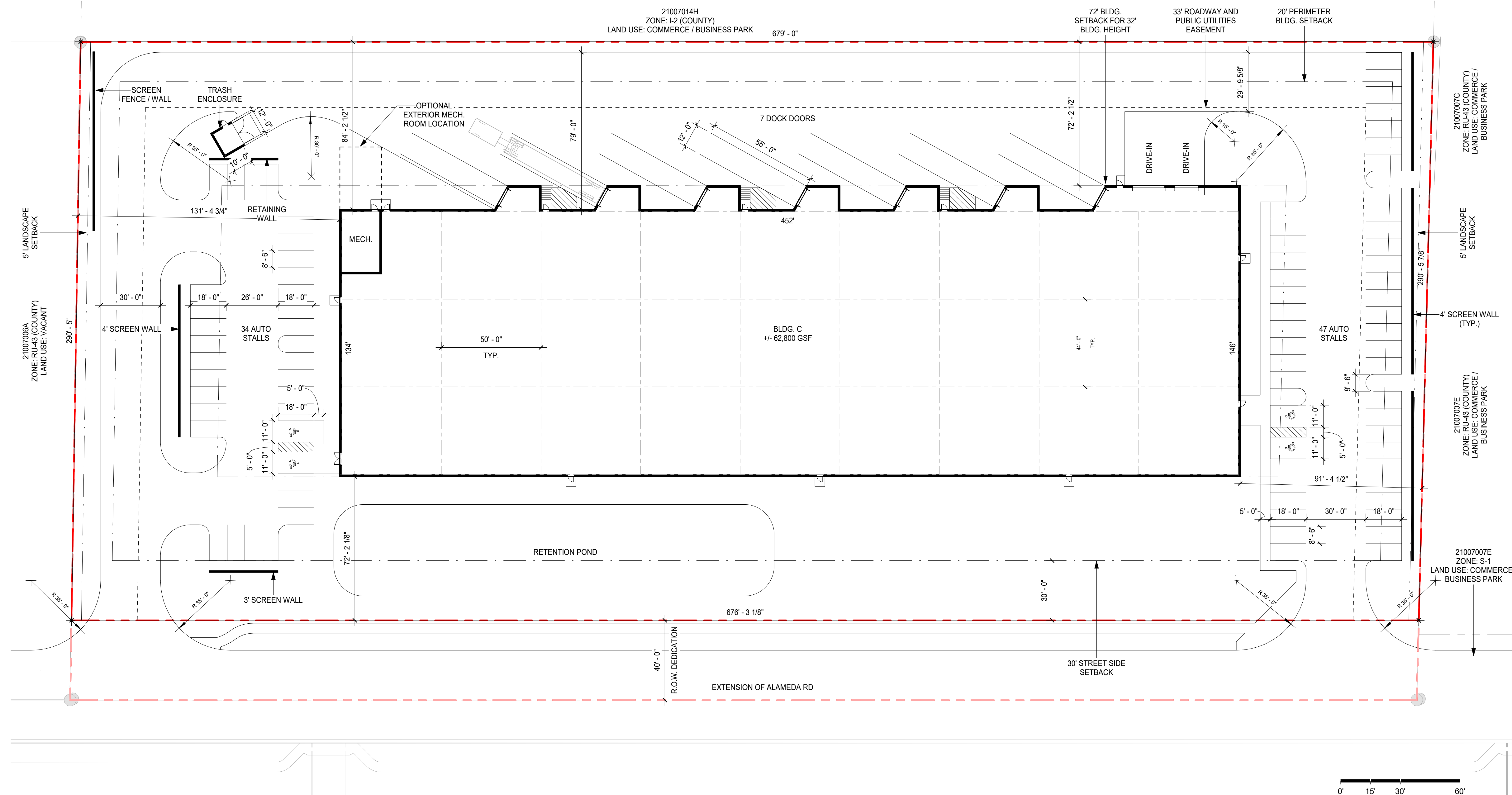
PROJECT

**Deer Valley 30**

PROJECT ADDRESS  
Phoenix, AZ

PROJECT NUMBER  
32013000

**ISSUE RECORD**



**1 5-Acres Site - Concept Site Plan**  
1" = 30'-0"



**2 Vicinity Map 5-Acres Site**  
1" = 24000'



**PROJECT INFORMATION**

|                        |                   |
|------------------------|-------------------|
| <b>Total Site Area</b> |                   |
| Gross Area             | +/- 5.14 Acres    |
| Net Area               | +/- 4.52 Acres    |
| <b>Building C</b>      |                   |
| Building Area          | +/- 62,800 GSF    |
| Building Height        | +/- 32' / 1 Story |
| Lot Coverage / F.A.R.  | 31.9 %            |
| Total Auto Parking     | 81 Stalls         |
| Accessible Parking     | 4 Stalls          |
| Dock Doors             | 7 Doors           |
| Drive-In Doors         | 2 Door            |

**ZONING**

**Zone District:** CP/GCP Commerce Park / General Commerce Park  
**Overlay District:** Deer Valley Airport Overlay (DVAO Area 1)  
**Zoning Cases:** Z-128-07  
**ZONING PARKING REQUIREMENTS**  
**Unspecified Industrial Use (Shell Building):**  
for 1-150,000 SF 1 stall per 1,000 SF;  
for 150,001-500,000 SF 1 stall per 2,000 SF;  
for 500,001 SF plus 1 stall per 2,500 SF  
**Office:** 1 per 300 SF  
**Industrial Plants, Manufacturing, Wholesale (including Warehouses):**  
1 stall per 1.5 warehouse or production workers and 1 space per 300 SF of administrative office. If the facility runs more than one shift a day, employee count will be based on the 2 largest shifts

**SITE PLAN NOTES**

- i. Development and use of this site will conform with all applicable codes and ordinances.
- ii. This project is located in the City of Phoenix water service area and has been designated as having an assured water supply.
- iii. All new or relocated utilities will be placed underground.
- iv. All signage requires separate approvals and permits.
- v. Any lighting will be placed so as to direct light away from the adjacent residential districts and will not exceed one-foot candle at the property line. No noise, odor, or vibration will be emitted so that it exceeds the general level of noise, odor, or vibration emitted by uses outside of the site.
- vi. Owners of property adjacent to public right-of-way will have the responsibility for maintaining all landscaping within the rights-of-way in accordance with approved plans.

**SITE PLAN NOTES ADDITIONAL**

1. Smoke, gas and odor emissions shall comply with Regulation III of the Maricopa County Air Pollution Control Rules and Regulations.
2. The disposal of all waste materials shall comply with title 9, chapter 8, articles 18 and 4 of the Hazardous Waste Regulations as adopted by the Arizona Health Department.
3. The average noise level, measured at the property line, shall not exceed fifty-five dB (Ldn) when measured on an "A weighted" sound level meter and according to the procedures of the Environmental Protection Agency.
4. Explosive or hazardous processes: Certification shall be provided by the Phoenix Fire Department Prevention Bureau that all manufacturing, storage and waste processes on the site shall meet safety and environmental standards as administered by the Bureau.
5. Outdoor lighting shall be shielded so that:
  - a. No source of illumination is directly visible from a public street or from residentially zoned property.
  - b. Light intensity does not exceed 1 footcandle on any adjacent residentially zoned property.

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PAPP  
QS

**Accessible Parking Required:**  
for 1-25 total stalls in parking lot: 1 required accessible space; for 26-50: 2; for 51-75: 3; for 76-100: 4; for 101-150: 5; for 151-200: 6; for 201-300: 7; for 301-400: 8; for 401-500: 9; for 1,001 and over: 20 plus 1 for each 100 spaces, or fraction thereof over 1,000.  
**Proposed Parking Mix:** 10% Office, 90% Industrial  
**Building A:** 78 Stalls Required, 4 to be accessible (57 Industrial + 21 Office)

SHEET TITLE  
**5-Acres Site - Concept Site Plan**

SHEET NUMBER

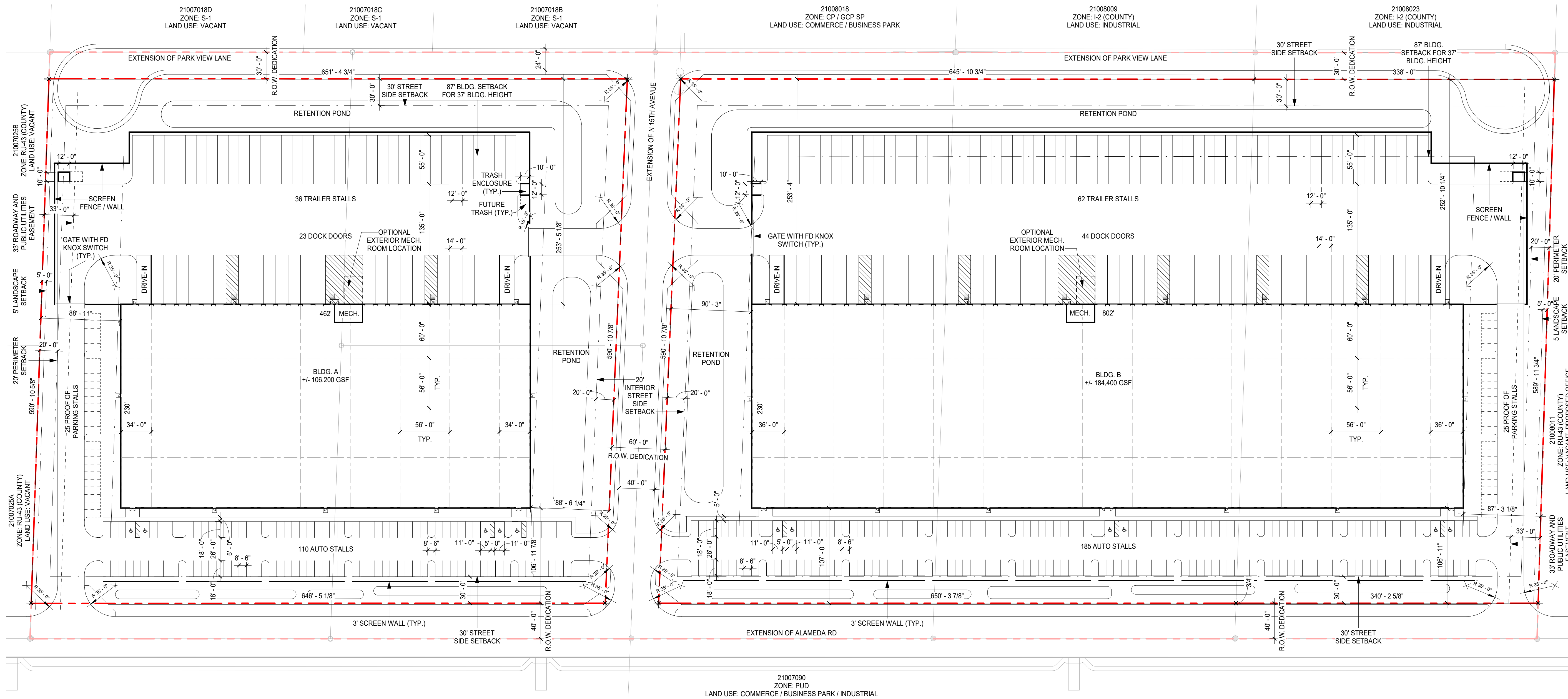
CONSULTANT

PROJECT  
**Deer Valley 30**

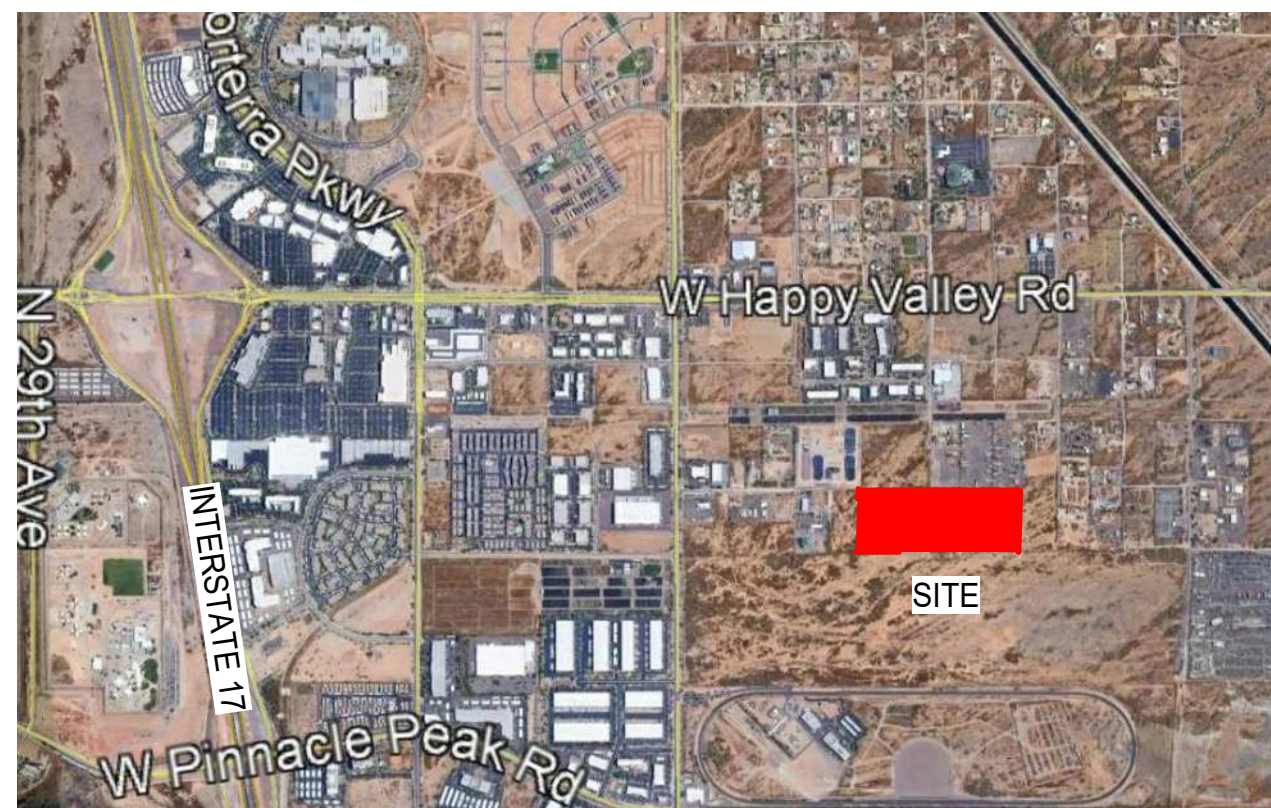
PROJECT ADDRESS  
Phoenix, AZ

PROJECT NUMBER  
32013000

**ISSUE RECORD**



**1** 25-Acres Site - Concept Site Plan  
1" = 60'-0"



**2** Vicinity Map 25-Acres Site  
1: 24000

**PROJECT INFORMATION**

**Total Site Area**  
Gross Area +/- 25.71 Acres  
Net Area +/- 22.17 Acres

**Building A**  
Gross Area +/- 10.29 Acres  
Net Area +/- 8.80 Acres  
Building Area +/- 106,200 GSF  
Building Height +/- 37' / 1 Story  
Lot Coverage / F.A.R. 23.7 %  
Auto Parking 110 Stalls  
Proof of Parking 25 Stalls  
Total Parking 135 Stalls  
Accessible Parking 5 Stalls  
Dock Doors 23 Doors  
Drive-In Doors 2 Doors  
Trailer Stalls 36 Stalls

**Building B**  
Gross Area +/- 15.41 Acres  
Net Area +/- 13.37 Acres  
Building Area +/- 184,400 GSF  
Building Height +/- 37' / 1 Story  
Lot Coverage / F.A.R. 31.7 %  
Auto Parking 185 Stalls  
Proof of Parking 25 Stalls  
Total Parking 210 Stalls  
Accessible Parking 6 Stalls  
Dock Doors 44 Doors  
Drive-In Doors 2 Doors  
Trailer Stalls 62 Stalls

**ZONING**

**Zone District:** CP/GCP Commerce Park / General Commerce Park

**Overlay District:** Deer Valley Airport Overlay (DVAO Area 1)

**Zoning Cases:** Z-129-07 and Z-18-10

**ZONING PARKING REQUIREMENTS**

**Unspecified Industrial Use (Shell Building):**  
for 1-150,000 SF 1 stall per 1,000 SF;  
for 150,001-500,000 SF 1 stall per 2,000 SF;  
for 500,001 SF plus 1 stall per 2,500 SF

**Office:** 1 per 300 SF

**Industrial Plants, Manufacturing, Wholesale (including Warehouses):**  
1 stall per 1.5 warehouse or production workers and 1 space per 300 SF of administrative office. If the facility runs more than one shift a day, employee count will be based on the 2 largest shifts

**Accessible Parking Required:**  
for 1-25 total stalls in parking lot: 1 required accessible space; for 26-50: 2; for 51-75: 3; for 76-100: 4; for 101-150: 5; for 151-200: 6; for 201-300: 7; for 301-400: 8; for 401-500: 9; for 1,001 and over: 20 plus 1 for each 100 spaces, or fraction thereof over 1,000.

**Proposed Parking Mix:** 10% Office, 90% Industrial

**Building A:** 131 Stalls Required, 5 to be accessible (96 Industrial + 35 Office)

**Building B:** 144 Stalls Required, 5 to be accessible (83 Industrial + 61 Office)

**SITE PLAN NOTES**

- i. Development and use of this site will conform with all applicable codes and ordinances.
- ii. This project is located in the City of Phoenix water service area and has been designated as having an assured water supply.
- iii. All new or relocated utilities will be placed underground.
- iv. All signage requires separate approvals and permits.
- v. Any lighting will be placed so as to direct light away from the adjacent residential districts and will not exceed one-foot candle at the property line. No noise, odor, or vibration will be emitted so that it exceeds the general level of noise, odor, or vibration emitted by uses outside of the site.
- vi. Owners of property adjacent to public right-of-way will have the responsibility for maintaining all landscaping within the rights-of-way in accordance with approved plans.

**SITE PLAN NOTES ADDITIONAL**

1. Smoke, gas and odor emissions shall comply with Regulation III of the Maricopa County Air Pollution Control Rules and Regulations.
2. The disposal of all waste materials shall comply with title 9, chapter 8, articles 18 and 4 of the Hazardous Waste Regulations as adopted by the Arizona Health Department.
3. The average noise level, measured at the property line, shall not exceed fifty-five dB (l dn) when measured on an "A weighted" sound level meter and according to the procedures of the Environmental Protection Agency.
4. Explosive or hazardous processes: Certification shall be provided by the Phoenix Fire Department Prevention Bureau that all manufacturing, storage and waste processes on the site shall meet safety and environmental standards as administered by the Bureau.
5. Outdoor lighting shall be shielded so that:
  - a. No source of illumination is directly visible from a public street or from residentially zoned property.
  - b. Light intensity does not exceed 1 footcandle on any adjacent residentially zoned property.

KIVA  
SDEV  
PAPP  
QS



**City of Phoenix**  
STREET TRANSPORTATION DEPARTMENT

November 24, 2021

Tove Christina White, P.E.  
CivTech, Inc.  
10605 N Hayden Road  
Scottsdale AZ 85260

**RE: Deer Valley 30 TIA – KIVA 21-3801**

Ms. White,

The City of Phoenix Street Transportation Department has reviewed this submittal of the Traffic Impact Analysis for Deer Valley 30 project and has the comments listed below. Please address all comments. Failure to address each comment may result in delays in the approval process. Please resubmit the revised traffic study to me. If you have any questions, please contact me at [Muhannad.zubi@Phoenix.gov](mailto:Muhannad.zubi@Phoenix.gov). Thank you.

Best Regards,

*Muhannad Zubi*

Muhannad Al Zubi, PE, PTOE  
Traffic Engineer III  
City of Phoenix  
Street Transportation Department

C: Chris Kowalsky

Derek Fancon





# City of Phoenix

STREET TRANSPORTATION DEPARTMENT

|  |                             |
|--|-----------------------------|
| <b>Project:</b> 213801   | <b>Name:</b> Deer Valley 30 |
| <b>Prepared by:</b> CivTech  | <b>Engineer:</b> Tove White |
| <b>Date of Study:</b> October 18, 2021                                     | <b>Submittal:</b> first     |
| <b>Reviewed by:</b><br>City of Phoenix Street Transportation<br>Department | <b>Date:</b> 11-19-2021     |

| Comments |   |
|----------|---|
| 1.       | Improvements assumed to be completed by others prior to the development of this project, please elaborate on who will complete these improvements and who verified these assumptions. Page 1 and 2.   |
| 2.       | Since the improvements on page 1 are assumed to be completed by opening and are included as mitigation to this development's impact, the development is confirming that this project will complete these improvements in case others do not complete them by opening. Page 1 and 2.   |
| 3.       | Remove irrelevant editorial about 15th Ave. Need to confirm that 15th Ave is to be built per the COP Street Classification Map. Page 2.   |
| 4.       | TIA needs to confirm that Parkview Lane shall connect to the existing Parkview Lane to the west as the row exist to make this connection. East end shall terminate in a temporary turnaround easement dedicated and constructed, so it can be extended east with future developments. Please remove commentary that neither of these streets is needed. Page 2.   |
| 5.       | Bullet point 3-d, is not relevant to the TIA. Page 3.   |
| 6.       | Bullet 3-b, stating when AND IF renders this statement irrelevant. Page-3.  |
| 7.       | Bullet 3-b, if this statement is part of the mitigation of this development's impact, then the developer needs to confirm completion by opening. Page-3.  |
| 8.       | The four scenarios discussed in the build out are confusing. What is a "No-Build Mitigated", if this is a no build, what is being mitigated? Page 3.  |
| 9.       | In the discussion of the "Buildout Year 2024", it states " <b>The No Build</b> scenarios are ones in which existing traffic volumes have continued to grow at an average annual rate of 3.6% since 2021, <b>Deer Valley 30</b> and all ASLD/Mack Supplier Sites have <b>been fully developed and are generating traffic</b> at full buildout levels in accordance with current land use assumptions". Not very clear what is this telling us? Page 3. |



## City of Phoenix

STREET TRANSPORTATION DEPARTMENT

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| 10. | The improvements referenced in the mitigated condition, if they are a part of the mitigation assumptions for this development, the project needs to confirm that the development will construct these improvements if not completed by others. Page 4. |
| 11. | Development shall contribute to the cost of the <b>signals which are warranted by horizon year</b> at a rate not less than 25% of the total cost in an escrow account in coordination with the Street Transportation Department.                       |
| 12. | Alameda improvements have been stipulated in the Pre-Application and is required to terminate in a cul-de-sac in the interim condition.  |
| 13. | Table 7 on page 33: The developer shall implement the recommended changes.   |
| 14. | Table 7 on page 33: why not use the more conservative lengths out of the three methods?  |

Disposition Codes: (1) Will Comply (2) Will Evaluate (3) Delete Comment (4) Defer to Consultant/Owner

Reviewer Name, Agency: **Muhannad Al Zubi, City of Phoenix**

| Item | Location   | Review Comment   | (Code) & Response   |
|------|------------|--|---|
| 1.   | Page 1 & 2 | Improvements assumed to be completed by others prior to the development of this project, please elaborate on who will complete these improvements and who verified these assumptions.  | <b>Disposition Code 2:</b> While it is still anticipated that before the end of 2024, the Supplier Site A developer(s) will have completed construction of the south half of Alameda Road from 19th Avenue to 7th Avenue and the now missing segment of 7th Avenue, between Alameda Road/Misty Willow Lane and Pinnacle Peak Road, CivTech understands that because this is not certain, a second pair of horizon year scenarios - one in which DV 30 development precedes Supplier Site off-site improvements has been included in this revision. <b>***Note: A "Pair" of horizon year scenarios, for the purposes of this explanation, includes a "No-Build" scenario and a "Build" scenario.***</b> Accordingly, the DV 30 TIS now addresses two pairs of horizon year scenarios, a pair of Horizon Year Scenario A's and a pair of Horizon Year Scenario B's. Horizon Year Scenario A's, the same horizon year scenarios addressed in the original (1st Submittal version) DV 30 TIS, are those in which: (A) The year is 2024; (B) Supplier Sites A, B and C are fully developed; (C) All of the off-site roadway improvements to be completed in conjunction with Supplier Site A, B and C development, including the above described half street segments of Alameda Road and 7th Avenue respectively, are complete and open to traffic. Horizon Year Scenario B's introduced with this submittal of the DV 30 TIS, are those in which: (A) The year is 2024; (B) No Supplier Site development nor any of the Supplier Site-associated off-site roadway improvements to Alameda Road or 7th Avenue have been made.   |
| 2.   | Page 1 & 2 | Since the improvements on page 1 are assumed to be completed by opening and are included as mitigation to this development's impact, the development is confirming that this project will complete these improvements in case others do not complete them by opening.  | <b>Disposition Code 2:</b> The DV 30 TIA has been updated to include a second analysis scenario, Horizon Year Scenario B, to address the question of off-site improvements. A new set of volumes has been completed for this scenario removing all of the Supplier Site volumes from the background. Additional Synchro analysis and Signal Warrant analyses have been conducted with these new volumes and the results indicate that many of the previously recommended off-site improvements are not warranted with only the DV 30 site. None of the three previously recommended traffic signals are warranted without the Supplier Site A traffic and the connection along Alameda Road from the eastern border of the site to 7th Avenue is also not needed to assist in traffic flow. The recommendations both with and without the Supplier Site A traffic (Scenario A and Scenario B, respectively) are included in the executive summary of the TIS as well as summarized in Figures 9A and 9B.  |
| 3.   | Page 2     | Remove irrelevant editorial about 15th Ave. Need to confirm that 15th Ave is to be built per the COP Street Classification Map.  | <b>Disposition Code 1:</b> The statement regarding 15th Avenue has been updated in the executive summary to better reflect the improvements and changes that will occur to 15th Avenue.   |
| 4.   | Page 2     | TIA needs to confirm that Parkview Lane shall connect to the existing Parkview Lane to the west as the (ROW exists) to make this connection. East end shall terminate in a temporary turnaround easement dedicated and constructed, so it can be extended east with future developments. Please remove commentary that neither of these streets is needed. | <b>Disposition Code 2/3:</b> Commentary regarding need for Parkview Lane has been removed from the report as requested. As to Parkview Lane improvements and with reference made to the DV 30 East Site plan presented in Figure 4, it is our understanding that consensus between the City and the developer has been reached and that the agreed upon extents and limits of DV 30 dedications and improvements to Parkview Lane are generally as follows: DV 30 will (A) dedicate a 30-foot wide strip of land/Right-of-Way (ROW) along the entire northern edge of the DV 30 East Site for future Parkview Lane, plus whatever additional portion of the DV 30 East Site near its northwest corner and northeast corner respectively, that may be needed to provide vehicle turnaround provisions within dedicated ROW at the eastern and western limits of DV 30's Parkview Lane construction; (B) construct a 24-foot-wide (minimum) "south half" segment of Parkview Lane within the limits of the DV 30 East Site, plus vehicle turnaround provisions at either or both endpoints. As to construction of Parkview Lane outside of the above described limits, it is CivTech's further understanding that, (A) as verified a second time on 1/9/2022, Parkview Lane currently exists as a fully improved street on both sides of the ultimate centerline (within a dedicated, 60-foot-wide full street ROW) for the first 340 feet +/- east of 19th Avenue. (B) From 340 feet +/- east of 19th Avenue to about 490 feet +/- east of 19th Avenue, there is what appears to be a fully improved north half within a 30-foot-wide north half ROW. (C) From 490 feet +/- east of 19th Avenue to about 835 feet +/- east of 19th Avenue, there is a marginally improved, varying width (generally 20-24 feet wide) paved segment that proceeds within a 55-foot-wide (25-foot wide "north half" + 30-foot wide "south half") ROW. (D) From 835 feet +/- east of 19th Avenue to about 890 feet +/- east of 19th Avenue, there is a 30-foot-wide south half right of way and a continuation of the marginally improved varying width (mostly north of the future centerline) roadway. (E) From 890 feet +/- east of 19th Avenue to a point approximately 1700 feet east of 19th Avenue (and approximately 185 feet west of the DV 30 East Site), the marginally improved segment of Parkview Lane is located on private property. (F) Based on CivTech's discussions with Mr. Zubi in early late October 2021, it is understood by CivTech that there are patent easements along the Parkview Lane edges of those land parcels located between that segment of Parkview Lane that exists within a fully dedicated ROW and the western limits of the DV30 East Site, with which a third party (developer or other) could make additional improvements to Parkview Lane to the extent necessary to provide a |
| 5.   | Page 3     | Bullet point 3-b, is not relevant to the TIA.  | <b>Disposition Code 1:</b> This statement has been removed from the executive summary of the TIS. A more concise replacement statement has been added to still discuss 15th Avenue and the improvements that will be made.  |
| 6.   | Page 3     | Bullet 3-b, stating when AND IF renders this statement irrelevant.   | Refer to Comment Response for Comment #5  |
| 7.   | Page 3     | Bullet 3-b, if this statement is part of the mitigation of this development's impact, then the developer needs to confirm completion by opening.   | Refer to Comment Response for Comment #5  |

Disposition Codes: (1) Will Comply (2) Will Evaluate (3) Delete Comment (4) Defer to Consultant/Owner

Reviewer Name, Agency: **Muhannad Al Zubi, City of Phoenix**

| Item | Location | Review Comment   | (Code) & Response   |
|------|----------|--|---|
| 8.   | Page 3   | The four scenarios discussed in the build out are confusing. What is a "No-Build Mitigation", if this is a no build, what is being mitigated?  | <b>Disposition Code 2:</b> The No-Build Mitigated scenario addresses traffic delays in the background, or no-build, scenario. At the intersection of 19th Avenue and Happy Valley Road in Scenario A, all four approaches warrant the addition of a second left turn lane. In Scenario B, the northbound and southbound approaches both warrant the addition of a second left turn lane without site traffic. These improvements are recommended to occur prior to the completion of DV 30 as the delays are present without the DV 30 site traffic and DV 30 contributes little to no traffic to these left turn approaches. The No-Build Mitigation scenario recognizes the need for these dual left turn lanes and recommends them to be completed with or without the DV 30 site; they are also recommended in the No-Build condition so as not to confuse these improvements with the improvements that are warranted by the DV 30 site.   |
| 9.   | Page 3   | In the discussion of the "Buildout Year 2024", it states "The No Build scenarios are ones in which existing traffic volumes have continued to grow at an average annual rate of 3.6% since 2021, DV 30 and all ASLD/Mack Supplier Sites have been fully developed and are generating traffic at full buildout levels in accordance with current land use assumptions". Not very clear what is this telling us? | <b>Disposition Code 2:</b> The cited statements are related to the No-Build scenario (perhaps for the purposes of this response, we should call the No-Build "Scenario", a No-Build "Version") of what is now being referred to as Horizon Year Scenario A. The No-Build version of Horizon Year Scenario A is one in which Supplier Site A, B and C development precede any DV 30 development. Under this version of Horizon Year Scenario A, existing traffic volumes within the study area will have grown as a result of both general growth in Phoenix Metropolitan area population (for which CivTech made a 3.6% per year upward adjustment to existing traffic volumes) and as a result of significant development (specifically development of Supplier Sites A, B and C) having occurred in the immediately surrounding area (for which CivTech made an additional adjustment). In other words (and in the context of the two scenarios now being considered), the No Build scenario is one in which general growth in population and development of Supplier Sites A, B and C have caused background traffic volumes as they existed in 2021 to rise |
| 10.  | Page 4   | The improvements referenced in the mitigated condition, if they are a part of the mitigation assumptions for this development, the project needs to confirm that the development will construct these improvements if not completed by others  | <b>Disposition Code 2:</b> This comment has been addressed by adding a second horizon year scenario to the TIS which identifies the off-site roadway improvements the DV 30 developer will construct, beyond those required adjacent to the DV 30 sites if DV 30 development precedes completion of those improvements to Alameda Road and 7th Avenue anticipated to be completed in conjunction with Supplier Site A development.  |
| 11.  |          | Development shall contribute to the cost of the <u>signals which are warranted by horizon year</u> at a rate not less than 25% of the total cost in an escrow account in coordination with the Street Transportation Department.   | <b>Disposition Code 1:</b> The DV 30 developer has agreed to contribute 25% to the cost of a traffic signal at the intersection of 19th Avenue and Alameda Road. No other not yet existing traffic signals within the study area will be needed to accommodate DV 30 traffic.   |
| 12.  |          | Alameda improvements have been stipulated in the Pre-Application and is required to terminate in a cul-de-sac in the interim condition.  | <b>Disposition Code 1:</b> Alameda Road will be improved in general accordance with the site plans presented in Figure 4 except as may otherwise be required by the City of Phoenix to provide for vehicle turnaround provisions near the eastern edge of the DV 30 East Site in the event that the south half of Alameda Road has not already been constructed from the eastern terminus of the DV 30 East Site segment to 7th Avenue (in which case a turnaround adjacent to DV 30 East would not be necessary).  |
| 13.  | Page 33  | <b>Table 7:</b> The developer shall implement the recommended changes.   | <b>Disposition Code 1:</b> The inclusion of a second analysis scenario, Scenario B, in this revised TIS allows the City and the Developer to recognize which specific roadway improvements are warranted by the DV 30 site and which are warranted with the Supplier Site A site. The DV 30 developer has agreed to contribute to additional costs that are not warranted by the DV 30 site alone (i.e. the traffic signal at 19th Avenue and Alameda Road) and will assist with the relevant improvements mentioned in Scenario B of this TIS.   |
| 14.  | Page 33  | <b>Table 7:</b> why not use the more conservative lengths out of the three methods?  | <b>Disposition Code 2:</b> The recommended turn lane queue lengths are those deemed to most appropriate in the context of multiple factors, including factors such as the advancements that have been made in traffic-activated signal timing and phasing technology that are not considered in the AASHTO equations that tend to yield the highest storage length values. Due to the limitations of the AASHTO equations, the AASHTO-based results have been removed from the queue storage tables.  |

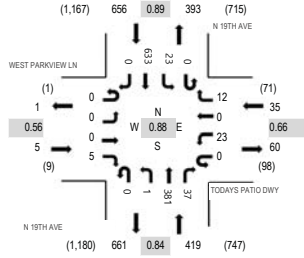
## **APPENDIX B**

### **EXISTING TRAFFIC COUNTS**

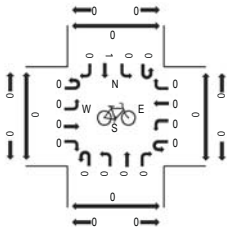


**Location:** 1 N 19TH AVE & TODAYS PATIO DWY AM  
**Date:** Wednesday, October 6, 2021  
**Peak Hour:** 07:30 AM - 08:30 AM  
**Peak 15-Minutes:** 07:45 AM - 08:00 AM

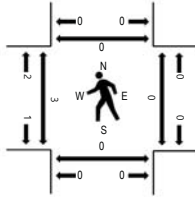
**Peak Hour - Motorized Vehicles**



**Peak Hour - Bicycles**



**Peak Hour - Pedestrians**



Note: Total study counts contained in parentheses.

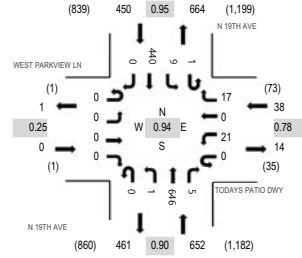
**Traffic Counts - Motorized Vehicles**

| Interval<br>Start Time | WEST PARKVIEW LN |      |      |       | TODAYS PATIO DWY |      |      |       | N 19TH AVE |      |      |       | N 19TH AVE |      |       |       | Rolling<br>Hour | Pedestrian Crossings |      |      |       |       |
|------------------------|------------------|------|------|-------|------------------|------|------|-------|------------|------|------|-------|------------|------|-------|-------|-----------------|----------------------|------|------|-------|-------|
|                        | Eastbound        |      |      |       | Westbound        |      |      |       | Northbound |      |      |       | Southbound |      |       |       |                 | Total                | West | East | South | North |
|                        | U-Turn           | Left | Thru | Right | U-Turn           | Left | Thru | Right | U-Turn     | Left | Thru | Right | U-Turn     | Left | Thru  | Right |                 |                      |      |      |       |       |
| 7:00 AM                | 0                | 0    | 0    | 0     | 0                | 8    | 0    | 6     | 0          | 0    | 63   | 6     | 0          | 3    | 116   | 0     | 202             | 1,028                | 2    | 0    | 0     | 0     |
| 7:15 AM                | 0                | 0    | 0    | 4     | 0                | 3    | 0    | 5     | 0          | 0    | 56   | 6     | 0          | 2    | 141   | 0     | 217             | 1,089                | 2    | 0    | 0     | 0     |
| 7:30 AM                | 0                | 0    | 0    | 4     | 0                | 8    | 0    | 2     | 0          | 1    | 88   | 6     | 0          | 7    | 177   | 0     | 293             | 1,115                | 1    | 0    | 0     | 0     |
| 7:45 AM                | 0                | 0    | 0    | 1     | 0                | 3    | 0    | 2     | 0          | 0    | 115  | 9     | 0          | 8    | 178   | 0     | 316             | 1,037                | 1    | 0    | 0     | 0     |
| 8:00 AM                | 0                | 0    | 0    | 0     | 0                | 8    | 0    | 5     | 0          | 0    | 87   | 13    | 0          | 6    | 144   | 0     | 253             | 966                  | 1    | 0    | 0     | 0     |
| 8:15 AM                | 0                | 0    | 0    | 0     | 0                | 4    | 0    | 3     | 0          | 0    | 91   | 9     | 0          | 2    | 134   | 0     | 243             | 0                    | 0    | 0    | 0     |       |
| 8:30 AM                | 0                | 0    | 0    | 0     | 0                | 5    | 0    | 5     | 0          | 0    | 80   | 9     | 0          | 2    | 114   | 0     | 215             | 0                    | 0    | 0    | 0     |       |
| 8:45 AM                | 0                | 0    | 0    | 0     | 0                | 2    | 0    | 2     | 0          | 0    | 105  | 3     | 0          | 7    | 126   | 0     | 245             | 0                    | 0    | 0    | 0     |       |
| Count Total            | 0                | 0    | 0    | 9     | 0                | 41   | 0    | 30    | 0          | 1    | 685  | 61    | 0          | 37   | 1,130 | 0     | 1,994           | 7                    | 0    | 0    | 0     |       |
| Peak Hour              | 0                | 0    | 0    | 5     | 0                | 23   | 0    | 12    | 0          | 1    | 381  | 37    | 0          | 23   | 633   | 0     | 1,115           | 3                    | 0    | 0    | 0     |       |

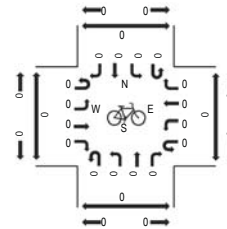


**Location:** 1 N 19TH AVE & TODAYS PATIO DWY PM  
**Date:** Wednesday, October 6, 2021  
**Peak Hour:** 04:15 PM - 05:15 PM  
**Peak 15-Minutes:** 05:00 PM - 05:15 PM

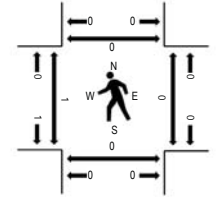
**Peak Hour - Motorized Vehicles**



**Peak Hour - Bicycles**



**Peak Hour - Pedestrians**



Note: Total study counts contained in parentheses.

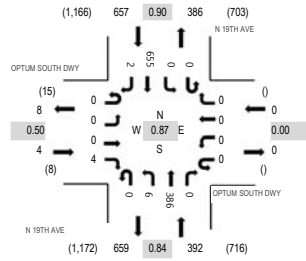
**Traffic Counts - Motorized Vehicles**

| Interval<br>Start Time | WEST PARKVIEW LN |      |      |       | TODAYS PATIO DWY |      |      |       | N 19TH AVE |      |       |       | N 19TH AVE |      |      |       | Rolling<br>Hour | Pedestrian Crossings |      |      |       |       |
|------------------------|------------------|------|------|-------|------------------|------|------|-------|------------|------|-------|-------|------------|------|------|-------|-----------------|----------------------|------|------|-------|-------|
|                        | Eastbound        |      |      |       | Westbound        |      |      |       | Northbound |      |       |       | Southbound |      |      |       |                 | Total                | West | East | South | North |
|                        | U-Turn           | Left | Thru | Right | U-Turn           | Left | Thru | Right | U-Turn     | Left | Thru  | Right | U-Turn     | Left | Thru | Right |                 |                      |      |      |       |       |
| 4:00 PM                | 0                | 1    | 0    | 0     | 0                | 9    | 0    | 7     | 0          | 0    | 160   | 3     | 0          | 5    | 106  | 0     | 291             | 1,128                | 0    | 0    | 0     | 0     |
| 4:15 PM                | 0                | 0    | 0    | 0     | 0                | 6    | 0    | 7     | 0          | 0    | 145   | 1     | 0          | 2    | 101  | 0     | 262             | 1,140                | 0    | 0    | 0     | 0     |
| 4:30 PM                | 0                | 0    | 0    | 0     | 0                | 10   | 0    | 4     | 0          | 0    | 166   | 0     | 0          | 4    | 115  | 0     | 299             | 1,120                | 0    | 0    | 0     | 0     |
| 4:45 PM                | 0                | 0    | 0    | 0     | 0                | 2    | 0    | 5     | 0          | 0    | 157   | 1     | 1          | 1    | 109  | 0     | 276             | 1,031                | 1    | 0    | 0     | 0     |
| 5:00 PM                | 0                | 0    | 0    | 0     | 0                | 3    | 0    | 1     | 0          | 1    | 178   | 3     | 0          | 2    | 115  | 0     | 303             | 967                  | 0    | 0    | 0     | 0     |
| 5:15 PM                | 0                | 0    | 0    | 0     | 0                | 5    | 0    | 2     | 0          | 0    | 144   | 4     | 0          | 1    | 86   | 0     | 242             | 3                    | 0    | 0    | 0     |       |
| 5:30 PM                | 0                | 0    | 0    | 0     | 0                | 5    | 0    | 3     | 0          | 0    | 116   | 1     | 0          | 0    | 85   | 0     | 210             | 0                    | 0    | 0    | 0     |       |
| 5:45 PM                | 0                | 0    | 0    | 0     | 0                | 2    | 0    | 2     | 0          | 0    | 100   | 2     | 0          | 5    | 101  | 0     | 212             | 0                    | 0    | 0    | 0     |       |
| Count Total            | 0                | 1    | 0    | 0     | 0                | 42   | 0    | 31    | 0          | 1    | 1,166 | 15    | 1          | 20   | 818  | 0     | 2,095           | 4                    | 0    | 0    | 0     |       |
| Peak Hour              | 0                | 0    | 0    | 0     | 0                | 21   | 0    | 17    | 0          | 1    | 646   | 5     | 1          | 9    | 440  | 0     | 1,140           | 1                    | 0    | 0    | 0     |       |

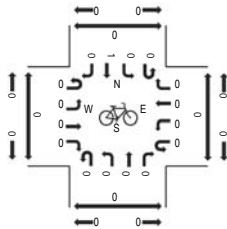


**Location:** 2 N 19TH AVE & OPTUM SOUTH DWY AM  
**Date:** Wednesday, October 6, 2021  
**Peak Hour:** 07:30 AM - 08:30 AM  
**Peak 15-Minutes:** 07:45 AM - 08:00 AM

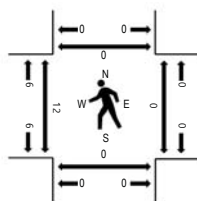
**Peak Hour - Motorized Vehicles**



**Peak Hour - Bicycles**



**Peak Hour - Pedestrians**



Note: Total study counts contained in parentheses.

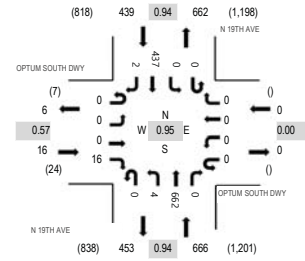
**Traffic Counts - Motorized Vehicles**

| Interval<br>Start Time | OPTUM SOUTH DWY |      |      |       | OPTUM SOUTH DWY |      |      |       | N 19TH AVE |      |      | N 19TH AVE |        |      | Rolling<br>Hour | Pedestrian Crossings |       |       |       |       |      |       |
|------------------------|-----------------|------|------|-------|-----------------|------|------|-------|------------|------|------|------------|--------|------|-----------------|----------------------|-------|-------|-------|-------|------|-------|
|                        | Eastbound       |      |      |       | Westbound       |      |      |       | Northbound |      |      | Southbound |        |      |                 | Total                | West  | East  | South | North |      |       |
|                        | U-Turn          | Left | Thru | Right | U-Turn          | Left | Thru | Right | U-Turn     | Left | Thru | Right      | U-Turn | Left |                 |                      |       |       |       |       | Thru | Right |
| 7:00 AM                | 0               | 0    | 0    | 0     | 0               | 0    | 0    | 0     | 0          | 2    | 66   | 0          | 0      | 0    | 117             | 0                    | 185   | 971   | 2     | 0     | 0    | 0     |
| 7:15 AM                | 0               | 0    | 0    | 0     | 0               | 0    | 0    | 0     | 0          | 0    | 62   | 0          | 0      | 0    | 145             | 0                    | 207   | 1,031 | 3     | 0     | 0    | 0     |
| 7:30 AM                | 0               | 0    | 0    | 1     | 0               | 0    | 0    | 0     | 0          | 1    | 88   | 0          | 0      | 0    | 185             | 0                    | 275   | 1,053 | 3     | 0     | 0    | 0     |
| 7:45 AM                | 0               | 0    | 0    | 1     | 0               | 0    | 0    | 0     | 0          | 3    | 114  | 0          | 0      | 0    | 185             | 1                    | 304   | 982   | 6     | 0     | 0    | 0     |
| 8:00 AM                | 0               | 0    | 0    | 0     | 0               | 0    | 0    | 0     | 0          | 1    | 91   | 0          | 0      | 0    | 153             | 0                    | 245   | 919   | 2     | 0     | 0    | 0     |
| 8:15 AM                | 0               | 0    | 0    | 2     | 0               | 0    | 0    | 0     | 0          | 1    | 93   | 0          | 0      | 0    | 132             | 1                    | 229   |       | 1     | 0     | 0    | 0     |
| 8:30 AM                | 0               | 0    | 0    | 1     | 0               | 0    | 0    | 0     | 0          | 2    | 84   | 0          | 0      | 0    | 117             | 0                    | 204   |       | 7     | 0     | 0    | 0     |
| 8:45 AM                | 0               | 0    | 0    | 3     | 0               | 0    | 0    | 0     | 0          | 3    | 105  | 0          | 0      | 0    | 130             | 0                    | 241   |       | 0     | 0     | 0    | 0     |
| Count Total            | 0               | 0    | 0    | 8     | 0               | 0    | 0    | 0     | 0          | 13   | 703  | 0          | 0      | 0    | 1,164           | 2                    | 1,890 |       | 24    | 0     | 0    | 0     |
| Peak Hour              | 0               | 0    | 0    | 4     | 0               | 0    | 0    | 0     | 0          | 6    | 386  | 0          | 0      | 0    | 655             | 2                    | 1,053 |       | 12    | 0     | 0    | 0     |

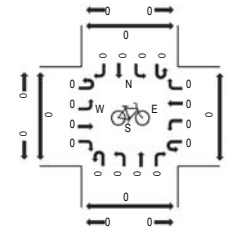


**Location:** 2 N 19TH AVE & OPTUM SOUTH DWY PM  
**Date:** Wednesday, October 6, 2021  
**Peak Hour:** 04:15 PM - 05:15 PM  
**Peak 15-Minutes:** 05:00 PM - 05:15 PM

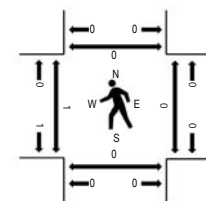
**Peak Hour - Motorized Vehicles**



**Peak Hour - Bicycles**



**Peak Hour - Pedestrians**



Note: Total study counts contained in parentheses.

**Traffic Counts - Motorized Vehicles**

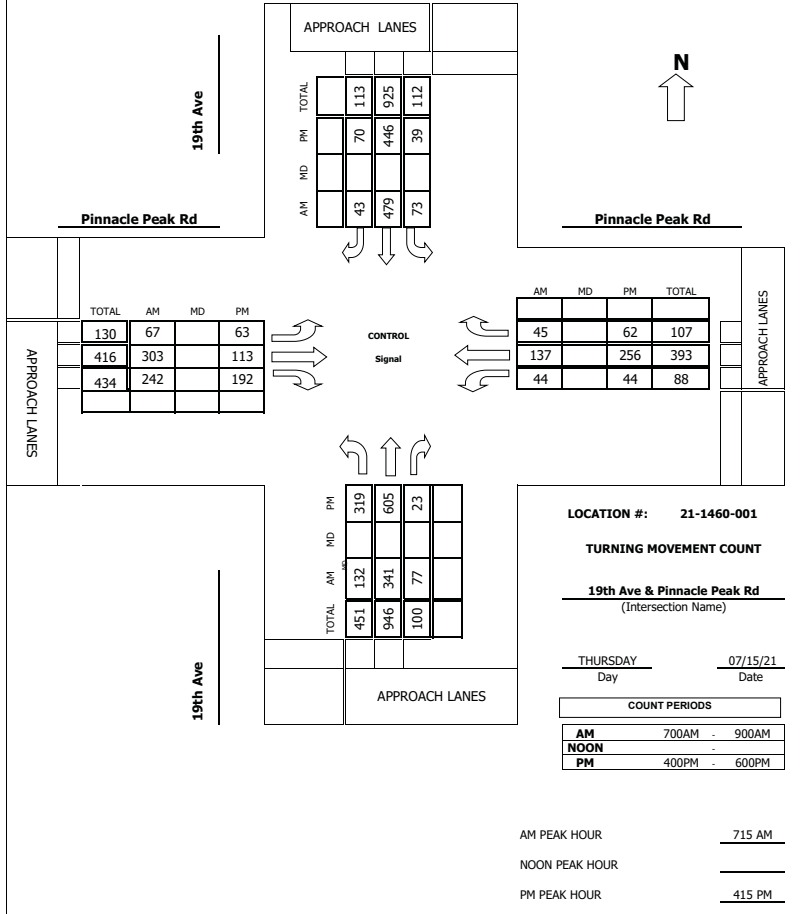
| Interval<br>Start Time | OPTUM SOUTH DWY |      |      |       | OPTUM SOUTH DWY |      |      |       | N 19TH AVE |      |       | N 19TH AVE |        |      | Rolling<br>Hour | Pedestrian Crossings |       |       |       |       |      |       |
|------------------------|-----------------|------|------|-------|-----------------|------|------|-------|------------|------|-------|------------|--------|------|-----------------|----------------------|-------|-------|-------|-------|------|-------|
|                        | Eastbound       |      |      |       | Westbound       |      |      |       | Northbound |      |       | Southbound |        |      |                 | Total                | West  | East  | South | North |      |       |
|                        | U-Turn          | Left | Thru | Right | U-Turn          | Left | Thru | Right | U-Turn     | Left | Thru  | Right      | U-Turn | Left |                 |                      |       |       |       |       | Thru | Right |
| 4:00 PM                | 0               | 0    | 0    | 1     | 0               | 0    | 0    | 0     | 0          | 0    | 166   | 0          | 0      | 0    | 107             | 0                    | 274   | 1,099 | 1     | 0     | 0    | 0     |
| 4:15 PM                | 0               | 0    | 0    | 5     | 0               | 0    | 0    | 0     | 0          | 0    | 153   | 0          | 0      | 0    | 100             | 1                    | 259   | 1,121 | 0     | 0     | 0    | 0     |
| 4:30 PM                | 0               | 0    | 0    | 3     | 0               | 0    | 0    | 0     | 0          | 3    | 168   | 0          | 0      | 0    | 116             | 1                    | 291   | 1,097 | 0     | 0     | 0    | 0     |
| 4:45 PM                | 0               | 0    | 0    | 1     | 0               | 0    | 0    | 0     | 0          | 0    | 163   | 0          | 0      | 0    | 110             | 0                    | 275   | 1,012 | 1     | 0     | 0    | 0     |
| 5:00 PM                | 0               | 0    | 0    | 7     | 0               | 0    | 0    | 0     | 0          | 0    | 178   | 0          | 0      | 0    | 111             | 0                    | 296   | 944   | 0     | 0     | 0    | 0     |
| 5:15 PM                | 0               | 1    | 0    | 3     | 0               | 0    | 0    | 0     | 0          | 0    | 146   | 0          | 0      | 0    | 84              | 1                    | 235   |       | 4     | 0     | 0    | 0     |
| 5:30 PM                | 0               | 0    | 0    | 2     | 0               | 0    | 0    | 0     | 0          | 0    | 121   | 0          | 0      | 0    | 83              | 0                    | 206   |       | 0     | 0     | 0    | 0     |
| 5:45 PM                | 0               | 0    | 0    | 1     | 0               | 0    | 0    | 0     | 0          | 0    | 102   | 0          | 0      | 0    | 104             | 0                    | 207   |       | 0     | 0     | 0    | 0     |
| Count Total            | 0               | 1    | 0    | 23    | 0               | 0    | 0    | 0     | 0          | 4    | 1,197 | 0          | 0      | 0    | 815             | 3                    | 2,043 |       | 6     | 0     | 0    | 0     |
| Peak Hour              | 0               | 0    | 0    | 16    | 0               | 0    | 0    | 0     | 0          | 4    | 662   | 0          | 0      | 0    | 437             | 2                    | 1,121 |       | 1     | 0     | 0    | 0     |

Intersection Turning Movement  
Prepared by:



Project #: **21-1460-001**

**TMC SUMMARY OF 19th Ave & Pinnacle Peak Rd**



Intersection Turning Movement  
Prepared by:



N-S STREET: 19th Ave DATE: 07/15/21 LOCATION: Phoenix

E-W STREET: Pinnacle Peak Rd DAY: THURSDAY PROJECT#: 21-1460-001

| LANES:   | NORTHBOUND |    |    | SOUTHBOUND |     |    | EASTBOUND |    |    | WESTBOUND |    |    | TOTAL |
|----------|------------|----|----|------------|-----|----|-----------|----|----|-----------|----|----|-------|
|          | NL         | NT | NR | SL         | ST  | SR | EL        | ET | ER | WL        | WT | WR |       |
| 6:00 AM  | 1          | 3  | 0  | 1          | 2   | 0  | 1         | 2  | 0  | 1         | 2  | 0  |       |
| 6:15 AM  |            |    |    |            |     |    |           |    |    |           |    |    |       |
| 6:30 AM  |            |    |    |            |     |    |           |    |    |           |    |    |       |
| 6:45 AM  |            |    |    |            |     |    |           |    |    |           |    |    |       |
| 7:00 AM  | 29         | 72 | 9  | 10         | 116 | 8  | 3         | 67 | 41 | 6         | 26 | 11 | 398   |
| 7:15 AM  | 23         | 71 | 17 | 16         | 116 | 14 | 19        | 95 | 69 | 12        | 35 | 11 | 498   |
| 7:30 AM  | 25         | 95 | 32 | 17         | 153 | 11 | 17        | 77 | 67 | 14        | 27 | 12 | 547   |
| 7:45 AM  | 40         | 88 | 13 | 23         | 121 | 5  | 14        | 78 | 63 | 10        | 41 | 15 | 511   |
| 8:00 AM  | 44         | 87 | 15 | 17         | 89  | 13 | 17        | 53 | 43 | 8         | 34 | 7  | 427   |
| 8:15 AM  | 32         | 78 | 11 | 13         | 118 | 9  | 20        | 44 | 38 | 10        | 46 | 10 | 429   |
| 8:30 AM  | 30         | 98 | 12 | 9          | 123 | 19 | 11        | 36 | 52 | 19        | 52 | 12 | 473   |
| 8:45 AM  | 24         | 90 | 4  | 15         | 95  | 15 | 18        | 49 | 49 | 9         | 37 | 8  | 413   |
| 9:00 AM  |            |    |    |            |     |    |           |    |    |           |    |    |       |
| 9:15 AM  |            |    |    |            |     |    |           |    |    |           |    |    |       |
| 9:30 AM  |            |    |    |            |     |    |           |    |    |           |    |    |       |
| 9:45 AM  |            |    |    |            |     |    |           |    |    |           |    |    |       |
| 10:00 AM |            |    |    |            |     |    |           |    |    |           |    |    |       |
| 10:15 AM |            |    |    |            |     |    |           |    |    |           |    |    |       |
| 10:30 AM |            |    |    |            |     |    |           |    |    |           |    |    |       |
| 10:45 AM |            |    |    |            |     |    |           |    |    |           |    |    |       |
| 11:00 AM |            |    |    |            |     |    |           |    |    |           |    |    |       |
| 11:15 AM |            |    |    |            |     |    |           |    |    |           |    |    |       |
| 11:30 AM |            |    |    |            |     |    |           |    |    |           |    |    |       |
| 11:45 AM |            |    |    |            |     |    |           |    |    |           |    |    |       |

| TOTAL      | NL    | NT    | NR    | SL    | ST    | SR   | EL    | ET    | ER    | WL    | WT    | WR    | TOTAL |
|------------|-------|-------|-------|-------|-------|------|-------|-------|-------|-------|-------|-------|-------|
| Volumes    | 247   | 679   | 113   | 120   | 931   | 94   | 119   | 499   | 422   | 88    | 298   | 86    | 3696  |
| Approach % | 23.77 | 65.35 | 10.88 | 10.48 | 81.31 | 8.21 | 11.44 | 47.98 | 40.58 | 18.64 | 63.14 | 18.22 |       |
| App/Depart | 1039  | /     | 884   | 1145  | /     | 1441 | 1040  | /     | 732   | 472   | /     | 639   |       |

AM Peak Hr Begins at: 715 AM

PEAK

|            |       |       |       |       |       |      |       |       |       |       |       |       |      |
|------------|-------|-------|-------|-------|-------|------|-------|-------|-------|-------|-------|-------|------|
| Volumes    | 132   | 341   | 77    | 73    | 479   | 43   | 67    | 303   | 242   | 44    | 137   | 45    | 1983 |
| Approach % | 24.00 | 62.00 | 14.00 | 12.27 | 80.50 | 7.23 | 10.95 | 49.51 | 39.54 | 19.47 | 60.62 | 19.91 |      |

PEAK HR. FACTOR:

|  |       |       |       |       |       |
|--|-------|-------|-------|-------|-------|
|  | 0.905 | 0.822 | 0.836 | 0.856 | 0.906 |
|--|-------|-------|-------|-------|-------|

CONTROL: Signal  
COMMENT 1: 33.698289, -112.099944  
GPS:



# Intersection Turning Movement



N-S STREET: **19th Ave** DATE: **07/15/21** LOCATION: **Phoenix**  
 E-W STREET: **Pinnacle Peak Rd** DAY: **THURSDAY** PROJECT# **21-1460-001**

| LANES:  | NORTHBOUND |     |    | SOUTHBOUND |     |    | EASTBOUND |    |    | WESTBOUND |    |    | TOTAL |
|---------|------------|-----|----|------------|-----|----|-----------|----|----|-----------|----|----|-------|
|         | NL         | NT  | NR | SL         | ST  | SR | EL        | ET | ER | WL        | WT | WR |       |
| 1:00 PM |            |     |    |            |     |    |           |    |    |           |    |    |       |
| 1:15 PM |            |     |    |            |     |    |           |    |    |           |    |    |       |
| 1:30 PM |            |     |    |            |     |    |           |    |    |           |    |    |       |
| 1:45 PM |            |     |    |            |     |    |           |    |    |           |    |    |       |
| 2:00 PM |            |     |    |            |     |    |           |    |    |           |    |    |       |
| 2:15 PM |            |     |    |            |     |    |           |    |    |           |    |    |       |
| 2:30 PM |            |     |    |            |     |    |           |    |    |           |    |    |       |
| 2:45 PM |            |     |    |            |     |    |           |    |    |           |    |    |       |
| 3:00 PM |            |     |    |            |     |    |           |    |    |           |    |    |       |
| 3:15 PM |            |     |    |            |     |    |           |    |    |           |    |    |       |
| 3:30 PM |            |     |    |            |     |    |           |    |    |           |    |    |       |
| 3:45 PM |            |     |    |            |     |    |           |    |    |           |    |    |       |
| 4:00 PM | 72         | 146 | 9  | 6          | 101 | 19 | 15        | 35 | 55 | 17        | 54 | 7  | 536   |
| 4:15 PM | 80         | 165 | 11 | 7          | 123 | 16 | 17        | 19 | 58 | 9         | 72 | 15 | 592   |
| 4:30 PM | 78         | 123 | 5  | 11         | 108 | 16 | 22        | 42 | 52 | 9         | 45 | 18 | 529   |
| 4:45 PM | 83         | 156 | 3  | 7          | 112 | 19 | 8         | 26 | 35 | 19        | 87 | 16 | 571   |
| 5:00 PM | 78         | 161 | 4  | 14         | 103 | 19 | 16        | 26 | 47 | 7         | 52 | 13 | 540   |
| 5:15 PM | 78         | 149 | 3  | 4          | 96  | 15 | 10        | 15 | 42 | 9         | 70 | 12 | 503   |
| 5:30 PM | 51         | 107 | 3  | 3          | 90  | 8  | 8         | 19 | 43 | 4         | 23 | 7  | 366   |
| 5:45 PM | 44         | 93  | 0  | 2          | 88  | 17 | 10        | 13 | 41 | 2         | 35 | 8  | 353   |
| 6:00 PM |            |     |    |            |     |    |           |    |    |           |    |    |       |
| 6:15 PM |            |     |    |            |     |    |           |    |    |           |    |    |       |
| 6:30 PM |            |     |    |            |     |    |           |    |    |           |    |    |       |
| 6:45 PM |            |     |    |            |     |    |           |    |    |           |    |    |       |

| TOTAL      | NL    | NT    | NR   | SL   | ST    | SR    | EL    | ET    | ER    | WL    | WT    | WR    | TOTAL |
|------------|-------|-------|------|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Volumes    | 564   | 1100  | 38   | 54   | 821   | 129   | 106   | 195   | 373   | 76    | 438   | 96    | 3990  |
| Approach % | 33.14 | 64.63 | 2.23 | 5.38 | 81.77 | 12.85 | 15.73 | 28.93 | 55.34 | 12.46 | 71.80 | 15.74 |       |
| App/Depart | 1702  | /     | 1302 | 1004 | /     | 1270  | 674   | /     | 287   | 610   | /     | 1131  |       |

PM Peak Hr Begins at: 415 PM

| PEAK       | NL    | NT    | NR   | SL   | ST    | SR    | EL    | ET    | ER    | WL    | WT    | WR    | TOTAL |
|------------|-------|-------|------|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Volumes    | 319   | 605   | 23   | 39   | 446   | 70    | 63    | 113   | 192   | 44    | 256   | 62    | 2232  |
| Approach % | 33.69 | 63.89 | 2.43 | 7.03 | 80.36 | 12.61 | 17.12 | 30.71 | 52.17 | 12.15 | 70.72 | 17.13 |       |

| PEAK HR. FACTOR: | NL | NT    | NR | SL | ST    | SR | EL | ET    | ER | WL | WT    | WR | TOTAL |
|------------------|----|-------|----|----|-------|----|----|-------|----|----|-------|----|-------|
|                  |    | 0.925 |    |    | 0.950 |    |    | 0.793 |    |    | 0.742 |    | 0.943 |

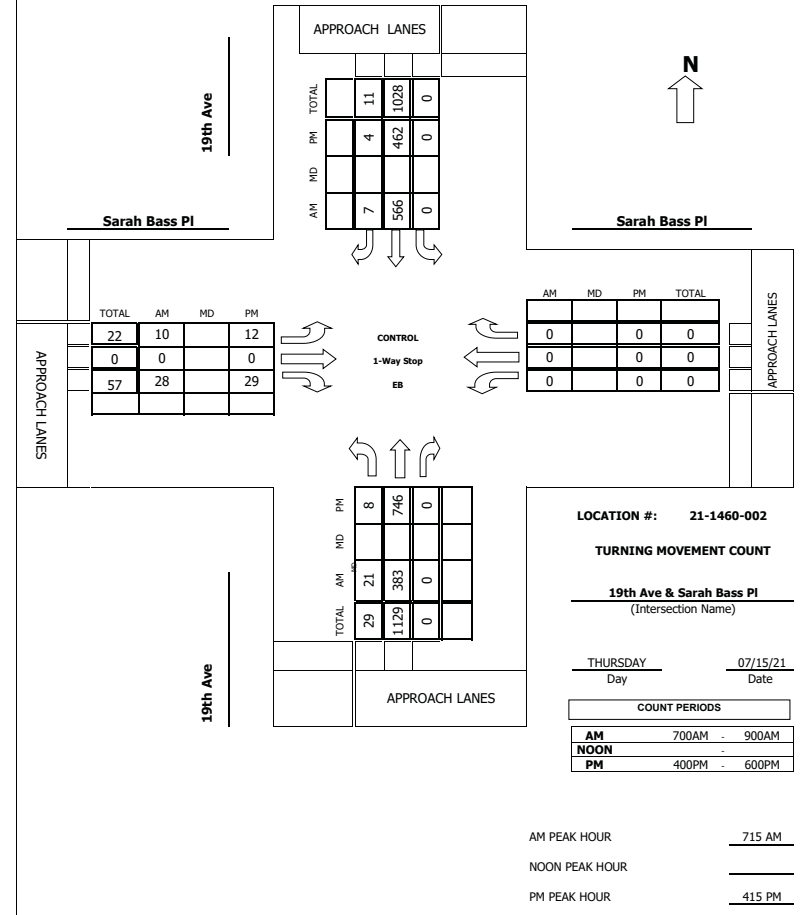
CONTROL: **Signal**  
 COMMENT 1: **0**  
 GPS: **33.698289, -112.099944**

## Intersection Turning Movement Prepared by:



Project #: **21-1460-002**

### TMC SUMMARY OF 19th Ave & Sarah Bass Pl



### Intersection Turning Movement

Prepared by:



**FIELD DATA SERVICES OF ARIZONA, INC.**  
520.316.6745



veracitytrafficgroup

N-S STREET: 19th Ave DATE: 07/15/21 LOCATION: Phoneix  
E-W STREET: Sarah Bass Pl DAY: THURSDAY PROJECT# 21-1460-002

| LANES:   | NORTHBOUND |     |    | SOUTHBOUND |     |    | EASTBOUND |    |    | WESTBOUND |    |    | TOTAL |
|----------|------------|-----|----|------------|-----|----|-----------|----|----|-----------|----|----|-------|
|          | NL         | NT  | NR | SL         | ST  | SR | EL        | ET | ER | WL        | WT | WR |       |
| 6:00 AM  |            |     |    |            |     |    |           |    |    |           |    |    |       |
| 6:15 AM  |            |     |    |            |     |    |           |    |    |           |    |    |       |
| 6:30 AM  |            |     |    |            |     |    |           |    |    |           |    |    |       |
| 6:45 AM  |            |     |    |            |     |    |           |    |    |           |    |    |       |
| 7:00 AM  | 11         | 57  | 0  | 0          | 124 | 1  | 5         | 0  | 5  | 0         | 0  | 0  | 203   |
| 7:15 AM  | 5          | 91  | 0  | 0          | 148 | 0  | 4         | 0  | 9  | 0         | 0  | 0  | 257   |
| 7:30 AM  | 5          | 90  | 0  | 0          | 142 | 0  | 4         | 0  | 6  | 0         | 0  | 0  | 247   |
| 7:45 AM  | 6          | 111 | 0  | 0          | 149 | 5  | 2         | 0  | 7  | 0         | 0  | 0  | 280   |
| 8:00 AM  | 5          | 91  | 0  | 0          | 127 | 2  | 0         | 0  | 6  | 0         | 0  | 0  | 231   |
| 8:15 AM  | 11         | 92  | 0  | 0          | 129 | 1  | 5         | 0  | 3  | 0         | 0  | 0  | 241   |
| 8:30 AM  | 4          | 114 | 0  | 0          | 123 | 4  | 3         | 0  | 3  | 0         | 0  | 0  | 251   |
| 8:45 AM  | 3          | 98  | 0  | 0          | 143 | 4  | 3         | 0  | 7  | 0         | 0  | 0  | 258   |
| 9:00 AM  |            |     |    |            |     |    |           |    |    |           |    |    |       |
| 9:15 AM  |            |     |    |            |     |    |           |    |    |           |    |    |       |
| 9:30 AM  |            |     |    |            |     |    |           |    |    |           |    |    |       |
| 9:45 AM  |            |     |    |            |     |    |           |    |    |           |    |    |       |
| 10:00 AM |            |     |    |            |     |    |           |    |    |           |    |    |       |
| 10:15 AM |            |     |    |            |     |    |           |    |    |           |    |    |       |
| 10:30 AM |            |     |    |            |     |    |           |    |    |           |    |    |       |
| 10:45 AM |            |     |    |            |     |    |           |    |    |           |    |    |       |
| 11:00 AM |            |     |    |            |     |    |           |    |    |           |    |    |       |
| 11:15 AM |            |     |    |            |     |    |           |    |    |           |    |    |       |
| 11:30 AM |            |     |    |            |     |    |           |    |    |           |    |    |       |
| 11:45 AM |            |     |    |            |     |    |           |    |    |           |    |    |       |

| TOTAL      | NL   | NT    | NR   | SL   | ST    | SR   | EL    | ET   | ER    | WL   | WT   | WR   | TOTAL |
|------------|------|-------|------|------|-------|------|-------|------|-------|------|------|------|-------|
| Volumes    | 50   | 744   | 0    | 0    | 1085  | 17   | 26    | 0    | 46    | 0    | 0    | 0    | 1968  |
| Approach % | 6.30 | 93.70 | 0.00 | 0.00 | 98.46 | 1.54 | 36.11 | 0.00 | 63.89 | #### | #### | #### |       |
| App/Depart | 794  | /     | 770  | 1102 | /     | 1131 | 72    | /    | 0     | 0    | /    | 67   |       |

AM Peak Hr Begins at: 715 AM

| PEAK       | Volumes         | Approach %       |
|------------|-----------------|------------------|
| Volumes    | 21 383 0        | 0 566 7          |
| Approach % | 5.20 94.80 0.00 | 0.00 98.78 1.22  |
|            |                 | 10 0 28          |
|            |                 | 26.32 0.00 73.68 |
|            |                 | #### #### ####   |
|            |                 | 1015             |

| PEAK HR. FACTOR:              |
|-------------------------------|
| 0.863 0.930 0.731 0.000 0.906 |

CONTROL: 1-Way Stop (EB)  
COMMENT 1: 33.702016, -112.099975  
GPS:

### Intersection Turning Movement



**FIELD DATA SERVICES OF ARIZONA, INC.**  
520.316.6745



veracitytrafficgroup

N-S STREET: 19th Ave DATE: 07/15/21 LOCATION: Phoneix  
E-W STREET: Sarah Bass Pl DAY: THURSDAY PROJECT# 21-1460-002

| LANES:  | NORTHBOUND |     |    | SOUTHBOUND |     |    | EASTBOUND |    |    | WESTBOUND |    |    | TOTAL |
|---------|------------|-----|----|------------|-----|----|-----------|----|----|-----------|----|----|-------|
|         | NL         | NT  | NR | SL         | ST  | SR | EL        | ET | ER | WL        | WT | WR |       |
| 1:00 PM |            |     |    |            |     |    |           |    |    |           |    |    |       |
| 1:15 PM |            |     |    |            |     |    |           |    |    |           |    |    |       |
| 1:30 PM |            |     |    |            |     |    |           |    |    |           |    |    |       |
| 1:45 PM |            |     |    |            |     |    |           |    |    |           |    |    |       |
| 2:00 PM |            |     |    |            |     |    |           |    |    |           |    |    |       |
| 2:15 PM |            |     |    |            |     |    |           |    |    |           |    |    |       |
| 2:30 PM |            |     |    |            |     |    |           |    |    |           |    |    |       |
| 2:45 PM |            |     |    |            |     |    |           |    |    |           |    |    |       |
| 3:00 PM |            |     |    |            |     |    |           |    |    |           |    |    |       |
| 3:15 PM |            |     |    |            |     |    |           |    |    |           |    |    |       |
| 3:30 PM |            |     |    |            |     |    |           |    |    |           |    |    |       |
| 3:45 PM |            |     |    |            |     |    |           |    |    |           |    |    |       |
| 4:00 PM | 1          | 186 | 0  | 0          | 107 | 2  | 3         | 0  | 9  | 0         | 0  | 0  | 308   |
| 4:15 PM | 2          | 179 | 0  | 0          | 114 | 2  | 2         | 0  | 5  | 0         | 0  | 0  | 304   |
| 4:30 PM | 1          | 183 | 0  | 0          | 111 | 0  | 4         | 0  | 9  | 0         | 0  | 0  | 308   |
| 4:45 PM | 0          | 170 | 0  | 0          | 122 | 1  | 1         | 0  | 7  | 0         | 0  | 0  | 301   |
| 5:00 PM | 5          | 214 | 0  | 0          | 115 | 1  | 5         | 0  | 8  | 0         | 0  | 0  | 348   |
| 5:15 PM | 2          | 156 | 0  | 0          | 105 | 1  | 0         | 0  | 4  | 0         | 0  | 0  | 268   |
| 5:30 PM | 2          | 140 | 0  | 0          | 114 | 0  | 0         | 0  | 7  | 0         | 0  | 0  | 263   |
| 5:45 PM | 0          | 123 | 0  | 0          | 92  | 1  | 0         | 0  | 0  | 0         | 0  | 0  | 216   |
| 6:00 PM |            |     |    |            |     |    |           |    |    |           |    |    |       |
| 6:15 PM |            |     |    |            |     |    |           |    |    |           |    |    |       |
| 6:30 PM |            |     |    |            |     |    |           |    |    |           |    |    |       |
| 6:45 PM |            |     |    |            |     |    |           |    |    |           |    |    |       |

| TOTAL      | NL   | NT    | NR   | SL   | ST    | SR   | EL    | ET   | ER    | WL   | WT   | WR   | TOTAL |
|------------|------|-------|------|------|-------|------|-------|------|-------|------|------|------|-------|
| Volumes    | 13   | 1351  | 0    | 0    | 880   | 8    | 15    | 0    | 49    | 0    | 0    | 0    | 2316  |
| Approach % | 0.95 | 99.05 | 0.00 | 0.00 | 99.10 | 0.90 | 23.44 | 0.00 | 76.56 | #### | #### | #### |       |
| App/Depart | 1364 | /     | 1366 | 888  | /     | 929  | 64    | /    | 0     | 0    | /    | 21   |       |

PM Peak Hr Begins at: 415 PM

| PEAK       | Volumes         | Approach %       |
|------------|-----------------|------------------|
| Volumes    | 8 746 0         | 0 462 4          |
| Approach % | 1.06 98.94 0.00 | 0.00 99.14 0.86  |
|            |                 | 12 0 29          |
|            |                 | 29.27 0.00 70.73 |
|            |                 | #### #### ####   |
|            |                 | 1261             |

| PEAK HR. FACTOR:              |
|-------------------------------|
| 0.861 0.947 0.788 0.000 0.906 |

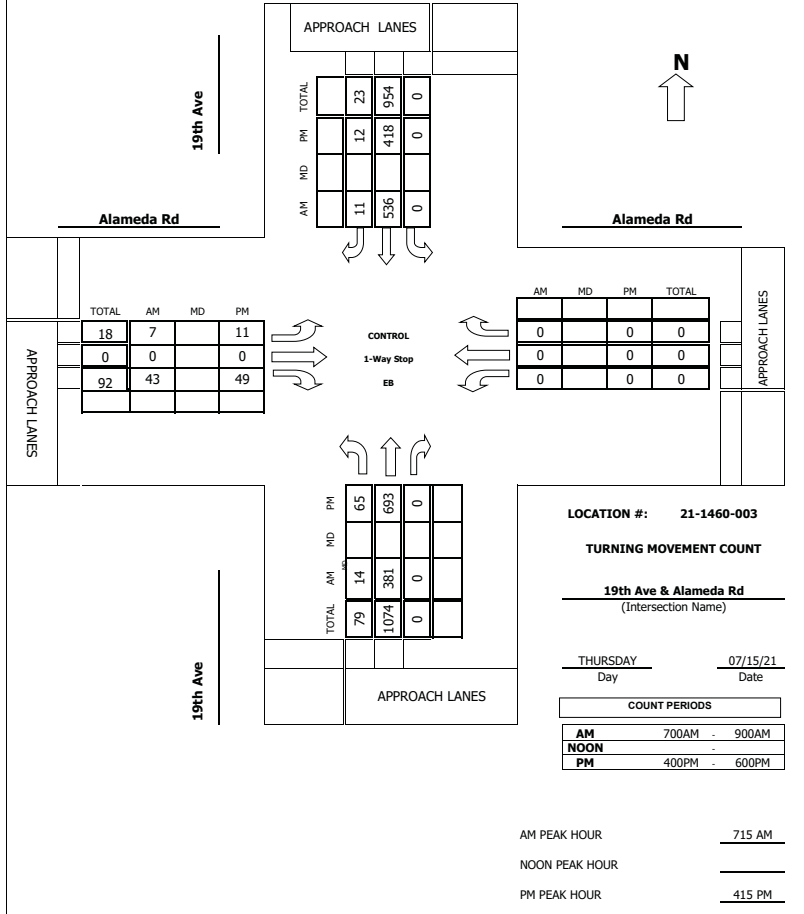
CONTROL: 1-Way Stop (EB)  
COMMENT 1: 33.702016, -112.099975  
GPS:

Intersection Turning Movement  
Prepared by:



Project #: **21-1460-003**

**TMC SUMMARY OF 19th Ave & Alameda Rd**



Intersection Turning Movement  
Prepared by:



N-S STREET: 19th Ave DATE: 07/15/21 LOCATION: Phoenix  
E-W STREET: Alameda Rd DAY: THURSDAY PROJECT#: 21-1460-003

| LANES:   | NORTHBOUND |     |    | SOUTHBOUND |     |    | EASTBOUND |    |    | WESTBOUND |    |    | TOTAL |
|----------|------------|-----|----|------------|-----|----|-----------|----|----|-----------|----|----|-------|
|          | NL         | NT  | NR | SL         | ST  | SR | EL        | ET | ER | WL        | WT | WR |       |
| 6:00 AM  | 0          | 3   | 0  | 0          | 2   | 0  | 0         | 1  | 0  | 0         | 0  | 0  |       |
| 6:15 AM  |            |     |    |            |     |    |           |    |    |           |    |    |       |
| 6:30 AM  |            |     |    |            |     |    |           |    |    |           |    |    |       |
| 6:45 AM  |            |     |    |            |     |    |           |    |    |           |    |    |       |
| 7:00 AM  | 4          | 54  | 0  | 0          | 123 | 3  | 5         | 0  | 11 | 0         | 0  | 0  | 200   |
| 7:15 AM  | 7          | 89  | 0  | 0          | 133 | 2  | 2         | 0  | 10 | 0         | 0  | 0  | 243   |
| 7:30 AM  | 4          | 94  | 0  | 0          | 136 | 1  | 0         | 0  | 11 | 0         | 0  | 0  | 246   |
| 7:45 AM  | 3          | 108 | 0  | 0          | 140 | 1  | 2         | 0  | 10 | 0         | 0  | 0  | 264   |
| 8:00 AM  | 0          | 90  | 0  | 0          | 127 | 7  | 3         | 0  | 12 | 0         | 0  | 0  | 239   |
| 8:15 AM  | 1          | 94  | 0  | 0          | 111 | 7  | 4         | 0  | 17 | 0         | 0  | 0  | 234   |
| 8:30 AM  | 2          | 111 | 0  | 0          | 122 | 4  | 1         | 0  | 10 | 0         | 0  | 0  | 250   |
| 8:45 AM  | 2          | 92  | 0  | 0          | 134 | 4  | 5         | 0  | 10 | 0         | 0  | 0  | 247   |
| 9:00 AM  |            |     |    |            |     |    |           |    |    |           |    |    |       |
| 9:15 AM  |            |     |    |            |     |    |           |    |    |           |    |    |       |
| 9:30 AM  |            |     |    |            |     |    |           |    |    |           |    |    |       |
| 9:45 AM  |            |     |    |            |     |    |           |    |    |           |    |    |       |
| 10:00 AM |            |     |    |            |     |    |           |    |    |           |    |    |       |
| 10:15 AM |            |     |    |            |     |    |           |    |    |           |    |    |       |
| 10:30 AM |            |     |    |            |     |    |           |    |    |           |    |    |       |
| 10:45 AM |            |     |    |            |     |    |           |    |    |           |    |    |       |
| 11:00 AM |            |     |    |            |     |    |           |    |    |           |    |    |       |
| 11:15 AM |            |     |    |            |     |    |           |    |    |           |    |    |       |
| 11:30 AM |            |     |    |            |     |    |           |    |    |           |    |    |       |
| 11:45 AM |            |     |    |            |     |    |           |    |    |           |    |    |       |

| TOTAL      | NL   | NT    | NR   | SL   | ST    | SR   | EL    | ET   | ER    | WL   | WT   | WR   | TOTAL |
|------------|------|-------|------|------|-------|------|-------|------|-------|------|------|------|-------|
| Volumes    | 23   | 732   | 0    | 0    | 1026  | 29   | 22    | 0    | 91    | 0    | 0    | 0    | 1923  |
| Approach % | 3.05 | 96.95 | 0.00 | 0.00 | 97.25 | 2.75 | 19.47 | 0.00 | 80.53 | #### | #### | #### |       |
| App/Depart | 755  | /     | 754  | 1055 | /     | 1117 | 113   | /    | 0     | 0    | /    | 52   |       |

AM Peak Hr Begins at: 715 AM

PEAK

|            |      |       |      |      |       |      |       |      |       |      |      |      |     |
|------------|------|-------|------|------|-------|------|-------|------|-------|------|------|------|-----|
| Volumes    | 14   | 381   | 0    | 0    | 536   | 11   | 7     | 0    | 43    | 0    | 0    | 0    | 992 |
| Approach % | 3.54 | 96.46 | 0.00 | 0.00 | 97.99 | 2.01 | 14.00 | 0.00 | 86.00 | #### | #### | #### |     |

PEAK HR. FACTOR:

|  |       |       |       |       |       |
|--|-------|-------|-------|-------|-------|
|  | 0.890 | 0.970 | 0.833 | 0.000 | 0.939 |
|--|-------|-------|-------|-------|-------|

CONTROL: 1-Way Stop (EB)  
COMMENT 1: 33.705580, -112.099991  
GPS:

# Intersection Turning Movement



N-S STREET: 19th Ave DATE: 07/15/21 LOCATION: Phoenix  
 E-W STREET: Alameda Rd DAY: THURSDAY PROJECT#: 21-1460-003

| LANES:  | NORTHBOUND |     |    | SOUTHBOUND |     |    | EASTBOUND |    |    | WESTBOUND |    |    | TOTAL |
|---------|------------|-----|----|------------|-----|----|-----------|----|----|-----------|----|----|-------|
|         | NL         | NT  | NR | SL         | ST  | SR | EL        | ET | ER | WL        | WT | WR |       |
| 1:00 PM | 0          | 3   | 0  | 0          | 2   | 0  | 0         | 1  | 0  | 0         | 0  | 0  |       |
| 1:15 PM |            |     |    |            |     |    |           |    |    |           |    |    |       |
| 1:30 PM |            |     |    |            |     |    |           |    |    |           |    |    |       |
| 1:45 PM |            |     |    |            |     |    |           |    |    |           |    |    |       |
| 2:00 PM |            |     |    |            |     |    |           |    |    |           |    |    |       |
| 2:15 PM |            |     |    |            |     |    |           |    |    |           |    |    |       |
| 2:30 PM |            |     |    |            |     |    |           |    |    |           |    |    |       |
| 2:45 PM |            |     |    |            |     |    |           |    |    |           |    |    |       |
| 3:00 PM |            |     |    |            |     |    |           |    |    |           |    |    |       |
| 3:15 PM |            |     |    |            |     |    |           |    |    |           |    |    |       |
| 3:30 PM |            |     |    |            |     |    |           |    |    |           |    |    |       |
| 3:45 PM |            |     |    |            |     |    |           |    |    |           |    |    |       |
| 4:00 PM | 14         | 180 | 0  | 0          | 96  | 5  | 5         | 0  | 10 | 0         | 0  | 0  | 310   |
| 4:15 PM | 13         | 169 | 0  | 0          | 100 | 4  | 2         | 0  | 9  | 0         | 0  | 0  | 297   |
| 4:30 PM | 17         | 173 | 0  | 0          | 113 | 4  | 0         | 0  | 11 | 0         | 0  | 0  | 318   |
| 4:45 PM | 20         | 147 | 0  | 0          | 101 | 1  | 3         | 0  | 13 | 0         | 0  | 0  | 285   |
| 5:00 PM | 15         | 204 | 0  | 0          | 104 | 3  | 6         | 0  | 16 | 0         | 0  | 0  | 348   |
| 5:15 PM | 16         | 142 | 0  | 0          | 95  | 3  | 3         | 0  | 12 | 0         | 0  | 0  | 271   |
| 5:30 PM | 11         | 127 | 0  | 0          | 98  | 3  | 0         | 0  | 12 | 0         | 0  | 0  | 251   |
| 5:45 PM | 15         | 106 | 0  | 0          | 83  | 3  | 0         | 0  | 11 | 0         | 0  | 0  | 218   |
| 6:00 PM |            |     |    |            |     |    |           |    |    |           |    |    |       |
| 6:15 PM |            |     |    |            |     |    |           |    |    |           |    |    |       |
| 6:30 PM |            |     |    |            |     |    |           |    |    |           |    |    |       |
| 6:45 PM |            |     |    |            |     |    |           |    |    |           |    |    |       |

| TOTAL      | NL   | NT    | NR   | SL   | ST    | SR   | EL    | ET   | ER    | WL   | WT   | WR   | TOTAL |
|------------|------|-------|------|------|-------|------|-------|------|-------|------|------|------|-------|
| Volumes    | 121  | 1248  | 0    | 0    | 790   | 26   | 19    | 0    | 94    | 0    | 0    | 0    | 2298  |
| Approach % | 8.84 | 91.16 | 0.00 | 0.00 | 96.81 | 3.19 | 16.81 | 0.00 | 83.19 | #### | #### | #### |       |
| App/Depart | 1369 | /     | 1267 | 816  | /     | 884  | 113   | /    | 0     | 0    | /    | 147  |       |

PM Peak Hr Begins at: 415 PM

| PEAK | Volumes                              | Approach %  |
|------|--------------------------------------|---|
| PEAK | 65 693 0 0 418 12 11 0 49 0 0 0 1248 | 8.58 91.42 0.00 0.00 97.21 2.79 18.33 0.00 81.67 #### #### #### |

| PEAK HR. FACTOR:                      |
|---------------------------------------|
| 0.865   0.919   0.682   0.000   0.897 |

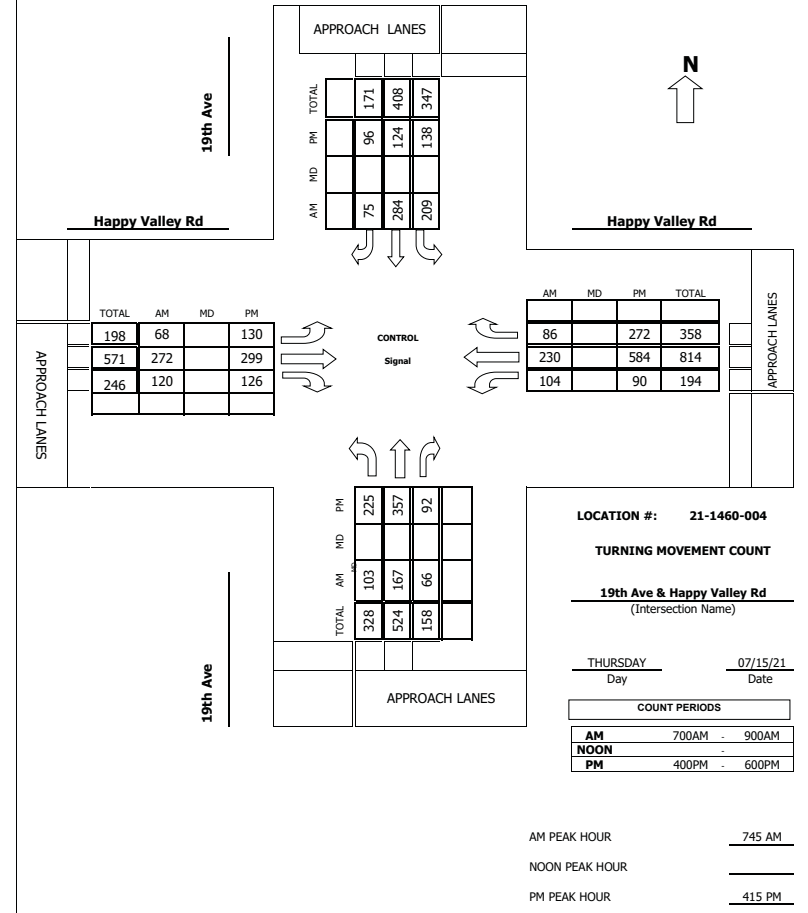
CONTROL: 1-Way Stop (EB)  
 COMMENT 1: 0  
 GPS: 33.705580, -112.099991

## Intersection Turning Movement Prepared by:



Project #: 21-1460-004

### TMC SUMMARY OF 19th Ave & Happy Valley Rd



**Intersection Turning Movement  
Prepared by:**



N-S STREET: 19th Ave      DATE: 07/15/21      LOCATION: Phoneix  
 E-W STREET: Happy Valley Rd      DAY: THURSDAY      PROJECT# 21-1460-004

| LANES:   | NORTHBOUND |    |    | SOUTHBOUND |    |    | EASTBOUND |    |    | WESTBOUND |    |    | TOTAL |
|----------|------------|----|----|------------|----|----|-----------|----|----|-----------|----|----|-------|
|          | NL         | NT | NR | SL         | ST | SR | EL        | ET | ER | WL        | WT | WR |       |
| 6:00 AM  |            |    |    |            |    |    |           |    |    |           |    |    |       |
| 6:15 AM  |            |    |    |            |    |    |           |    |    |           |    |    |       |
| 6:30 AM  |            |    |    |            |    |    |           |    |    |           |    |    |       |
| 6:45 AM  |            |    |    |            |    |    |           |    |    |           |    |    |       |
| 7:00 AM  | 15         | 31 | 7  | 45         | 68 | 3  | 17        | 83 | 42 | 26        | 55 | 15 | 407   |
| 7:15 AM  | 21         | 40 | 17 | 44         | 73 | 12 | 12        | 76 | 41 | 19        | 50 | 13 | 418   |
| 7:30 AM  | 21         | 28 | 22 | 59         | 71 | 12 | 18        | 76 | 52 | 25        | 54 | 15 | 453   |
| 7:45 AM  | 23         | 50 | 19 | 57         | 80 | 15 | 15        | 66 | 38 | 28        | 47 | 23 | 461   |
| 8:00 AM  | 29         | 27 | 15 | 56         | 47 | 19 | 10        | 69 | 22 | 25        | 60 | 20 | 399   |
| 8:15 AM  | 28         | 44 | 14 | 40         | 74 | 20 | 15        | 61 | 31 | 25        | 60 | 20 | 432   |
| 8:30 AM  | 23         | 46 | 18 | 56         | 83 | 21 | 28        | 76 | 29 | 26        | 63 | 23 | 492   |
| 8:45 AM  | 29         | 42 | 17 | 42         | 57 | 22 | 14        | 55 | 33 | 18        | 66 | 26 | 421   |
| 9:00 AM  |            |    |    |            |    |    |           |    |    |           |    |    |       |
| 9:15 AM  |            |    |    |            |    |    |           |    |    |           |    |    |       |
| 9:30 AM  |            |    |    |            |    |    |           |    |    |           |    |    |       |
| 9:45 AM  |            |    |    |            |    |    |           |    |    |           |    |    |       |
| 10:00 AM |            |    |    |            |    |    |           |    |    |           |    |    |       |
| 10:15 AM |            |    |    |            |    |    |           |    |    |           |    |    |       |
| 10:30 AM |            |    |    |            |    |    |           |    |    |           |    |    |       |
| 10:45 AM |            |    |    |            |    |    |           |    |    |           |    |    |       |
| 11:00 AM |            |    |    |            |    |    |           |    |    |           |    |    |       |
| 11:15 AM |            |    |    |            |    |    |           |    |    |           |    |    |       |
| 11:30 AM |            |    |    |            |    |    |           |    |    |           |    |    |       |
| 11:45 AM |            |    |    |            |    |    |           |    |    |           |    |    |       |

| TOTAL      | NL    | NT    | NR    | SL    | ST    | SR    | EL    | ET    | ER    | WL    | WT    | WR    | TOTAL |
|------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Volumes    | 189   | 308   | 129   | 399   | 553   | 124   | 129   | 562   | 288   | 192   | 455   | 155   | 3483  |
| Approach % | 30.19 | 49.20 | 20.61 | 37.08 | 51.39 | 11.52 | 13.18 | 57.41 | 29.42 | 23.94 | 56.73 | 19.33 |       |
| App/Depart | 626   | /     | 592   | 1076  | /     | 1033  | 979   | /     | 1090  | 802   | /     | 768   |       |

AM Peak Hr Begins at: 745 AM

| PEAK       | Volumes   | Approach % | Factor |
|------------|---|------------|--------|
| Volumes    | 103 167 66   209 284 75   68 272 120   104 230 86   1784                      |            |        |
| Approach % | 30.65 49.70 19.64   36.80 50.00 13.20   14.78 59.13 26.09   24.76 54.76 20.48 |            |        |

| PEAK HR. FACTOR: | 0.913 | 0.888 | 0.865 | 0.938 | 0.907 |
|------------------|-------|-------|-------|-------|-------|
|------------------|-------|-------|-------|-------|-------|

CONTROL: Signal  
 COMMENT 1: 33.712836, -112.100045

**Intersection Turning Movement**



N-S STREET: 19th Ave      DATE: 07/15/21      LOCATION: Phoneix  
 E-W STREET: Happy Valley Rd      DAY: THURSDAY      PROJECT# 21-1460-004

| LANES:  | NORTHBOUND |    |    | SOUTHBOUND |    |    | EASTBOUND |    |    | WESTBOUND |     |    | TOTAL |
|---------|------------|----|----|------------|----|----|-----------|----|----|-----------|-----|----|-------|
|         | NL         | NT | NR | SL         | ST | SR | EL        | ET | ER | WL        | WT  | WR |       |
| 1:00 PM |            |    |    |            |    |    |           |    |    |           |     |    |       |
| 1:15 PM |            |    |    |            |    |    |           |    |    |           |     |    |       |
| 1:30 PM |            |    |    |            |    |    |           |    |    |           |     |    |       |
| 1:45 PM |            |    |    |            |    |    |           |    |    |           |     |    |       |
| 2:00 PM |            |    |    |            |    |    |           |    |    |           |     |    |       |
| 2:15 PM |            |    |    |            |    |    |           |    |    |           |     |    |       |
| 2:30 PM |            |    |    |            |    |    |           |    |    |           |     |    |       |
| 2:45 PM |            |    |    |            |    |    |           |    |    |           |     |    |       |
| 3:00 PM |            |    |    |            |    |    |           |    |    |           |     |    |       |
| 3:15 PM |            |    |    |            |    |    |           |    |    |           |     |    |       |
| 3:30 PM |            |    |    |            |    |    |           |    |    |           |     |    |       |
| 3:45 PM |            |    |    |            |    |    |           |    |    |           |     |    |       |
| 4:00 PM | 52         | 85 | 23 | 26         | 28 | 24 | 31        | 77 | 39 | 25        | 141 | 80 | 631   |
| 4:15 PM | 63         | 96 | 21 | 36         | 34 | 28 | 28        | 61 | 27 | 29        | 158 | 75 | 656   |
| 4:30 PM | 49         | 82 | 26 | 38         | 32 | 28 | 37        | 82 | 35 | 18        | 130 | 60 | 617   |
| 4:45 PM | 57         | 96 | 18 | 36         | 29 | 14 | 34        | 70 | 31 | 22        | 150 | 60 | 617   |
| 5:00 PM | 56         | 83 | 27 | 28         | 29 | 26 | 31        | 86 | 33 | 21        | 146 | 77 | 643   |
| 5:15 PM | 43         | 79 | 29 | 26         | 26 | 24 | 35        | 63 | 28 | 10        | 91  | 70 | 524   |
| 5:30 PM | 50         | 52 | 13 | 27         | 29 | 19 | 29        | 72 | 34 | 22        | 134 | 58 | 539   |
| 5:45 PM | 39         | 35 | 27 | 27         | 38 | 18 | 30        | 81 | 26 | 15        | 80  | 45 | 461   |
| 6:00 PM |            |    |    |            |    |    |           |    |    |           |     |    |       |
| 6:15 PM |            |    |    |            |    |    |           |    |    |           |     |    |       |
| 6:30 PM |            |    |    |            |    |    |           |    |    |           |     |    |       |
| 6:45 PM |            |    |    |            |    |    |           |    |    |           |     |    |       |

| TOTAL      | NL    | NT    | NR    | SL    | ST    | SR    | EL    | ET    | ER    | WL   | WT    | WR    | TOTAL |
|------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|------|-------|-------|-------|
| Volumes    | 409   | 608   | 184   | 244   | 245   | 181   | 255   | 592   | 253   | 162  | 1030  | 525   | 4688  |
| Approach % | 34.05 | 50.62 | 15.32 | 36.42 | 36.57 | 27.01 | 23.18 | 53.82 | 23.00 | 9.44 | 59.99 | 30.58 |       |
| App/Depart | 1201  | /     | 1388  | 670   | /     | 660   | 1100  | /     | 1020  | 1717 | /     | 1620  |       |

PM Peak Hr Begins at: 415 PM

| PEAK       | Volumes  | Approach % | Factor |
|------------|--|------------|--------|
| Volumes    | 225 357 92   138 124 96   130 299 126   90 584 272   2533                    |            |        |
| Approach % | 33.38 52.97 13.65   38.55 34.64 26.82   23.42 53.87 22.70   9.51 61.73 28.75 |            |        |

| PEAK HR. FACTOR: | 0.936 | 0.913 | 0.901 | 0.903 | 0.965 |
|------------------|-------|-------|-------|-------|-------|
|------------------|-------|-------|-------|-------|-------|

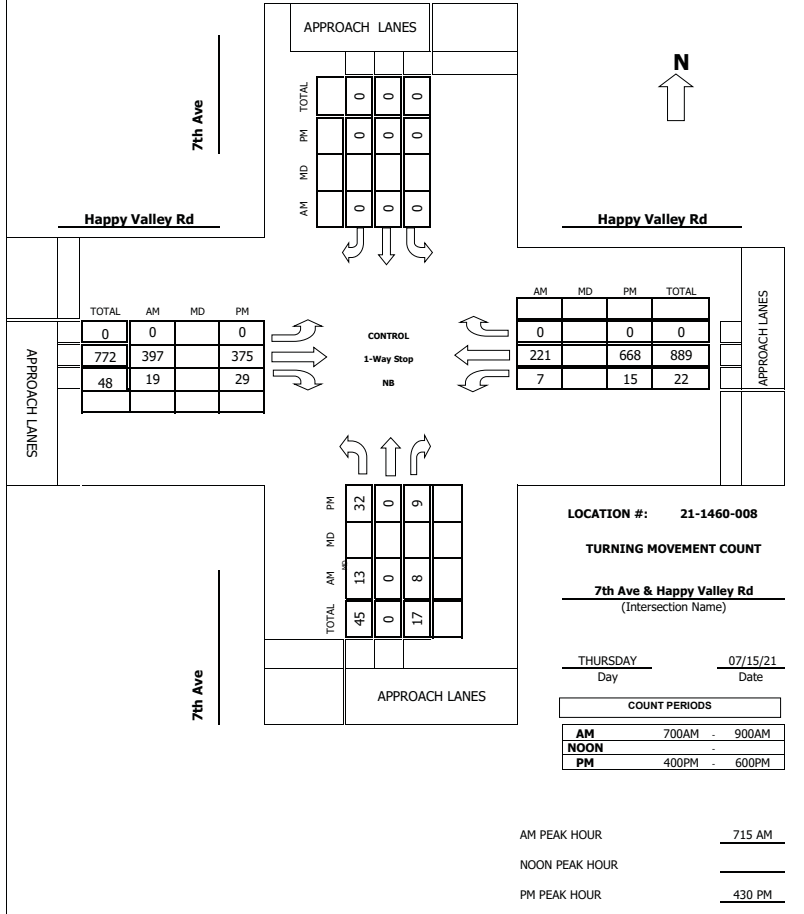
CONTROL: Signal  
 COMMENT 1: 33.712836, -112.100045

Intersection Turning Movement  
Prepared by:



Project #: **21-1460-008**

**TMC SUMMARY OF 7th Ave & Happy Valley Rd**



Intersection Turning Movement  
Prepared by:



N-S STREET: **7th Ave** DATE: **07/15/21** LOCATION: **Phoenix**  
E-W STREET: **Happy Valley Rd** DAY: **THURSDAY** PROJECT# **21-1460-008**

| LANES:   | NORTHBOUND |    |    | SOUTHBOUND |    |    | EASTBOUND |     |    | WESTBOUND |    |    | TOTAL |
|----------|------------|----|----|------------|----|----|-----------|-----|----|-----------|----|----|-------|
|          | NL         | NT | NR | SL         | ST | SR | EL        | ET  | ER | WL        | WT | WR |       |
| 6:00 AM  | 0          | 1  | 0  | 0          | 0  | 0  | 0         | 1   | 0  | 0         | 1  | 0  |       |
| 6:15 AM  |            |    |    |            |    |    |           |     |    |           |    |    |       |
| 6:30 AM  |            |    |    |            |    |    |           |     |    |           |    |    |       |
| 6:45 AM  |            |    |    |            |    |    |           |     |    |           |    |    |       |
| 7:00 AM  | 1          | 0  | 0  | 0          | 0  | 0  | 0         | 77  | 1  | 0         | 43 | 0  | 122   |
| 7:15 AM  | 4          | 0  | 3  | 0          | 0  | 0  | 0         | 112 | 3  | 1         | 47 | 0  | 170   |
| 7:30 AM  | 3          | 0  | 3  | 0          | 0  | 0  | 0         | 93  | 4  | 2         | 47 | 0  | 152   |
| 7:45 AM  | 2          | 0  | 1  | 0          | 0  | 0  | 0         | 95  | 7  | 3         | 62 | 0  | 170   |
| 8:00 AM  | 4          | 0  | 1  | 0          | 0  | 0  | 0         | 97  | 5  | 1         | 65 | 0  | 173   |
| 8:15 AM  | 8          | 0  | 2  | 0          | 0  | 0  | 0         | 82  | 6  | 3         | 43 | 0  | 144   |
| 8:30 AM  | 7          | 0  | 3  | 0          | 0  | 0  | 0         | 92  | 3  | 1         | 60 | 0  | 166   |
| 8:45 AM  | 4          | 0  | 0  | 0          | 0  | 0  | 0         | 85  | 5  | 1         | 66 | 0  | 161   |
| 9:00 AM  |            |    |    |            |    |    |           |     |    |           |    |    |       |
| 9:15 AM  |            |    |    |            |    |    |           |     |    |           |    |    |       |
| 9:30 AM  |            |    |    |            |    |    |           |     |    |           |    |    |       |
| 9:45 AM  |            |    |    |            |    |    |           |     |    |           |    |    |       |
| 10:00 AM |            |    |    |            |    |    |           |     |    |           |    |    |       |
| 10:15 AM |            |    |    |            |    |    |           |     |    |           |    |    |       |
| 10:30 AM |            |    |    |            |    |    |           |     |    |           |    |    |       |
| 10:45 AM |            |    |    |            |    |    |           |     |    |           |    |    |       |
| 11:00 AM |            |    |    |            |    |    |           |     |    |           |    |    |       |
| 11:15 AM |            |    |    |            |    |    |           |     |    |           |    |    |       |
| 11:30 AM |            |    |    |            |    |    |           |     |    |           |    |    |       |
| 11:45 AM |            |    |    |            |    |    |           |     |    |           |    |    |       |

| TOTAL      | NL    | NT   | NR    | SL   | ST   | SR   | EL   | ET    | ER   | WL   | WT    | WR   | TOTAL |
|------------|-------|------|-------|------|------|------|------|-------|------|------|-------|------|-------|
| Volumes    | 33    | 0    | 13    | 0    | 0    | 0    | 0    | 733   | 34   | 12   | 433   | 0    | 1258  |
| Approach % | 71.74 | 0.00 | 28.26 | #### | #### | #### | 0.00 | 95.57 | 4.43 | 2.70 | 97.30 | 0.00 |       |
| App/Depart | 46    | /    | 0     | 0    | /    | 46   | 767  | /     | 746  | 445  | /     | 466  |       |

AM Peak Hr Begins at: 715 AM

PEAK  
Volumes | 13 0 8 | 0 0 0 | 0 397 19 | 7 221 0 | 665 |  
Approach % | 61.90 0.00 38.10 | #### #### #### | 0.00 95.43 4.57 | 3.07 96.93 0.00 |

PEAK HR.  
FACTOR: | 0.750 | 0.000 | 0.904 | 0.864 | 0.961 |

CONTROL: 1-Way Stop (NB)  
COMMENT 1:  
GPS: 33.713034, -112.082521

# Intersection Turning Movement



N-S STREET: **7th Ave** DATE: **07/15/21** LOCATION: **Phoenix**  
 E-W STREET: **Happy Valley Rd** DAY: **THURSDAY** PROJECT# **21-1460-008**

| LANES:  | NORTHBOUND |    |    | SOUTHBOUND |    |    | EASTBOUND |    |    | WESTBOUND |     |    | TOTAL |
|---------|------------|----|----|------------|----|----|-----------|----|----|-----------|-----|----|-------|
|         | NL         | NT | NR | SL         | ST | SR | EL        | ET | ER | WL        | WT  | WR |       |
| 1:00 PM | 0          | 1  | 0  | 0          | 0  | 0  | 0         | 1  | 0  | 0         | 1   | 0  |       |
| 1:15 PM |            |    |    |            |    |    |           |    |    |           |     |    |       |
| 1:30 PM |            |    |    |            |    |    |           |    |    |           |     |    |       |
| 1:45 PM |            |    |    |            |    |    |           |    |    |           |     |    |       |
| 2:00 PM |            |    |    |            |    |    |           |    |    |           |     |    |       |
| 2:15 PM |            |    |    |            |    |    |           |    |    |           |     |    |       |
| 2:30 PM |            |    |    |            |    |    |           |    |    |           |     |    |       |
| 2:45 PM |            |    |    |            |    |    |           |    |    |           |     |    |       |
| 3:00 PM |            |    |    |            |    |    |           |    |    |           |     |    |       |
| 3:15 PM |            |    |    |            |    |    |           |    |    |           |     |    |       |
| 3:30 PM |            |    |    |            |    |    |           |    |    |           |     |    |       |
| 3:45 PM |            |    |    |            |    |    |           |    |    |           |     |    |       |
| 4:00 PM | 8          | 0  | 4  | 0          | 0  | 0  | 0         | 86 | 6  | 4         | 159 | 0  | 267   |
| 4:15 PM | 8          | 0  | 3  | 0          | 0  | 0  | 0         | 77 | 5  | 2         | 180 | 0  | 275   |
| 4:30 PM | 13         | 0  | 2  | 0          | 0  | 0  | 0         | 95 | 9  | 5         | 180 | 0  | 304   |
| 4:45 PM | 6          | 0  | 3  | 0          | 0  | 0  | 0         | 98 | 9  | 3         | 150 | 0  | 269   |
| 5:00 PM | 8          | 0  | 3  | 0          | 0  | 0  | 0         | 84 | 5  | 1         | 159 | 0  | 260   |
| 5:15 PM | 5          | 0  | 1  | 0          | 0  | 0  | 0         | 98 | 6  | 6         | 179 | 0  | 295   |
| 5:30 PM | 12         | 0  | 3  | 0          | 0  | 0  | 0         | 78 | 7  | 4         | 153 | 0  | 257   |
| 5:45 PM | 8          | 0  | 3  | 0          | 0  | 0  | 0         | 69 | 1  | 1         | 142 | 0  | 224   |
| 6:00 PM |            |    |    |            |    |    |           |    |    |           |     |    |       |
| 6:15 PM |            |    |    |            |    |    |           |    |    |           |     |    |       |
| 6:30 PM |            |    |    |            |    |    |           |    |    |           |     |    |       |
| 6:45 PM |            |    |    |            |    |    |           |    |    |           |     |    |       |

| TOTAL      | NL    | NT   | NR    | SL   | ST   | SR   | EL   | ET    | ER   | WL   | WT    | WR   | TOTAL |
|------------|-------|------|-------|------|------|------|------|-------|------|------|-------|------|-------|
| Volumes    | 68    | 0    | 22    | 0    | 0    | 0    | 0    | 685   | 48   | 26   | 1302  | 0    | 2151  |
| Approach % | 75.56 | 0.00 | 24.44 | #### | #### | #### | 0.00 | 93.45 | 6.55 | 1.96 | 98.04 | 0.00 |       |
| App/Depart | 90    | /    | 0     | 0    | /    | 74   | 733  | /     | 707  | 1328 | /     | 1370 |       |

PM Peak Hr Begins at: 430 PM

| PEAK       | Volumes  | Approach % |
|------------|--|------------|
| Volumes    | 32 0 9   0 0 0   0 375 29   15 668 0   1128                  |            |
| Approach % | 78.05 0.00 21.95   #####   0.00 92.82 7.18   2.20 97.80 0.00 |            |

| PEAK HR. FACTOR:                      |
|---------------------------------------|
| 0.683   0.000   0.944   0.923   0.928 |

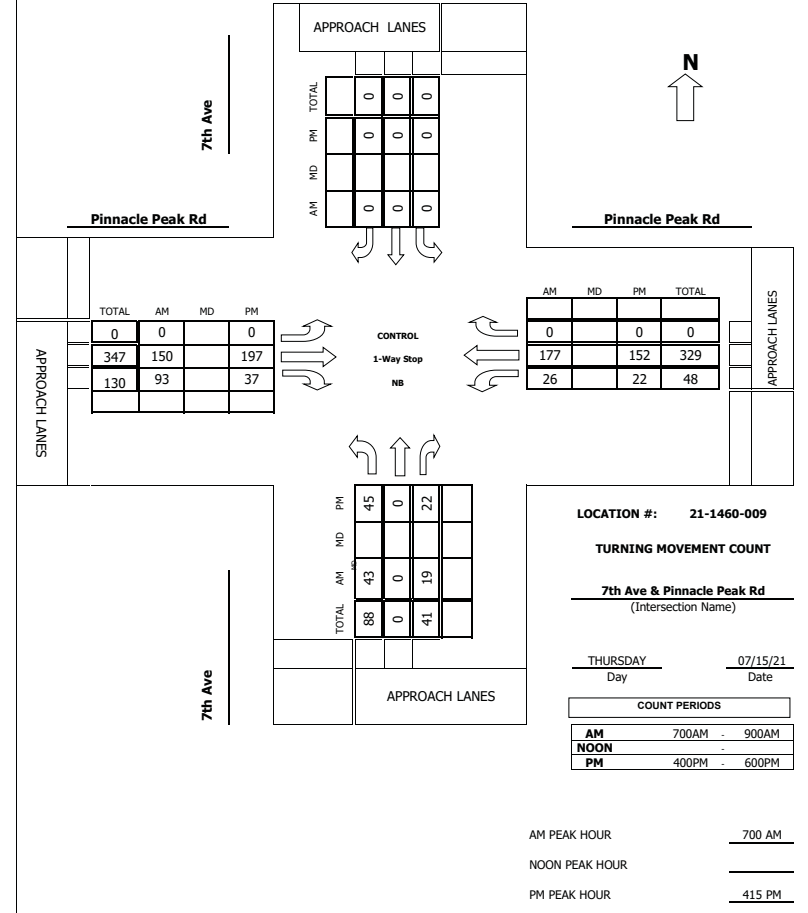
CONTROL: **1-Way Stop (NB)**  
 COMMENT 1: **0**  
 GPS: **33.713034, -112.082521**

## Intersection Turning Movement Prepared by:



Project #: **21-1460-009**

### TMC SUMMARY OF 7th Ave & Pinnacle Peak Rd



### Intersection Turning Movement

Prepared by:



**FIELD DATA SERVICES OF ARIZONA, INC.**  
520.316.6745



veracitytrafficgroup

N-S STREET: 7th Ave DATE: 07/15/21 LOCATION: Phoneix

E-W STREET: Pinnacle Peak Rd DAY: THURSDAY PROJECT# 21-1460-009

| LANES:   | NORTHBOUND |    |    | SOUTHBOUND |    |    | EASTBOUND |    |    | WESTBOUND |    |    | TOTAL |
|----------|------------|----|----|------------|----|----|-----------|----|----|-----------|----|----|-------|
|          | NL         | NT | NR | SL         | ST | SR | EL        | ET | ER | WL        | WT | WR |       |
| 6:00 AM  |            |    |    |            |    |    |           |    |    |           |    |    |       |
| 6:15 AM  |            |    |    |            |    |    |           |    |    |           |    |    |       |
| 6:30 AM  |            |    |    |            |    |    |           |    |    |           |    |    |       |
| 6:45 AM  |            |    |    |            |    |    |           |    |    |           |    |    |       |
| 7:00 AM  | 3          | 0  | 2  | 0          | 0  | 0  | 0         | 51 | 23 | 7         | 33 | 0  | 119   |
| 7:15 AM  | 9          | 0  | 2  | 0          | 0  | 0  | 0         | 34 | 34 | 4         | 40 | 0  | 123   |
| 7:30 AM  | 19         | 0  | 5  | 0          | 0  | 0  | 0         | 36 | 21 | 5         | 45 | 0  | 131   |
| 7:45 AM  | 12         | 0  | 10 | 0          | 0  | 0  | 0         | 29 | 15 | 10        | 59 | 0  | 135   |
| 8:00 AM  | 16         | 0  | 5  | 0          | 0  | 0  | 0         | 32 | 19 | 5         | 41 | 0  | 118   |
| 8:15 AM  | 31         | 0  | 5  | 0          | 0  | 0  | 0         | 18 | 20 | 2         | 24 | 0  | 100   |
| 8:30 AM  | 47         | 0  | 29 | 0          | 0  | 0  | 0         | 33 | 9  | 2         | 26 | 0  | 146   |
| 8:45 AM  | 21         | 0  | 12 | 0          | 0  | 0  | 0         | 21 | 10 | 4         | 25 | 0  | 93    |
| 9:00 AM  |            |    |    |            |    |    |           |    |    |           |    |    |       |
| 9:15 AM  |            |    |    |            |    |    |           |    |    |           |    |    |       |
| 9:30 AM  |            |    |    |            |    |    |           |    |    |           |    |    |       |
| 9:45 AM  |            |    |    |            |    |    |           |    |    |           |    |    |       |
| 10:00 AM |            |    |    |            |    |    |           |    |    |           |    |    |       |
| 10:15 AM |            |    |    |            |    |    |           |    |    |           |    |    |       |
| 10:30 AM |            |    |    |            |    |    |           |    |    |           |    |    |       |
| 10:45 AM |            |    |    |            |    |    |           |    |    |           |    |    |       |
| 11:00 AM |            |    |    |            |    |    |           |    |    |           |    |    |       |
| 11:15 AM |            |    |    |            |    |    |           |    |    |           |    |    |       |
| 11:30 AM |            |    |    |            |    |    |           |    |    |           |    |    |       |
| 11:45 AM |            |    |    |            |    |    |           |    |    |           |    |    |       |

| TOTAL      | NL    | NT   | NR    | SL   | ST   | SR   | EL   | ET    | ER    | WL    | WT    | WR   | TOTAL |
|------------|-------|------|-------|------|------|------|------|-------|-------|-------|-------|------|-------|
| Volumes    | 158   | 0    | 70    | 0    | 0    | 0    | 0    | 254   | 151   | 39    | 293   | 0    | 965   |
| Approach % | 69.30 | 0.00 | 30.70 | #### | #### | #### | 0.00 | 62.72 | 37.28 | 11.75 | 88.25 | 0.00 |       |
| App/Depart | 228   | /    | 0     | 0    | /    | 190  | 405  | /     | 324   | 332   | /     | 451  |       |

AM Peak Hr Begins at: 700 AM

| PEAK       | Volumes | Approach % | Factor |
|------------|---------|------------|--------|
| PEAK       | 43      | 0          | 19     |
| Volumes    | 43      | 0          | 19     |
| Approach % | 69.35   | 0.00       | 30.65  |
| Factor     | 0.646   | 0.000      | 0.821  |
| Total      | 0.941   |            |        |

PEAK HR. FACTOR: 0.646 | 0.000 | 0.821 | 0.736 | 0.941

CONTROL: 1-Way Stop (NB)  
COMMENT 1: 33.698243, -112.083118  
GPS:

### Intersection Turning Movement



**FIELD DATA SERVICES OF ARIZONA, INC.**  
520.316.6745



veracitytrafficgroup

N-S STREET: 7th Ave DATE: 07/15/21 LOCATION: Phoneix

E-W STREET: Pinnacle Peak Rd DAY: THURSDAY PROJECT# 21-1460-009

| LANES:  | NORTHBOUND |    |    | SOUTHBOUND |    |    | EASTBOUND |    |    | WESTBOUND |    |    | TOTAL |
|---------|------------|----|----|------------|----|----|-----------|----|----|-----------|----|----|-------|
|         | NL         | NT | NR | SL         | ST | SR | EL        | ET | ER | WL        | WT | WR |       |
| 1:00 PM |            |    |    |            |    |    |           |    |    |           |    |    |       |
| 1:15 PM |            |    |    |            |    |    |           |    |    |           |    |    |       |
| 1:30 PM |            |    |    |            |    |    |           |    |    |           |    |    |       |
| 1:45 PM |            |    |    |            |    |    |           |    |    |           |    |    |       |
| 2:00 PM |            |    |    |            |    |    |           |    |    |           |    |    |       |
| 2:15 PM |            |    |    |            |    |    |           |    |    |           |    |    |       |
| 2:30 PM |            |    |    |            |    |    |           |    |    |           |    |    |       |
| 2:45 PM |            |    |    |            |    |    |           |    |    |           |    |    |       |
| 3:00 PM |            |    |    |            |    |    |           |    |    |           |    |    |       |
| 3:15 PM |            |    |    |            |    |    |           |    |    |           |    |    |       |
| 3:30 PM |            |    |    |            |    |    |           |    |    |           |    |    |       |
| 3:45 PM |            |    |    |            |    |    |           |    |    |           |    |    |       |
| 4:00 PM | 11         | 0  | 3  | 0          | 0  | 0  | 0         | 44 | 9  | 6         | 29 | 0  | 102   |
| 4:15 PM | 14         | 0  | 7  | 0          | 0  | 0  | 0         | 37 | 12 | 5         | 42 | 0  | 117   |
| 4:30 PM | 12         | 0  | 2  | 0          | 0  | 0  | 0         | 49 | 11 | 5         | 36 | 0  | 115   |
| 4:45 PM | 12         | 0  | 7  | 0          | 0  | 0  | 0         | 61 | 5  | 7         | 39 | 0  | 131   |
| 5:00 PM | 7          | 0  | 6  | 0          | 0  | 0  | 0         | 50 | 9  | 5         | 35 | 0  | 112   |
| 5:15 PM | 8          | 0  | 1  | 0          | 0  | 0  | 0         | 41 | 6  | 2         | 46 | 0  | 104   |
| 5:30 PM | 9          | 0  | 3  | 0          | 0  | 0  | 0         | 28 | 5  | 0         | 18 | 0  | 63    |
| 5:45 PM | 7          | 0  | 1  | 0          | 0  | 0  | 0         | 11 | 4  | 2         | 21 | 0  | 46    |
| 6:00 PM |            |    |    |            |    |    |           |    |    |           |    |    |       |
| 6:15 PM |            |    |    |            |    |    |           |    |    |           |    |    |       |
| 6:30 PM |            |    |    |            |    |    |           |    |    |           |    |    |       |
| 6:45 PM |            |    |    |            |    |    |           |    |    |           |    |    |       |

| TOTAL      | NL    | NT   | NR    | SL   | ST   | SR   | EL   | ET    | ER    | WL    | WT    | WR   | TOTAL |
|------------|-------|------|-------|------|------|------|------|-------|-------|-------|-------|------|-------|
| Volumes    | 80    | 0    | 30    | 0    | 0    | 0    | 0    | 321   | 61    | 32    | 266   | 0    | 790   |
| Approach % | 72.73 | 0.00 | 27.27 | #### | #### | #### | 0.00 | 84.03 | 15.97 | 10.74 | 89.26 | 0.00 |       |
| App/Depart | 110   | /    | 0     | 0    | /    | 93   | 382  | /     | 351   | 298   | /     | 346  |       |

PM Peak Hr Begins at: 415 PM

| PEAK       | Volumes | Approach % | Factor |
|------------|---------|------------|--------|
| PEAK       | 45      | 0          | 22     |
| Volumes    | 45      | 0          | 22     |
| Approach % | 67.16   | 0.00       | 32.84  |
| Factor     | 0.798   | 0.000      | 0.886  |
| Total      | 0.926   |            |        |

PEAK HR. FACTOR: 0.798 | 0.000 | 0.886 | 0.926 | 0.906

CONTROL: 1-Way Stop (NB)  
COMMENT 1: 33.698243, -112.083118  
GPS:

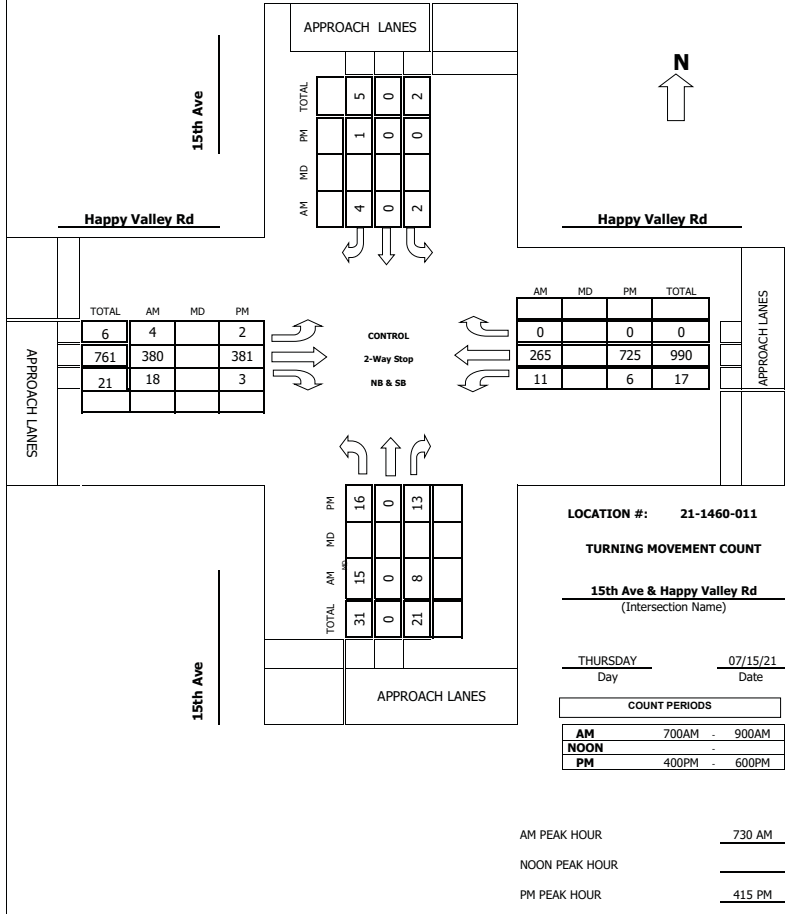


Intersection Turning Movement  
Prepared by:



Project #: **21-1460-011**

**TMC SUMMARY OF 15th Ave & Happy Valley Rd**



Intersection Turning Movement  
Prepared by:



N-S STREET: 15th Ave DATE: 07/15/21 LOCATION: Phoenix  
E-W STREET: Happy Valley Rd DAY: THURSDAY PROJECT#: 21-1460-011

| LANES:   | NORTHBOUND |    |    | SOUTHBOUND |    |    | EASTBOUND |     |    | WESTBOUND |    |    | TOTAL |
|----------|------------|----|----|------------|----|----|-----------|-----|----|-----------|----|----|-------|
|          | NL         | NT | NR | SL         | ST | SR | EL        | ET  | ER | WL        | WT | WR |       |
| 6:00 AM  | 0          | 1  | 0  | 0          | 1  | 0  | 0         | 1   | 0  | 0         | 1  | 0  |       |
| 6:15 AM  |            |    |    |            |    |    |           |     |    |           |    |    |       |
| 6:30 AM  |            |    |    |            |    |    |           |     |    |           |    |    |       |
| 6:45 AM  |            |    |    |            |    |    |           |     |    |           |    |    |       |
| 7:00 AM  | 5          | 0  | 5  | 0          | 0  | 0  | 0         | 102 | 4  | 4         | 50 | 1  | 171   |
| 7:15 AM  | 1          | 0  | 3  | 0          | 0  | 0  | 0         | 103 | 0  | 3         | 45 | 0  | 155   |
| 7:30 AM  | 8          | 0  | 3  | 1          | 0  | 1  | 1         | 114 | 6  | 3         | 57 | 0  | 194   |
| 7:45 AM  | 3          | 0  | 1  | 0          | 0  | 1  | 0         | 91  | 5  | 3         | 69 | 0  | 173   |
| 8:00 AM  | 1          | 0  | 2  | 0          | 0  | 1  | 2         | 89  | 3  | 2         | 64 | 0  | 164   |
| 8:15 AM  | 3          | 0  | 2  | 1          | 0  | 1  | 1         | 86  | 4  | 3         | 75 | 0  | 176   |
| 8:30 AM  | 2          | 0  | 2  | 0          | 0  | 3  | 0         | 105 | 3  | 2         | 72 | 0  | 189   |
| 8:45 AM  | 4          | 0  | 6  | 0          | 0  | 1  | 1         | 67  | 0  | 5         | 70 | 0  | 154   |
| 9:00 AM  |            |    |    |            |    |    |           |     |    |           |    |    |       |
| 9:15 AM  |            |    |    |            |    |    |           |     |    |           |    |    |       |
| 9:30 AM  |            |    |    |            |    |    |           |     |    |           |    |    |       |
| 9:45 AM  |            |    |    |            |    |    |           |     |    |           |    |    |       |
| 10:00 AM |            |    |    |            |    |    |           |     |    |           |    |    |       |
| 10:15 AM |            |    |    |            |    |    |           |     |    |           |    |    |       |
| 10:30 AM |            |    |    |            |    |    |           |     |    |           |    |    |       |
| 10:45 AM |            |    |    |            |    |    |           |     |    |           |    |    |       |
| 11:00 AM |            |    |    |            |    |    |           |     |    |           |    |    |       |
| 11:15 AM |            |    |    |            |    |    |           |     |    |           |    |    |       |
| 11:30 AM |            |    |    |            |    |    |           |     |    |           |    |    |       |
| 11:45 AM |            |    |    |            |    |    |           |     |    |           |    |    |       |

| TOTAL      | NL    | NT   | NR    | SL    | ST   | SR    | EL   | ET    | ER   | WL   | WT    | WR   | TOTAL |
|------------|-------|------|-------|-------|------|-------|------|-------|------|------|-------|------|-------|
| Volumes    | 27    | 0    | 24    | 2     | 0    | 8     | 5    | 757   | 25   | 25   | 502   | 1    | 1376  |
| Approach % | 52.94 | 0.00 | 47.06 | 20.00 | 0.00 | 80.00 | 0.64 | 96.19 | 3.18 | 4.73 | 95.08 | 0.19 |       |
| App/Depart | 51    | /    | 6     | 10    | /    | 50    | 787  | /     | 783  | 528  | /     | 537  |       |

AM Peak Hr Begins at: 730 AM

**PEAK**

|            |       |      |       |       |      |       |      |       |      |      |       |      |     |
|------------|-------|------|-------|-------|------|-------|------|-------|------|------|-------|------|-----|
| Volumes    | 15    | 0    | 8     | 2     | 0    | 4     | 4    | 380   | 18   | 11   | 265   | 0    | 707 |
| Approach % | 65.22 | 0.00 | 34.78 | 33.33 | 0.00 | 66.67 | 1.00 | 94.53 | 4.48 | 3.99 | 96.01 | 0.00 |     |

**PEAK HR. FACTOR:**

|  |       |       |       |       |       |
|--|-------|-------|-------|-------|-------|
|  | 0.523 | 0.750 | 0.831 | 0.885 | 0.911 |
|--|-------|-------|-------|-------|-------|

**CONTROL:** 2-Way Stop (NB & SB)  
**COMMENT 1:** 33.712944, -112.091323  
**GPS:**

## Intersection Turning Movement



N-S STREET: 15th Ave      DATE: 07/15/21      LOCATION: Phoenix  
 E-W STREET: Happy Valley Rd      DAY: THURSDAY      PROJECT# 21-1460-011

| LANES:  | NORTHBOUND |    |    | SOUTHBOUND |    |    | EASTBOUND |     |    | WESTBOUND |     |    | TOTAL |
|---------|------------|----|----|------------|----|----|-----------|-----|----|-----------|-----|----|-------|
|         | NL         | NT | NR | SL         | ST | SR | EL        | ET  | ER | WL        | WT  | WR |       |
| 1:00 PM | 0          | 1  | 0  | 0          | 1  | 0  | 0         | 1   | 0  | 0         | 1   | 0  |       |
| 1:15 PM |            |    |    |            |    |    |           |     |    |           |     |    |       |
| 1:30 PM |            |    |    |            |    |    |           |     |    |           |     |    |       |
| 1:45 PM |            |    |    |            |    |    |           |     |    |           |     |    |       |
| 2:00 PM |            |    |    |            |    |    |           |     |    |           |     |    |       |
| 2:15 PM |            |    |    |            |    |    |           |     |    |           |     |    |       |
| 2:30 PM |            |    |    |            |    |    |           |     |    |           |     |    |       |
| 2:45 PM |            |    |    |            |    |    |           |     |    |           |     |    |       |
| 3:00 PM |            |    |    |            |    |    |           |     |    |           |     |    |       |
| 3:15 PM |            |    |    |            |    |    |           |     |    |           |     |    |       |
| 3:30 PM |            |    |    |            |    |    |           |     |    |           |     |    |       |
| 3:45 PM |            |    |    |            |    |    |           |     |    |           |     |    |       |
| 4:00 PM | 2          | 0  | 3  | 0          | 0  | 1  | 0         | 88  | 1  | 2         | 179 | 2  | 278   |
| 4:15 PM | 3          | 0  | 3  | 0          | 0  | 1  | 2         | 91  | 0  | 1         | 211 | 0  | 312   |
| 4:30 PM | 5          | 0  | 2  | 0          | 0  | 0  | 0         | 110 | 1  | 1         | 153 | 0  | 272   |
| 4:45 PM | 5          | 0  | 4  | 0          | 0  | 0  | 0         | 89  | 1  | 2         | 171 | 0  | 272   |
| 5:00 PM | 3          | 0  | 4  | 0          | 0  | 0  | 0         | 91  | 1  | 2         | 190 | 0  | 291   |
| 5:15 PM | 4          | 0  | 1  | 0          | 0  | 1  | 1         | 84  | 1  | 0         | 155 | 0  | 247   |
| 5:30 PM | 1          | 0  | 3  | 0          | 0  | 0  | 0         | 78  | 0  | 4         | 163 | 0  | 249   |
| 5:45 PM | 1          | 0  | 4  | 0          | 0  | 0  | 1         | 97  | 3  | 4         | 112 | 0  | 222   |
| 6:00 PM |            |    |    |            |    |    |           |     |    |           |     |    |       |
| 6:15 PM |            |    |    |            |    |    |           |     |    |           |     |    |       |
| 6:30 PM |            |    |    |            |    |    |           |     |    |           |     |    |       |
| 6:45 PM |            |    |    |            |    |    |           |     |    |           |     |    |       |

| TOTAL      | NL    | NT   | NR    | SL   | ST   | SR     | EL   | ET    | ER   | WL   | WT    | WR   | TOTAL |
|------------|-------|------|-------|------|------|--------|------|-------|------|------|-------|------|-------|
| Volumes    | 24    | 0    | 24    | 0    | 0    | 3      | 4    | 728   | 8    | 16   | 1334  | 2    | 2143  |
| Approach % | 50.00 | 0.00 | 50.00 | 0.00 | 0.00 | 100.00 | 0.54 | 98.38 | 1.08 | 1.18 | 98.67 | 0.15 |       |
| App/Depart | 48    | /    | 6     | 3    | /    | 24     | 740  | /     | 752  | 1352 | /     | 1361 |       |

PM Peak Hr Begins at: 415 PM

PEAK

|            |       |      |       |      |      |        |      |       |      |      |       |      |      |
|------------|-------|------|-------|------|------|--------|------|-------|------|------|-------|------|------|
| Volumes    | 16    | 0    | 13    | 0    | 0    | 1      | 2    | 381   | 3    | 6    | 725   | 0    | 1147 |
| Approach % | 55.17 | 0.00 | 44.83 | 0.00 | 0.00 | 100.00 | 0.52 | 98.70 | 0.78 | 0.82 | 99.18 | 0.00 |      |

PEAK HR.

|         |       |       |       |       |       |
|---------|-------|-------|-------|-------|-------|
| FACTOR: | 0.806 | 0.250 | 0.869 | 0.862 | 0.919 |
|---------|-------|-------|-------|-------|-------|

CONTROL: 2-Way Stop (NB & SB)  
 COMMENT 1: 0  
 GPS: 33.712944, -112.091323

## **APPENDIX C**

### **EXISTING PEAK HOUR ANALYSIS**

Deer Valley 30  
1: 19th Ave & Happy Valley Rd

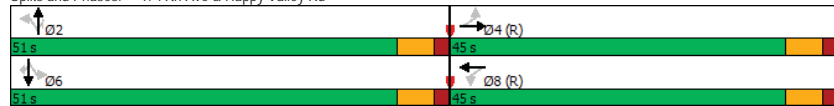
Existing AM  
Timings

| Lane Group           | EBL   | EBT   | WBL   | WBT   | NBL   | NBT   | NBR   | SBL   | SBT   | SBR   |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations  | ↔     | ↔↔    | ↔     | ↔↔    | ↔     | ↔     | ↔     | ↔     | ↔↔    | ↔     |
| Traffic Volume (vph) | 78    | 313   | 135   | 265   | 138   | 231   | 92    | 240   | 367   | 86    |
| Future Volume (vph)  | 78    | 313   | 135   | 265   | 138   | 231   | 92    | 240   | 367   | 86    |
| Turn Type            | Perm  | NA    | Perm  | NA    | Perm  | NA    | Perm  | Perm  | NA    | Perm  |
| Protected Phases     |       | 4     |       | 8     |       | 2     |       | 2     | 6     | 6     |
| Permitted Phases     | 4     |       | 8     |       | 2     |       | 2     | 6     |       | 6     |
| Detector Phase       | 4     | 4     | 8     | 8     | 2     | 2     | 2     | 6     | 6     | 6     |
| Switch Phase         |       |       |       |       |       |       |       |       |       |       |
| Minimum Initial (s)  | 15.0  | 15.0  | 15.0  | 15.0  | 5.0   | 5.0   | 5.0   | 5.0   | 5.0   | 5.0   |
| Minimum Split (s)    | 41.0  | 41.0  | 41.0  | 41.0  | 43.1  | 43.1  | 43.1  | 43.1  | 43.1  | 43.1  |
| Total Split (s)      | 45.0  | 45.0  | 45.0  | 45.0  | 51.0  | 51.0  | 51.0  | 51.0  | 51.0  | 51.0  |
| Total Split (%)      | 46.9% | 46.9% | 46.9% | 46.9% | 53.1% | 53.1% | 53.1% | 53.1% | 53.1% | 53.1% |
| Yellow Time (s)      | 4.3   | 4.3   | 4.3   | 4.3   | 4.3   | 4.3   | 4.3   | 4.3   | 4.3   | 4.3   |
| All-Red Time (s)     | 1.7   | 1.7   | 1.7   | 1.7   | 1.8   | 1.8   | 1.8   | 1.8   | 1.8   | 1.8   |
| Lost Time Adjust (s) | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Lost Time (s)  | 6.0   | 6.0   | 6.0   | 6.0   | 6.1   | 6.1   | 6.1   | 6.1   | 6.1   | 6.1   |
| Lead/Lag             |       |       |       |       |       |       |       |       |       |       |
| Lead-Lag Optimize?   |       |       |       |       |       |       |       |       |       |       |
| Recall Mode          | C-Max | C-Max | C-Max | C-Max | Max   | Max   | Max   | Max   | Max   | Max   |
| Act Effct Green (s)  | 39.0  | 39.0  | 39.0  | 39.0  | 44.9  | 44.9  | 44.9  | 44.9  | 44.9  | 44.9  |
| Actuated g/C Ratio   | 0.41  | 0.41  | 0.41  | 0.41  | 0.47  | 0.47  | 0.47  | 0.47  | 0.47  | 0.47  |
| v/c Ratio            | 0.22  | 0.25  | 0.43  | 0.19  | 0.34  | 0.15  | 0.13  | 0.50  | 0.17  | 0.12  |
| Control Delay        | 20.6  | 13.1  | 25.6  | 13.4  | 18.9  | 15.0  | 3.5   | 22.0  | 15.0  | 3.6   |
| Queue Delay          | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Delay          | 20.6  | 13.1  | 25.6  | 13.4  | 18.9  | 15.0  | 3.5   | 22.0  | 15.0  | 3.6   |
| LOS                  | C     | B     | C     | B     | B     | B     | A     | C     | B     | A     |
| Approach Delay       |       | 14.2  |       | 16.7  |       | 13.9  |       | 16.0  |       |       |
| Approach LOS         |       | B     |       | B     |       | B     |       | B     |       | B     |

Intersection Summary

Cycle Length: 96  
 Actuated Cycle Length: 96  
 Offset: 51 (53%), Referenced to phase 4:EBTL and 8:WBTL, Start of Green  
 Natural Cycle: 85  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.50  
 Intersection Signal Delay: 15.3  
 Intersection Capacity Utilization 64.8%  
 Intersection LOS: B  
 ICU Level of Service C  
 Analysis Period (min) 15

Splits and Phases: 1: 19th Ave & Happy Valley Rd



Deer Valley 30  
1: 19th Ave & Happy Valley Rd

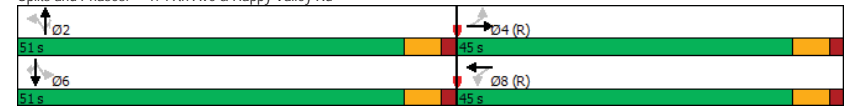
Existing PM  
Timings

| Lane Group           | EBL   | EBT   | WBL   | WBT   | NBL   | NBT   | NBR   | SBL   | SBT   | SBR   |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations  | ↔     | ↔↔    | ↔     | ↔↔    | ↔     | ↔     | ↔     | ↔     | ↔↔    | ↔     |
| Traffic Volume (vph) | 150   | 344   | 148   | 672   | 273   | 433   | 112   | 159   | 205   | 110   |
| Future Volume (vph)  | 150   | 344   | 148   | 672   | 273   | 433   | 112   | 159   | 205   | 110   |
| Turn Type            | Perm  | NA    | Perm  | NA    | Perm  | NA    | Perm  | Perm  | NA    | Perm  |
| Protected Phases     |       | 4     |       | 8     |       | 2     |       | 2     | 6     | 6     |
| Permitted Phases     | 4     |       | 8     |       | 2     |       | 2     | 6     |       | 6     |
| Detector Phase       | 4     | 4     | 8     | 8     | 2     | 2     | 2     | 6     | 6     | 6     |
| Switch Phase         |       |       |       |       |       |       |       |       |       |       |
| Minimum Initial (s)  | 15.0  | 15.0  | 15.0  | 15.0  | 5.0   | 5.0   | 5.0   | 5.0   | 5.0   | 5.0   |
| Minimum Split (s)    | 41.0  | 41.0  | 41.0  | 41.0  | 43.1  | 43.1  | 43.1  | 43.1  | 43.1  | 43.1  |
| Total Split (s)      | 45.0  | 45.0  | 45.0  | 45.0  | 51.0  | 51.0  | 51.0  | 51.0  | 51.0  | 51.0  |
| Total Split (%)      | 46.9% | 46.9% | 46.9% | 46.9% | 53.1% | 53.1% | 53.1% | 53.1% | 53.1% | 53.1% |
| Yellow Time (s)      | 4.3   | 4.3   | 4.3   | 4.3   | 4.3   | 4.3   | 4.3   | 4.3   | 4.3   | 4.3   |
| All-Red Time (s)     | 1.7   | 1.7   | 1.7   | 1.7   | 1.8   | 1.8   | 1.8   | 1.8   | 1.8   | 1.8   |
| Lost Time Adjust (s) | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Lost Time (s)  | 6.0   | 6.0   | 6.0   | 6.0   | 6.1   | 6.1   | 6.1   | 6.1   | 6.1   | 6.1   |
| Lead/Lag             |       |       |       |       |       |       |       |       |       |       |
| Lead-Lag Optimize?   |       |       |       |       |       |       |       |       |       |       |
| Recall Mode          | C-Max | C-Max | C-Max | C-Max | Max   | Max   | Max   | Max   | Max   | Max   |
| Act Effct Green (s)  | 39.0  | 39.0  | 39.0  | 39.0  | 44.9  | 44.9  | 44.9  | 44.9  | 44.9  | 44.9  |
| Actuated g/C Ratio   | 0.41  | 0.41  | 0.41  | 0.41  | 0.47  | 0.47  | 0.47  | 0.47  | 0.47  | 0.47  |
| v/c Ratio            | 1.13  | 0.29  | 0.54  | 0.52  | 0.56  | 0.28  | 0.15  | 0.43  | 0.09  | 0.15  |
| Control Delay        | 145.8 | 13.1  | 30.1  | 19.3  | 23.6  | 16.3  | 3.3   | 21.3  | 14.4  | 4.7   |
| Queue Delay          | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Delay          | 145.8 | 13.1  | 30.1  | 19.3  | 23.6  | 16.3  | 3.3   | 21.3  | 14.4  | 4.7   |
| LOS                  | F     | B     | C     | B     | C     | B     | A     | C     | B     | A     |
| Approach Delay       |       | 41.4  |       | 20.7  |       | 16.9  |       | 14.4  |       |       |
| Approach LOS         |       | D     |       | C     |       | B     |       | B     |       | B     |

Intersection Summary

Cycle Length: 96  
 Actuated Cycle Length: 96  
 Offset: 51 (53%), Referenced to phase 4:EBTL and 8:WBTL, Start of Green  
 Natural Cycle: 85  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 1.13  
 Intersection Signal Delay: 23.4  
 Intersection Capacity Utilization 73.4%  
 Intersection LOS: C  
 ICU Level of Service D  
 Analysis Period (min) 15

Splits and Phases: 1: 19th Ave & Happy Valley Rd





Deer Valley 30  
2: 19th Ave & Optum Drwy

Existing AM  
HCM 6th TWSC

| Intersection             |        |        |        |      |      |      |
|--------------------------|--------|--------|--------|------|------|------|
| Int Delay, s/veh         | 0.1    |        |        |      |      |      |
| Movement                 | EBL    | EBR    | NBL    | NBT  | SBT  | SBR  |
| Lane Configurations      | ↔      |        | ↔ ↑↑↑  |      | ↔ ↑↑ |      |
| Traffic Vol, veh/h       | 0      | 4      | 6      | 461  | 655  | 2    |
| Future Vol, veh/h        | 0      | 4      | 6      | 461  | 655  | 2    |
| Conflicting Peds, #/hr   | 0      | 0      | 0      | 0    | 0    | 0    |
| Sign Control             | Stop   | Stop   | Free   | Free | Free | Free |
| RT Channelized           | -      | None   | -      | None | -    | None |
| Storage Length           | 0      | -      | 50     | -    | -    | -    |
| Veh in Median Storage, # | 0      | -      | -      | 0    | 0    | -    |
| Grade, %                 | 0      | -      | -      | 0    | 0    | -    |
| Peak Hour Factor         | 92     | 92     | 92     | 92   | 92   | 92   |
| Heavy Vehicles, %        | 2      | 2      | 2      | 2    | 2    | 2    |
| Mvmt Flow                | 0      | 4      | 7      | 501  | 712  | 2    |
| Major/Minor              | Minor2 | Major1 | Major2 |      |      |      |
| Conflicting Flow All     | 927    | 357    | 714    | 0    | -    | 0    |
| Stage 1                  | 713    | -      | -      | -    | -    | -    |
| Stage 2                  | 214    | -      | -      | -    | -    | -    |
| Critical Hdwy            | 6.29   | 6.94   | 4.14   | -    | -    | -    |
| Critical Hdwy Stg 1      | 5.84   | -      | -      | -    | -    | -    |
| Critical Hdwy Stg 2      | 6.04   | -      | -      | -    | -    | -    |
| Follow-up Hdwy           | 3.67   | 3.32   | 2.22   | -    | -    | -    |
| Pot Cap-1 Maneuver       | 300    | 639    | 882    | -    | -    | -    |
| Stage 1                  | 434    | -      | -      | -    | -    | -    |
| Stage 2                  | 762    | -      | -      | -    | -    | -    |
| Platoon blocked, %       | -      | -      | -      | -    | -    | -    |
| Mov Cap-1 Maneuver       | 298    | 639    | 882    | -    | -    | -    |
| Mov Cap-2 Maneuver       | 366    | -      | -      | -    | -    | -    |
| Stage 1                  | 431    | -      | -      | -    | -    | -    |
| Stage 2                  | 762    | -      | -      | -    | -    | -    |
| Approach                 | EB     | NB     | SB     |      |      |      |
| HCM Control Delay, s     | 10.7   | 0.1    | 0      |      |      |      |
| HCM LOS                  | B      |        |        |      |      |      |
| Minor Lane/Major Mvmt    | NBL    | NBT    | EBLn1  | SBT  | SBR  |      |
| Capacity (veh/h)         | 882    | -      | 639    | -    | -    |      |
| HCM Lane V/C Ratio       | 0.007  | -      | 0.007  | -    | -    |      |
| HCM Control Delay (s)    | 9.1    | -      | 10.7   | -    | -    |      |
| HCM Lane LOS             | A      | -      | B      | -    | -    |      |
| HCM 95th %tile Q(veh)    | 0      | -      | 0      | -    | -    |      |

Deer Valley 30  
2: 19th Ave & Optum Drwy

Existing PM  
HCM 6th TWSC

| Intersection             |        |        |        |      |      |      |
|--------------------------|--------|--------|--------|------|------|------|
| Int Delay, s/veh         | 0.1    |        |        |      |      |      |
| Movement                 | EBL    | EBR    | NBL    | NBT  | SBT  | SBR  |
| Lane Configurations      | ↔      |        | ↔ ↑↑↑  |      | ↔ ↑↑ |      |
| Traffic Vol, veh/h       | 0      | 4      | 6      | 818  | 560  | 2    |
| Future Vol, veh/h        | 0      | 4      | 6      | 818  | 560  | 2    |
| Conflicting Peds, #/hr   | 0      | 0      | 0      | 0    | 0    | 0    |
| Sign Control             | Stop   | Stop   | Free   | Free | Free | Free |
| RT Channelized           | -      | None   | -      | None | -    | None |
| Storage Length           | 0      | -      | 50     | -    | -    | -    |
| Veh in Median Storage, # | 0      | -      | -      | 0    | 0    | -    |
| Grade, %                 | 0      | -      | -      | 0    | 0    | -    |
| Peak Hour Factor         | 92     | 92     | 92     | 92   | 92   | 92   |
| Heavy Vehicles, %        | 2      | 2      | 2      | 2    | 2    | 2    |
| Mvmt Flow                | 0      | 4      | 7      | 889  | 609  | 2    |
| Major/Minor              | Minor2 | Major1 | Major2 |      |      |      |
| Conflicting Flow All     | 980    | 306    | 611    | 0    | -    | 0    |
| Stage 1                  | 610    | -      | -      | -    | -    | -    |
| Stage 2                  | 370    | -      | -      | -    | -    | -    |
| Critical Hdwy            | 6.29   | 6.94   | 4.14   | -    | -    | -    |
| Critical Hdwy Stg 1      | 5.84   | -      | -      | -    | -    | -    |
| Critical Hdwy Stg 2      | 6.04   | -      | -      | -    | -    | -    |
| Follow-up Hdwy           | 3.67   | 3.32   | 2.22   | -    | -    | -    |
| Pot Cap-1 Maneuver       | 280    | 690    | 964    | -    | -    | -    |
| Stage 1                  | 490    | -      | -      | -    | -    | -    |
| Stage 2                  | 633    | -      | -      | -    | -    | -    |
| Platoon blocked, %       | -      | -      | -      | -    | -    | -    |
| Mov Cap-1 Maneuver       | 278    | 690    | 964    | -    | -    | -    |
| Mov Cap-2 Maneuver       | 374    | -      | -      | -    | -    | -    |
| Stage 1                  | 487    | -      | -      | -    | -    | -    |
| Stage 2                  | 633    | -      | -      | -    | -    | -    |
| Approach                 | EB     | NB     | SB     |      |      |      |
| HCM Control Delay, s     | 10.3   | 0.1    | 0      |      |      |      |
| HCM LOS                  | B      |        |        |      |      |      |
| Minor Lane/Major Mvmt    | NBL    | NBT    | EBLn1  | SBT  | SBR  |      |
| Capacity (veh/h)         | 964    | -      | 690    | -    | -    |      |
| HCM Lane V/C Ratio       | 0.007  | -      | 0.006  | -    | -    |      |
| HCM Control Delay (s)    | 8.8    | -      | 10.3   | -    | -    |      |
| HCM Lane LOS             | A      | -      | B      | -    | -    |      |
| HCM 95th %tile Q(veh)    | 0      | -      | 0      | -    | -    |      |

Deer Valley 30  
3: 19th Ave & Patio Drwy/Parkview Ln

Existing AM  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Int Delay, s/veh         | 0.8  |      |      |      |      |      |      |      |      |      |      |      |
| Movement                 | EBL  | EBT  | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
| Lane Configurations      |      |      | ↗    |      | ↔    |      |      | ↖↗   |      | ↘    | ↖↗   |      |
| Traffic Vol, veh/h       | 0    | 0    | 5    | 23   | 0    | 12   | 1    | 455  | 37   | 23   | 636  | 0    |
| Future Vol, veh/h        | 0    | 0    | 5    | 23   | 0    | 12   | 1    | 455  | 37   | 23   | 636  | 0    |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Stop | Stop | Stop | Stop | Stop | Stop | Free | Free | Free | Free | Free | Free |
| RT Channelized           | -    | -    | None | -    | -    | None | -    | -    | None | -    | -    | None |
| Storage Length           | -    | -    | 0    | -    | -    | -    | -    | -    | -    | 50   | -    | -    |
| Veh in Median Storage, # | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Grade, %                 | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Peak Hour Factor         | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 0    | 0    | 5    | 25   | 0    | 13   | 1    | 495  | 40   | 25   | 691  | 0    |

| Major/Minor          | Minor2 | Minor1 | Major1 | Major2 |      |      |      |   |   |      |   |   |  |  |
|----------------------|--------|--------|--------|--------|------|------|------|---|---|------|---|---|--|--|
| Conflicting Flow All | -      | -      | 346    | 913    | 1258 | 268  | 691  | 0 | 0 | 535  | 0 | 0 |  |  |
| Stage 1              | -      | -      | -      | 517    | 517  | -    | -    | - | - | -    | - | - |  |  |
| Stage 2              | -      | -      | -      | 396    | 741  | -    | -    | - | - | -    | - | - |  |  |
| Critical Hdwy        | -      | -      | 6.94   | 6.99   | 6.54 | 7.14 | 4.14 | - | - | 5.34 | - | - |  |  |
| Critical Hdwy Stg 1  | -      | -      | -      | 7.34   | 5.54 | -    | -    | - | - | -    | - | - |  |  |
| Critical Hdwy Stg 2  | -      | -      | -      | 6.54   | 5.54 | -    | -    | - | - | -    | - | - |  |  |
| Follow-up Hdwy       | -      | -      | 3.32   | 3.67   | 4.02 | 3.92 | 2.22 | - | - | 3.12 | - | - |  |  |
| Pot Cap-1 Maneuver   | 0      | 0      | 650    | 256    | 170  | 622  | 900  | - | - | 652  | - | 0 |  |  |
| Stage 1              | 0      | 0      | -      | 440    | 532  | -    | -    | - | - | -    | - | 0 |  |  |
| Stage 2              | 0      | 0      | -      | 581    | 421  | -    | -    | - | - | -    | - | 0 |  |  |
| Platoon blocked, %   |        |        |        |        |      |      |      |   |   |      |   |   |  |  |
| Mov Cap-1 Maneuver   | -      | -      | 650    | 246    | 163  | 622  | 900  | - | - | 652  | - | - |  |  |
| Mov Cap-2 Maneuver   | -      | -      | -      | 246    | 163  | -    | -    | - | - | -    | - | - |  |  |
| Stage 1              | -      | -      | -      | 439    | 531  | -    | -    | - | - | -    | - | - |  |  |
| Stage 2              | -      | -      | -      | 554    | 405  | -    | -    | - | - | -    | - | - |  |  |

| Approach             | EB   | WB   | NB | SB  |
|----------------------|------|------|----|-----|
| HCM Control Delay, s | 10.6 | 18.2 | 0  | 0.4 |
| HCM LOS              | B    | C    |    |     |

| Minor Lane/Major Mvmt | NBL   | NBT | NBR | EBLn1 | WBLn1 | SBL   | SBT |
|-----------------------|-------|-----|-----|-------|-------|-------|-----|
| Capacity (veh/h)      | 900   | -   | -   | 650   | 310   | 652   | -   |
| HCM Lane V/C Ratio    | 0.001 | -   | -   | 0.008 | 0.123 | 0.038 | -   |
| HCM Control Delay (s) | 9     | -   | -   | 10.6  | 18.2  | 10.7  | -   |
| HCM Lane LOS          | A     | -   | -   | B     | C     | B     | -   |
| HCM 95th %tile Q(veh) | 0     | -   | -   | 0.4   | 0.1   | -     | -   |

Deer Valley 30  
3: 19th Ave & Patio Drwy/Parkview Ln

Existing PM  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Int Delay, s/veh         | 0.9  |      |      |      |      |      |      |      |      |      |      |      |
| Movement                 | EBL  | EBT  | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
| Lane Configurations      |      |      | ↗    |      | ↔    |      |      | ↖↗   |      | ↘    | ↖↗   |      |
| Traffic Vol, veh/h       | 0    | 0    | 5    | 23   | 0    | 12   | 1    | 501  | 37   | 23   | 541  | 0    |
| Future Vol, veh/h        | 0    | 0    | 5    | 23   | 0    | 12   | 1    | 501  | 37   | 23   | 541  | 0    |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Stop | Stop | Stop | Stop | Stop | Stop | Free | Free | Free | Free | Free | Free |
| RT Channelized           | -    | -    | None | -    | -    | None | -    | -    | None | -    | -    | None |
| Storage Length           | -    | -    | 0    | -    | -    | -    | -    | -    | -    | 50   | -    | -    |
| Veh in Median Storage, # | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Grade, %                 | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Peak Hour Factor         | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 0    | 0    | 5    | 25   | 0    | 13   | 1    | 545  | 40   | 25   | 588  | 0    |

| Major/Minor          | Minor2 | Minor1 | Major1 | Major2 |      |      |      |   |   |      |   |   |  |  |
|----------------------|--------|--------|--------|--------|------|------|------|---|---|------|---|---|--|--|
| Conflicting Flow All | -      | -      | 294    | 911    | 1205 | 293  | 588  | 0 | 0 | 585  | 0 | 0 |  |  |
| Stage 1              | -      | -      | -      | 567    | 567  | -    | -    | - | - | -    | - | - |  |  |
| Stage 2              | -      | -      | -      | 344    | 638  | -    | -    | - | - | -    | - | - |  |  |
| Critical Hdwy        | -      | -      | 6.94   | 6.99   | 6.54 | 7.14 | 4.14 | - | - | 5.34 | - | - |  |  |
| Critical Hdwy Stg 1  | -      | -      | -      | 7.34   | 5.54 | -    | -    | - | - | -    | - | - |  |  |
| Critical Hdwy Stg 2  | -      | -      | -      | 6.54   | 5.54 | -    | -    | - | - | -    | - | - |  |  |
| Follow-up Hdwy       | -      | -      | 3.32   | 3.67   | 4.02 | 3.92 | 2.22 | - | - | 3.12 | - | - |  |  |
| Pot Cap-1 Maneuver   | 0      | 0      | 702    | 257    | 183  | 600  | 983  | - | - | 618  | - | 0 |  |  |
| Stage 1              | 0      | 0      | -      | 406    | 505  | -    | -    | - | - | -    | - | 0 |  |  |
| Stage 2              | 0      | 0      | -      | 623    | 469  | -    | -    | - | - | -    | - | 0 |  |  |
| Platoon blocked, %   |        |        |        |        |      |      |      |   |   |      |   |   |  |  |
| Mov Cap-1 Maneuver   | -      | -      | 702    | 247    | 175  | 600  | 983  | - | - | 618  | - | - |  |  |
| Mov Cap-2 Maneuver   | -      | -      | -      | 247    | 175  | -    | -    | - | - | -    | - | - |  |  |
| Stage 1              | -      | -      | -      | 405    | 504  | -    | -    | - | - | -    | - | - |  |  |
| Stage 2              | -      | -      | -      | 593    | 450  | -    | -    | - | - | -    | - | - |  |  |

| Approach             | EB   | WB   | NB | SB  |
|----------------------|------|------|----|-----|
| HCM Control Delay, s | 10.2 | 18.3 | 0  | 0.5 |
| HCM LOS              | B    | C    |    |     |

| Minor Lane/Major Mvmt | NBL   | NBT | NBR | EBLn1 | WBLn1 | SBL  | SBT |
|-----------------------|-------|-----|-----|-------|-------|------|-----|
| Capacity (veh/h)      | 983   | -   | -   | 702   | 309   | 618  | -   |
| HCM Lane V/C Ratio    | 0.001 | -   | -   | 0.008 | 0.123 | 0.04 | -   |
| HCM Control Delay (s) | 8.7   | -   | -   | 10.2  | 18.3  | 11.1 | -   |
| HCM Lane LOS          | A     | -   | -   | B     | C     | B    | -   |
| HCM 95th %tile Q(veh) | 0     | -   | -   | 0.4   | 0.1   | -    | -   |

Deer Valley 30  
4: Alameda Rd & 19th Ave

Existing AM  
HCM 6th TWSC

| Intersection             |      |      |       |       |      |      |
|--------------------------|------|------|-------|-------|------|------|
| Int Delay, s/veh         | 0.7  |      |       |       |      |      |
| Movement                 | EBL  | EBR  | NBL   | NBT   | SBT  | SBR  |
| Lane Configurations      | ↔    | ↔    | ↔ ↕ ↕ | ↕ ↕ ↕ | ↕ ↕  | ↕ ↕  |
| Traffic Vol, veh/h       | 8    | 49   | 16    | 493   | 651  | 13   |
| Future Vol, veh/h        | 8    | 49   | 16    | 493   | 651  | 13   |
| Conflicting Peds, #/hr   | 0    | 0    | 0     | 0     | 0    | 0    |
| Sign Control             | Stop | Stop | Free  | Free  | Free | Free |
| RT Channelized           | -    | None | -     | None  | -    | None |
| Storage Length           | 0    | 100  | 150   | -     | -    | -    |
| Veh in Median Storage, # | 0    | -    | -     | 0     | 0    | -    |
| Grade, %                 | 0    | -    | -     | 0     | 0    | -    |
| Peak Hour Factor         | 92   | 92   | 92    | 92    | 92   | 92   |
| Heavy Vehicles, %        | 2    | 2    | 2     | 2     | 2    | 2    |
| Mvmt Flow                | 9    | 53   | 17    | 536   | 708  | 14   |

| Major/Minor          | Minor2 | Major1 | Major2 |   |     |
|----------------------|--------|--------|--------|---|-----|
| Conflicting Flow All | 963    | 361    | 722    | 0 | - 0 |
| Stage 1              | 715    | -      | -      | - | -   |
| Stage 2              | 248    | -      | -      | - | -   |
| Critical Hdwy        | 6.29   | 6.94   | 4.14   | - | - - |
| Critical Hdwy Stg 1  | 5.84   | -      | -      | - | -   |
| Critical Hdwy Stg 2  | 6.04   | -      | -      | - | -   |
| Follow-up Hdwy       | 3.67   | 3.32   | 2.22   | - | - - |
| Pot Cap-1 Maneuver   | 286    | 636    | 876    | - | - - |
| Stage 1              | 433    | -      | -      | - | -   |
| Stage 2              | 732    | -      | -      | - | -   |
| Platoon blocked, %   |        |        |        | - | - - |
| Mov Cap-1 Maneuver   | 281    | 636    | 876    | - | - - |
| Mov Cap-2 Maneuver   | 356    | -      | -      | - | -   |
| Stage 1              | 425    | -      | -      | - | -   |
| Stage 2              | 732    | -      | -      | - | -   |

| Approach             | EB   | NB  | SB |
|----------------------|------|-----|----|
| HCM Control Delay, s | 11.8 | 0.3 | 0  |
| HCM LOS              | B    |     |    |

| Minor Lane/Major Mvmt | NBL  | NBT | EBLn1 | EBLn2 | SBT | SBR |
|-----------------------|------|-----|-------|-------|-----|-----|
| Capacity (veh/h)      | 876  | -   | 356   | 636   | -   | -   |
| HCM Lane V/C Ratio    | 0.02 | -   | 0.024 | 0.084 | -   | -   |
| HCM Control Delay (s) | 9.2  | -   | 15.4  | 11.2  | -   | -   |
| HCM Lane LOS          | A    | -   | C     | B     | -   | -   |
| HCM 95th %tile Q(veh) | 0.1  | -   | 0.1   | 0.3   | -   | -   |

Deer Valley 30  
4: Alameda Rd & 19th Ave

Existing PM  
HCM 6th TWSC

| Intersection             |      |      |       |       |      |      |
|--------------------------|------|------|-------|-------|------|------|
| Int Delay, s/veh         | 1    |      |       |       |      |      |
| Movement                 | EBL  | EBR  | NBL   | NBT   | SBT  | SBR  |
| Lane Configurations      | ↔    | ↔    | ↔ ↕ ↕ | ↕ ↕ ↕ | ↕ ↕  | ↕ ↕  |
| Traffic Vol, veh/h       | 13   | 56   | 75    | 797   | 555  | 14   |
| Future Vol, veh/h        | 13   | 56   | 75    | 797   | 555  | 14   |
| Conflicting Peds, #/hr   | 0    | 0    | 0     | 0     | 0    | 0    |
| Sign Control             | Stop | Stop | Free  | Free  | Free | Free |
| RT Channelized           | -    | None | -     | None  | -    | None |
| Storage Length           | 0    | 100  | 150   | -     | -    | -    |
| Veh in Median Storage, # | 0    | -    | -     | 0     | 0    | -    |
| Grade, %                 | 0    | -    | -     | 0     | 0    | -    |
| Peak Hour Factor         | 92   | 92   | 92    | 92    | 92   | 92   |
| Heavy Vehicles, %        | 2    | 2    | 2     | 2     | 2    | 2    |
| Mvmt Flow                | 14   | 61   | 82    | 866   | 603  | 15   |

| Major/Minor          | Minor2 | Major1 | Major2 |   |     |
|----------------------|--------|--------|--------|---|-----|
| Conflicting Flow All | 1121   | 309    | 618    | 0 | - 0 |
| Stage 1              | 611    | -      | -      | - | -   |
| Stage 2              | 510    | -      | -      | - | -   |
| Critical Hdwy        | 6.29   | 6.94   | 4.14   | - | - - |
| Critical Hdwy Stg 1  | 5.84   | -      | -      | - | -   |
| Critical Hdwy Stg 2  | 6.04   | -      | -      | - | -   |
| Follow-up Hdwy       | 3.67   | 3.32   | 2.22   | - | - - |
| Pot Cap-1 Maneuver   | 232    | 687    | 958    | - | - - |
| Stage 1              | 489    | -      | -      | - | -   |
| Stage 2              | 535    | -      | -      | - | -   |
| Platoon blocked, %   |        |        |        | - | - - |
| Mov Cap-1 Maneuver   | 212    | 687    | 958    | - | - - |
| Mov Cap-2 Maneuver   | 318    | -      | -      | - | -   |
| Stage 1              | 447    | -      | -      | - | -   |
| Stage 2              | 535    | -      | -      | - | -   |

| Approach             | EB   | NB  | SB |
|----------------------|------|-----|----|
| HCM Control Delay, s | 11.8 | 0.8 | 0  |
| HCM LOS              | B    |     |    |

| Minor Lane/Major Mvmt | NBL   | NBT | EBLn1 | EBLn2 | SBT | SBR |
|-----------------------|-------|-----|-------|-------|-----|-----|
| Capacity (veh/h)      | 958   | -   | 318   | 687   | -   | -   |
| HCM Lane V/C Ratio    | 0.085 | -   | 0.044 | 0.089 | -   | -   |
| HCM Control Delay (s) | 9.1   | -   | 16.8  | 10.7  | -   | -   |
| HCM Lane LOS          | A     | -   | C     | B     | -   | -   |
| HCM 95th %tile Q(veh) | 0.3   | -   | 0.1   | 0.3   | -   | -   |



Deer Valley 30  
5: 19th Ave & Sarah Bass PI

Existing AM  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh         | 0.6  |      |      |      |      |      |
| Movement                 | EBL  | EBR  | NBL  | NBT  | SBT  | SBR  |
| Lane Configurations      |      |      |      |      |      |      |
| Traffic Vol, veh/h       | 12   | 32   | 24   | 497  | 692  | 8    |
| Future Vol, veh/h        | 12   | 32   | 24   | 497  | 692  | 8    |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Stop | Stop | Free | Free | Free | Free |
| RT Channelized           | -    | None | -    | None | -    | None |
| Storage Length           | 0    | 0    | 150  | -    | -    | -    |
| Veh in Median Storage, # | 0    | -    | -    | 0    | 0    | -    |
| Grade, %                 | 0    | -    | -    | 0    | 0    | -    |
| Peak Hour Factor         | 92   | 92   | 92   | 92   | 92   | 92   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 13   | 35   | 26   | 540  | 752  | 9    |

| Major/Minor          | Minor2 | Major1 | Major2 |
|----------------------|--------|--------|--------|
| Conflicting Flow All | 1025   | 381    | 761    |
| Stage 1              | 757    | -      | -      |
| Stage 2              | 268    | -      | -      |
| Critical Hdwy        | 6.29   | 6.94   | 4.14   |
| Critical Hdwy Stg 1  | 5.84   | -      | -      |
| Critical Hdwy Stg 2  | 6.04   | -      | -      |
| Follow-up Hdwy       | 3.67   | 3.32   | 2.22   |
| Pot Cap-1 Maneuver   | 264    | 617    | 847    |
| Stage 1              | 412    | -      | -      |
| Stage 2              | 715    | -      | -      |
| Platoon blocked, %   | -      | -      | -      |
| Mov Cap-1 Maneuver   | 256    | 617    | 847    |
| Mov Cap-2 Maneuver   | 333    | -      | -      |
| Stage 1              | 399    | -      | -      |
| Stage 2              | 715    | -      | -      |

| Approach             | EB   | NB  | SB |
|----------------------|------|-----|----|
| HCM Control Delay, s | 12.6 | 0.4 | 0  |
| HCM LOS              | B    |     |    |

| Minor Lane/Major Mvmt | NBL   | NBT | EBLn1 | EBLn2 | SBT | SBR |
|-----------------------|-------|-----|-------|-------|-----|-----|
| Capacity (veh/h)      | 847   | -   | 333   | 617   | -   | -   |
| HCM Lane V/C Ratio    | 0.031 | -   | 0.039 | 0.056 | -   | -   |
| HCM Control Delay (s) | 9.4   | -   | 16.3  | 11.2  | -   | -   |
| HCM Lane LOS          | A     | -   | C     | B     | -   | -   |
| HCM 95th %tile Q(veh) | 0.1   | -   | 0.1   | 0.2   | -   | -   |

Deer Valley 30  
5: 19th Ave & Sarah Bass PI

Existing PM  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh         | 0.4  |      |      |      |      |      |
| Movement                 | EBL  | EBR  | NBL  | NBT  | SBT  | SBR  |
| Lane Configurations      |      |      |      |      |      |      |
| Traffic Vol, veh/h       | 14   | 33   | 9    | 858  | 606  | 5    |
| Future Vol, veh/h        | 14   | 33   | 9    | 858  | 606  | 5    |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Stop | Stop | Free | Free | Free | Free |
| RT Channelized           | -    | None | -    | None | -    | None |
| Storage Length           | 0    | 0    | 150  | -    | -    | -    |
| Veh in Median Storage, # | 0    | -    | -    | 0    | 0    | -    |
| Grade, %                 | 0    | -    | -    | 0    | 0    | -    |
| Peak Hour Factor         | 92   | 92   | 92   | 92   | 92   | 92   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 15   | 36   | 10   | 933  | 659  | 5    |

| Major/Minor          | Minor2 | Major1 | Major2 |
|----------------------|--------|--------|--------|
| Conflicting Flow All | 1055   | 332    | 664    |
| Stage 1              | 662    | -      | -      |
| Stage 2              | 393    | -      | -      |
| Critical Hdwy        | 6.29   | 6.94   | 4.14   |
| Critical Hdwy Stg 1  | 5.84   | -      | -      |
| Critical Hdwy Stg 2  | 6.04   | -      | -      |
| Follow-up Hdwy       | 3.67   | 3.32   | 2.22   |
| Pot Cap-1 Maneuver   | 253    | 664    | 921    |
| Stage 1              | 461    | -      | -      |
| Stage 2              | 616    | -      | -      |
| Platoon blocked, %   | -      | -      | -      |
| Mov Cap-1 Maneuver   | 250    | 664    | 921    |
| Mov Cap-2 Maneuver   | 349    | -      | -      |
| Stage 1              | 456    | -      | -      |
| Stage 2              | 616    | -      | -      |

| Approach             | EB   | NB  | SB |
|----------------------|------|-----|----|
| HCM Control Delay, s | 12.2 | 0.1 | 0  |
| HCM LOS              | B    |     |    |

| Minor Lane/Major Mvmt | NBL   | NBT | EBLn1 | EBLn2 | SBT | SBR |
|-----------------------|-------|-----|-------|-------|-----|-----|
| Capacity (veh/h)      | 921   | -   | 349   | 664   | -   | -   |
| HCM Lane V/C Ratio    | 0.011 | -   | 0.044 | 0.054 | -   | -   |
| HCM Control Delay (s) | 9     | -   | 15.8  | 10.7  | -   | -   |
| HCM Lane LOS          | A     | -   | C     | B     | -   | -   |
| HCM 95th %tile Q(veh) | 0     | -   | 0.1   | 0.2   | -   | -   |

Deer Valley 30  
6: Pinnacle Peak Rd & 19th Ave

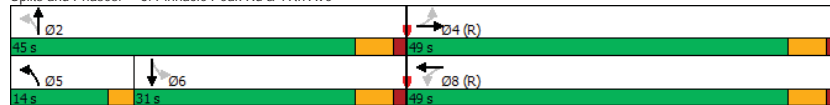
Existing AM  
Timings

| Lane Group           | EBL   | EBT   | WBL   | WBT   | NBL   | NBT   | SBL   | SBT   |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations  | ↔     | ↕     | ↔     | ↕     | ↔     | ↕     | ↔     | ↕     |
| Traffic Volume (vph) | 77    | 348   | 51    | 158   | 152   | 392   | 89    | 583   |
| Future Volume (vph)  | 77    | 348   | 51    | 158   | 152   | 392   | 89    | 583   |
| Turn Type            | Perm  | NA    | Perm  | NA    | pm+pt | NA    | Perm  | NA    |
| Protected Phases     |       | 4     |       | 8     | 5     | 2     |       | 6     |
| Permitted Phases     | 4     |       | 8     |       | 2     |       | 6     |       |
| Detector Phase       | 4     | 4     | 8     | 8     | 5     | 2     | 6     | 6     |
| Switch Phase         |       |       |       |       |       |       |       |       |
| Minimum Initial (s)  | 15.0  | 15.0  | 15.0  | 15.0  | 5.0   | 15.0  | 15.0  | 15.0  |
| Minimum Split (s)    | 34.6  | 34.6  | 34.6  | 34.6  | 9.5   | 30.8  | 30.8  | 30.8  |
| Total Split (s)      | 49.0  | 49.0  | 49.0  | 49.0  | 14.0  | 45.0  | 31.0  | 31.0  |
| Total Split (%)      | 52.1% | 52.1% | 52.1% | 52.1% | 14.9% | 47.9% | 33.0% | 33.0% |
| Yellow Time (s)      | 4.3   | 4.3   | 4.3   | 4.3   | 3.0   | 4.3   | 4.3   | 4.3   |
| All-Red Time (s)     | 1.3   | 1.3   | 1.3   | 1.3   | 0.0   | 1.5   | 1.5   | 1.5   |
| Lost Time Adjust (s) | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Lost Time (s)  | 5.6   | 5.6   | 5.6   | 5.6   | 3.0   | 5.8   | 5.8   | 5.8   |
| Lead/Lag             |       |       |       |       | Lead  |       | Lag   | Lag   |
| Lead-Lag Optimize?   |       |       |       |       | Yes   |       | Yes   | Yes   |
| Recall Mode          | C-Max | C-Max | C-Max | C-Max | None  | Max   | Max   | Max   |
| Act Effct Green (s)  | 43.4  | 43.4  | 43.4  | 43.4  | 42.0  | 39.2  | 26.3  | 26.3  |
| Actuated g/C Ratio   | 0.46  | 0.46  | 0.46  | 0.46  | 0.45  | 0.42  | 0.28  | 0.28  |
| v/c Ratio            | 0.16  | 0.41  | 0.19  | 0.14  | 0.53  | 0.25  | 0.42  | 0.70  |
| Control Delay        | 15.8  | 10.0  | 17.3  | 11.1  | 22.4  | 15.8  | 34.9  | 34.7  |
| Queue Delay          | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Delay          | 15.8  | 10.0  | 17.3  | 11.1  | 22.4  | 15.8  | 34.9  | 34.7  |
| LOS                  | B     | A     | B     | B     | C     | B     | C     | C     |
| Approach Delay       |       | 10.6  |       | 12.3  |       | 17.4  |       | 34.7  |
| Approach LOS         |       | B     |       | B     |       | B     |       | C     |

Intersection Summary

Cycle Length: 94  
 Actuated Cycle Length: 94  
 Offset: 31 (33%), Referenced to phase 4:EBTL and 8:WBTL, Start of Green  
 Natural Cycle: 75  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.70  
 Intersection Signal Delay: 20.2  
 Intersection Capacity Utilization 75.0%  
 Analysis Period (min) 15  
 Intersection LOS: C  
 ICU Level of Service D

Splits and Phases: 6: Pinnacle Peak Rd & 19th Ave



Deer Valley 30  
6: Pinnacle Peak Rd & 19th Ave

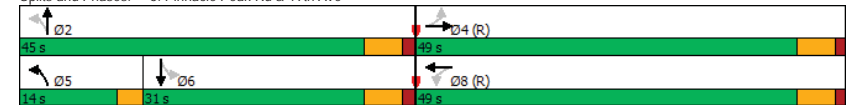
Existing PM  
Timings

| Lane Group           | EBL   | EBT   | WBL   | WBT   | NBL   | NBT   | SBL   | SBT   |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations  | ↔     | ↕     | ↔     | ↕     | ↔     | ↕     | ↔     | ↕     |
| Traffic Volume (vph) | 72    | 130   | 51    | 294   | 367   | 724   | 45    | 513   |
| Future Volume (vph)  | 72    | 130   | 51    | 294   | 367   | 724   | 45    | 513   |
| Turn Type            | Perm  | NA    | Perm  | NA    | pm+pt | NA    | Perm  | NA    |
| Protected Phases     |       | 4     |       | 8     | 5     | 2     |       | 6     |
| Permitted Phases     | 4     |       | 8     |       | 2     |       | 6     |       |
| Detector Phase       | 4     | 4     | 8     | 8     | 5     | 2     | 6     | 6     |
| Switch Phase         |       |       |       |       |       |       |       |       |
| Minimum Initial (s)  | 15.0  | 15.0  | 15.0  | 15.0  | 5.0   | 15.0  | 15.0  | 15.0  |
| Minimum Split (s)    | 34.6  | 34.6  | 34.6  | 34.6  | 9.5   | 30.8  | 30.8  | 30.8  |
| Total Split (s)      | 49.0  | 49.0  | 49.0  | 49.0  | 14.0  | 45.0  | 31.0  | 31.0  |
| Total Split (%)      | 52.1% | 52.1% | 52.1% | 52.1% | 14.9% | 47.9% | 33.0% | 33.0% |
| Yellow Time (s)      | 4.3   | 4.3   | 4.3   | 4.3   | 3.0   | 4.3   | 4.3   | 4.3   |
| All-Red Time (s)     | 1.3   | 1.3   | 1.3   | 1.3   | 0.0   | 1.5   | 1.5   | 1.5   |
| Lost Time Adjust (s) | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Lost Time (s)  | 5.6   | 5.6   | 5.6   | 5.6   | 3.0   | 5.8   | 5.8   | 5.8   |
| Lead/Lag             |       |       |       |       | Lead  |       | Lag   | Lag   |
| Lead-Lag Optimize?   |       |       |       |       | Yes   |       | Yes   | Yes   |
| Recall Mode          | C-Max | C-Max | C-Max | C-Max | None  | Max   | Max   | Max   |
| Act Effct Green (s)  | 43.4  | 43.4  | 43.4  | 43.4  | 42.0  | 39.2  | 25.2  | 25.2  |
| Actuated g/C Ratio   | 0.46  | 0.46  | 0.46  | 0.46  | 0.45  | 0.42  | 0.27  | 0.27  |
| v/c Ratio            | 0.18  | 0.24  | 0.12  | 0.25  | 1.18  | 0.39  | 0.30  | 0.69  |
| Control Delay        | 16.3  | 5.9   | 15.5  | 14.1  | 128.8 | 19.5  | 33.3  | 34.4  |
| Queue Delay          | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Delay          | 16.3  | 5.9   | 15.5  | 14.1  | 128.8 | 19.5  | 33.3  | 34.4  |
| LOS                  | B     | A     | B     | B     | F     | B     | C     | C     |
| Approach Delay       |       | 7.7   |       | 14.3  |       | 55.4  |       | 34.3  |
| Approach LOS         |       | A     |       | B     |       | E     |       | C     |

Intersection Summary

Cycle Length: 94  
 Actuated Cycle Length: 94  
 Offset: 31 (33%), Referenced to phase 4:EBTL and 8:WBTL, Start of Green  
 Natural Cycle: 80  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 1.18  
 Intersection Signal Delay: 35.9  
 Intersection Capacity Utilization 79.6%  
 Analysis Period (min) 15  
 Intersection LOS: D  
 ICU Level of Service D

Splits and Phases: 6: Pinnacle Peak Rd & 19th Ave





Deer Valley 30  
7: 15th Ave & Happy Valley Rd

Existing AM  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Int Delay, s/veh         | 0.8  |      |      |      |      |      |      |      |      |      |      |      |
| Movement                 | EBL  | EBT  | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
| Lane Configurations      | ↕    |      |      | ↕    |      |      | ↕    |      |      | ↕    |      |      |
| Traffic Vol, veh/h       | 5    | 437  | 21   | 13   | 305  | 0    | 17   | 0    | 9    | 2    | 0    | 5    |
| Future Vol, veh/h        | 5    | 437  | 21   | 13   | 305  | 0    | 17   | 0    | 9    | 2    | 0    | 5    |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Free | Free | Free | Free | Free | Free | Stop | Stop | Stop | Stop | Stop | Stop |
| RT Channelized           | -    | -    | None | -    | -    | None | -    | -    | None | -    | -    | None |
| Storage Length           | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    |
| Veh in Median Storage, # | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Grade, %                 | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Peak Hour Factor         | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 5    | 475  | 23   | 14   | 332  | 0    | 18   | 0    | 10   | 2    | 0    | 5    |

| Major/Minor          | Major1 | Major2 | Minor1 | Minor2 |
|----------------------|--------|--------|--------|--------|
| Conflicting Flow All | 332    | 0      | 0      | 498    |
| Stage 1              | -      | -      | -      | -      |
| Stage 2              | -      | -      | -      | -      |
| Critical Hdwy        | 4.12   | -      | 4.12   | -      |
| Critical Hdwy Stg 1  | -      | -      | -      | -      |
| Critical Hdwy Stg 2  | -      | -      | -      | -      |
| Follow-up Hdwy       | 2.218  | -      | 2.218  | -      |
| Pot Cap-1 Maneuver   | 1227   | -      | 1066   | -      |
| Stage 1              | -      | -      | -      | -      |
| Stage 2              | -      | -      | -      | -      |
| Platoon blocked, %   | -      | -      | -      | -      |
| Mov Cap-1 Maneuver   | 1227   | -      | 1066   | -      |
| Mov Cap-2 Maneuver   | -      | -      | -      | -      |
| Stage 1              | -      | -      | -      | -      |
| Stage 2              | -      | -      | -      | -      |

| Approach             | EB  | WB  | NB   | SB   |
|----------------------|-----|-----|------|------|
| HCM Control Delay, s | 0.1 | 0.3 | 16.9 | 12.6 |
| HCM LOS              |     |     | C    | B    |

| Minor Lane/Major Mvmt | NBLn1 | EBL   | EBT | EBR | WBL   | WBT | WBR | SBLn1 |
|-----------------------|-------|-------|-----|-----|-------|-----|-----|-------|
| Capacity (veh/h)      | 330   | 1227  | -   | -   | 1066  | -   | -   | 481   |
| HCM Lane V/C Ratio    | 0.086 | 0.004 | -   | -   | 0.013 | -   | -   | 0.016 |
| HCM Control Delay (s) | 16.9  | 7.9   | 0   | -   | 8.4   | 0   | -   | 12.6  |
| HCM Lane LOS          | C     | A     | A   | -   | A     | A   | -   | B     |
| HCM 95th %tile Q(veh) | 0.3   | 0     | -   | -   | 0     | -   | -   | 0     |

Deer Valley 30  
7: 15th Ave & Happy Valley Rd

Existing PM  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Int Delay, s/veh         | 0.8  |      |      |      |      |      |      |      |      |      |      |      |
| Movement                 | EBL  | EBT  | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
| Lane Configurations      | ↕    |      |      | ↕    |      |      | ↕    |      |      | ↕    |      |      |
| Traffic Vol, veh/h       | 2    | 438  | 3    | 7    | 834  | 0    | 18   | 0    | 15   | 0    | 0    | 1    |
| Future Vol, veh/h        | 2    | 438  | 3    | 7    | 834  | 0    | 18   | 0    | 15   | 0    | 0    | 1    |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Free | Free | Free | Free | Free | Free | Stop | Stop | Stop | Stop | Stop | Stop |
| RT Channelized           | -    | -    | None | -    | -    | None | -    | -    | None | -    | -    | None |
| Storage Length           | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    |
| Veh in Median Storage, # | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Grade, %                 | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Peak Hour Factor         | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 2    | 476  | 3    | 8    | 907  | 0    | 20   | 0    | 16   | 0    | 0    | 1    |

| Major/Minor          | Major1 | Major2 | Minor1 | Minor2 |
|----------------------|--------|--------|--------|--------|
| Conflicting Flow All | 907    | 0      | 0      | 479    |
| Stage 1              | -      | -      | -      | -      |
| Stage 2              | -      | -      | -      | -      |
| Critical Hdwy        | 4.12   | -      | 4.12   | -      |
| Critical Hdwy Stg 1  | -      | -      | -      | -      |
| Critical Hdwy Stg 2  | -      | -      | -      | -      |
| Follow-up Hdwy       | 2.218  | -      | 2.218  | -      |
| Pot Cap-1 Maneuver   | 750    | -      | 1083   | -      |
| Stage 1              | -      | -      | -      | -      |
| Stage 2              | -      | -      | -      | -      |
| Platoon blocked, %   | -      | -      | -      | -      |
| Mov Cap-1 Maneuver   | 750    | -      | 1083   | -      |
| Mov Cap-2 Maneuver   | -      | -      | -      | -      |
| Stage 1              | -      | -      | -      | -      |
| Stage 2              | -      | -      | -      | -      |

| Approach             | EB | WB  | NB   | SB   |
|----------------------|----|-----|------|------|
| HCM Control Delay, s | 0  | 0.1 | 29.7 | 15.8 |
| HCM LOS              |    |     | D    | C    |

| Minor Lane/Major Mvmt | NBLn1 | EBL   | EBT | EBR | WBL   | WBT | WBR | SBLn1 |
|-----------------------|-------|-------|-----|-----|-------|-----|-----|-------|
| Capacity (veh/h)      | 181   | 750   | -   | -   | 1083  | -   | -   | 334   |
| HCM Lane V/C Ratio    | 0.198 | 0.003 | -   | -   | 0.007 | -   | -   | 0.003 |
| HCM Control Delay (s) | 29.7  | 9.8   | 0   | -   | 8.3   | 0   | -   | 15.8  |
| HCM Lane LOS          | D     | A     | A   | -   | A     | A   | -   | C     |
| HCM 95th %tile Q(veh) | 0.7   | 0     | -   | -   | 0     | -   | -   | 0     |

Deer Valley 30  
8: 7th Ave & Happy Valley Rd

Existing AM  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh         | 0.6  |      |      |      |      |      |
| Movement                 | EBT  | EBR  | WBL  | WBT  | NBL  | NBR  |
| Lane Configurations      | ↔    |      |      | ↕    | ↕    |      |
| Traffic Vol, veh/h       | 457  | 22   | 8    | 254  | 15   | 9    |
| Future Vol, veh/h        | 457  | 22   | 8    | 254  | 15   | 9    |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Free | Free | Free | Free | Stop | Stop |
| RT Channelized           | -    | None | -    | None | -    | None |
| Storage Length           | -    | -    | -    | -    | 0    | -    |
| Veh in Median Storage, # | 0    | -    | -    | 0    | 0    | -    |
| Grade, %                 | 0    | -    | -    | 0    | 0    | -    |
| Peak Hour Factor         | 92   | 92   | 92   | 92   | 92   | 92   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 497  | 24   | 9    | 276  | 16   | 10   |

| Major/Minor          | Major1 | Major2 | Minor1 |   |       |
|----------------------|--------|--------|--------|---|-------|
| Conflicting Flow All | 0      | 0      | 521    | 0 | 803   |
| Stage 1              | -      | -      | -      | - | 509   |
| Stage 2              | -      | -      | -      | - | 294   |
| Critical Hdwy        | -      | -      | 4.12   | - | 6.42  |
| Critical Hdwy Stg 1  | -      | -      | -      | - | 5.42  |
| Critical Hdwy Stg 2  | -      | -      | -      | - | 5.42  |
| Follow-up Hdwy       | -      | -      | 2.218  | - | 3.518 |
| Pot Cap-1 Maneuver   | -      | -      | 1045   | - | 353   |
| Stage 1              | -      | -      | -      | - | 604   |
| Stage 2              | -      | -      | -      | - | 756   |
| Platoon blocked, %   | -      | -      | -      | - | -     |
| Mov Cap-1 Maneuver   | -      | -      | 1045   | - | 349   |
| Mov Cap-2 Maneuver   | -      | -      | -      | - | 349   |
| Stage 1              | -      | -      | -      | - | 604   |
| Stage 2              | -      | -      | -      | - | 748   |

| Approach             | EB | WB  | NB   |
|----------------------|----|-----|------|
| HCM Control Delay, s | 0  | 0.3 | 14.5 |
| HCM LOS              | B  |     |      |

| Minor Lane/Major Mvmt | NBLn1 | EBT | EBR | WBL   | WBT |
|-----------------------|-------|-----|-----|-------|-----|
| Capacity (veh/h)      | 407   | -   | -   | 1045  | -   |
| HCM Lane V/C Ratio    | 0.064 | -   | -   | 0.008 | -   |
| HCM Control Delay (s) | 14.5  | -   | -   | 8.5   | 0   |
| HCM Lane LOS          | B     | -   | -   | A     | A   |
| HCM 95th %tile Q(veh) | 0.2   | -   | -   | 0     | -   |

Deer Valley 30  
8: 7th Ave & Happy Valley Rd

Existing PM  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh         | 1.2  |      |      |      |      |      |
| Movement                 | EBT  | EBR  | WBL  | WBT  | NBL  | NBR  |
| Lane Configurations      | ↔    |      |      | ↕    | ↕    |      |
| Traffic Vol, veh/h       | 431  | 33   | 17   | 768  | 37   | 10   |
| Future Vol, veh/h        | 431  | 33   | 17   | 768  | 37   | 10   |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Free | Free | Free | Free | Stop | Stop |
| RT Channelized           | -    | None | -    | None | -    | None |
| Storage Length           | -    | -    | -    | -    | 0    | -    |
| Veh in Median Storage, # | 0    | -    | -    | 0    | 0    | -    |
| Grade, %                 | 0    | -    | -    | 0    | 0    | -    |
| Peak Hour Factor         | 92   | 92   | 92   | 92   | 92   | 92   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 468  | 36   | 18   | 835  | 40   | 11   |

| Major/Minor          | Major1 | Major2 | Minor1 |   |       |
|----------------------|--------|--------|--------|---|-------|
| Conflicting Flow All | 0      | 0      | 504    | 0 | 1357  |
| Stage 1              | -      | -      | -      | - | 486   |
| Stage 2              | -      | -      | -      | - | 871   |
| Critical Hdwy        | -      | -      | 4.12   | - | 6.42  |
| Critical Hdwy Stg 1  | -      | -      | -      | - | 5.42  |
| Critical Hdwy Stg 2  | -      | -      | -      | - | 5.42  |
| Follow-up Hdwy       | -      | -      | 2.218  | - | 3.518 |
| Pot Cap-1 Maneuver   | -      | -      | 1061   | - | 164   |
| Stage 1              | -      | -      | -      | - | 618   |
| Stage 2              | -      | -      | -      | - | 410   |
| Platoon blocked, %   | -      | -      | -      | - | -     |
| Mov Cap-1 Maneuver   | -      | -      | 1061   | - | 159   |
| Mov Cap-2 Maneuver   | -      | -      | -      | - | 159   |
| Stage 1              | -      | -      | -      | - | 618   |
| Stage 2              | -      | -      | -      | - | 397   |

| Approach             | EB | WB  | NB   |
|----------------------|----|-----|------|
| HCM Control Delay, s | 0  | 0.2 | 31.1 |
| HCM LOS              | D  |     |      |

| Minor Lane/Major Mvmt | NBLn1 | EBT | EBR | WBL   | WBT |
|-----------------------|-------|-----|-----|-------|-----|
| Capacity (veh/h)      | 188   | -   | -   | 1061  | -   |
| HCM Lane V/C Ratio    | 0.272 | -   | -   | 0.017 | -   |
| HCM Control Delay (s) | 31.1  | -   | -   | 8.5   | 0   |
| HCM Lane LOS          | D     | -   | -   | A     | A   |
| HCM 95th %tile Q(veh) | 1.1   | -   | -   | 0.1   | -   |

Deer Valley 30  
9: 7th Ave & Pinnacle Peak Rd

Existing AM  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh         | 1.8  |      |      |      |      |      |
| Movement                 | EBT  | EBR  | WBL  | WBT  | NBL  | NBR  |
| Lane Configurations      | ↑    | ↑    |      | ↑    | ↑    |      |
| Traffic Vol, veh/h       | 173  | 107  | 30   | 204  | 49   | 22   |
| Future Vol, veh/h        | 173  | 107  | 30   | 204  | 49   | 22   |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Free | Free | Free | Free | Stop | Stop |
| RT Channelized           | -    | None | -    | None | -    | None |
| Storage Length           | -    | 170  | -    | -    | 0    | -    |
| Veh in Median Storage, # | 0    | -    | -    | 0    | 0    | -    |
| Grade, %                 | 0    | -    | -    | 0    | 0    | -    |
| Peak Hour Factor         | 92   | 92   | 92   | 92   | 92   | 92   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 188  | 116  | 33   | 222  | 53   | 24   |

| Major/Minor          | Major1 | Major2 | Minor1 |   |             |
|----------------------|--------|--------|--------|---|-------------|
| Conflicting Flow All | 0      | 0      | 304    | 0 | 476 188     |
| Stage 1              | -      | -      | -      | - | 188 -       |
| Stage 2              | -      | -      | -      | - | 288 -       |
| Critical Hdwy        | -      | -      | 4.12   | - | 6.42 6.22   |
| Critical Hdwy Stg 1  | -      | -      | -      | - | 5.42 -      |
| Critical Hdwy Stg 2  | -      | -      | -      | - | 5.42 -      |
| Follow-up Hdwy       | -      | -      | 2.218  | - | 3.518 3.318 |
| Pot Cap-1 Maneuver   | -      | -      | 1257   | - | 548 854     |
| Stage 1              | -      | -      | -      | - | 844 -       |
| Stage 2              | -      | -      | -      | - | 761 -       |
| Platoon blocked, %   | -      | -      | -      | - | - -         |
| Mov Cap-1 Maneuver   | -      | -      | 1257   | - | 532 854     |
| Mov Cap-2 Maneuver   | -      | -      | -      | - | 532 -       |
| Stage 1              | -      | -      | -      | - | 844 -       |
| Stage 2              | -      | -      | -      | - | 738 -       |

| Approach             | EB | WB | NB   |
|----------------------|----|----|------|
| HCM Control Delay, s | 0  | 1  | 11.9 |
| HCM LOS              |    |    | B    |

| Minor Lane/Major Mvmt | NBLn1 | EBT | EBR | WBL   | WBT |
|-----------------------|-------|-----|-----|-------|-----|
| Capacity (veh/h)      | 602   | -   | -   | 1257  | -   |
| HCM Lane V/C Ratio    | 0.128 | -   | -   | 0.026 | -   |
| HCM Control Delay (s) | 11.9  | -   | -   | 7.9   | 0   |
| HCM Lane LOS          | B     | -   | -   | A     | A   |
| HCM 95th %tile Q(veh) | 0.4   | -   | -   | 0.1   | -   |

Deer Valley 30  
9: 7th Ave & Pinnacle Peak Rd

Existing PM  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh         | 2.1  |      |      |      |      |      |
| Movement                 | EBT  | EBR  | WBL  | WBT  | NBL  | NBR  |
| Lane Configurations      | ↑    | ↑    |      | ↑    | ↑    |      |
| Traffic Vol, veh/h       | 227  | 43   | 25   | 175  | 52   | 25   |
| Future Vol, veh/h        | 227  | 43   | 25   | 175  | 52   | 25   |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Free | Free | Free | Free | Stop | Stop |
| RT Channelized           | -    | None | -    | None | -    | None |
| Storage Length           | -    | 170  | -    | -    | 0    | -    |
| Veh in Median Storage, # | 0    | -    | -    | 0    | 0    | -    |
| Grade, %                 | 0    | -    | -    | 0    | 0    | -    |
| Peak Hour Factor         | 92   | 92   | 92   | 92   | 92   | 92   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 247  | 47   | 27   | 190  | 57   | 27   |

| Major/Minor          | Major1 | Major2 | Minor1 |   |             |
|----------------------|--------|--------|--------|---|-------------|
| Conflicting Flow All | 0      | 0      | 294    | 0 | 491 247     |
| Stage 1              | -      | -      | -      | - | 247 -       |
| Stage 2              | -      | -      | -      | - | 244 -       |
| Critical Hdwy        | -      | -      | 4.12   | - | 6.42 6.22   |
| Critical Hdwy Stg 1  | -      | -      | -      | - | 5.42 -      |
| Critical Hdwy Stg 2  | -      | -      | -      | - | 5.42 -      |
| Follow-up Hdwy       | -      | -      | 2.218  | - | 3.518 3.318 |
| Pot Cap-1 Maneuver   | -      | -      | 1268   | - | 537 792     |
| Stage 1              | -      | -      | -      | - | 794 -       |
| Stage 2              | -      | -      | -      | - | 797 -       |
| Platoon blocked, %   | -      | -      | -      | - | - -         |
| Mov Cap-1 Maneuver   | -      | -      | 1268   | - | 524 792     |
| Mov Cap-2 Maneuver   | -      | -      | -      | - | 524 -       |
| Stage 1              | -      | -      | -      | - | 794 -       |
| Stage 2              | -      | -      | -      | - | 778 -       |

| Approach             | EB | WB | NB   |
|----------------------|----|----|------|
| HCM Control Delay, s | 0  | 1  | 12.1 |
| HCM LOS              |    |    | B    |

| Minor Lane/Major Mvmt | NBLn1 | EBT | EBR | WBL   | WBT |
|-----------------------|-------|-----|-----|-------|-----|
| Capacity (veh/h)      | 589   | -   | -   | 1268  | -   |
| HCM Lane V/C Ratio    | 0.142 | -   | -   | 0.021 | -   |
| HCM Control Delay (s) | 12.1  | -   | -   | 7.9   | 0   |
| HCM Lane LOS          | B     | -   | -   | A     | A   |
| HCM 95th %tile Q(veh) | 0.5   | -   | -   | 0.1   | -   |

## **APPENDIX D**

### **TRIP GENERATION CALCULATIONS**

# Deer Valley 30 - West Site

# Trip Generation

Proposed

October 2021

## Land Use Types and Size

| Proposed Use             | Amount | Units             |  | ITE LUC | ITE Land Use Name        |
|--------------------------|--------|-------------------|--|---------|--------------------------|
| General Office Building  | 7.020  | 1,000 square feet |  | 710     | General Office Building  |
| General Light Industrial | 63.180 | 1,000 square feet |  | 110     | General Light Industrial |

## Equation Type: Equation Used [Equated Rate] (Type Abbreviations: Weighted Average Rate ("WA"), Fitted Curve ("FC"), or Custom ("C") )

| Proposed Use             | ADT                              | AM Peak Hour                     | PM Peak Hour                     |
|--------------------------|----------------------------------|----------------------------------|----------------------------------|
| General Office Building  | FC: LN(T)=0.97*LN(X)+2.5 [11.49] | FC: T=0.94*X+26.49 [4.71]        | FC: LN(T)=0.95*LN(X)+0.36 [1.30] |
| General Light Industrial | FC: T=3.79*X+57.96 [4.71]        | FC: LN(T)=0.74*LN(X)+0.39 [0.50] | FC: LN(T)=0.69*LN(X)+0.43 [0.43] |

## Baseline Vehicular Trips

| Proposed Use             | ADT  |     |     |       | AM Peak Hour |    |     |       | PM Peak Hour |    |     |       | % In | In | Out | Total |
|--------------------------|------|-----|-----|-------|--------------|----|-----|-------|--------------|----|-----|-------|------|----|-----|-------|
|                          | % In | In  | Out | Total | % In         | In | Out | Total | % In         | In | Out | Total |      |    |     |       |
| General Office Building  | 50%  | 40  | 40  | 80    | 86%          | 28 | 5   | 33    | 16%          | 1  | 8   | 9     |      |    |     |       |
| General Light Industrial | 50%  | 149 | 149 | 298   | 88%          | 28 | 4   | 32    | 13%          | 4  | 23  | 27    |      |    |     |       |

## Truck Trips

| Proposed Use             | ADT     |           |           |           | AM Peak Hour |          |          |          | PM Peak Hour |          |          |          | Percent | In | Out | Total |
|--------------------------|---------|-----------|-----------|-----------|--------------|----------|----------|----------|--------------|----------|----------|----------|---------|----|-----|-------|
|                          | Percent | In        | Out       | Total     | Percent      | In       | Out      | Total    | Percent      | In       | Out      | Total    |         |    |     |       |
| General Office Building  |         | 0         | 0         | 0         |              | 0        | 0        | 0        |              | 0        | 0        | 0        |         |    |     |       |
| General Light Industrial | 8%      | 12        | 12        | 24        | 8%           | 2        | 1        | 3        | 8%           | 0        | 2        | 2        |         |    |     |       |
| <b>Totals</b>            |         | <b>12</b> | <b>12</b> | <b>24</b> |              | <b>2</b> | <b>1</b> | <b>3</b> |              | <b>0</b> | <b>2</b> | <b>2</b> |         |    |     |       |

## Trip Generation Summary

| Proposed Use                        | ITE LUC | Size  | Units | Weekday Trips |              |          |           |              |           |           |
|-------------------------------------|---------|-------|-------|---------------|--------------|----------|-----------|--------------|-----------|-----------|
|                                     |         |       |       | Daily Total   | AM Peak Hour |          |           | PM Peak Hour |           |           |
|                                     |         |       |       |               | In           | Out      | Total     | In           | Out       | Total     |
| General Office Building             | 710     | 7.02  | KSF   | 80            | 28           | 5        | 33        | 1            | 8         | 9         |
| General Light Industrial            | 110     | 63.18 | KSF   | 298           | 28           | 4        | 32        | 4            | 23        | 27        |
| Subtotals                           |         |       |       | 378           | 56           | 9        | 65        | 5            | 31        | 36        |
| <b>Total External Vehicle Trips</b> |         |       |       | <b>378</b>    | <b>56</b>    | <b>9</b> | <b>65</b> | <b>5</b>     | <b>31</b> | <b>36</b> |
| Truck Trips                         |         |       |       | 24            | 2            | 1        | 3         | 0            | 2         | 2         |
| Other Trips                         |         |       |       | 354           | 54           | 8        | 62        | 5            | 29        | 34        |



# Deer Valley 30 - East Site

# Trip Generation

Proposed

10/11/2021

## Land Use Types and Size

| Proposed Use             | Amount  | Units             |  | ITE LUC | ITE Land Use Name        |
|--------------------------|---------|-------------------|--|---------|--------------------------|
| General Office Building  | 29.060  | 1,000 square feet |  | 710     | General Office Building  |
| General Light Industrial | 261.540 | 1,000 square feet |  | 110     | General Light Industrial |

**Equation Type: Equation Used [Equated Rate]** (Type Abbreviations: Weighted Average Rate ("WA"), Fitted Curve ("FC"), or Custom ("C"))

| Proposed Use             | ADT                              | AM Peak Hour                     | PM Peak Hour                     |
|--------------------------|----------------------------------|----------------------------------|----------------------------------|
| General Office Building  | FC: LN(T)=0.97*LN(X)+2.5 [11.01] | FC: T=0.94*X+26.49 [1.85]        | FC: LN(T)=0.95*LN(X)+0.36 [1.21] |
| General Light Industrial | FC: T=3.79*X+57.96 [4.01]        | FC: LN(T)=0.74*LN(X)+0.39 [0.35] | FC: LN(T)=0.69*LN(X)+0.43 [0.27] |

## Baseline Vehicular Trips

| Proposed Use             | ADT  |     |     |       | AM Peak Hour |    |     |       | PM Peak Hour |    |     |       | % In | In | Out | Total |
|--------------------------|------|-----|-----|-------|--------------|----|-----|-------|--------------|----|-----|-------|------|----|-----|-------|
|                          | % In | In  | Out | Total | % In         | In | Out | Total | % In         | In | Out | Total |      |    |     |       |
| General Office Building  | 50%  | 160 | 160 | 320   | 86%          | 46 | 8   | 54    | 16%          | 6  | 29  | 35    |      |    |     |       |
| General Light Industrial | 50%  | 525 | 525 | 1,050 | 88%          | 80 | 11  | 91    | 13%          | 9  | 63  | 72    |      |    |     |       |

## Truck Trips

| Proposed Use             | ADT     |           |           |           | AM Peak Hour |          |          |          | PM Peak Hour |          |          |          | Percent | In | Out | Total |
|--------------------------|---------|-----------|-----------|-----------|--------------|----------|----------|----------|--------------|----------|----------|----------|---------|----|-----|-------|
|                          | Percent | In        | Out       | Total     | Percent      | In       | Out      | Total    | Percent      | In       | Out      | Total    |         |    |     |       |
| General Office Building  |         | 0         | 0         | 0         |              | 0        | 0        | 0        |              | 0        | 0        | 0        |         |    |     |       |
| General Light Industrial | 8%      | 42        | 42        | 84        | 8%           | 6        | 1        | 7        | 8%           | 1        | 5        | 6        |         |    |     |       |
| <b>Totals</b>            |         | <b>42</b> | <b>42</b> | <b>84</b> |              | <b>6</b> | <b>1</b> | <b>7</b> |              | <b>1</b> | <b>5</b> | <b>6</b> |         |    |     |       |

## Trip Generation Summary

| Proposed Use                        | ITE LUC | Size   | Units | Weekday Trips |              |           |            |              |           |            |
|-------------------------------------|---------|--------|-------|---------------|--------------|-----------|------------|--------------|-----------|------------|
|                                     |         |        |       | Daily Total   | AM Peak Hour |           |            | PM Peak Hour |           |            |
|                                     |         |        |       |               | In           | Out       | Total      | In           | Out       | Total      |
| General Office Building             | 710     | 29.06  | KSF   | 320           | 46           | 8         | 54         | 6            | 29        | 35         |
| General Light Industrial            | 110     | 261.54 | KSF   | 1,050         | 80           | 11        | 91         | 9            | 63        | 72         |
| Subtotals                           |         |        |       | 1,370         | 126          | 19        | 145        | 15           | 92        | 107        |
| <b>Total External Vehicle Trips</b> |         |        |       | <b>1,370</b>  | <b>126</b>   | <b>19</b> | <b>145</b> | <b>15</b>    | <b>92</b> | <b>107</b> |
| Truck Trips                         |         |        |       | 84            | 6            | 1         | 7          | 1            | 5         | 6          |
| Other Trips                         |         |        |       | 1,286         | 120          | 18        | 138        | 14           | 87        | 101        |

## **APPENDIX E**

### **TRIP DISTRIBUTION CALCULATIONS**

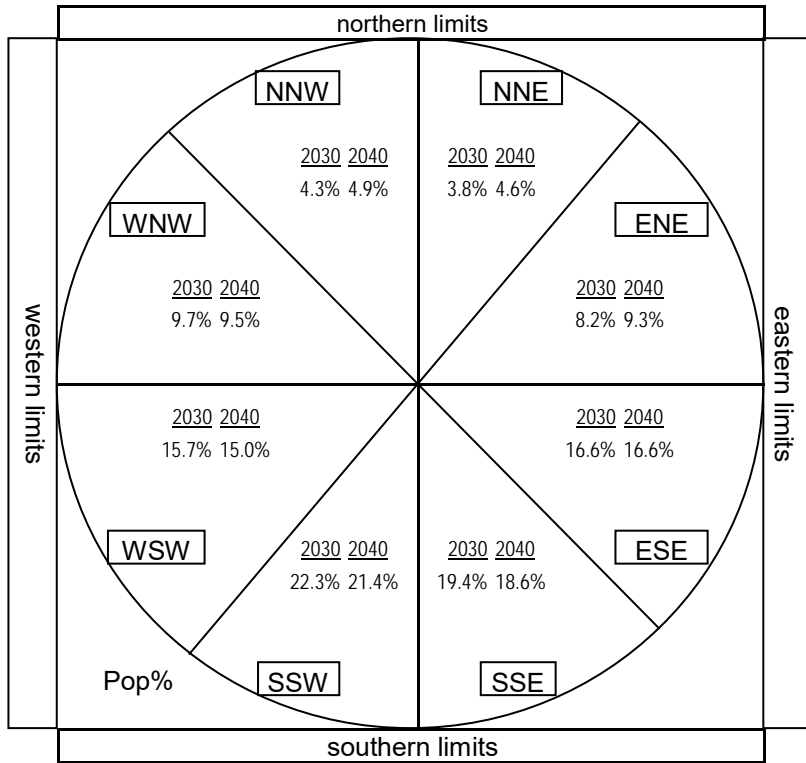
| Quadrant        | 2030       |         | 2040       |              |
|-----------------|------------|---------|------------|--------------|
|                 | Population | Percent | Population | Percent      |
| North Northwest | 20,943     | 4.3%    | 25,024     | 4.9%         |
| North Northeast | 18,562     | 3.8%    | 23,800     | 4.6%         |
| North           | 39,505     | 8.1%    | 48,824     | <b>9.5%</b>  |
| East Northeast  | 39,822     | 8.2%    | 47,809     | 9.3%         |
| East Southeast  | 80,448     | 16.6%   | 85,260     | 16.6%        |
| East            | 120,270    | 24.8%   | 133,069    | <b>25.9%</b> |
| South Southeast | 94,048     | 19.4%   | 95,246     | 18.6%        |
| South Southwest | 108,129    | 22.3%   | 109,769    | 21.4%        |
| South           | 202,177    | 41.7%   | 205,015    | <b>40.0%</b> |
| West Southwest  | 76,275     | 15.7%   | 77,020     | 15.0%        |
| West Northwest  | 47,126     | 9.7%    | 48,891     | 9.5%         |
| West            | 123,401    | 25.4%   | 125,911    | <b>24.5%</b> |
| Totals          | 485,353    | 100.0%  | 512,819    | 99.9%        |

**Radius**

Population radius: 7 miles

**Select Analysis Year (2030, 2040, 2050)**

2030











## **APPENDIX F**

### **BACKGROUND GROWTH CALCULATIONS**



**Location of counts:** I-17 at  
Pinnacle  
Peak Road

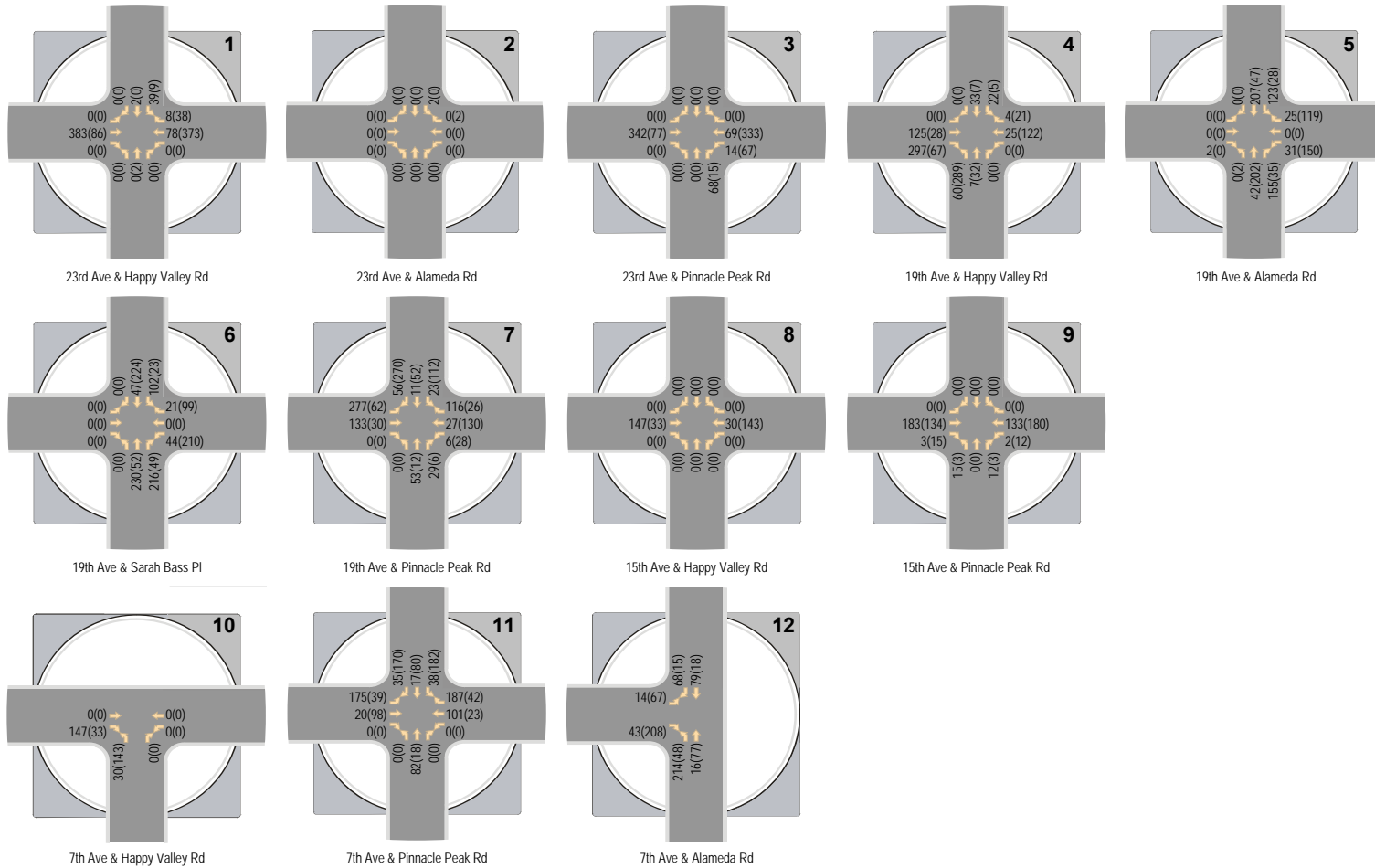
*Source(s):* ADOT AADT Publications

|            | Year | Volume  |
|------------|------|---------|
| Start      | 2016 | 136,254 |
| End        | 2017 | 141,159 |
| AAGR       |      | 3.6%    |
| Exp Factor |      | 1.036   |

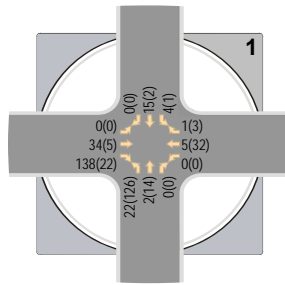
Growth Rate Used 3.6%  
Per-Year Multiplier 1.036

| Year        | Expansion Factor(s)  |
|-------------|----------------------|
| 2021        | 1.000                |
| 2022        | 1.036                |
| 2023        | 1.073                |
| <b>2024</b> | <b>1.112 Opening</b> |
| 2025        | 1.152                |
| 2026        | 1.193                |
| 2027        | 1.236                |
| 2028        | 1.281                |
| 2029        | 1.327                |
| 2030        | 1.375                |
| 2031        | 1.424                |
| 2032        | 1.476                |
| 2033        | 1.529                |
| 2034        | 1.584                |
| 2035        | 1.641                |
| 2036        | 1.700                |
| 2037        | 1.761                |
| 2038        | 1.824                |
| 2039        | 1.890                |
| 2040        | 1.958                |
| 2041        | 2.029                |
| 2042        | 2.102                |
| 2043        | 2.177                |
| 2044        | 2.256                |
| 2045        | 2.337                |
| 2046        | 2.421                |
| 2047        | 2.508                |
| 2048        | 2.598                |
| 2049        | 2.692                |
| 2050        | 2.789                |
| 2051        | 2.889                |
| 2052        | 2.993                |
| 2053        | 3.101                |

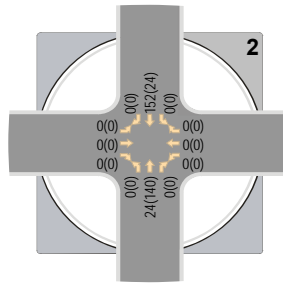
Supplier Site A Volumes



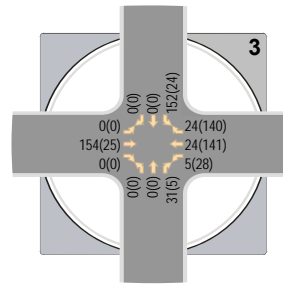
Supplier Site B and C Volumes



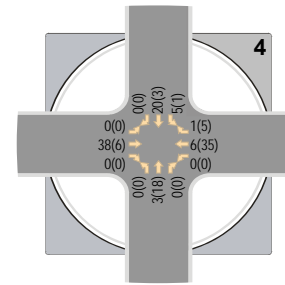
23rd Ave & Happy Valley Rd



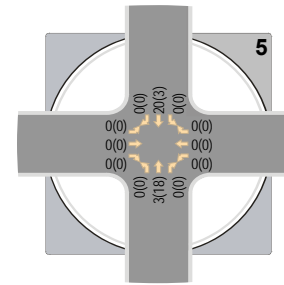
23rd Ave & Alameda Rd



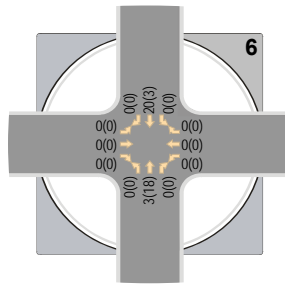
23rd Ave & Pinnacle Peak Rd



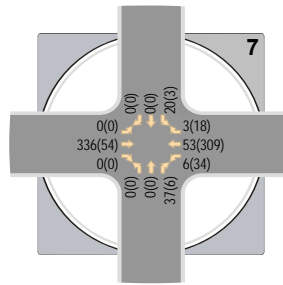
19th Ave & Happy Valley Rd



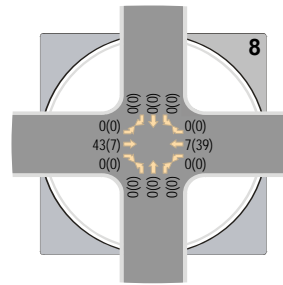
19th Ave & Alameda Rd



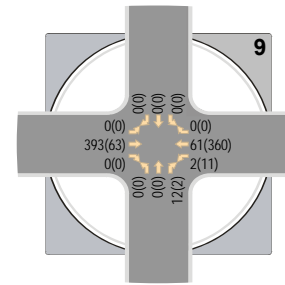
19th Ave & Sarah Bass Pl



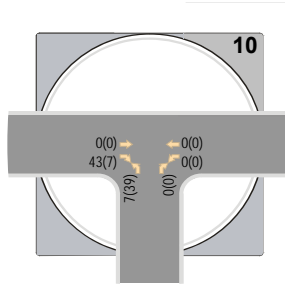
19th Ave & Pinnacle Peak Rd



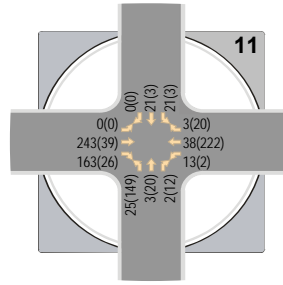
15th Ave & Happy Valley Rd



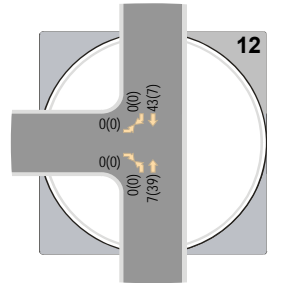
15th Ave & Pinnacle Peak Rd



7th Ave & Happy Valley Rd



7th Ave & Pinnacle Peak Rd



7th Ave & Alameda Rd

## **APPENDIX G**

### **2024 NO BUILD PEAK HOUR ANALYSIS**

Deer Valley 30  
1: 19th Ave & Happy Valley Rd

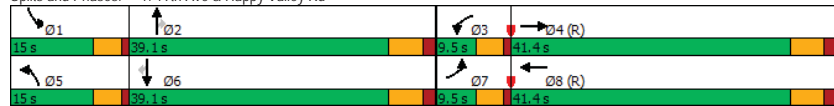
2024 Background AM  
Timings

| Lane Group           | EBL  | EBT   | WBL   | WBT   | NBL   | NBT   | NBR   | SBL   | SBT   | SBR   |  |
|----------------------|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|--|
| Lane Configurations  | ↔↔   | ↔↔↔   | ↔↔    | ↔↔↔   | ↔↔    | ↔↔    | ↔     | ↔↔    | ↔↔↔   | ↔     |  |
| Traffic Volume (vph) | 87   | 511   | 150   | 326   | 213   | 267   | 102   | 294   | 461   | 96    |  |
| Future Volume (vph)  | 87   | 511   | 150   | 326   | 213   | 267   | 102   | 294   | 461   | 96    |  |
| Turn Type            | Prot | NA    | Prot  | NA    | Prot  | NA    | Perm  | Prot  | NA    | Perm  |  |
| Protected Phases     | 7    | 4     | 3     | 8     | 5     | 2     |       | 1     | 6     |       |  |
| Permitted Phases     |      |       |       |       |       |       | 2     |       |       | 6     |  |
| Detector Phase       | 7    | 4     | 3     | 8     | 5     | 2     | 2     | 1     | 6     | 6     |  |
| Switch Phase         |      |       |       |       |       |       |       |       |       |       |  |
| Minimum Initial (s)  | 5.0  | 15.0  | 5.0   | 15.0  | 5.0   | 5.0   | 5.0   | 5.0   | 5.0   | 5.0   |  |
| Minimum Split (s)    | 9.5  | 41.0  | 9.5   | 41.0  | 9.5   | 43.1  | 43.1  | 9.5   | 43.1  | 43.1  |  |
| Total Split (s)      | 9.5  | 41.4  | 9.5   | 41.4  | 15.0  | 39.1  | 39.1  | 15.0  | 39.1  | 39.1  |  |
| Total Split (%)      | 9.0% | 39.4% | 9.0%  | 39.4% | 14.3% | 37.2% | 37.2% | 14.3% | 37.2% | 37.2% |  |
| Yellow Time (s)      | 3.5  | 4.3   | 3.5   | 4.3   | 3.5   | 4.3   | 4.3   | 3.5   | 4.3   | 4.3   |  |
| All-Red Time (s)     | 1.0  | 1.7   | 1.0   | 1.7   | 1.0   | 1.8   | 1.8   | 1.0   | 1.8   | 1.8   |  |
| Lost Time Adjust (s) | 0.0  | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |  |
| Total Lost Time (s)  | 4.5  | 6.0   | 4.5   | 6.0   | 4.5   | 6.1   | 6.1   | 4.5   | 6.1   | 6.1   |  |
| Lead/Lag             | Lead | Lag   | Lead  | Lag   | Lead  | Lag   | Lead  | Lag   | Lag   | Lag   |  |
| Lead-Lag Optimize?   | Yes  | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   |  |
| Recall Mode          | None | C-Max | None  | C-Max | None  | Max   | Max   | None  | Max   | Max   |  |
| Act Effct Green (s)  | 5.0  | 35.4  | 5.0   | 35.4  | 10.3  | 33.0  | 33.0  | 10.5  | 33.2  | 33.2  |  |
| Actuated g/C Ratio   | 0.05 | 0.34  | 0.05  | 0.34  | 0.10  | 0.31  | 0.31  | 0.10  | 0.32  | 0.32  |  |
| v/c Ratio            | 0.62 | 0.64  | 1.06  | 0.30  | 0.73  | 0.28  | 0.20  | 0.99  | 0.33  | 0.19  |  |
| Control Delay        | 66.8 | 24.5  | 137.8 | 21.0  | 60.4  | 27.9  | 4.7   | 95.2  | 28.2  | 4.0   |  |
| Queue Delay          | 0.0  | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |  |
| Total Delay          | 66.8 | 24.5  | 137.8 | 21.0  | 60.4  | 27.9  | 4.7   | 95.2  | 28.2  | 4.0   |  |
| LOS                  | E    | C     | F     | C     | E     | C     | A     | F     | C     | A     |  |
| Approach Delay       | 27.9 |       |       | 50.7  |       |       | 35.8  |       |       | 48.7  |  |
| Approach LOS         | C    |       |       | D     |       |       | D     |       |       | D     |  |

Intersection Summary

Cycle Length: 105  
 Actuated Cycle Length: 105  
 Offset: 0 (0%), Referenced to phase 4:EBT and 8:WBT, Start of Green  
 Natural Cycle: 105  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 1.06  
 Intersection Signal Delay: 39.5  
 Intersection Capacity Utilization 58.0%  
 Intersection LOS: D  
 ICU Level of Service B  
 Analysis Period (min) 15

Splits and Phases: 1: 19th Ave & Happy Valley Rd



Deer Valley 30  
1: 19th Ave & Happy Valley Rd

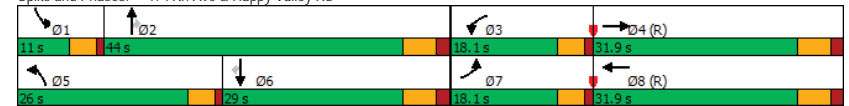
2024 Background PM  
Timings

| Lane Group           | EBL   | EBT   | WBL   | WBT   | NBL   | NBT   | NBR   | SBL   | SBT   | SBR   |  |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|--|
| Lane Configurations  | ↔↔    | ↔↔↔   | ↔↔    | ↔↔↔   | ↔↔    | ↔↔    | ↔     | ↔↔    | ↔↔↔   | ↔     |  |
| Traffic Volume (vph) | 167   | 417   | 165   | 904   | 593   | 531   | 125   | 183   | 238   | 122   |  |
| Future Volume (vph)  | 167   | 417   | 165   | 904   | 593   | 531   | 125   | 183   | 238   | 122   |  |
| Turn Type            | Prot  | NA    | Prot  | NA    | Prot  | NA    | Perm  | Prot  | NA    | Perm  |  |
| Protected Phases     | 7     | 4     | 3     | 8     | 5     | 2     |       | 1     | 6     |       |  |
| Permitted Phases     |       |       |       |       |       |       | 2     |       |       | 6     |  |
| Detector Phase       | 7     | 4     | 3     | 8     | 5     | 2     | 2     | 1     | 6     | 6     |  |
| Switch Phase         |       |       |       |       |       |       |       |       |       |       |  |
| Minimum Initial (s)  | 5.0   | 15.0  | 5.0   | 15.0  | 5.0   | 5.0   | 5.0   | 5.0   | 5.0   | 5.0   |  |
| Minimum Split (s)    | 9.5   | 41.0  | 9.5   | 41.0  | 9.5   | 43.1  | 43.1  | 9.5   | 43.1  | 43.1  |  |
| Total Split (s)      | 18.1  | 31.9  | 18.1  | 31.9  | 26.0  | 44.0  | 44.0  | 11.0  | 29.0  | 29.0  |  |
| Total Split (%)      | 17.2% | 30.4% | 17.2% | 30.4% | 24.8% | 41.9% | 41.9% | 10.5% | 27.6% | 27.6% |  |
| Yellow Time (s)      | 3.5   | 4.3   | 3.5   | 4.3   | 3.5   | 4.3   | 4.3   | 3.5   | 4.3   | 4.3   |  |
| All-Red Time (s)     | 1.0   | 1.7   | 1.0   | 1.7   | 1.0   | 1.8   | 1.8   | 1.0   | 1.8   | 1.8   |  |
| Lost Time Adjust (s) | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |  |
| Total Lost Time (s)  | 4.5   | 6.0   | 4.5   | 6.0   | 4.5   | 6.1   | 6.1   | 4.5   | 6.1   | 6.1   |  |
| Lead/Lag             | Lead  | Lag   | Lead  | Lag   | Lead  | Lag   | Lead  | Lag   | Lag   | Lag   |  |
| Lead-Lag Optimize?   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   |  |
| Recall Mode          | None  | C-Max | None  | C-Max | None  | Max   | Max   | None  | Max   | Max   |  |
| Act Effct Green (s)  | 11.0  | 28.5  | 11.0  | 28.5  | 21.5  | 37.9  | 37.9  | 6.5   | 22.9  | 22.9  |  |
| Actuated g/C Ratio   | 0.10  | 0.27  | 0.10  | 0.27  | 0.20  | 0.36  | 0.36  | 0.06  | 0.22  | 0.22  |  |
| v/c Ratio            | 0.54  | 0.58  | 0.53  | 1.06  | 0.97  | 0.48  | 0.22  | 0.99  | 0.25  | 0.29  |  |
| Control Delay        | 50.1  | 28.1  | 50.1  | 77.3  | 71.2  | 27.6  | 4.9   | 112.9 | 34.7  | 4.0   |  |
| Queue Delay          | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |  |
| Total Delay          | 50.1  | 28.1  | 50.1  | 77.3  | 71.2  | 27.6  | 4.9   | 112.9 | 34.7  | 4.0   |  |
| LOS                  | D     | C     | D     | E     | E     | C     | A     | F     | C     | A     |  |
| Approach Delay       | 32.2  |       |       | 74.2  |       |       | 46.0  |       |       | 54.1  |  |
| Approach LOS         | C     |       |       | E     |       |       | D     |       |       | D     |  |

Intersection Summary

Cycle Length: 105  
 Actuated Cycle Length: 105  
 Offset: 0 (0%), Referenced to phase 4:EBT and 8:WBT, Start of Green  
 Natural Cycle: 125  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 1.06  
 Intersection Signal Delay: 54.0  
 Intersection Capacity Utilization 69.7%  
 Intersection LOS: D  
 ICU Level of Service C  
 Analysis Period (min) 15

Splits and Phases: 1: 19th Ave & Happy Valley Rd



Deer Valley 30  
1: 19th Ave & Happy Valley Rd

2024 Background AM  
HCM 6th Signalized Intersection Summary

| Movement                     | EBL  | EBT  | EBR  | WBL   | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
|------------------------------|------|------|------|-------|------|------|------|------|------|------|------|------|
| Lane Configurations          | ↔    | ↔    | ↔    | ↔     | ↔    | ↔    | ↔    | ↔    | ↔    | ↔    | ↔    | ↔    |
| Traffic Volume (veh/h)       | 87   | 511  | 469  | 150   | 326  | 115  | 213  | 267  | 102  | 294  | 461  | 96   |
| Future Volume (veh/h)        | 87   | 511  | 469  | 150   | 326  | 115  | 213  | 267  | 102  | 294  | 461  | 96   |
| Initial Q (Ob), veh          | 0    | 0    | 0    | 0     | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Ped-Bike Adj(A_pbT)          | 1.00 | 1.00 | 1.00 | 1.00  | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Parking Bus, Adj             | 1.00 | 1.00 | 1.00 | 1.00  | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Work Zone On Approach        | No   | No   | No   | No    | No   | No   | No   | No   | No   | No   | No   | No   |
| Adj Sat Flow, veh/h/ln       | 1781 | 1781 | 1781 | 1781  | 1781 | 1781 | 1781 | 1781 | 1781 | 1781 | 1781 | 1781 |
| Adj Flow Rate, veh/h         | 95   | 555  | 510  | 163   | 354  | 125  | 232  | 290  | 111  | 320  | 501  | 104  |
| Peak Hour Factor             | 0.92 | 0.92 | 0.92 | 0.92  | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Percent Heavy Veh, %         | 8    | 8    | 8    | 8     | 8    | 8    | 8    | 8    | 8    | 8    | 8    | 8    |
| Cap, veh/h                   | 147  | 1093 | 509  | 157   | 1224 | 411  | 293  | 1064 | 474  | 329  | 1582 | 491  |
| Arrive On Green              | 0.04 | 0.34 | 0.34 | 0.05  | 0.34 | 0.34 | 0.09 | 0.31 | 0.31 | 0.10 | 0.33 | 0.33 |
| Sat Flow, veh/h              | 3291 | 3242 | 1510 | 3291  | 3599 | 1208 | 3291 | 3385 | 1510 | 3291 | 4863 | 1510 |
| Grp Volume(v), veh/h         | 95   | 555  | 510  | 163   | 317  | 162  | 232  | 290  | 111  | 320  | 501  | 104  |
| Grp Sat Flow(s), veh/h/ln    | 1646 | 1621 | 1510 | 1646  | 1621 | 1564 | 1646 | 1692 | 1510 | 1646 | 1621 | 1510 |
| Q Serve(g_s), s              | 3.0  | 14.4 | 35.4 | 5.0   | 7.5  | 8.0  | 7.3  | 6.7  | 5.7  | 10.2 | 8.1  | 5.2  |
| Cycle Q Clear(g_c), s        | 3.0  | 14.4 | 35.4 | 5.0   | 7.5  | 8.0  | 7.3  | 6.7  | 5.7  | 10.2 | 8.1  | 5.2  |
| Prop In Lane                 | 1.00 | 1.00 | 1.00 | 1.00  | 0.77 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Lane Grp Cap(c), veh/h       | 147  | 1093 | 509  | 157   | 1103 | 532  | 293  | 1064 | 474  | 329  | 1582 | 491  |
| V/C Ratio(X)                 | 0.65 | 0.51 | 1.00 | 1.04  | 0.29 | 0.30 | 0.79 | 0.27 | 0.23 | 0.97 | 0.32 | 0.21 |
| Avail Cap(c_a), veh/h        | 157  | 1093 | 509  | 157   | 1103 | 532  | 329  | 1064 | 474  | 329  | 1582 | 491  |
| HCM Platoon Ratio            | 1.00 | 1.00 | 1.00 | 1.00  | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(I)           | 1.00 | 1.00 | 1.00 | 1.00  | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Uniform Delay (d), s/veh     | 49.3 | 27.8 | 34.8 | 50.0  | 25.3 | 25.5 | 46.9 | 27.0 | 26.6 | 47.1 | 26.6 | 25.7 |
| Incr Delay (d2), s/veh       | 8.2  | 1.7  | 40.4 | 82.9  | 0.7  | 1.5  | 11.2 | 0.6  | 1.2  | 42.0 | 0.5  | 1.0  |
| Initial Q Delay(d3), s/veh   | 0.0  | 0.0  | 0.0  | 0.0   | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| %ile BackOfQ(50%), veh/ln    | 1.4  | 5.8  | 18.3 | 3.8   | 3.0  | 3.2  | 3.4  | 2.8  | 2.2  | 6.1  | 3.2  | 2.0  |
| Unsig. Movement Delay, s/veh |      |      |      |       |      |      |      |      |      |      |      |      |
| LnGrp Delay(d), s/veh        | 57.5 | 29.5 | 75.2 | 132.9 | 26.0 | 27.0 | 58.1 | 27.6 | 27.8 | 89.1 | 27.2 | 26.6 |
| LnGrp LOS                    | E    | C    | F    | F     | C    | C    | E    | C    | C    | F    | C    | C    |
| Approach Vol, veh/h          |      | 1160 |      |       | 642  |      |      | 633  |      |      | 925  |      |
| Approach Delay, s/veh        |      | 51.9 |      |       | 53.4 |      |      | 38.8 |      |      | 48.5 |      |
| Approach LOS                 |      | D    |      |       | D    |      |      | D    |      |      | D    |      |

| Timer - Assigned Phs         | 1    | 2     | 3   | 4    | 5    | 6     | 7   | 8    |
|------------------------------|------|-------|-----|------|------|-------|-----|------|
| Phs Duration (G+Y+Rc), s     | 15.0 | 39.1  | 9.5 | 41.4 | 13.8 | 40.3  | 9.2 | 41.7 |
| Change Period (Y+Rc), s      | 4.5  | * 6.1 | 4.5 | * 6  | 4.5  | * 6.1 | 4.5 | * 6  |
| Max Green Setting (Gmax), s  | 10.5 | * 33  | 5.0 | * 35 | 10.5 | * 33  | 5.0 | * 35 |
| Max Q Clear Time (g_c+I1), s | 12.2 | 8.7   | 7.0 | 37.4 | 9.3  | 10.1  | 5.0 | 10.0 |
| Green Ext Time (p_c), s      | 0.0  | 2.3   | 0.0 | 0.0  | 0.1  | 3.9   | 0.0 | 3.3  |

| Intersection Summary |      |
|----------------------|------|
| HCM 6th Ctrl Delay   | 48.8 |
| HCM 6th LOS          | D    |

Notes  
User approved pedestrian interval to be less than phase max green.  
\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Deer Valley 30  
1: 19th Ave & Happy Valley Rd

2024 Background PM  
HCM 6th Signalized Intersection Summary

| Movement                     | EBL  | EBT  | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL   | SBT  | SBR  |
|------------------------------|------|------|------|------|------|------|------|------|------|-------|------|------|
| Lane Configurations          | ↔    | ↔    | ↔    | ↔    | ↔    | ↔    | ↔    | ↔    | ↔    | ↔     | ↔    | ↔    |
| Traffic Volume (veh/h)       | 167  | 417  | 299  | 165  | 904  | 374  | 593  | 531  | 125  | 183   | 238  | 122  |
| Future Volume (veh/h)        | 167  | 417  | 299  | 165  | 904  | 374  | 593  | 531  | 125  | 183   | 238  | 122  |
| Initial Q (Ob), veh          | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0     | 0    | 0    |
| Ped-Bike Adj(A_pbT)          | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00  | 1.00 | 1.00 |
| Parking Bus, Adj             | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00  | 1.00 | 1.00 |
| Work Zone On Approach        | No   | No   | No   | No   | No   | No   | No   | No   | No   | No    | No   | No   |
| Adj Sat Flow, veh/h/ln       | 1781 | 1781 | 1781 | 1781 | 1781 | 1781 | 1781 | 1781 | 1781 | 1781  | 1781 | 1781 |
| Adj Flow Rate, veh/h         | 182  | 453  | 325  | 179  | 983  | 407  | 645  | 577  | 136  | 199   | 259  | 133  |
| Peak Hour Factor             | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92  | 0.92 | 0.92 |
| Percent Heavy Veh, %         | 8    | 8    | 8    | 8    | 8    | 8    | 8    | 8    | 8    | 8     | 8    | 8    |
| Cap, veh/h                   | 248  | 978  | 456  | 245  | 1015 | 420  | 674  | 1222 | 545  | 204   | 1061 | 329  |
| Arrive On Green              | 0.08 | 0.30 | 0.30 | 0.07 | 0.30 | 0.30 | 0.20 | 0.36 | 0.36 | 0.06  | 0.22 | 0.22 |
| Sat Flow, veh/h              | 3291 | 3242 | 1510 | 3291 | 3375 | 1397 | 3291 | 3385 | 1510 | 3291  | 4863 | 1510 |
| Grp Volume(v), veh/h         | 182  | 453  | 325  | 179  | 944  | 446  | 645  | 577  | 136  | 199   | 259  | 133  |
| Grp Sat Flow(s), veh/h/ln    | 1646 | 1621 | 1510 | 1646 | 1621 | 1530 | 1646 | 1692 | 1510 | 1646  | 1621 | 1510 |
| Q Serve(g_s), s              | 5.7  | 11.9 | 20.1 | 5.6  | 30.2 | 30.2 | 20.4 | 13.8 | 6.6  | 6.3   | 4.6  | 7.9  |
| Cycle Q Clear(g_c), s        | 5.7  | 11.9 | 20.1 | 5.6  | 30.2 | 30.2 | 20.4 | 13.8 | 6.6  | 6.3   | 4.6  | 7.9  |
| Prop In Lane                 | 1.00 | 1.00 | 1.00 | 1.00 | 0.91 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00  | 1.00 | 1.00 |
| Lane Grp Cap(c), veh/h       | 248  | 978  | 456  | 245  | 975  | 460  | 674  | 1222 | 545  | 204   | 1061 | 329  |
| V/C Ratio(X)                 | 0.73 | 0.46 | 0.71 | 0.73 | 0.97 | 0.97 | 0.96 | 0.47 | 0.25 | 0.98  | 0.24 | 0.40 |
| Avail Cap(c_a), veh/h        | 426  | 978  | 456  | 426  | 975  | 460  | 674  | 1222 | 545  | 204   | 1061 | 329  |
| HCM Platoon Ratio            | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00  | 1.00 | 1.00 |
| Upstream Filter(I)           | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00  | 1.00 | 1.00 |
| Uniform Delay (d), s/veh     | 47.5 | 29.8 | 32.6 | 47.6 | 36.2 | 36.2 | 41.3 | 25.8 | 23.6 | 49.2  | 33.9 | 35.2 |
| Incr Delay (d2), s/veh       | 4.2  | 1.6  | 9.2  | 4.2  | 22.1 | 34.8 | 24.5 | 1.3  | 1.1  | 56.1  | 0.5  | 3.7  |
| Initial Q Delay(d3), s/veh   | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0   | 0.0  | 0.0  |
| %ile BackOfQ(50%), veh/ln    | 2.5  | 4.8  | 8.4  | 2.4  | 14.7 | 15.5 | 10.4 | 5.7  | 2.5  | 4.2   | 1.9  | 3.2  |
| Unsig. Movement Delay, s/veh |      |      |      |      |      |      |      |      |      |       |      |      |
| LnGrp Delay(d), s/veh        | 51.7 | 31.3 | 41.8 | 51.7 | 58.3 | 71.0 | 65.8 | 27.2 | 24.7 | 105.3 | 34.5 | 38.9 |
| LnGrp LOS                    | D    | C    | D    | D    | E    | E    | E    | C    | C    | F     | C    | D    |
| Approach Vol, veh/h          |      | 960  |      |      | 1569 |      |      | 1358 |      |       | 591  |      |
| Approach Delay, s/veh        |      | 38.7 |      |      | 61.2 |      |      | 45.2 |      |       | 59.3 |      |
| Approach LOS                 |      | D    |      |      | E    |      |      | D    |      |       | E    |      |

| Timer - Assigned Phs         | 1    | 2     | 3    | 4    | 5    | 6     | 7    | 8    |
|------------------------------|------|-------|------|------|------|-------|------|------|
| Phs Duration (G+Y+Rc), s     | 11.0 | 44.0  | 12.3 | 37.7 | 26.0 | 29.0  | 12.4 | 37.6 |
| Change Period (Y+Rc), s      | 4.5  | * 6.1 | 4.5  | * 6  | 4.5  | * 6.1 | 4.5  | * 6  |
| Max Green Setting (Gmax), s  | 6.5  | * 38  | 13.6 | * 26 | 21.5 | * 23  | 13.6 | * 26 |
| Max Q Clear Time (g_c+I1), s | 8.3  | 15.8  | 7.6  | 22.1 | 22.4 | 9.9   | 7.7  | 32.2 |
| Green Ext Time (p_c), s      | 0.0  | 4.5   | 0.3  | 1.8  | 0.0  | 1.7   | 0.3  | 0.0  |

| Intersection Summary |      |
|----------------------|------|
| HCM 6th Ctrl Delay   | 51.3 |
| HCM 6th LOS          | D    |

Notes  
User approved pedestrian interval to be less than phase max green.  
\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Deer Valley 30  
2: 19th Ave & Optum Drwy

2024 Background AM  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh         | 0.1  |      |      |      |      |      |
| Movement                 | EBL  | EBR  | NBL  | NBT  | SBT  | SBR  |
| Lane Configurations      | W    |      | T    | T    | T    | T    |
| Traffic Vol, veh/h       | 0    | 4    | 7    | 583  | 1078 | 2    |
| Future Vol, veh/h        | 0    | 4    | 7    | 583  | 1078 | 2    |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Stop | Stop | Free | Free | Free | Free |
| RT Channelized           | -    | None | -    | None | -    | None |
| Storage Length           | 0    | -    | 50   | -    | -    | -    |
| Veh in Median Storage, # | 0    | -    | -    | 0    | 0    | -    |
| Grade, %                 | 0    | -    | -    | 0    | 0    | -    |
| Peak Hour Factor         | 92   | 92   | 92   | 92   | 92   | 92   |
| Heavy Vehicles, %        | 8    | 8    | 8    | 8    | 8    | 8    |
| Mvmt Flow                | 0    | 4    | 8    | 634  | 1172 | 2    |

| Major/Minor          | Minor2 | Major1 | Major2 |
|----------------------|--------|--------|--------|
| Conflicting Flow All | 1443   | 587    | 1174   |
| Stage 1              | 1173   | -      | -      |
| Stage 2              | 270    | -      | -      |
| Critical Hdwy        | 6.41   | 7.06   | 4.26   |
| Critical Hdwy Stg 1  | 5.96   | -      | -      |
| Critical Hdwy Stg 2  | 6.16   | -      | -      |
| Follow-up Hdwy       | 3.73   | 3.38   | 2.28   |
| Pot Cap-1 Maneuver   | 142    | 438    | 558    |
| Stage 1              | 239    | -      | -      |
| Stage 2              | 697    | -      | -      |
| Platoon blocked, %   | -      | -      | -      |
| Mov Cap-1 Maneuver   | 140    | 438    | 558    |
| Mov Cap-2 Maneuver   | 203    | -      | -      |
| Stage 1              | 236    | -      | -      |
| Stage 2              | 697    | -      | -      |

| Approach             | EB   | NB  | SB |
|----------------------|------|-----|----|
| HCM Control Delay, s | 13.3 | 0.1 | 0  |
| HCM LOS              | B    |     |    |

| Minor Lane/Major Mvmt | NBL   | NBT | EBLn1 | SBT | SBR |
|-----------------------|-------|-----|-------|-----|-----|
| Capacity (veh/h)      | 558   | -   | 438   | -   | -   |
| HCM Lane V/C Ratio    | 0.014 | -   | 0.01  | -   | -   |
| HCM Control Delay (s) | 11.5  | -   | 13.3  | -   | -   |
| HCM Lane LOS          | B     | -   | B     | -   | -   |
| HCM 95th %tile Q(veh) | 0     | -   | 0     | -   | -   |

Deer Valley 30  
2: 19th Ave & Optum Drwy

2024 Background PM  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh         | 0.1  |      |      |      |      |      |
| Movement                 | EBL  | EBR  | NBL  | NBT  | SBT  | SBR  |
| Lane Configurations      | W    |      | T    | T    | T    | T    |
| Traffic Vol, veh/h       | 0    | 4    | 7    | 1249 | 700  | 2    |
| Future Vol, veh/h        | 0    | 4    | 7    | 1249 | 700  | 2    |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Stop | Stop | Free | Free | Free | Free |
| RT Channelized           | -    | None | -    | None | -    | None |
| Storage Length           | 0    | -    | 50   | -    | -    | -    |
| Veh in Median Storage, # | 0    | -    | -    | 0    | 0    | -    |
| Grade, %                 | 0    | -    | -    | 0    | 0    | -    |
| Peak Hour Factor         | 92   | 92   | 92   | 92   | 92   | 92   |
| Heavy Vehicles, %        | 8    | 8    | 8    | 8    | 8    | 8    |
| Mvmt Flow                | 0    | 4    | 8    | 1358 | 761  | 2    |

| Major/Minor          | Minor2 | Major1 | Major2 |
|----------------------|--------|--------|--------|
| Conflicting Flow All | 1321   | 382    | 763    |
| Stage 1              | 762    | -      | -      |
| Stage 2              | 559    | -      | -      |
| Critical Hdwy        | 6.41   | 7.06   | 4.26   |
| Critical Hdwy Stg 1  | 5.96   | -      | -      |
| Critical Hdwy Stg 2  | 6.16   | -      | -      |
| Follow-up Hdwy       | 3.73   | 3.38   | 2.28   |
| Pot Cap-1 Maneuver   | 169    | 599    | 807    |
| Stage 1              | 395    | -      | -      |
| Stage 2              | 489    | -      | -      |
| Platoon blocked, %   | -      | -      | -      |
| Mov Cap-1 Maneuver   | 167    | 599    | 807    |
| Mov Cap-2 Maneuver   | 273    | -      | -      |
| Stage 1              | 391    | -      | -      |
| Stage 2              | 489    | -      | -      |

| Approach             | EB   | NB  | SB |
|----------------------|------|-----|----|
| HCM Control Delay, s | 11.1 | 0.1 | 0  |
| HCM LOS              | B    |     |    |

| Minor Lane/Major Mvmt | NBL   | NBT | EBLn1 | SBT | SBR |
|-----------------------|-------|-----|-------|-----|-----|
| Capacity (veh/h)      | 807   | -   | 599   | -   | -   |
| HCM Lane V/C Ratio    | 0.009 | -   | 0.007 | -   | -   |
| HCM Control Delay (s) | 9.5   | -   | 11.1  | -   | -   |
| HCM Lane LOS          | A     | -   | B     | -   | -   |
| HCM 95th %tile Q(veh) | 0     | -   | 0     | -   | -   |

Deer Valley 30  
3: 19th Ave & Patio Drwy/Parkview Ln

2024 Background AM  
HCM 6th TWSC

| Intersection             |        |        |        |        |       |       |      |      |      |      |      |      |
|--------------------------|--------|--------|--------|--------|-------|-------|------|------|------|------|------|------|
| Int Delay, s/veh         | 0.9    |        |        |        |       |       |      |      |      |      |      |      |
| Movement                 | EBL    | EBT    | EBR    | WBL    | WBT   | WBR   | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
| Lane Configurations      |        |        | ↕      |        | ↕     |       |      | ↕↕↕  |      | ↕    | ↕↕   |      |
| Traffic Vol, veh/h       | 0      | 0      | 6      | 26     | 0     | 13    | 1    | 576  | 41   | 26   | 1057 | 0    |
| Future Vol, veh/h        | 0      | 0      | 6      | 26     | 0     | 13    | 1    | 576  | 41   | 26   | 1057 | 0    |
| Conflicting Peds, #/hr   | 0      | 0      | 0      | 0      | 0     | 0     | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Stop   | Stop   | Stop   | Stop   | Stop  | Stop  | Free | Free | Free | Free | Free | Free |
| RT Channelized           | -      | -      | None   | -      | -     | None  | -    | -    | None | -    | -    | None |
| Storage Length           | -      | -      | 0      | -      | -     | -     | -    | -    | -    | 50   | -    | -    |
| Veh in Median Storage, # | -      | 0      | -      | -      | 0     | -     | -    | 0    | -    | -    | 0    | -    |
| Grade, %                 | -      | 0      | -      | -      | 0     | -     | -    | 0    | -    | -    | 0    | -    |
| Peak Hour Factor         | 92     | 92     | 92     | 92     | 92    | 92    | 92   | 92   | 92   | 92   | 92   | 92   |
| Heavy Vehicles, %        | 8      | 8      | 8      | 8      | 8     | 8     | 8    | 8    | 8    | 8    | 8    | 8    |
| Mvmt Flow                | 0      | 0      | 7      | 28     | 0     | 14    | 1    | 626  | 45   | 28   | 1149 | 0    |
| Major/Minor              | Minor2 | Minor1 | Major1 | Major2 |       |       |      |      |      |      |      |      |
| Conflicting Flow All     | -      | -      | 575    | 1282   | 1856  | 336   | 1149 | 0    | 0    | 671  | 0    | 0    |
| Stage 1                  | -      | -      | 651    | 651    | -     | -     | -    | -    | -    | -    | -    | -    |
| Stage 2                  | -      | -      | 631    | 1205   | -     | -     | -    | -    | -    | -    | -    | -    |
| Critical Hdwy            | -      | -      | 7.06   | 7.11   | 6.66  | 7.26  | 4.26 | -    | -    | 5.46 | -    | -    |
| Critical Hdwy Stg 1      | -      | -      | 7.46   | 5.66   | -     | -     | -    | -    | -    | -    | -    | -    |
| Critical Hdwy Stg 2      | -      | -      | 6.66   | 5.66   | -     | -     | -    | -    | -    | -    | -    | -    |
| Follow-up Hdwy           | -      | -      | 3.38   | 3.73   | 4.08  | 3.98  | 2.28 | -    | -    | 3.18 | -    | -    |
| Pot Cap-1 Maneuver       | 0      | 0      | 446    | 139    | 68    | 550   | 571  | -    | -    | 542  | -    | 0    |
| Stage 1                  | 0      | 0      | 344    | 448    | -     | -     | -    | -    | -    | -    | -    | 0    |
| Stage 2                  | 0      | 0      | 409    | 243    | -     | -     | -    | -    | -    | -    | -    | 0    |
| Platoon blocked, %       | -      | -      | -      | -      | -     | -     | -    | -    | -    | -    | -    | -    |
| Mov Cap-1 Maneuver       | -      | -      | 446    | 131    | 64    | 550   | 571  | -    | -    | 542  | -    | -    |
| Mov Cap-2 Maneuver       | -      | -      | 131    | 64     | -     | -     | -    | -    | -    | -    | -    | -    |
| Stage 1                  | -      | -      | 343    | 447    | -     | -     | -    | -    | -    | -    | -    | -    |
| Stage 2                  | -      | -      | 382    | 230    | -     | -     | -    | -    | -    | -    | -    | -    |
| Approach                 | EB     | WB     | NB     | SB     |       |       |      |      |      |      |      |      |
| HCM Control Delay, s     | 13.2   | 31.8   | 0      | 0.3    |       |       |      |      |      |      |      |      |
| HCM LOS                  | B      | D      |        |        |       |       |      |      |      |      |      |      |
| Minor Lane/Major Mvmt    | NBL    | NBT    | NBR    | EBLn1  | WBLn1 | SBL   | SBT  |      |      |      |      |      |
| Capacity (veh/h)         | 571    | -      | -      | 446    | 176   | 542   | -    |      |      |      |      |      |
| HCM Lane V/C Ratio       | 0.002  | -      | -      | 0.015  | 0.241 | 0.052 | -    |      |      |      |      |      |
| HCM Control Delay (s)    | 11.3   | -      | -      | 13.2   | 31.8  | 12    | -    |      |      |      |      |      |
| HCM Lane LOS             | B      | -      | -      | B      | D     | B     | -    |      |      |      |      |      |
| HCM 95th %tile Q(veh)    | 0      | -      | -      | 0      | 0.9   | 0.2   | -    |      |      |      |      |      |

Deer Valley 30  
3: 19th Ave & Patio Drwy/Parkview Ln

2024 Background PM  
HCM 6th TWSC

| Intersection             |        |        |        |        |       |       |      |      |      |      |      |      |
|--------------------------|--------|--------|--------|--------|-------|-------|------|------|------|------|------|------|
| Int Delay, s/veh         | 1.3    |        |        |        |       |       |      |      |      |      |      |      |
| Movement                 | EBL    | EBT    | EBR    | WBL    | WBT   | WBR   | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
| Lane Configurations      |        |        | ↕      |        | ↕     |       |      | ↕↕↕  |      | ↕    | ↕↕   |      |
| Traffic Vol, veh/h       | 0      | 0      | 6      | 26     | 0     | 13    | 1    | 896  | 41   | 26   | 679  | 0    |
| Future Vol, veh/h        | 0      | 0      | 6      | 26     | 0     | 13    | 1    | 896  | 41   | 26   | 679  | 0    |
| Conflicting Peds, #/hr   | 0      | 0      | 0      | 0      | 0     | 0     | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Stop   | Stop   | Stop   | Stop   | Stop  | Stop  | Free | Free | Free | Free | Free | Free |
| RT Channelized           | -      | -      | None   | -      | -     | None  | -    | -    | None | -    | -    | None |
| Storage Length           | -      | -      | 0      | -      | -     | -     | -    | -    | -    | 50   | -    | -    |
| Veh in Median Storage, # | -      | 0      | -      | -      | 0     | -     | -    | 0    | -    | -    | 0    | -    |
| Grade, %                 | -      | 0      | -      | -      | 0     | -     | -    | 0    | -    | -    | 0    | -    |
| Peak Hour Factor         | 92     | 92     | 92     | 92     | 92    | 92    | 92   | 92   | 92   | 92   | 92   | 92   |
| Heavy Vehicles, %        | 8      | 8      | 8      | 8      | 8     | 8     | 8    | 8    | 8    | 8    | 8    | 8    |
| Mvmt Flow                | 0      | 0      | 7      | 28     | 0     | 14    | 1    | 974  | 45   | 28   | 738  | 0    |
| Major/Minor              | Minor2 | Minor1 | Major1 | Major2 |       |       |      |      |      |      |      |      |
| Conflicting Flow All     | -      | -      | 369    | 1424   | 1793  | 510   | 738  | 0    | 0    | 1019 | 0    | 0    |
| Stage 1                  | -      | -      | 999    | 999    | -     | -     | -    | -    | -    | -    | -    | -    |
| Stage 2                  | -      | -      | 425    | 794    | -     | -     | -    | -    | -    | -    | -    | -    |
| Critical Hdwy            | -      | -      | 7.06   | 7.11   | 6.66  | 7.26  | 4.26 | -    | -    | 5.46 | -    | -    |
| Critical Hdwy Stg 1      | -      | -      | 7.46   | 5.66   | -     | -     | -    | -    | -    | -    | -    | -    |
| Critical Hdwy Stg 2      | -      | -      | 6.66   | 5.66   | -     | -     | -    | -    | -    | -    | -    | -    |
| Follow-up Hdwy           | -      | -      | 3.38   | 3.73   | 4.08  | 3.98  | 2.28 | -    | -    | 3.18 | -    | -    |
| Pot Cap-1 Maneuver       | 0      | 0      | 611    | 111    | 75    | 423   | 825  | -    | -    | 366  | -    | 0    |
| Stage 1                  | 0      | 0      | 195    | 306    | -     | -     | -    | -    | -    | -    | -    | 0    |
| Stage 2                  | 0      | 0      | 544    | 384    | -     | -     | -    | -    | -    | -    | -    | 0    |
| Platoon blocked, %       | -      | -      | -      | -      | -     | -     | -    | -    | -    | -    | -    | -    |
| Mov Cap-1 Maneuver       | -      | -      | 611    | 103    | 69    | 423   | 825  | -    | -    | 366  | -    | -    |
| Mov Cap-2 Maneuver       | -      | -      | 103    | 69     | -     | -     | -    | -    | -    | -    | -    | -    |
| Stage 1                  | -      | -      | 194    | 305    | -     | -     | -    | -    | -    | -    | -    | -    |
| Stage 2                  | -      | -      | 497    | 354    | -     | -     | -    | -    | -    | -    | -    | -    |
| Approach                 | EB     | WB     | NB     | SB     |       |       |      |      |      |      |      |      |
| HCM Control Delay, s     | 11     | 42.3   | 0      | 0.6    |       |       |      |      |      |      |      |      |
| HCM LOS                  | B      | E      |        |        |       |       |      |      |      |      |      |      |
| Minor Lane/Major Mvmt    | NBL    | NBT    | NBR    | EBLn1  | WBLn1 | SBL   | SBT  |      |      |      |      |      |
| Capacity (veh/h)         | 825    | -      | -      | 611    | 138   | 366   | -    |      |      |      |      |      |
| HCM Lane V/C Ratio       | 0.001  | -      | -      | 0.011  | 0.307 | 0.077 | -    |      |      |      |      |      |
| HCM Control Delay (s)    | 9.4    | -      | -      | 11     | 42.3  | 15.7  | -    |      |      |      |      |      |
| HCM Lane LOS             | A      | -      | -      | B      | E     | C     | -    |      |      |      |      |      |
| HCM 95th %tile Q(veh)    | 0      | -      | -      | 0      | 1.2   | 0.2   | -    |      |      |      |      |      |



Deer Valley 30  
4: Alameda Rd & 19th Ave

2024 Background AM  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Int Delay, s/veh         | 4    |      |      |      |      |      |      |      |      |      |      |      |
| Movement                 | EBL  | EBT  | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
| Lane Configurations      | ↔    |      | ↔    |      | ↔    |      | ↔    |      | ↔    |      | ↔    |      |
| Traffic Vol, veh/h       | 9    | 0    | 56   | 31   | 0    | 25   | 18   | 593  | 155  | 123  | 951  | 14   |
| Future Vol, veh/h        | 9    | 0    | 56   | 31   | 0    | 25   | 18   | 593  | 155  | 123  | 951  | 14   |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Stop | Stop | Stop | Stop | Stop | Stop | Free | Free | Free | Free | Free | Free |
| RT Channelized           | -    | -    | None | -    | -    | None | -    | -    | None | -    | -    | None |
| Storage Length           | 0    | -    | -    | 150  | -    | -    | 150  | -    | -    | 0    | -    | -    |
| Veh in Median Storage, # | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Grade, %                 | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Peak Hour Factor         | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   |
| Heavy Vehicles, %        | 8    | 8    | 8    | 8    | 8    | 8    | 8    | 8    | 8    | 8    | 8    | 8    |
| Mvmt Flow                | 10   | 0    | 61   | 34   | 0    | 27   | 20   | 645  | 168  | 134  | 1034 | 15   |

| Major/Minor          | Minor2 | Minor1 | Major1 | Major2 |
|----------------------|--------|--------|--------|--------|
| Conflicting Flow All | 1608   | 2163   | 525    | 1554   |
| Stage 1              | 1310   | 1310   | -      | 769    |
| Stage 2              | 298    | 853    | -      | 785    |
| Critical Hdwy        | 7.11   | 6.66   | 7.06   | 7.11   |
| Critical Hdwy Stg 1  | 6.66   | 5.66   | -      | 7.46   |
| Critical Hdwy Stg 2  | 6.86   | 5.66   | -      | 6.66   |
| Follow-up Hdwy       | 3.73   | 4.08   | 3.38   | 3.73   |
| Pot Cap-1 Maneuver   | 83     | 43     | 482    | 90     |
| Stage 1              | 156    | 216    | -      | 285    |
| Stage 2              | 636    | 360    | -      | 330    |
| Platoon blocked, %   | -      | -      | -      | -      |
| Mov Cap-1 Maneuver   | 59     | 30     | 482    | 60     |
| Mov Cap-2 Maneuver   | 59     | 30     | -      | 60     |
| Stage 1              | 151    | 153    | -      | 276    |
| Stage 2              | 582    | 348    | -      | 205    |

| Approach             | EB   | WB   | NB  | SB  |
|----------------------|------|------|-----|-----|
| HCM Control Delay, s | 22.4 | 74.4 | 0.3 | 1.8 |
| HCM LOS              | C    | F    |     |     |

| Minor Lane/Major Mvmt | NBL   | NBT | NBR | EBLn1 | EBLn2 | WBLn1 | WBLn2 | SBL   | SBT | SBR |
|-----------------------|-------|-----|-----|-------|-------|-------|-------|-------|-----|-----|
| Capacity (veh/h)      | 625   | -   | -   | 59    | 482   | 60    | 494   | 462   | -   | -   |
| HCM Lane V/C Ratio    | 0.031 | -   | -   | 0.166 | 0.126 | 0.562 | 0.055 | 0.289 | -   | -   |
| HCM Control Delay (s) | 10.9  | -   | -   | 77.8  | 13.5  | 124.1 | 12.7  | 15.9  | -   | -   |
| HCM Lane LOS          | B     | -   | -   | F     | B     | F     | B     | C     | -   | -   |
| HCM 95th %tile Q(veh) | 0.1   | -   | -   | 0.5   | 0.4   | 2.3   | 0.2   | 1.2   | -   | -   |

Deer Valley 30  
4: Alameda Rd & 19th Ave

2024 Background PM  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Int Delay, s/veh         | 97.9 |      |      |      |      |      |      |      |      |      |      |      |
| Movement                 | EBL  | EBT  | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
| Lane Configurations      | ↔    |      | ↔    |      | ↔    |      | ↔    |      | ↔    |      | ↔    |      |
| Traffic Vol, veh/h       | 14   | 0    | 62   | 150  | 0    | 119  | 85   | 1106 | 35   | 28   | 667  | 16   |
| Future Vol, veh/h        | 14   | 0    | 62   | 150  | 0    | 119  | 85   | 1106 | 35   | 28   | 667  | 16   |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Stop | Stop | Stop | Stop | Stop | Stop | Free | Free | Free | Free | Free | Free |
| RT Channelized           | -    | -    | None | -    | -    | None | -    | -    | None | -    | -    | None |
| Storage Length           | 0    | -    | -    | 150  | -    | -    | 150  | -    | -    | 0    | -    | -    |
| Veh in Median Storage, # | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Grade, %                 | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Peak Hour Factor         | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   |
| Heavy Vehicles, %        | 8    | 8    | 8    | 8    | 8    | 8    | 8    | 8    | 8    | 8    | 8    | 8    |
| Mvmt Flow                | 15   | 0    | 67   | 163  | 0    | 129  | 92   | 1202 | 38   | 30   | 725  | 17   |

| Major/Minor          | Minor2 | Minor1 | Major1 | Major2 |
|----------------------|--------|--------|--------|--------|
| Conflicting Flow All | 1459   | 2218   | 371    | 1828   |
| Stage 1              | 794    | 794    | -      | 1405   |
| Stage 2              | 665    | 1424   | -      | 423    |
| Critical Hdwy        | 7.11   | 6.66   | 7.06   | 7.11   |
| Critical Hdwy Stg 1  | 6.66   | 5.66   | -      | 7.46   |
| Critical Hdwy Stg 2  | 6.86   | 5.66   | -      | 6.66   |
| Follow-up Hdwy       | 3.73   | 4.08   | 3.38   | 3.73   |
| Pot Cap-1 Maneuver   | 105    | 40     | 609    | -      |
| Stage 1              | 326    | 384    | -      | 100    |
| Stage 2              | 376    | 190    | -      | 545    |
| Platoon blocked, %   | -      | -      | -      | -      |
| Mov Cap-1 Maneuver   | 56     | 32     | 609    | -      |
| Mov Cap-2 Maneuver   | 56     | 32     | -      | 43     |
| Stage 1              | 289    | 343    | -      | 89     |
| Stage 2              | 213    | 169    | -      | 433    |

| Approach             | EB   | WB       | NB  | SB  |
|----------------------|------|----------|-----|-----|
| HCM Control Delay, s | 26.4 | \$ 817.6 | 0.7 | 0.8 |
| HCM LOS              | D    | F        |     |     |

| Minor Lane/Major Mvmt | NBL   | NBT | NBR | EBLn1 | EBLn2 | WBLn1  | WBLn2 | SBL   | SBT | SBR |
|-----------------------|-------|-----|-----|-------|-------|--------|-------|-------|-----|-----|
| Capacity (veh/h)      | 822   | -   | -   | 56    | 609   | 43     | 358   | 284   | -   | -   |
| HCM Lane V/C Ratio    | 0.112 | -   | -   | 0.272 | 0.111 | 3.792  | 0.361 | 0.107 | -   | -   |
| HCM Control Delay (s) | 9.9   | -   | -   | 91.7  | 11.8  | 1449.9 | 20.6  | 19.2  | -   | -   |
| HCM Lane LOS          | A     | -   | -   | F     | B     | F      | C     | C     | -   | -   |
| HCM 95th %tile Q(veh) | 0.4   | -   | -   | 0.9   | 0.4   | 18.3   | 1.6   | 0.4   | -   | -   |

Notes  
 -: Volume exceeds capacity    \$: Delay exceeds 300s    +: Computation Not Defined    \*: All major volume in platoon

Deer Valley 30  
5: 19th Ave & Sarah Bass PI

2024 Background AM  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh         | 0.6  |      |      |      |      |      |
| Movement                 | EBL  | EBR  | NBL  | NBT  | SBT  | SBR  |
| Lane Configurations      | ↔    | ↔    | ↔    | ↔↔   | ↔↔   | ↔↔   |
| Traffic Vol, veh/h       | 13   | 36   | 27   | 786  | 837  | 9    |
| Future Vol, veh/h        | 13   | 36   | 27   | 786  | 837  | 9    |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Stop | Stop | Free | Free | Free | Free |
| RT Channelized           | -    | None | -    | None | -    | None |
| Storage Length           | 0    | 0    | 150  | -    | -    | -    |
| Veh in Median Storage, # | 0    | -    | -    | 0    | 0    | -    |
| Grade, %                 | 0    | -    | -    | 0    | 0    | -    |
| Peak Hour Factor         | 92   | 92   | 92   | 92   | 92   | 92   |
| Heavy Vehicles, %        | 8    | 8    | 8    | 8    | 8    | 8    |
| Mvmt Flow                | 14   | 39   | 29   | 854  | 910  | 10   |

| Major/Minor          | Minor2 | Major1 | Major2 |   |   |   |
|----------------------|--------|--------|--------|---|---|---|
| Conflicting Flow All | 1315   | 460    | 920    | 0 | - | 0 |
| Stage 1              | 915    | -      | -      | - | - | - |
| Stage 2              | 400    | -      | -      | - | - | - |
| Critical Hdwy        | 6.41   | 7.06   | 4.26   | - | - | - |
| Critical Hdwy Stg 1  | 5.96   | -      | -      | - | - | - |
| Critical Hdwy Stg 2  | 6.16   | -      | -      | - | - | - |
| Follow-up Hdwy       | 3.73   | 3.38   | 2.28   | - | - | - |
| Pot Cap-1 Maneuver   | 170    | 532    | 701    | - | - | - |
| Stage 1              | 328    | -      | -      | - | - | - |
| Stage 2              | 595    | -      | -      | - | - | - |
| Platoon blocked, %   | -      | -      | -      | - | - | - |
| Mov Cap-1 Maneuver   | 163    | 532    | 701    | - | - | - |
| Mov Cap-2 Maneuver   | 251    | -      | -      | - | - | - |
| Stage 1              | 315    | -      | -      | - | - | - |
| Stage 2              | 595    | -      | -      | - | - | - |

| Approach             | EB   | NB  | SB |
|----------------------|------|-----|----|
| HCM Control Delay, s | 14.4 | 0.3 | 0  |
| HCM LOS              | B    |     |    |

| Minor Lane/Major Mvmt | NBL   | NBT | EBLn1 | EBLn2 | SBT | SBR |
|-----------------------|-------|-----|-------|-------|-----|-----|
| Capacity (veh/h)      | 701   | -   | 251   | 532   | -   | -   |
| HCM Lane V/C Ratio    | 0.042 | -   | 0.056 | 0.074 | -   | -   |
| HCM Control Delay (s) | 10.4  | -   | 20.2  | 12.3  | -   | -   |
| HCM Lane LOS          | B     | -   | C     | B     | -   | -   |
| HCM 95th %tile Q(veh) | 0.1   | -   | 0.2   | 0.2   | -   | -   |

Deer Valley 30  
5: 19th Ave & Sarah Bass PI

2024 Background PM  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh         | 0.5  |      |      |      |      |      |
| Movement                 | EBL  | EBR  | NBL  | NBT  | SBT  | SBR  |
| Lane Configurations      | ↔    | ↔    | ↔    | ↔↔   | ↔↔   | ↔↔   |
| Traffic Vol, veh/h       | 16   | 37   | 10   | 1024 | 901  | 6    |
| Future Vol, veh/h        | 16   | 37   | 10   | 1024 | 901  | 6    |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Stop | Stop | Free | Free | Free | Free |
| RT Channelized           | -    | None | -    | None | -    | None |
| Storage Length           | 0    | 0    | 150  | -    | -    | -    |
| Veh in Median Storage, # | 0    | -    | -    | 0    | 0    | -    |
| Grade, %                 | 0    | -    | -    | 0    | 0    | -    |
| Peak Hour Factor         | 92   | 92   | 92   | 92   | 92   | 92   |
| Heavy Vehicles, %        | 8    | 8    | 8    | 8    | 8    | 8    |
| Mvmt Flow                | 17   | 40   | 11   | 1113 | 979  | 7    |

| Major/Minor          | Minor2 | Major1 | Major2 |   |   |   |
|----------------------|--------|--------|--------|---|---|---|
| Conflicting Flow All | 1450   | 493    | 986    | 0 | - | 0 |
| Stage 1              | 983    | -      | -      | - | - | - |
| Stage 2              | 467    | -      | -      | - | - | - |
| Critical Hdwy        | 6.41   | 7.06   | 4.26   | - | - | - |
| Critical Hdwy Stg 1  | 5.96   | -      | -      | - | - | - |
| Critical Hdwy Stg 2  | 6.16   | -      | -      | - | - | - |
| Follow-up Hdwy       | 3.73   | 3.38   | 2.28   | - | - | - |
| Pot Cap-1 Maneuver   | 141    | 506    | 661    | - | - | - |
| Stage 1              | 302    | -      | -      | - | - | - |
| Stage 2              | 548    | -      | -      | - | - | - |
| Platoon blocked, %   | -      | -      | -      | - | - | - |
| Mov Cap-1 Maneuver   | 139    | 506    | 661    | - | - | - |
| Mov Cap-2 Maneuver   | 231    | -      | -      | - | - | - |
| Stage 1              | 297    | -      | -      | - | - | - |
| Stage 2              | 548    | -      | -      | - | - | - |

| Approach             | EB   | NB  | SB |
|----------------------|------|-----|----|
| HCM Control Delay, s | 15.4 | 0.1 | 0  |
| HCM LOS              | C    |     |    |

| Minor Lane/Major Mvmt | NBL   | NBT | EBLn1 | EBLn2 | SBT | SBR |
|-----------------------|-------|-----|-------|-------|-----|-----|
| Capacity (veh/h)      | 661   | -   | 231   | 506   | -   | -   |
| HCM Lane V/C Ratio    | 0.016 | -   | 0.075 | 0.079 | -   | -   |
| HCM Control Delay (s) | 10.5  | -   | 21.8  | 12.7  | -   | -   |
| HCM Lane LOS          | B     | -   | C     | B     | -   | -   |
| HCM 95th %tile Q(veh) | 0.1   | -   | 0.2   | 0.3   | -   | -   |

Deer Valley 30  
6: Pinnacle Peak Rd & 19th Ave

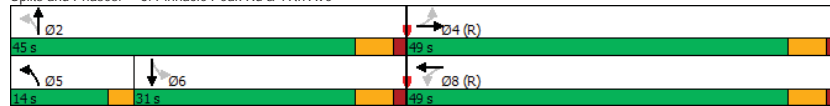
2024 Background AM  
Timings

| Lane Group           | EBL   | EBT   | WBL   | WBT   | NBL   | NBT   | SBL   | SBT   |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations  | ↔     | ↕↔    | ↔     | ↕↔    | ↔     | ↕↔    | ↔     | ↕↔    |
| Traffic Volume (vph) | 363   | 856   | 69    | 256   | 169   | 489   | 142   | 659   |
| Future Volume (vph)  | 363   | 856   | 69    | 256   | 169   | 489   | 142   | 659   |
| Turn Type            | Perm  | NA    | Perm  | NA    | pm+pt | NA    | Perm  | NA    |
| Protected Phases     |       | 4     |       | 8     | 5     | 2     |       | 6     |
| Permitted Phases     | 4     |       | 8     |       | 2     |       | 6     |       |
| Detector Phase       | 4     | 4     | 8     | 8     | 5     | 2     | 6     | 6     |
| Switch Phase         |       |       |       |       |       |       |       |       |
| Minimum Initial (s)  | 15.0  | 15.0  | 15.0  | 15.0  | 5.0   | 15.0  | 15.0  | 15.0  |
| Minimum Split (s)    | 34.6  | 34.6  | 34.6  | 34.6  | 9.5   | 30.8  | 30.8  | 30.8  |
| Total Split (s)      | 49.0  | 49.0  | 49.0  | 49.0  | 14.0  | 45.0  | 31.0  | 31.0  |
| Total Split (%)      | 52.1% | 52.1% | 52.1% | 52.1% | 14.9% | 47.9% | 33.0% | 33.0% |
| Yellow Time (s)      | 4.3   | 4.3   | 4.3   | 4.3   | 3.0   | 4.3   | 4.3   | 4.3   |
| All-Red Time (s)     | 1.3   | 1.3   | 1.3   | 1.3   | 0.0   | 1.5   | 1.5   | 1.5   |
| Lost Time Adjust (s) | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Lost Time (s)  | 5.6   | 5.6   | 5.6   | 5.6   | 3.0   | 5.8   | 5.8   | 5.8   |
| Lead/Lag             |       |       |       |       | Lead  |       | Lag   | Lag   |
| Lead-Lag Optimize?   |       |       |       |       | Yes   |       | Yes   | Yes   |
| Recall Mode          | C-Max | C-Max | C-Max | C-Max | None  | Max   | Max   | Max   |
| Act Effct Green (s)  | 43.4  | 43.4  | 43.4  | 43.4  | 42.0  | 39.2  | 25.9  | 25.9  |
| Actuated g/C Ratio   | 0.46  | 0.46  | 0.46  | 0.46  | 0.45  | 0.42  | 0.28  | 0.28  |
| v/c Ratio            | 1.07  | 0.83  | 0.96  | 0.30  | 0.70  | 0.36  | 0.86  | 0.92  |
| Control Delay        | 94.4  | 26.8  | 124.0 | 9.6   | 32.3  | 17.3  | 74.6  | 49.0  |
| Queue Delay          | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Delay          | 94.4  | 26.8  | 124.0 | 9.6   | 32.3  | 17.3  | 74.6  | 49.0  |
| LOS                  | F     | C     | F     | A     | C     | B     | E     | D     |
| Approach Delay       |       | 42.9  |       | 25.3  |       | 20.4  |       | 53.0  |
| Approach LOS         |       | D     |       | C     |       | C     |       | D     |

Intersection Summary

Cycle Length: 94  
 Actuated Cycle Length: 94  
 Offset: 31 (33%), Referenced to phase 4:EBTL and 8:WBTL, Start of Green  
 Natural Cycle: 90  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 1.07  
 Intersection Signal Delay: 38.1  
 Intersection Capacity Utilization 94.8%  
 Intersection LOS: D  
 ICU Level of Service F  
 Analysis Period (min) 15

Splits and Phases: 6: Pinnacle Peak Rd & 19th Ave



Deer Valley 30  
6: Pinnacle Peak Rd & 19th Ave

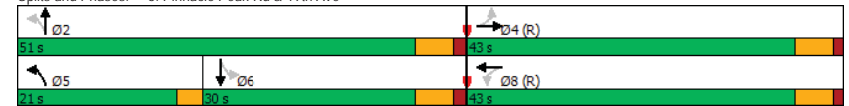
2024 Background PM  
Timings

| Lane Group           | EBL   | EBT   | WBL   | WBT   | NBL   | NBT   | SBL   | SBT   |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations  | ↔     | ↕↔    | ↔     | ↕↔    | ↔     | ↕↔    | ↔     | ↕↔    |
| Traffic Volume (vph) | 142   | 229   | 119   | 766   | 408   | 817   | 165   | 622   |
| Future Volume (vph)  | 142   | 229   | 119   | 766   | 408   | 817   | 165   | 622   |
| Turn Type            | Perm  | NA    | Perm  | NA    | pm+pt | NA    | Perm  | NA    |
| Protected Phases     |       | 4     |       | 8     | 5     | 2     |       | 6     |
| Permitted Phases     | 4     |       | 8     |       | 2     |       | 6     |       |
| Detector Phase       | 4     | 4     | 8     | 8     | 5     | 2     | 6     | 6     |
| Switch Phase         |       |       |       |       |       |       |       |       |
| Minimum Initial (s)  | 15.0  | 15.0  | 15.0  | 15.0  | 5.0   | 15.0  | 15.0  | 15.0  |
| Minimum Split (s)    | 34.6  | 34.6  | 34.6  | 34.6  | 9.5   | 30.8  | 30.8  | 30.8  |
| Total Split (s)      | 43.0  | 43.0  | 43.0  | 43.0  | 21.0  | 51.0  | 30.0  | 30.0  |
| Total Split (%)      | 45.7% | 45.7% | 45.7% | 45.7% | 22.3% | 54.3% | 31.9% | 31.9% |
| Yellow Time (s)      | 4.3   | 4.3   | 4.3   | 4.3   | 3.0   | 4.3   | 4.3   | 4.3   |
| All-Red Time (s)     | 1.3   | 1.3   | 1.3   | 1.3   | 0.0   | 1.5   | 1.5   | 1.5   |
| Lost Time Adjust (s) | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Lost Time (s)  | 5.6   | 5.6   | 5.6   | 5.6   | 3.0   | 5.8   | 5.8   | 5.8   |
| Lead/Lag             |       |       |       |       | Lead  |       | Lag   | Lag   |
| Lead-Lag Optimize?   |       |       |       |       | Yes   |       | Yes   | Yes   |
| Recall Mode          | C-Max | C-Max | C-Max | C-Max | None  | Max   | Max   | Max   |
| Act Effct Green (s)  | 37.4  | 37.4  | 37.4  | 37.4  | 48.0  | 45.2  | 24.2  | 24.2  |
| Actuated g/C Ratio   | 0.40  | 0.40  | 0.40  | 0.40  | 0.51  | 0.48  | 0.26  | 0.26  |
| v/c Ratio            | 1.35  | 0.37  | 0.45  | 0.74  | 1.10  | 0.41  | 1.35  | 1.23  |
| Control Delay        | 233.1 | 10.0  | 27.3  | 27.6  | 100.9 | 16.2  | 228.9 | 143.0 |
| Queue Delay          | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Delay          | 233.1 | 10.0  | 27.3  | 27.6  | 100.9 | 16.2  | 228.9 | 143.0 |
| LOS                  | F     | B     | C     | C     | F     | B     | F     | F     |
| Approach Delay       |       | 61.3  |       | 27.5  |       | 43.5  |       | 155.3 |
| Approach LOS         |       | E     |       | C     |       | D     |       | F     |

Intersection Summary

Cycle Length: 94  
 Actuated Cycle Length: 94  
 Offset: 31 (33%), Referenced to phase 4:EBTL and 8:WBTL, Start of Green  
 Natural Cycle: 90  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 1.35  
 Intersection Signal Delay: 74.0  
 Intersection Capacity Utilization 106.4%  
 Intersection LOS: E  
 ICU Level of Service G  
 Analysis Period (min) 15

Splits and Phases: 6: Pinnacle Peak Rd & 19th Ave





Deer Valley 30  
7: 15th Ave & Happy Valley Rd

2024 Background AM  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Int Delay, s/veh         | 1    |      |      |      |      |      |      |      |      |      |      |      |
| Movement                 | EBL  | EBT  | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
| Lane Configurations      | ↕    |      | ↕    |      | ↕    |      | ↕    |      | ↕    |      | ↕    |      |
| Traffic Vol, veh/h       | 6    | 676  | 23   | 14   | 376  | 0    | 19   | 0    | 10   | 2    | 0    | 6    |
| Future Vol, veh/h        | 6    | 676  | 23   | 14   | 376  | 0    | 19   | 0    | 10   | 2    | 0    | 6    |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Free | Free | Free | Free | Free | Free | Stop | Stop | Stop | Stop | Stop | Stop |
| RT Channelized           | -    | -    | None | -    | -    | None | -    | -    | None | -    | -    | None |
| Storage Length           | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    |
| Veh in Median Storage, # | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Grade, %                 | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Peak Hour Factor         | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   |
| Heavy Vehicles, %        | 8    | 8    | 8    | 8    | 8    | 8    | 8    | 8    | 8    | 8    | 8    | 8    |
| Mvmt Flow                | 7    | 735  | 25   | 15   | 409  | 0    | 21   | 0    | 11   | 2    | 0    | 7    |

| Major/Minor          | Major1 | Major2 | Minor1 | Minor2 |
|----------------------|--------|--------|--------|--------|
| Conflicting Flow All | 409    | 0      | 760    | 0      |
| Stage 1              | -      | -      | -      | -      |
| Stage 2              | -      | -      | -      | -      |
| Critical Hdwy        | 4.18   | -      | 4.18   | -      |
| Critical Hdwy Stg 1  | -      | -      | -      | -      |
| Critical Hdwy Stg 2  | -      | -      | -      | -      |
| Follow-up Hdwy       | 2.272  | -      | 2.272  | -      |
| Pot Cap-1 Maneuver   | 1118   | -      | 825    | -      |
| Stage 1              | -      | -      | -      | -      |
| Stage 2              | -      | -      | -      | -      |
| Platoon blocked, %   | -      | -      | -      | -      |
| Mov Cap-1 Maneuver   | 1118   | -      | 825    | -      |
| Mov Cap-2 Maneuver   | -      | -      | -      | -      |
| Stage 1              | -      | -      | -      | -      |
| Stage 2              | -      | -      | -      | -      |

| Approach             | EB  | WB  | NB   | SB   |
|----------------------|-----|-----|------|------|
| HCM Control Delay, s | 0.1 | 0.3 | 27.5 | 15.6 |
| HCM LOS              |     |     | D    | C    |

| Minor Lane/Major Mvmt | NBLn1 | EBL   | EBT | EBR | WBL   | WBT | WBR | SBLn1 |
|-----------------------|-------|-------|-----|-----|-------|-----|-----|-------|
| Capacity (veh/h)      | 191   | 1118  | -   | -   | 825   | -   | -   | 347   |
| HCM Lane V/C Ratio    | 0.165 | 0.006 | -   | -   | 0.018 | -   | -   | 0.025 |
| HCM Control Delay (s) | 27.5  | 8.2   | 0   | -   | 9.4   | 0   | -   | 15.6  |
| HCM Lane LOS          | D     | A     | A   | -   | A     | A   | -   | C     |
| HCM 95th %tile Q(veh) | 0.6   | 0     | -   | -   | 0.1   | -   | -   | 0.1   |

Deer Valley 30  
7: 15th Ave & Happy Valley Rd

2024 Background PM  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Int Delay, s/veh         | 1.6  |      |      |      |      |      |      |      |      |      |      |      |
| Movement                 | EBL  | EBT  | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
| Lane Configurations      | ↕    |      | ↕    |      | ↕    |      | ↕    |      | ↕    |      | ↕    |      |
| Traffic Vol, veh/h       | 2    | 527  | 3    | 8    | 1109 | 0    | 20   | 0    | 17   | 0    | 0    | 1    |
| Future Vol, veh/h        | 2    | 527  | 3    | 8    | 1109 | 0    | 20   | 0    | 17   | 0    | 0    | 1    |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Free | Free | Free | Free | Free | Free | Stop | Stop | Stop | Stop | Stop | Stop |
| RT Channelized           | -    | -    | None | -    | -    | None | -    | -    | None | -    | -    | None |
| Storage Length           | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    |
| Veh in Median Storage, # | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Grade, %                 | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Peak Hour Factor         | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   |
| Heavy Vehicles, %        | 8    | 8    | 8    | 8    | 8    | 8    | 8    | 8    | 8    | 8    | 8    | 8    |
| Mvmt Flow                | 2    | 573  | 3    | 9    | 1205 | 0    | 22   | 0    | 18   | 0    | 0    | 1    |

| Major/Minor          | Major1 | Major2 | Minor1 | Minor2 |
|----------------------|--------|--------|--------|--------|
| Conflicting Flow All | 1205   | 0      | 576    | 0      |
| Stage 1              | -      | -      | -      | -      |
| Stage 2              | -      | -      | -      | -      |
| Critical Hdwy        | 4.18   | -      | 4.18   | -      |
| Critical Hdwy Stg 1  | -      | -      | -      | -      |
| Critical Hdwy Stg 2  | -      | -      | -      | -      |
| Follow-up Hdwy       | 2.272  | -      | 2.272  | -      |
| Pot Cap-1 Maneuver   | 558    | -      | 968    | -      |
| Stage 1              | -      | -      | -      | -      |
| Stage 2              | -      | -      | -      | -      |
| Platoon blocked, %   | -      | -      | -      | -      |
| Mov Cap-1 Maneuver   | 558    | -      | 968    | -      |
| Mov Cap-2 Maneuver   | -      | -      | -      | -      |
| Stage 1              | -      | -      | -      | -      |
| Stage 2              | -      | -      | -      | -      |

| Approach             | EB | WB  | NB   | SB   |
|----------------------|----|-----|------|------|
| HCM Control Delay, s | 0  | 0.1 | 67.2 | 21.6 |
| HCM LOS              |    |     | F    | C    |

| Minor Lane/Major Mvmt | NBLn1 | EBL   | EBT | EBR | WBL   | WBT | WBR | SBLn1 |
|-----------------------|-------|-------|-----|-----|-------|-----|-----|-------|
| Capacity (veh/h)      | 96    | 558   | -   | -   | 968   | -   | -   | 218   |
| HCM Lane V/C Ratio    | 0.419 | 0.004 | -   | -   | 0.009 | -   | -   | 0.005 |
| HCM Control Delay (s) | 67.2  | 11.5  | 0   | -   | 8.8   | 0   | -   | 21.6  |
| HCM Lane LOS          | F     | B     | A   | -   | A     | A   | -   | C     |
| HCM 95th %tile Q(veh) | 1.7   | 0     | -   | -   | 0     | -   | -   | 0     |

Deer Valley 30  
8: 7th Ave & Happy Valley Rd

2024 Background AM  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh         | 1.4  |      |      |      |      |      |
| Movement                 | EBT  | EBR  | WBL  | WBT  | NBL  | NBR  |
| Lane Configurations      | ↻    |      |      | ↻    | ↻    | ↻    |
| Traffic Vol, veh/h       | 508  | 214  | 9    | 282  | 54   | 10   |
| Future Vol, veh/h        | 508  | 214  | 9    | 282  | 54   | 10   |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Free | Free | Free | Free | Stop | Stop |
| RT Channelized           | -    | None | -    | None | -    | None |
| Storage Length           | -    | -    | -    | -    | -    | -    |
| Veh in Median Storage, # | 0    | -    | -    | 0    | 0    | -    |
| Grade, %                 | 0    | -    | -    | 0    | 0    | -    |
| Peak Hour Factor         | 92   | 92   | 92   | 92   | 92   | 92   |
| Heavy Vehicles, %        | 8    | 8    | 8    | 8    | 8    | 8    |
| Mvmt Flow                | 552  | 233  | 10   | 307  | 59   | 11   |

| Major/Minor          | Major1 | Major2 | Minor1 |   |       |
|----------------------|--------|--------|--------|---|-------|
| Conflicting Flow All | 0      | 0      | 785    | 0 | 996   |
| Stage 1              | -      | -      | -      | - | 669   |
| Stage 2              | -      | -      | -      | - | 327   |
| Critical Hdwy        | -      | -      | 4.18   | - | 6.48  |
| Critical Hdwy Stg 1  | -      | -      | -      | - | 5.48  |
| Critical Hdwy Stg 2  | -      | -      | -      | - | 5.48  |
| Follow-up Hdwy       | -      | -      | 2.272  | - | 3.572 |
| Pot Cap-1 Maneuver   | -      | -      | 808    | - | 264   |
| Stage 1              | -      | -      | -      | - | 498   |
| Stage 2              | -      | -      | -      | - | 717   |
| Platoon blocked, %   | -      | -      | -      | - | -     |
| Mov Cap-1 Maneuver   | -      | -      | 808    | - | 260   |
| Mov Cap-2 Maneuver   | -      | -      | -      | - | 260   |
| Stage 1              | -      | -      | -      | - | 498   |
| Stage 2              | -      | -      | -      | - | 706   |

| Approach             | EB | WB  | NB   |
|----------------------|----|-----|------|
| HCM Control Delay, s | 0  | 0.3 | 22.2 |
| HCM LOS              |    |     | C    |

| Minor Lane/Major Mvmt | NBLn1 | EBT | EBR | WBL   | WBT |
|-----------------------|-------|-----|-----|-------|-----|
| Capacity (veh/h)      | 278   | -   | -   | 808   | -   |
| HCM Lane V/C Ratio    | 0.25  | -   | -   | 0.012 | -   |
| HCM Control Delay (s) | 22.2  | -   | -   | 9.5   | 0   |
| HCM Lane LOS          | C     | -   | -   | A     | A   |
| HCM 95th %tile Q(veh) | 1     | -   | -   | 0     | -   |

Deer Valley 30  
8: 7th Ave & Happy Valley Rd

2024 Background PM  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh         | 80.9 |      |      |      |      |      |
| Movement                 | EBT  | EBR  | WBL  | WBT  | NBL  | NBR  |
| Lane Configurations      | ↻    |      |      | ↻    | ↻    | ↻    |
| Traffic Vol, veh/h       | 479  | 77   | 19   | 854  | 223  | 11   |
| Future Vol, veh/h        | 479  | 77   | 19   | 854  | 223  | 11   |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Free | Free | Free | Free | Stop | Stop |
| RT Channelized           | -    | None | -    | None | -    | None |
| Storage Length           | -    | -    | -    | -    | -    | -    |
| Veh in Median Storage, # | 0    | -    | -    | 0    | 0    | -    |
| Grade, %                 | 0    | -    | -    | 0    | 0    | -    |
| Peak Hour Factor         | 92   | 92   | 92   | 92   | 92   | 92   |
| Heavy Vehicles, %        | 8    | 8    | 8    | 8    | 8    | 8    |
| Mvmt Flow                | 521  | 84   | 21   | 928  | 242  | 12   |

| Major/Minor          | Major1 | Major2 | Minor1 |   |       |
|----------------------|--------|--------|--------|---|-------|
| Conflicting Flow All | 0      | 0      | 605    | 0 | 1533  |
| Stage 1              | -      | -      | -      | - | 563   |
| Stage 2              | -      | -      | -      | - | 970   |
| Critical Hdwy        | -      | -      | 4.18   | - | 6.48  |
| Critical Hdwy Stg 1  | -      | -      | -      | - | 5.48  |
| Critical Hdwy Stg 2  | -      | -      | -      | - | 5.48  |
| Follow-up Hdwy       | -      | -      | 2.272  | - | 3.572 |
| Pot Cap-1 Maneuver   | -      | -      | 944    | - | 124   |
| Stage 1              | -      | -      | -      | - | 558   |
| Stage 2              | -      | -      | -      | - | 359   |
| Platoon blocked, %   | -      | -      | -      | - | -     |
| Mov Cap-1 Maneuver   | -      | -      | 944    | - | 118   |
| Mov Cap-2 Maneuver   | -      | -      | -      | - | 118   |
| Stage 1              | -      | -      | -      | - | 558   |
| Stage 2              | -      | -      | -      | - | 342   |

| Approach             | EB | WB  | NB     |
|----------------------|----|-----|--------|
| HCM Control Delay, s | 0  | 0.2 | \$ 574 |
| HCM LOS              |    |     | F      |

| Minor Lane/Major Mvmt | NBLn1  | EBT | EBR | WBL   | WBT |
|-----------------------|--------|-----|-----|-------|-----|
| Capacity (veh/h)      | 122    | -   | -   | 944   | -   |
| HCM Lane V/C Ratio    | 2.085  | -   | -   | 0.022 | -   |
| HCM Control Delay (s) | \$ 574 | -   | -   | 8.9   | 0   |
| HCM Lane LOS          | F      | -   | -   | A     | A   |
| HCM 95th %tile Q(veh) | 21.1   | -   | -   | 0.1   | -   |

Notes  
 -: Volume exceeds capacity    \$: Delay exceeds 300s    +: Computation Not Defined    \*: All major volume in platoon

Deer Valley 30  
9: 7th Ave & Pinnacle Peak Rd

2024 Background AM  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Int Delay, s/veh         | 59.8 |      |      |      |      |      |      |      |      |      |      |      |
| Movement                 | EBL  | EBT  | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
| Lane Configurations      | ↔    | ↕    | ↔    | ↔    | ↔    | ↔    | ↔    | ↔    | ↔    | ↔    | ↔    | ↔    |
| Traffic Vol, veh/h       | 175  | 455  | 282  | 46   | 366  | 190  | 79   | 85   | 26   | 59   | 38   | 35   |
| Future Vol, veh/h        | 175  | 455  | 282  | 46   | 366  | 190  | 79   | 85   | 26   | 59   | 38   | 35   |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Free | Free | Free | Free | Free | Free | Stop | Stop | Stop | Stop | Stop | Stop |
| RT Channelized           | -    | -    | None | -    | -    | None | -    | -    | None | -    | -    | None |
| Storage Length           | 150  | -    | 170  | 150  | -    | -    | 150  | -    | -    | 150  | -    | -    |
| Veh in Median Storage, # | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Grade, %                 | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Peak Hour Factor         | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   |
| Heavy Vehicles, %        | 8    | 8    | 8    | 8    | 8    | 8    | 8    | 8    | 8    | 8    | 8    | 8    |
| Mvmt Flow                | 190  | 495  | 307  | 50   | 398  | 207  | 86   | 92   | 28   | 64   | 41   | 38   |

| Major/Minor          | Major1 | Major2 | Minor1 | Minor2 |
|----------------------|--------|--------|--------|--------|
| Conflicting Flow All | 605    | 0      | 802    | 0      |
| Stage 1              | -      | -      | -      | -      |
| Stage 2              | -      | -      | -      | -      |
| Critical Hdwy        | 4.18   | -      | 4.18   | -      |
| Critical Hdwy Stg 1  | -      | -      | -      | -      |
| Critical Hdwy Stg 2  | -      | -      | -      | -      |
| Follow-up Hdwy       | 2.272  | -      | 2.272  | -      |
| Pot Cap-1 Maneuver   | 944    | -      | 796    | -      |
| Stage 1              | -      | -      | -      | -      |
| Stage 2              | -      | -      | -      | -      |
| Platoon blocked, %   | -      | -      | -      | -      |
| Mov Cap-1 Maneuver   | 944    | -      | 796    | -      |
| Mov Cap-2 Maneuver   | -      | -      | -      | -      |
| Stage 1              | -      | -      | -      | -      |
| Stage 2              | -      | -      | -      | -      |

| Approach             | EB  | WB  | NB       | SB |
|----------------------|-----|-----|----------|----|
| HCM Control Delay, s | 1.9 | 0.8 | \$ 566.4 |    |
| HCM LOS              |     |     | F        | -  |

| Minor Lane/Major Mvmt | NBLn1     | NBLn2 | EBL   | EBT | EBR | WBL   | WBT | WBR | SBLn1 | SBLn2 |
|-----------------------|-----------|-------|-------|-----|-----|-------|-----|-----|-------|-------|
| Capacity (veh/h)      | 32        | 99    | 944   | -   | -   | 796   | -   | -   | -     | 103   |
| HCM Lane V/C Ratio    | 2.683     | 1.219 | 0.202 | -   | -   | 0.063 | -   | -   | -     | 0.77  |
| HCM Control Delay (s) | \$ 1024.8 | 240.1 | 9.8   | -   | -   | 9.8   | -   | -   | -     | 109.9 |
| HCM Lane LOS          | F         | F     | A     | -   | -   | A     | -   | -   | -     | F     |
| HCM 95th %tile Q(veh) | 10        | 8.2   | 0.8   | -   | -   | 0.2   | -   | -   | -     | 4.2   |

Notes  
 -: Volume exceeds capacity    \$: Delay exceeds 300s    +: Computation Not Defined    \*: All major volume in platoon

Deer Valley 30  
9: 7th Ave & Pinnacle Peak Rd

2024 Background PM  
HCM 6th TWSC

| Intersection             |       |      |      |      |      |      |      |      |      |      |      |      |
|--------------------------|-------|------|------|------|------|------|------|------|------|------|------|------|
| Int Delay, s/veh         | 224.6 |      |      |      |      |      |      |      |      |      |      |      |
| Movement                 | EBL   | EBT  | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
| Lane Configurations      | ↔     | ↕    | ↔    | ↔    | ↔    | ↔    | ↔    | ↔    | ↔    | ↔    | ↔    | ↔    |
| Traffic Vol, veh/h       | 39    | 389  | 74   | 30   | 440  | 62   | 207  | 38   | 40   | 185  | 83   | 170  |
| Future Vol, veh/h        | 39    | 389  | 74   | 30   | 440  | 62   | 207  | 38   | 40   | 185  | 83   | 170  |
| Conflicting Peds, #/hr   | 0     | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Free  | Free | Free | Free | Free | Free | Stop | Stop | Stop | Stop | Stop | Stop |
| RT Channelized           | -     | -    | None | -    | -    | None | -    | -    | None | -    | -    | None |
| Storage Length           | 150   | -    | 170  | 150  | -    | -    | 150  | -    | -    | 150  | -    | -    |
| Veh in Median Storage, # | -     | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Grade, %                 | -     | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Peak Hour Factor         | 92    | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   |
| Heavy Vehicles, %        | 8     | 8    | 8    | 8    | 8    | 8    | 8    | 8    | 8    | 8    | 8    | 8    |
| Mvmt Flow                | 42    | 423  | 80   | 33   | 478  | 67   | 225  | 41   | 43   | 201  | 90   | 185  |

| Major/Minor          | Major1 | Major2 | Minor1 | Minor2 |
|----------------------|--------|--------|--------|--------|
| Conflicting Flow All | 545    | 0      | 503    | 0      |
| Stage 1              | -      | -      | -      | -      |
| Stage 2              | -      | -      | -      | -      |
| Critical Hdwy        | 4.18   | -      | 4.18   | -      |
| Critical Hdwy Stg 1  | -      | -      | -      | -      |
| Critical Hdwy Stg 2  | -      | -      | -      | -      |
| Follow-up Hdwy       | 2.272  | -      | 2.272  | -      |
| Pot Cap-1 Maneuver   | 995    | -      | 1031   | -      |
| Stage 1              | -      | -      | -      | -      |
| Stage 2              | -      | -      | -      | -      |
| Platoon blocked, %   | -      | -      | -      | -      |
| Mov Cap-1 Maneuver   | 995    | -      | 1031   | -      |
| Mov Cap-2 Maneuver   | -      | -      | -      | -      |
| Stage 1              | -      | -      | -      | -      |
| Stage 2              | -      | -      | -      | -      |

| Approach             | EB  | WB  | NB        | SB  |
|----------------------|-----|-----|-----------|-----|
| HCM Control Delay, s | 0.7 | 0.5 | \$ 1076.9 | 199 |
| HCM LOS              |     |     | F         | F   |

| Minor Lane/Major Mvmt | NBLn1     | NBLn2 | EBL   | EBT | EBR | WBL   | WBT | WBR | SBLn1 | SBLn2    |
|-----------------------|-----------|-------|-------|-----|-----|-------|-----|-----|-------|----------|
| Capacity (veh/h)      | 57        | 291   | 995   | -   | -   | 1031  | -   | -   | -     | 121      |
| HCM Lane V/C Ratio    | 3.947     | 0.291 | 0.043 | -   | -   | 0.032 | -   | -   | -     | 1.662    |
| HCM Control Delay (s) | \$ 1474.3 | 22.4  | 8.8   | -   | -   | 8.6   | -   | -   | -     | \$ 394.5 |
| HCM Lane LOS          | F         | C     | A     | -   | -   | A     | -   | -   | -     | F        |
| HCM 95th %tile Q(veh) | 24.5      | 1.2   | 0.1   | -   | -   | 0.1   | -   | -   | -     | 15       |

Notes  
 -: Volume exceeds capacity    \$: Delay exceeds 300s    +: Computation Not Defined    \*: All major volume in platoon

Deer Valley 30  
10: 7th Ave & Alameda Rd

2024 Background AM  
HCM 6th TWSC

| Intersection             |        |        |        |      |      |      |
|--------------------------|--------|--------|--------|------|------|------|
| Int Delay, s/veh         | 4.5    |        |        |      |      |      |
| Movement                 | EBL    | EBR    | NBL    | NBT  | SBT  | SBR  |
| Lane Configurations      | ↔      |        | ↔      | ↔    | ↔    |      |
| Traffic Vol, veh/h       | 14     | 43     | 214    | 50   | 155  | 68   |
| Future Vol, veh/h        | 14     | 43     | 214    | 50   | 155  | 68   |
| Conflicting Peds, #/hr   | 0      | 0      | 0      | 0    | 0    | 0    |
| Sign Control             | Stop   | Stop   | Free   | Free | Free | Free |
| RT Channelized           | -      | None   | -      | None | -    | None |
| Storage Length           | 0      | -      | 150    | -    | -    | -    |
| Veh in Median Storage, # | 0      | -      | -      | 0    | 0    | -    |
| Grade, %                 | 0      | -      | -      | 0    | 0    | -    |
| Peak Hour Factor         | 92     | 92     | 92     | 92   | 92   | 92   |
| Heavy Vehicles, %        | 8      | 8      | 8      | 8    | 8    | 8    |
| Mvmt Flow                | 15     | 47     | 233    | 54   | 168  | 74   |
| Major/Minor              | Minor2 | Major1 | Major2 |      |      |      |
| Conflicting Flow All     | 725    | 205    | 242    | 0    | -    | 0    |
| Stage 1                  | 205    | -      | -      | -    | -    | -    |
| Stage 2                  | 520    | -      | -      | -    | -    | -    |
| Critical Hdwy            | 6.48   | 6.28   | 4.18   | -    | -    | -    |
| Critical Hdwy Stg 1      | 5.48   | -      | -      | -    | -    | -    |
| Critical Hdwy Stg 2      | 5.48   | -      | -      | -    | -    | -    |
| Follow-up Hdwy           | 3.572  | 3.372  | 2.272  | -    | -    | -    |
| Pot Cap-1 Maneuver       | 383    | 821    | 1290   | -    | -    | -    |
| Stage 1                  | 815    | -      | -      | -    | -    | -    |
| Stage 2                  | 585    | -      | -      | -    | -    | -    |
| Platoon blocked, %       |        |        |        | -    | -    | -    |
| Mov Cap-1 Maneuver       | 314    | 821    | 1290   | -    | -    | -    |
| Mov Cap-2 Maneuver       | 314    | -      | -      | -    | -    | -    |
| Stage 1                  | 667    | -      | -      | -    | -    | -    |
| Stage 2                  | 585    | -      | -      | -    | -    | -    |
| Approach                 | EB     | NB     | SB     |      |      |      |
| HCM Control Delay, s     | 11.8   | 6.8    | 0      |      |      |      |
| HCM LOS                  | B      |        |        |      |      |      |
| Minor Lane/Major Mvmt    | NBL    | NBT    | EBLn1  | SBT  | SBR  |      |
| Capacity (veh/h)         | 1290   | -      | 588    | -    | -    |      |
| HCM Lane V/C Ratio       | 0.18   | -      | 0.105  | -    | -    |      |
| HCM Control Delay (s)    | 8.4    | -      | 11.8   | -    | -    |      |
| HCM Lane LOS             | A      | -      | B      | -    | -    |      |
| HCM 95th %tile Q(veh)    | 0.7    | -      | 0.4    | -    | -    |      |

Deer Valley 30  
10: 7th Ave & Alameda Rd

2024 Background PM  
HCM 6th TWSC

| Intersection             |        |        |        |      |      |      |
|--------------------------|--------|--------|--------|------|------|------|
| Int Delay, s/veh         | 6.2    |        |        |      |      |      |
| Movement                 | EBL    | EBR    | NBL    | NBT  | SBT  | SBR  |
| Lane Configurations      | ↔      |        | ↔      | ↔    | ↔    |      |
| Traffic Vol, veh/h       | 67     | 208    | 48     | 168  | 81   | 15   |
| Future Vol, veh/h        | 67     | 208    | 48     | 168  | 81   | 15   |
| Conflicting Peds, #/hr   | 0      | 0      | 0      | 0    | 0    | 0    |
| Sign Control             | Stop   | Stop   | Free   | Free | Free | Free |
| RT Channelized           | -      | None   | -      | None | -    | None |
| Storage Length           | 0      | -      | 150    | -    | -    | -    |
| Veh in Median Storage, # | 0      | -      | -      | 0    | 0    | -    |
| Grade, %                 | 0      | -      | -      | 0    | 0    | -    |
| Peak Hour Factor         | 92     | 92     | 92     | 92   | 92   | 92   |
| Heavy Vehicles, %        | 8      | 8      | 8      | 8    | 8    | 8    |
| Mvmt Flow                | 73     | 226    | 52     | 183  | 88   | 16   |
| Major/Minor              | Minor2 | Major1 | Major2 |      |      |      |
| Conflicting Flow All     | 383    | 96     | 104    | 0    | -    | 0    |
| Stage 1                  | 96     | -      | -      | -    | -    | -    |
| Stage 2                  | 287    | -      | -      | -    | -    | -    |
| Critical Hdwy            | 6.48   | 6.28   | 4.18   | -    | -    | -    |
| Critical Hdwy Stg 1      | 5.48   | -      | -      | -    | -    | -    |
| Critical Hdwy Stg 2      | 5.48   | -      | -      | -    | -    | -    |
| Follow-up Hdwy           | 3.572  | 3.372  | 2.272  | -    | -    | -    |
| Pot Cap-1 Maneuver       | 608    | 944    | 1451   | -    | -    | -    |
| Stage 1                  | 913    | -      | -      | -    | -    | -    |
| Stage 2                  | 748    | -      | -      | -    | -    | -    |
| Platoon blocked, %       |        |        |        | -    | -    | -    |
| Mov Cap-1 Maneuver       | 586    | 944    | 1451   | -    | -    | -    |
| Mov Cap-2 Maneuver       | 586    | -      | -      | -    | -    | -    |
| Stage 1                  | 880    | -      | -      | -    | -    | -    |
| Stage 2                  | 748    | -      | -      | -    | -    | -    |
| Approach                 | EB     | NB     | SB     |      |      |      |
| HCM Control Delay, s     | 11.9   | 1.7    | 0      |      |      |      |
| HCM LOS                  | B      |        |        |      |      |      |
| Minor Lane/Major Mvmt    | NBL    | NBT    | EBLn1  | SBT  | SBR  |      |
| Capacity (veh/h)         | 1451   | -      | 822    | -    | -    |      |
| HCM Lane V/C Ratio       | 0.036  | -      | 0.364  | -    | -    |      |
| HCM Control Delay (s)    | 7.6    | -      | 11.9   | -    | -    |      |
| HCM Lane LOS             | A      | -      | B      | -    | -    |      |
| HCM 95th %tile Q(veh)    | 0.1    | -      | 1.7    | -    | -    |      |



Deer Valley 30  
11: 15th Ave & Parkview Ln

2024 Background AM  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh         | 0    |      |      |      |      |      |
| Movement                 | EBT  | EBR  | WBL  | WBT  | NBL  | NBR  |
| Lane Configurations      | ↻    |      |      | ↻    | ↻    |      |
| Traffic Vol, veh/h       | 0    | 0    | 0    | 0    | 0    | 0    |
| Future Vol, veh/h        | 0    | 0    | 0    | 0    | 0    | 0    |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Free | Free | Free | Free | Stop | Stop |
| RT Channelized           | -    | None | -    | None | -    | None |
| Storage Length           | -    | -    | -    | -    | 0    | -    |
| Veh in Median Storage, # | 0    | -    | -    | 0    | 0    | -    |
| Grade, %                 | 0    | -    | -    | 0    | 0    | -    |
| Peak Hour Factor         | 92   | 92   | 92   | 92   | 92   | 92   |
| Heavy Vehicles, %        | 8    | 8    | 8    | 8    | 8    | 8    |
| Mvmt Flow                | 0    | 0    | 0    | 0    | 0    | 0    |

| Major/Minor          | Major1 | Major2 | Minor1 |   |       |
|----------------------|--------|--------|--------|---|-------|
| Conflicting Flow All | 0      | 0      | 1      | 0 | 2     |
| Stage 1              | -      | -      | -      | - | 1     |
| Stage 2              | -      | -      | -      | - | 1     |
| Critical Hdwy        | -      | -      | 4.18   | - | 6.48  |
| Critical Hdwy Stg 1  | -      | -      | -      | - | 5.48  |
| Critical Hdwy Stg 2  | -      | -      | -      | - | 5.48  |
| Follow-up Hdwy       | -      | -      | 2.272  | - | 3.572 |
| Pot Cap-1 Maneuver   | -      | -      | 1583   | - | 1005  |
| Stage 1              | -      | -      | -      | - | 1007  |
| Stage 2              | -      | -      | -      | - | 1007  |
| Platoon blocked, %   | -      | -      | -      | - | -     |
| Mov Cap-1 Maneuver   | -      | -      | 1583   | - | 1005  |
| Mov Cap-2 Maneuver   | -      | -      | -      | - | 1005  |
| Stage 1              | -      | -      | -      | - | 1007  |
| Stage 2              | -      | -      | -      | - | 1007  |

| Approach             | EB | WB | NB |
|----------------------|----|----|----|
| HCM Control Delay, s | 0  | 0  | 0  |
| HCM LOS              |    |    | A  |

| Minor Lane/Major Mvmt | NBLn1 | EBT | EBR | WBL  | WBT |
|-----------------------|-------|-----|-----|------|-----|
| Capacity (veh/h)      | -     | -   | -   | 1583 | -   |
| HCM Lane V/C Ratio    | -     | -   | -   | -    | -   |
| HCM Control Delay (s) | 0     | -   | -   | 0    | -   |
| HCM Lane LOS          | A     | -   | -   | A    | -   |
| HCM 95th %tile Q(veh) | -     | -   | -   | 0    | -   |

Deer Valley 30  
11: 15th Ave & Parkview Ln

2024 Background PM  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh         | 0    |      |      |      |      |      |
| Movement                 | EBT  | EBR  | WBL  | WBT  | NBL  | NBR  |
| Lane Configurations      | ↻    |      |      | ↻    | ↻    |      |
| Traffic Vol, veh/h       | 0    | 0    | 0    | 0    | 0    | 0    |
| Future Vol, veh/h        | 0    | 0    | 0    | 0    | 0    | 0    |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Free | Free | Free | Free | Stop | Stop |
| RT Channelized           | -    | None | -    | None | -    | None |
| Storage Length           | -    | -    | -    | -    | 0    | -    |
| Veh in Median Storage, # | 0    | -    | -    | 0    | 0    | -    |
| Grade, %                 | 0    | -    | -    | 0    | 0    | -    |
| Peak Hour Factor         | 92   | 92   | 92   | 92   | 92   | 92   |
| Heavy Vehicles, %        | 8    | 8    | 8    | 8    | 8    | 8    |
| Mvmt Flow                | 0    | 0    | 0    | 0    | 0    | 0    |

| Major/Minor          | Major1 | Major2 | Minor1 |   |       |
|----------------------|--------|--------|--------|---|-------|
| Conflicting Flow All | 0      | 0      | 1      | 0 | 2     |
| Stage 1              | -      | -      | -      | - | 1     |
| Stage 2              | -      | -      | -      | - | 1     |
| Critical Hdwy        | -      | -      | 4.18   | - | 6.48  |
| Critical Hdwy Stg 1  | -      | -      | -      | - | 5.48  |
| Critical Hdwy Stg 2  | -      | -      | -      | - | 5.48  |
| Follow-up Hdwy       | -      | -      | 2.272  | - | 3.572 |
| Pot Cap-1 Maneuver   | -      | -      | 1583   | - | 1005  |
| Stage 1              | -      | -      | -      | - | 1007  |
| Stage 2              | -      | -      | -      | - | 1007  |
| Platoon blocked, %   | -      | -      | -      | - | -     |
| Mov Cap-1 Maneuver   | -      | -      | 1583   | - | 1005  |
| Mov Cap-2 Maneuver   | -      | -      | -      | - | 1005  |
| Stage 1              | -      | -      | -      | - | 1007  |
| Stage 2              | -      | -      | -      | - | 1007  |

| Approach             | EB | WB | NB |
|----------------------|----|----|----|
| HCM Control Delay, s | 0  | 0  | 0  |
| HCM LOS              |    |    | A  |

| Minor Lane/Major Mvmt | NBLn1 | EBT | EBR | WBL  | WBT |
|-----------------------|-------|-----|-----|------|-----|
| Capacity (veh/h)      | -     | -   | -   | 1583 | -   |
| HCM Lane V/C Ratio    | -     | -   | -   | -    | -   |
| HCM Control Delay (s) | 0     | -   | -   | 0    | -   |
| HCM Lane LOS          | A     | -   | -   | A    | -   |
| HCM 95th %tile Q(veh) | -     | -   | -   | 0    | -   |

Deer Valley 30  
12: Alameda Rd & Access A

2024 Background AM  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh         | 0    |      |      |      |      |      |
| Movement                 | EBL  | EBT  | WBT  | WBR  | SBL  | SBR  |
| Lane Configurations      |      | ↕    | ↕    |      | ↕    |      |
| Traffic Vol, veh/h       | 0    | 278  | 56   | 0    | 0    | 0    |
| Future Vol, veh/h        | 0    | 278  | 56   | 0    | 0    | 0    |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Free | Free | Free | Free | Stop | Stop |
| RT Channelized           | -    | None | -    | None | -    | None |
| Storage Length           | -    | -    | -    | -    | 0    | -    |
| Veh in Median Storage, # | -    | 0    | 0    | -    | 0    | -    |
| Grade, %                 | -    | 0    | 0    | -    | 0    | -    |
| Peak Hour Factor         | 92   | 92   | 92   | 92   | 92   | 92   |
| Heavy Vehicles, %        | 8    | 8    | 8    | 8    | 8    | 8    |
| Mvmt Flow                | 0    | 302  | 61   | 0    | 0    | 0    |

| Major/Minor          | Major1 | Major2 | Minor2 |       |       |
|----------------------|--------|--------|--------|-------|-------|
| Conflicting Flow All | 61     | 0      | 0      | 363   | 61    |
| Stage 1              | -      | -      | -      | 61    | -     |
| Stage 2              | -      | -      | -      | 302   | -     |
| Critical Hdwy        | 4.18   | -      | -      | 6.48  | 6.28  |
| Critical Hdwy Stg 1  | -      | -      | -      | 5.48  | -     |
| Critical Hdwy Stg 2  | -      | -      | -      | 5.48  | -     |
| Follow-up Hdwy       | 2.272  | -      | -      | 3.572 | 3.372 |
| Pot Cap-1 Maneuver   | 1505   | -      | -      | 624   | 988   |
| Stage 1              | -      | -      | -      | 947   | -     |
| Stage 2              | -      | -      | -      | 737   | -     |
| Platoon blocked, %   | -      | -      | -      | -     | -     |
| Mov Cap-1 Maneuver   | 1505   | -      | -      | 624   | 988   |
| Mov Cap-2 Maneuver   | -      | -      | -      | 624   | -     |
| Stage 1              | -      | -      | -      | 947   | -     |
| Stage 2              | -      | -      | -      | 737   | -     |

| Approach             | EB | WB | SB |
|----------------------|----|----|----|
| HCM Control Delay, s | 0  | 0  | 0  |
| HCM LOS              |    |    | A  |

| Minor Lane/Major Mvmt | EBL  | EBT | WBT | WBR | SBLn1 |
|-----------------------|------|-----|-----|-----|-------|
| Capacity (veh/h)      | 1505 | -   | -   | -   | -     |
| HCM Lane V/C Ratio    | -    | -   | -   | -   | -     |
| HCM Control Delay (s) | 0    | -   | -   | -   | 0     |
| HCM Lane LOS          | A    | -   | -   | -   | A     |
| HCM 95th %tile Q(veh) | 0    | -   | -   | -   | -     |

Deer Valley 30  
12: Alameda Rd & Access A

2024 Background PM  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh         | 0    |      |      |      |      |      |
| Movement                 | EBL  | EBT  | WBT  | WBR  | SBL  | SBR  |
| Lane Configurations      |      | ↕    | ↕    |      | ↕    |      |
| Traffic Vol, veh/h       | 0    | 63   | 269  | 0    | 0    | 0    |
| Future Vol, veh/h        | 0    | 63   | 269  | 0    | 0    | 0    |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Free | Free | Free | Free | Stop | Stop |
| RT Channelized           | -    | None | -    | None | -    | None |
| Storage Length           | -    | -    | -    | -    | 0    | -    |
| Veh in Median Storage, # | -    | 0    | 0    | -    | 0    | -    |
| Grade, %                 | -    | 0    | 0    | -    | 0    | -    |
| Peak Hour Factor         | 92   | 92   | 92   | 92   | 92   | 92   |
| Heavy Vehicles, %        | 8    | 8    | 8    | 8    | 8    | 8    |
| Mvmt Flow                | 0    | 68   | 292  | 0    | 0    | 0    |

| Major/Minor          | Major1 | Major2 | Minor2 |       |       |
|----------------------|--------|--------|--------|-------|-------|
| Conflicting Flow All | 292    | 0      | 0      | 360   | 292   |
| Stage 1              | -      | -      | -      | 292   | -     |
| Stage 2              | -      | -      | -      | 68    | -     |
| Critical Hdwy        | 4.18   | -      | -      | 6.48  | 6.28  |
| Critical Hdwy Stg 1  | -      | -      | -      | 5.48  | -     |
| Critical Hdwy Stg 2  | -      | -      | -      | 5.48  | -     |
| Follow-up Hdwy       | 2.272  | -      | -      | 3.572 | 3.372 |
| Pot Cap-1 Maneuver   | 1236   | -      | -      | 627   | 733   |
| Stage 1              | -      | -      | -      | 744   | -     |
| Stage 2              | -      | -      | -      | 940   | -     |
| Platoon blocked, %   | -      | -      | -      | -     | -     |
| Mov Cap-1 Maneuver   | 1236   | -      | -      | 627   | 733   |
| Mov Cap-2 Maneuver   | -      | -      | -      | 627   | -     |
| Stage 1              | -      | -      | -      | 744   | -     |
| Stage 2              | -      | -      | -      | 940   | -     |

| Approach             | EB | WB | SB |
|----------------------|----|----|----|
| HCM Control Delay, s | 0  | 0  | 0  |
| HCM LOS              |    |    | A  |

| Minor Lane/Major Mvmt | EBL  | EBT | WBT | WBR | SBLn1 |
|-----------------------|------|-----|-----|-----|-------|
| Capacity (veh/h)      | 1236 | -   | -   | -   | -     |
| HCM Lane V/C Ratio    | -    | -   | -   | -   | -     |
| HCM Control Delay (s) | 0    | -   | -   | -   | 0     |
| HCM Lane LOS          | A    | -   | -   | -   | A     |
| HCM 95th %tile Q(veh) | 0    | -   | -   | -   | -     |

Deer Valley 30  
13: Alameda Rd & Access B

2024 Background AM  
HCM 6th TWSC

| Intersection             |        |        |        |       |       |      |
|--------------------------|--------|--------|--------|-------|-------|------|
| Int Delay, s/veh         | 0      |        |        |       |       |      |
| Movement                 | EBL    | EBT    | WBT    | WBR   | SBL   | SBR  |
| Lane Configurations      |        | ↕      | ↕      |       | ↕     | ↕    |
| Traffic Vol, veh/h       | 0      | 278    | 56     | 0     | 0     | 0    |
| Future Vol, veh/h        | 0      | 278    | 56     | 0     | 0     | 0    |
| Conflicting Peds, #/hr   | 0      | 0      | 0      | 0     | 0     | 0    |
| Sign Control             | Free   | Free   | Free   | Free  | Stop  | Stop |
| RT Channelized           | -      | None   | -      | None  | -     | None |
| Storage Length           | -      | -      | -      | -     | 0     | -    |
| Veh in Median Storage, # | -      | 0      | 0      | -     | 0     | -    |
| Grade, %                 | -      | 0      | 0      | -     | 0     | -    |
| Peak Hour Factor         | 92     | 92     | 92     | 92    | 92    | 92   |
| Heavy Vehicles, %        | 8      | 8      | 8      | 8     | 8     | 8    |
| Mvmt Flow                | 0      | 302    | 61     | 0     | 0     | 0    |
| Major/Minor              | Major1 | Major2 | Minor2 |       |       |      |
| Conflicting Flow All     | 61     | 0      | 0      | 363   | 61    |      |
| Stage 1                  | -      | -      | -      | 61    | -     |      |
| Stage 2                  | -      | -      | -      | 302   | -     |      |
| Critical Hdwy            | 4.18   | -      | -      | 6.48  | 6.28  |      |
| Critical Hdwy Stg 1      | -      | -      | -      | 5.48  | -     |      |
| Critical Hdwy Stg 2      | -      | -      | -      | 5.48  | -     |      |
| Follow-up Hdwy           | 2.272  | -      | -      | 3.572 | 3.372 |      |
| Pot Cap-1 Maneuver       | 1505   | -      | -      | 624   | 988   |      |
| Stage 1                  | -      | -      | -      | 947   | -     |      |
| Stage 2                  | -      | -      | -      | 737   | -     |      |
| Platoon blocked, %       | -      | -      | -      | -     | -     |      |
| Mov Cap-1 Maneuver       | 1505   | -      | -      | 624   | 988   |      |
| Mov Cap-2 Maneuver       | -      | -      | -      | 624   | -     |      |
| Stage 1                  | -      | -      | -      | 947   | -     |      |
| Stage 2                  | -      | -      | -      | 737   | -     |      |
| Approach                 | EB     | WB     | SB     |       |       |      |
| HCM Control Delay, s     | 0      | 0      | 0      |       |       |      |
| HCM LOS                  |        |        |        | A     |       |      |
| Minor Lane/Major Mvmt    | EBL    | EBT    | WBT    | WBR   | SBLn1 | SBR  |
| Capacity (veh/h)         | 1505   | -      | -      | -     | -     | -    |
| HCM Lane V/C Ratio       | -      | -      | -      | -     | -     | -    |
| HCM Control Delay (s)    | 0      | -      | -      | -     | 0     | -    |
| HCM Lane LOS             | A      | -      | -      | -     | A     | -    |
| HCM 95th %tile Q(veh)    | 0      | -      | -      | -     | -     | -    |

Deer Valley 30  
13: Alameda Rd & Access B

2024 Background PM  
HCM 6th TWSC

| Intersection             |        |        |        |       |       |      |
|--------------------------|--------|--------|--------|-------|-------|------|
| Int Delay, s/veh         | 0      |        |        |       |       |      |
| Movement                 | EBL    | EBT    | WBT    | WBR   | SBL   | SBR  |
| Lane Configurations      |        | ↕      | ↕      |       | ↕     | ↕    |
| Traffic Vol, veh/h       | 0      | 63     | 269    | 0     | 0     | 0    |
| Future Vol, veh/h        | 0      | 63     | 269    | 0     | 0     | 0    |
| Conflicting Peds, #/hr   | 0      | 0      | 0      | 0     | 0     | 0    |
| Sign Control             | Free   | Free   | Free   | Free  | Stop  | Stop |
| RT Channelized           | -      | None   | -      | None  | -     | None |
| Storage Length           | -      | -      | -      | -     | 0     | -    |
| Veh in Median Storage, # | -      | 0      | 0      | -     | 0     | -    |
| Grade, %                 | -      | 0      | 0      | -     | 0     | -    |
| Peak Hour Factor         | 92     | 92     | 92     | 92    | 92    | 92   |
| Heavy Vehicles, %        | 8      | 8      | 8      | 8     | 8     | 8    |
| Mvmt Flow                | 0      | 68     | 292    | 0     | 0     | 0    |
| Major/Minor              | Major1 | Major2 | Minor2 |       |       |      |
| Conflicting Flow All     | 292    | 0      | 0      | 360   | 292   |      |
| Stage 1                  | -      | -      | -      | 292   | -     |      |
| Stage 2                  | -      | -      | -      | 68    | -     |      |
| Critical Hdwy            | 4.18   | -      | -      | 6.48  | 6.28  |      |
| Critical Hdwy Stg 1      | -      | -      | -      | 5.48  | -     |      |
| Critical Hdwy Stg 2      | -      | -      | -      | 5.48  | -     |      |
| Follow-up Hdwy           | 2.272  | -      | -      | 3.572 | 3.372 |      |
| Pot Cap-1 Maneuver       | 1236   | -      | -      | 627   | 733   |      |
| Stage 1                  | -      | -      | -      | 744   | -     |      |
| Stage 2                  | -      | -      | -      | 940   | -     |      |
| Platoon blocked, %       | -      | -      | -      | -     | -     |      |
| Mov Cap-1 Maneuver       | 1236   | -      | -      | 627   | 733   |      |
| Mov Cap-2 Maneuver       | -      | -      | -      | 627   | -     |      |
| Stage 1                  | -      | -      | -      | 744   | -     |      |
| Stage 2                  | -      | -      | -      | 940   | -     |      |
| Approach                 | EB     | WB     | SB     |       |       |      |
| HCM Control Delay, s     | 0      | 0      | 0      |       |       |      |
| HCM LOS                  |        |        |        | A     |       |      |
| Minor Lane/Major Mvmt    | EBL    | EBT    | WBT    | WBR   | SBLn1 | SBR  |
| Capacity (veh/h)         | 1236   | -      | -      | -     | -     | -    |
| HCM Lane V/C Ratio       | -      | -      | -      | -     | -     | -    |
| HCM Control Delay (s)    | 0      | -      | -      | -     | 0     | -    |
| HCM Lane LOS             | A      | -      | -      | -     | A     | -    |
| HCM 95th %tile Q(veh)    | 0      | -      | -      | -     | -     | -    |

Deer Valley 30  
14: Alameda Rd & Access C

2024 Background AM  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh         | 0    |      |      |      |      |      |
| Movement                 | EBL  | EBT  | WBT  | WBR  | SBL  | SBR  |
| Lane Configurations      |      | ↕    | ↕    |      | ↕    | ↕    |
| Traffic Vol, veh/h       | 0    | 278  | 56   | 0    | 0    | 0    |
| Future Vol, veh/h        | 0    | 278  | 56   | 0    | 0    | 0    |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Free | Free | Free | Free | Stop | Stop |
| RT Channelized           | -    | None | -    | None | -    | None |
| Storage Length           | -    | -    | -    | -    | 0    | -    |
| Veh in Median Storage, # | -    | 0    | 0    | -    | 0    | -    |
| Grade, %                 | -    | 0    | 0    | -    | 0    | -    |
| Peak Hour Factor         | 92   | 92   | 92   | 92   | 92   | 92   |
| Heavy Vehicles, %        | 8    | 8    | 8    | 8    | 8    | 8    |
| Mvmt Flow                | 0    | 302  | 61   | 0    | 0    | 0    |

| Major/Minor          | Major1 | Major2 | Minor2 |       |       |
|----------------------|--------|--------|--------|-------|-------|
| Conflicting Flow All | 61     | 0      | 0      | 363   | 61    |
| Stage 1              | -      | -      | -      | 61    | -     |
| Stage 2              | -      | -      | -      | 302   | -     |
| Critical Hdwy        | 4.18   | -      | -      | 6.48  | 6.28  |
| Critical Hdwy Stg 1  | -      | -      | -      | 5.48  | -     |
| Critical Hdwy Stg 2  | -      | -      | -      | 5.48  | -     |
| Follow-up Hdwy       | 2.272  | -      | -      | 3.572 | 3.372 |
| Pot Cap-1 Maneuver   | 1505   | -      | -      | 624   | 988   |
| Stage 1              | -      | -      | -      | 947   | -     |
| Stage 2              | -      | -      | -      | 737   | -     |
| Platoon blocked, %   | -      | -      | -      | -     | -     |
| Mov Cap-1 Maneuver   | 1505   | -      | -      | 624   | 988   |
| Mov Cap-2 Maneuver   | -      | -      | -      | 624   | -     |
| Stage 1              | -      | -      | -      | 947   | -     |
| Stage 2              | -      | -      | -      | 737   | -     |

| Approach             | EB | WB | SB |
|----------------------|----|----|----|
| HCM Control Delay, s | 0  | 0  | 0  |
| HCM LOS              |    |    | A  |

| Minor Lane/Major Mvmt | EBL  | EBT | WBT | WBR | SBLn1 |
|-----------------------|------|-----|-----|-----|-------|
| Capacity (veh/h)      | 1505 | -   | -   | -   | -     |
| HCM Lane V/C Ratio    | -    | -   | -   | -   | -     |
| HCM Control Delay (s) | 0    | -   | -   | -   | 0     |
| HCM Lane LOS          | A    | -   | -   | -   | A     |
| HCM 95th %tile Q(veh) | 0    | -   | -   | -   | -     |

Deer Valley 30  
14: Alameda Rd & Access C

2024 Background PM  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh         | 0    |      |      |      |      |      |
| Movement                 | EBL  | EBT  | WBT  | WBR  | SBL  | SBR  |
| Lane Configurations      |      | ↕    | ↕    |      | ↕    | ↕    |
| Traffic Vol, veh/h       | 0    | 63   | 269  | 0    | 0    | 0    |
| Future Vol, veh/h        | 0    | 63   | 269  | 0    | 0    | 0    |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Free | Free | Free | Free | Stop | Stop |
| RT Channelized           | -    | None | -    | None | -    | None |
| Storage Length           | -    | -    | -    | -    | 0    | -    |
| Veh in Median Storage, # | -    | 0    | 0    | -    | 0    | -    |
| Grade, %                 | -    | 0    | 0    | -    | 0    | -    |
| Peak Hour Factor         | 92   | 92   | 92   | 92   | 92   | 92   |
| Heavy Vehicles, %        | 8    | 8    | 8    | 8    | 8    | 8    |
| Mvmt Flow                | 0    | 68   | 292  | 0    | 0    | 0    |

| Major/Minor          | Major1 | Major2 | Minor2 |       |       |
|----------------------|--------|--------|--------|-------|-------|
| Conflicting Flow All | 292    | 0      | 0      | 360   | 292   |
| Stage 1              | -      | -      | -      | 292   | -     |
| Stage 2              | -      | -      | -      | 68    | -     |
| Critical Hdwy        | 4.18   | -      | -      | 6.48  | 6.28  |
| Critical Hdwy Stg 1  | -      | -      | -      | 5.48  | -     |
| Critical Hdwy Stg 2  | -      | -      | -      | 5.48  | -     |
| Follow-up Hdwy       | 2.272  | -      | -      | 3.572 | 3.372 |
| Pot Cap-1 Maneuver   | 1236   | -      | -      | 627   | 733   |
| Stage 1              | -      | -      | -      | 744   | -     |
| Stage 2              | -      | -      | -      | 940   | -     |
| Platoon blocked, %   | -      | -      | -      | -     | -     |
| Mov Cap-1 Maneuver   | 1236   | -      | -      | 627   | 733   |
| Mov Cap-2 Maneuver   | -      | -      | -      | 627   | -     |
| Stage 1              | -      | -      | -      | 744   | -     |
| Stage 2              | -      | -      | -      | 940   | -     |

| Approach             | EB | WB | SB |
|----------------------|----|----|----|
| HCM Control Delay, s | 0  | 0  | 0  |
| HCM LOS              |    |    | A  |

| Minor Lane/Major Mvmt | EBL  | EBT | WBT | WBR | SBLn1 |
|-----------------------|------|-----|-----|-----|-------|
| Capacity (veh/h)      | 1236 | -   | -   | -   | -     |
| HCM Lane V/C Ratio    | -    | -   | -   | -   | -     |
| HCM Control Delay (s) | 0    | -   | -   | -   | 0     |
| HCM Lane LOS          | A    | -   | -   | -   | A     |
| HCM 95th %tile Q(veh) | 0    | -   | -   | -   | -     |

Deer Valley 30  
15: Alameda Rd & 15th Ave

2024 Background AM  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh         | 0    |      |      |      |      |      |
| Movement                 | EBL  | EBT  | WBT  | WBR  | SBL  | SBR  |
| Lane Configurations      |      | ↕    | ↕    |      | ↕    |      |
| Traffic Vol, veh/h       | 0    | 278  | 56   | 0    | 0    | 0    |
| Future Vol, veh/h        | 0    | 278  | 56   | 0    | 0    | 0    |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Free | Free | Free | Free | Stop | Stop |
| RT Channelized           | -    | None | -    | None | -    | None |
| Storage Length           | -    | -    | -    | -    | 0    | -    |
| Veh in Median Storage, # | -    | 0    | 0    | -    | 0    | -    |
| Grade, %                 | -    | 0    | 0    | -    | 0    | -    |
| Peak Hour Factor         | 92   | 92   | 92   | 92   | 92   | 92   |
| Heavy Vehicles, %        | 8    | 8    | 8    | 8    | 8    | 8    |
| Mvmt Flow                | 0    | 302  | 61   | 0    | 0    | 0    |

| Major/Minor          | Major1 | Major2 | Minor2 |       |       |
|----------------------|--------|--------|--------|-------|-------|
| Conflicting Flow All | 61     | 0      | 0      | 363   | 61    |
| Stage 1              | -      | -      | -      | 61    | -     |
| Stage 2              | -      | -      | -      | 302   | -     |
| Critical Hdwy        | 4.18   | -      | -      | 6.48  | 6.28  |
| Critical Hdwy Stg 1  | -      | -      | -      | 5.48  | -     |
| Critical Hdwy Stg 2  | -      | -      | -      | 5.48  | -     |
| Follow-up Hdwy       | 2.272  | -      | -      | 3.572 | 3.372 |
| Pot Cap-1 Maneuver   | 1505   | -      | -      | 624   | 988   |
| Stage 1              | -      | -      | -      | 947   | -     |
| Stage 2              | -      | -      | -      | 737   | -     |
| Platoon blocked, %   | -      | -      | -      | -     | -     |
| Mov Cap-1 Maneuver   | 1505   | -      | -      | 624   | 988   |
| Mov Cap-2 Maneuver   | -      | -      | -      | 624   | -     |
| Stage 1              | -      | -      | -      | 947   | -     |
| Stage 2              | -      | -      | -      | 737   | -     |

| Approach             | EB | WB | SB |
|----------------------|----|----|----|
| HCM Control Delay, s | 0  | 0  | 0  |
| HCM LOS              |    |    | A  |

| Minor Lane/Major Mvmt | EBL  | EBT | WBT | WBR | SBLn1 |
|-----------------------|------|-----|-----|-----|-------|
| Capacity (veh/h)      | 1505 | -   | -   | -   | -     |
| HCM Lane V/C Ratio    | -    | -   | -   | -   | -     |
| HCM Control Delay (s) | 0    | -   | -   | -   | 0     |
| HCM Lane LOS          | A    | -   | -   | -   | A     |
| HCM 95th %tile Q(veh) | 0    | -   | -   | -   | -     |

Deer Valley 30  
15: Alameda Rd & 15th Ave

2024 Background PM  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh         | 0    |      |      |      |      |      |
| Movement                 | EBL  | EBT  | WBT  | WBR  | SBL  | SBR  |
| Lane Configurations      |      | ↕    | ↕    |      | ↕    |      |
| Traffic Vol, veh/h       | 0    | 63   | 269  | 0    | 0    | 0    |
| Future Vol, veh/h        | 0    | 63   | 269  | 0    | 0    | 0    |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Free | Free | Free | Free | Stop | Stop |
| RT Channelized           | -    | None | -    | None | -    | None |
| Storage Length           | -    | -    | -    | -    | 0    | -    |
| Veh in Median Storage, # | -    | 0    | 0    | -    | 0    | -    |
| Grade, %                 | -    | 0    | 0    | -    | 0    | -    |
| Peak Hour Factor         | 92   | 92   | 92   | 92   | 92   | 92   |
| Heavy Vehicles, %        | 8    | 8    | 8    | 8    | 8    | 8    |
| Mvmt Flow                | 0    | 68   | 292  | 0    | 0    | 0    |

| Major/Minor          | Major1 | Major2 | Minor2 |       |       |
|----------------------|--------|--------|--------|-------|-------|
| Conflicting Flow All | 292    | 0      | 0      | 360   | 292   |
| Stage 1              | -      | -      | -      | 292   | -     |
| Stage 2              | -      | -      | -      | 68    | -     |
| Critical Hdwy        | 4.18   | -      | -      | 6.48  | 6.28  |
| Critical Hdwy Stg 1  | -      | -      | -      | 5.48  | -     |
| Critical Hdwy Stg 2  | -      | -      | -      | 5.48  | -     |
| Follow-up Hdwy       | 2.272  | -      | -      | 3.572 | 3.372 |
| Pot Cap-1 Maneuver   | 1236   | -      | -      | 627   | 733   |
| Stage 1              | -      | -      | -      | 744   | -     |
| Stage 2              | -      | -      | -      | 940   | -     |
| Platoon blocked, %   | -      | -      | -      | -     | -     |
| Mov Cap-1 Maneuver   | 1236   | -      | -      | 627   | 733   |
| Mov Cap-2 Maneuver   | -      | -      | -      | 627   | -     |
| Stage 1              | -      | -      | -      | 744   | -     |
| Stage 2              | -      | -      | -      | 940   | -     |

| Approach             | EB | WB | SB |
|----------------------|----|----|----|
| HCM Control Delay, s | 0  | 0  | 0  |
| HCM LOS              |    |    | A  |

| Minor Lane/Major Mvmt | EBL  | EBT | WBT | WBR | SBLn1 |
|-----------------------|------|-----|-----|-----|-------|
| Capacity (veh/h)      | 1236 | -   | -   | -   | -     |
| HCM Lane V/C Ratio    | -    | -   | -   | -   | -     |
| HCM Control Delay (s) | 0    | -   | -   | -   | 0     |
| HCM Lane LOS          | A    | -   | -   | -   | A     |
| HCM 95th %tile Q(veh) | 0    | -   | -   | -   | -     |

Deer Valley 30  
16: Alameda Rd & Access D

2024 Background AM  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh         | 0    |      |      |      |      |      |
| Movement                 | EBL  | EBT  | WBT  | WBR  | SBL  | SBR  |
| Lane Configurations      |      | ↕    | ↕    |      | ↕    |      |
| Traffic Vol, veh/h       | 0    | 278  | 56   | 0    | 0    | 0    |
| Future Vol, veh/h        | 0    | 278  | 56   | 0    | 0    | 0    |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Free | Free | Free | Free | Stop | Stop |
| RT Channelized           | -    | None | -    | None | -    | None |
| Storage Length           | -    | -    | -    | -    | 0    | -    |
| Veh in Median Storage, # | -    | 0    | 0    | -    | 0    | -    |
| Grade, %                 | -    | 0    | 0    | -    | 0    | -    |
| Peak Hour Factor         | 92   | 92   | 92   | 92   | 92   | 92   |
| Heavy Vehicles, %        | 8    | 8    | 8    | 8    | 8    | 8    |
| Mvmt Flow                | 0    | 302  | 61   | 0    | 0    | 0    |

| Major/Minor          | Major1 | Major2 | Minor2 |       |       |
|----------------------|--------|--------|--------|-------|-------|
| Conflicting Flow All | 61     | 0      | 0      | 363   | 61    |
| Stage 1              | -      | -      | -      | 61    | -     |
| Stage 2              | -      | -      | -      | 302   | -     |
| Critical Hdwy        | 4.18   | -      | -      | 6.48  | 6.28  |
| Critical Hdwy Stg 1  | -      | -      | -      | 5.48  | -     |
| Critical Hdwy Stg 2  | -      | -      | -      | 5.48  | -     |
| Follow-up Hdwy       | 2.272  | -      | -      | 3.572 | 3.372 |
| Pot Cap-1 Maneuver   | 1505   | -      | -      | 624   | 988   |
| Stage 1              | -      | -      | -      | 947   | -     |
| Stage 2              | -      | -      | -      | 737   | -     |
| Platoon blocked, %   | -      | -      | -      | -     | -     |
| Mov Cap-1 Maneuver   | 1505   | -      | -      | 624   | 988   |
| Mov Cap-2 Maneuver   | -      | -      | -      | 624   | -     |
| Stage 1              | -      | -      | -      | 947   | -     |
| Stage 2              | -      | -      | -      | 737   | -     |

| Approach             | EB | WB | SB |
|----------------------|----|----|----|
| HCM Control Delay, s | 0  | 0  | 0  |
| HCM LOS              |    |    | A  |

| Minor Lane/Major Mvmt | EBL  | EBT | WBT | WBR | SBLn1 |
|-----------------------|------|-----|-----|-----|-------|
| Capacity (veh/h)      | 1505 | -   | -   | -   | -     |
| HCM Lane V/C Ratio    | -    | -   | -   | -   | -     |
| HCM Control Delay (s) | 0    | -   | -   | -   | 0     |
| HCM Lane LOS          | A    | -   | -   | -   | A     |
| HCM 95th %tile Q(veh) | 0    | -   | -   | -   | -     |

Deer Valley 30  
16: Alameda Rd & Access D

2024 Background PM  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh         | 0    |      |      |      |      |      |
| Movement                 | EBL  | EBT  | WBT  | WBR  | SBL  | SBR  |
| Lane Configurations      |      | ↕    | ↕    |      | ↕    |      |
| Traffic Vol, veh/h       | 0    | 63   | 269  | 0    | 0    | 0    |
| Future Vol, veh/h        | 0    | 63   | 269  | 0    | 0    | 0    |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Free | Free | Free | Free | Stop | Stop |
| RT Channelized           | -    | None | -    | None | -    | None |
| Storage Length           | -    | -    | -    | -    | 0    | -    |
| Veh in Median Storage, # | -    | 0    | 0    | -    | 0    | -    |
| Grade, %                 | -    | 0    | 0    | -    | 0    | -    |
| Peak Hour Factor         | 92   | 92   | 92   | 92   | 92   | 92   |
| Heavy Vehicles, %        | 8    | 8    | 8    | 8    | 8    | 8    |
| Mvmt Flow                | 0    | 68   | 292  | 0    | 0    | 0    |

| Major/Minor          | Major1 | Major2 | Minor2 |       |       |
|----------------------|--------|--------|--------|-------|-------|
| Conflicting Flow All | 292    | 0      | 0      | 360   | 292   |
| Stage 1              | -      | -      | -      | 292   | -     |
| Stage 2              | -      | -      | -      | 68    | -     |
| Critical Hdwy        | 4.18   | -      | -      | 6.48  | 6.28  |
| Critical Hdwy Stg 1  | -      | -      | -      | 5.48  | -     |
| Critical Hdwy Stg 2  | -      | -      | -      | 5.48  | -     |
| Follow-up Hdwy       | 2.272  | -      | -      | 3.572 | 3.372 |
| Pot Cap-1 Maneuver   | 1236   | -      | -      | 627   | 733   |
| Stage 1              | -      | -      | -      | 744   | -     |
| Stage 2              | -      | -      | -      | 940   | -     |
| Platoon blocked, %   | -      | -      | -      | -     | -     |
| Mov Cap-1 Maneuver   | 1236   | -      | -      | 627   | 733   |
| Mov Cap-2 Maneuver   | -      | -      | -      | 627   | -     |
| Stage 1              | -      | -      | -      | 744   | -     |
| Stage 2              | -      | -      | -      | 940   | -     |

| Approach             | EB | WB | SB |
|----------------------|----|----|----|
| HCM Control Delay, s | 0  | 0  | 0  |
| HCM LOS              |    |    | A  |

| Minor Lane/Major Mvmt | EBL  | EBT | WBT | WBR | SBLn1 |
|-----------------------|------|-----|-----|-----|-------|
| Capacity (veh/h)      | 1236 | -   | -   | -   | -     |
| HCM Lane V/C Ratio    | -    | -   | -   | -   | -     |
| HCM Control Delay (s) | 0    | -   | -   | -   | 0     |
| HCM Lane LOS          | A    | -   | -   | -   | A     |
| HCM 95th %tile Q(veh) | 0    | -   | -   | -   | -     |

Deer Valley 30  
1: 19th Ave & Happy Valley Rd

2024 Background AM Mitigated  
Timings

| Lane Group           | EBL  | EBT   | WBL   | WBT   | NBL   | NBT   | NBR   | SBL   | SBT   | SBR   |
|----------------------|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations  | ↔    | ↔     | ↔     | ↔     | ↔     | ↔     | ↔     | ↔     | ↔     | ↔     |
| Traffic Volume (vph) | 87   | 511   | 150   | 326   | 213   | 267   | 102   | 294   | 461   | 96    |
| Future Volume (vph)  | 87   | 511   | 150   | 326   | 213   | 267   | 102   | 294   | 461   | 96    |
| Turn Type            | Prot | NA    | Prot  | NA    | Prot  | NA    | Perm  | Prot  | NA    | Perm  |
| Protected Phases     | 7    | 4     | 3     | 8     | 5     | 2     |       | 1     | 6     |       |
| Permitted Phases     |      |       |       |       |       |       | 2     |       |       | 6     |
| Detector Phase       | 7    | 4     | 3     | 8     | 5     | 2     | 2     | 1     | 6     | 6     |
| Switch Phase         |      |       |       |       |       |       |       |       |       |       |
| Minimum Initial (s)  | 5.0  | 15.0  | 5.0   | 15.0  | 5.0   | 5.0   | 5.0   | 5.0   | 5.0   | 5.0   |
| Minimum Split (s)    | 9.5  | 41.0  | 9.5   | 41.0  | 9.5   | 43.1  | 43.1  | 9.5   | 43.1  | 43.1  |
| Total Split (s)      | 9.5  | 41.4  | 9.5   | 41.4  | 15.0  | 39.1  | 39.1  | 15.0  | 39.1  | 39.1  |
| Total Split (%)      | 9.0% | 39.4% | 9.0%  | 39.4% | 14.3% | 37.2% | 37.2% | 14.3% | 37.2% | 37.2% |
| Yellow Time (s)      | 3.5  | 4.3   | 3.5   | 4.3   | 3.5   | 4.3   | 4.3   | 3.5   | 4.3   | 4.3   |
| All-Red Time (s)     | 1.0  | 1.7   | 1.0   | 1.7   | 1.0   | 1.8   | 1.8   | 1.0   | 1.8   | 1.8   |
| Lost Time Adjust (s) | 0.0  | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Lost Time (s)  | 4.5  | 6.0   | 4.5   | 6.0   | 4.5   | 6.1   | 6.1   | 4.5   | 6.1   | 6.1   |
| Lead/Lag             | Lead | Lag   | Lead  | Lag   | Lead  | Lag   | Lead  | Lag   | Lag   | Lag   |
| Lead-Lag Optimize?   | Yes  | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   |
| Recall Mode          | None | C-Max | None  | C-Max | None  | Max   | Max   | None  | Max   | Max   |
| Act Effct Green (s)  | 5.0  | 35.4  | 5.0   | 35.4  | 10.3  | 33.0  | 33.0  | 10.5  | 33.2  | 33.2  |
| Actuated g/C Ratio   | 0.05 | 0.34  | 0.05  | 0.34  | 0.10  | 0.31  | 0.31  | 0.10  | 0.32  | 0.32  |
| v/c Ratio            | 0.62 | 0.64  | 1.06  | 0.30  | 0.73  | 0.28  | 0.20  | 0.99  | 0.33  | 0.19  |
| Control Delay        | 66.8 | 24.5  | 137.8 | 21.0  | 60.4  | 27.9  | 4.7   | 95.2  | 28.2  | 4.0   |
| Queue Delay          | 0.0  | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Delay          | 66.8 | 24.5  | 137.8 | 21.0  | 60.4  | 27.9  | 4.7   | 95.2  | 28.2  | 4.0   |
| LOS                  | E    | C     | F     | C     | E     | C     | A     | F     | C     | A     |
| Approach Delay       | 27.9 |       |       | 50.7  |       |       | 35.8  |       |       | 48.7  |
| Approach LOS         | C    |       |       | D     |       |       | D     |       |       | D     |

Intersection Summary

Cycle Length: 105

Actuated Cycle Length: 105

Offset: 0 (0%), Referenced to phase 4:EBT and 8:WBT, Start of Green

Natural Cycle: 105

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 1.06

Intersection Signal Delay: 39.5

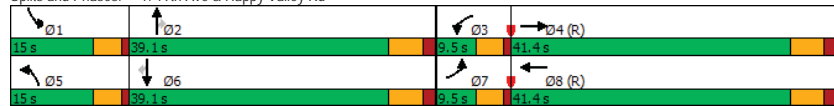
Intersection LOS: D

Intersection Capacity Utilization 58.0%

ICU Level of Service B

Analysis Period (min) 15

Splits and Phases: 1: 19th Ave & Happy Valley Rd



Deer Valley 30  
1: 19th Ave & Happy Valley Rd

2024 Background PM Mitigated  
Timings

| Lane Group           | EBL   | EBT   | WBL   | WBT   | NBL   | NBT   | NBR   | SBL   | SBT   | SBR   |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations  | ↔     | ↔     | ↔     | ↔     | ↔     | ↔     | ↔     | ↔     | ↔     | ↔     |
| Traffic Volume (vph) | 167   | 417   | 165   | 904   | 593   | 531   | 125   | 183   | 238   | 122   |
| Future Volume (vph)  | 167   | 417   | 165   | 904   | 593   | 531   | 125   | 183   | 238   | 122   |
| Turn Type            | Prot  | NA    | Prot  | NA    | Prot  | NA    | Perm  | Prot  | NA    | Perm  |
| Protected Phases     | 7     | 4     | 3     | 8     | 5     | 2     |       | 1     | 6     |       |
| Permitted Phases     |       |       |       |       |       |       | 2     |       |       | 6     |
| Detector Phase       | 7     | 4     | 3     | 8     | 5     | 2     | 2     | 1     | 6     | 6     |
| Switch Phase         |       |       |       |       |       |       |       |       |       |       |
| Minimum Initial (s)  | 5.0   | 15.0  | 5.0   | 15.0  | 5.0   | 5.0   | 5.0   | 5.0   | 5.0   | 5.0   |
| Minimum Split (s)    | 9.5   | 41.0  | 9.5   | 41.0  | 9.5   | 43.1  | 43.1  | 9.5   | 43.1  | 43.1  |
| Total Split (s)      | 20.1  | 31.9  | 20.1  | 31.9  | 26.0  | 40.0  | 40.0  | 13.0  | 27.0  | 27.0  |
| Total Split (%)      | 19.1% | 30.4% | 19.1% | 30.4% | 24.8% | 38.1% | 38.1% | 12.4% | 25.7% | 25.7% |
| Yellow Time (s)      | 3.5   | 4.3   | 3.5   | 4.3   | 3.5   | 4.3   | 4.3   | 3.5   | 4.3   | 4.3   |
| All-Red Time (s)     | 1.0   | 1.7   | 1.0   | 1.7   | 1.0   | 1.8   | 1.8   | 1.0   | 1.8   | 1.8   |
| Lost Time Adjust (s) | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Lost Time (s)  | 4.5   | 6.0   | 4.5   | 6.0   | 4.5   | 6.1   | 6.1   | 4.5   | 6.1   | 6.1   |
| Lead/Lag             | Lead  | Lag   | Lead  | Lag   | Lead  | Lag   | Lead  | Lag   | Lag   | Lag   |
| Lead-Lag Optimize?   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   |
| Recall Mode          | None  | C-Max | None  | C-Max | None  | Max   | Max   | None  | Max   | Max   |
| Act Effct Green (s)  | 11.2  | 30.4  | 11.1  | 30.3  | 21.5  | 33.9  | 33.9  | 8.5   | 20.9  | 20.9  |
| Actuated g/C Ratio   | 0.11  | 0.29  | 0.11  | 0.29  | 0.20  | 0.32  | 0.32  | 0.08  | 0.20  | 0.20  |
| v/c Ratio            | 0.53  | 0.55  | 0.52  | 1.00  | 0.97  | 0.53  | 0.24  | 0.76  | 0.27  | 0.31  |
| Control Delay        | 49.6  | 26.5  | 49.7  | 59.5  | 71.2  | 31.3  | 5.6   | 66.5  | 36.5  | 4.4   |
| Queue Delay          | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Delay          | 49.6  | 26.5  | 49.7  | 59.5  | 71.2  | 31.3  | 5.6   | 66.5  | 36.5  | 4.4   |
| LOS                  | D     | C     | D     | E     | E     | C     | A     | E     | D     | A     |
| Approach Delay       | 30.9  |       |       | 58.4  |       |       | 47.7  |       |       | 39.4  |
| Approach LOS         | C     |       |       | E     |       |       | D     |       |       | D     |

Intersection Summary

Cycle Length: 105

Actuated Cycle Length: 105

Offset: 0 (0%), Referenced to phase 4:EBT and 8:WBT, Start of Green

Natural Cycle: 125

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 1.00

Intersection Signal Delay: 46.7

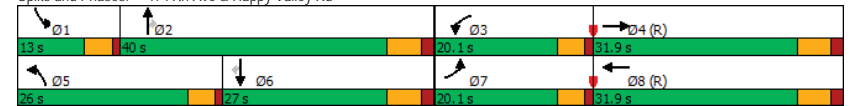
Intersection LOS: D

Intersection Capacity Utilization 69.7%

ICU Level of Service C

Analysis Period (min) 15

Splits and Phases: 1: 19th Ave & Happy Valley Rd







Deer Valley 30  
2: 19th Ave & Optum Drwy

2024 Background AM Mitigated  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh         | 0.1  |      |      |      |      |      |
| Movement                 | EBL  | EBR  | NBL  | NBT  | SBT  | SBR  |
| Lane Configurations      | W    |      | ↑↑↑  | ↑↑↑  | ↑↑   |      |
| Traffic Vol, veh/h       | 0    | 4    | 7    | 583  | 1078 | 2    |
| Future Vol, veh/h        | 0    | 4    | 7    | 583  | 1078 | 2    |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Stop | Stop | Free | Free | Free | Free |
| RT Channelized           | -    | None | -    | None | -    | None |
| Storage Length           | 0    | -    | 50   | -    | -    | -    |
| Veh in Median Storage, # | 0    | -    | -    | 0    | 0    | -    |
| Grade, %                 | 0    | -    | -    | 0    | 0    | -    |
| Peak Hour Factor         | 92   | 92   | 92   | 92   | 92   | 92   |
| Heavy Vehicles, %        | 8    | 8    | 8    | 8    | 8    | 8    |
| Mvmt Flow                | 0    | 4    | 8    | 634  | 1172 | 2    |

| Major/Minor          | Minor2 | Major1 | Major2 |   |     |
|----------------------|--------|--------|--------|---|-----|
| Conflicting Flow All | 1443   | 587    | 1174   | 0 | - 0 |
| Stage 1              | 1173   | -      | -      | - | -   |
| Stage 2              | 270    | -      | -      | - | -   |
| Critical Hdwy        | 6.41   | 7.06   | 4.26   | - | - - |
| Critical Hdwy Stg 1  | 5.96   | -      | -      | - | -   |
| Critical Hdwy Stg 2  | 6.16   | -      | -      | - | -   |
| Follow-up Hdwy       | 3.73   | 3.38   | 2.28   | - | - - |
| Pot Cap-1 Maneuver   | *242   | 438    | 558    | - | - - |
| Stage 1              | *239   | -      | -      | - | - - |
| Stage 2              | *828   | -      | -      | - | - - |
| Platoon blocked, %   | 1      | -      | -      | - | - - |
| Mov Cap-1 Maneuver   | *239   | 438    | 558    | - | - - |
| Mov Cap-2 Maneuver   | *215   | -      | -      | - | - - |
| Stage 1              | *236   | -      | -      | - | - - |
| Stage 2              | *828   | -      | -      | - | - - |

| Approach             | EB   | NB  | SB |
|----------------------|------|-----|----|
| HCM Control Delay, s | 13.3 | 0.1 | 0  |
| HCM LOS              | B    |     |    |

| Minor Lane/Major Mvmt | NBL   | NBT | EBLn1 | SBT | SBR |
|-----------------------|-------|-----|-------|-----|-----|
| Capacity (veh/h)      | 558   | -   | 438   | -   | -   |
| HCM Lane V/C Ratio    | 0.014 | -   | 0.01  | -   | -   |
| HCM Control Delay (s) | 11.5  | -   | 13.3  | -   | -   |
| HCM Lane LOS          | B     | -   | B     | -   | -   |
| HCM 95th %tile Q(veh) | 0     | -   | 0     | -   | -   |

Notes  
 -: Volume exceeds capacity    \$: Delay exceeds 300s    +: Computation Not Defined    \*: All major volume in platoon

Deer Valley 30  
2: 19th Ave & Optum Drwy

2024 Background PM Mitigated  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh         | 0.1  |      |      |      |      |      |
| Movement                 | EBL  | EBR  | NBL  | NBT  | SBT  | SBR  |
| Lane Configurations      | W    |      | ↑↑↑  | ↑↑↑  | ↑↑   |      |
| Traffic Vol, veh/h       | 0    | 4    | 7    | 1249 | 700  | 2    |
| Future Vol, veh/h        | 0    | 4    | 7    | 1249 | 700  | 2    |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Stop | Stop | Free | Free | Free | Free |
| RT Channelized           | -    | None | -    | None | -    | None |
| Storage Length           | 0    | -    | 50   | -    | -    | -    |
| Veh in Median Storage, # | 0    | -    | -    | 0    | 0    | -    |
| Grade, %                 | 0    | -    | -    | 0    | 0    | -    |
| Peak Hour Factor         | 92   | 92   | 92   | 92   | 92   | 92   |
| Heavy Vehicles, %        | 8    | 8    | 8    | 8    | 8    | 8    |
| Mvmt Flow                | 0    | 4    | 8    | 1358 | 761  | 2    |

| Major/Minor          | Minor2 | Major1 | Major2 |   |     |
|----------------------|--------|--------|--------|---|-----|
| Conflicting Flow All | 1321   | 382    | 763    | 0 | - 0 |
| Stage 1              | 762    | -      | -      | - | -   |
| Stage 2              | 559    | -      | -      | - | -   |
| Critical Hdwy        | 6.41   | 7.06   | 4.26   | - | - - |
| Critical Hdwy Stg 1  | 5.96   | -      | -      | - | -   |
| Critical Hdwy Stg 2  | 6.16   | -      | -      | - | -   |
| Follow-up Hdwy       | 3.73   | 3.38   | 2.28   | - | - - |
| Pot Cap-1 Maneuver   | *650   | 599    | 807    | - | - - |
| Stage 1              | *395   | -      | -      | - | - - |
| Stage 2              | *650   | -      | -      | - | - - |
| Platoon blocked, %   | 1      | -      | -      | - | - - |
| Mov Cap-1 Maneuver   | *643   | 599    | 807    | - | - - |
| Mov Cap-2 Maneuver   | *593   | -      | -      | - | - - |
| Stage 1              | *391   | -      | -      | - | - - |
| Stage 2              | *650   | -      | -      | - | - - |

| Approach             | EB   | NB  | SB |
|----------------------|------|-----|----|
| HCM Control Delay, s | 11.1 | 0.1 | 0  |
| HCM LOS              | B    |     |    |

| Minor Lane/Major Mvmt | NBL   | NBT | EBLn1 | SBT | SBR |
|-----------------------|-------|-----|-------|-----|-----|
| Capacity (veh/h)      | 807   | -   | 599   | -   | -   |
| HCM Lane V/C Ratio    | 0.009 | -   | 0.007 | -   | -   |
| HCM Control Delay (s) | 9.5   | -   | 11.1  | -   | -   |
| HCM Lane LOS          | A     | -   | B     | -   | -   |
| HCM 95th %tile Q(veh) | 0     | -   | 0     | -   | -   |

Notes  
 -: Volume exceeds capacity    \$: Delay exceeds 300s    +: Computation Not Defined    \*: All major volume in platoon

Deer Valley 30  
3: 19th Ave & Patio Drwy/Parkview Ln

2024 Background AM Mitigated  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Int Delay, s/veh         | 0.6  |      |      |      |      |      |      |      |      |      |      |      |
| Movement                 | EBL  | EBT  | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
| Lane Configurations      |      |      | ↕    |      | ↕    |      |      | ↕↕↕  |      | ↕    | ↕↕   |      |
| Traffic Vol, veh/h       | 0    | 0    | 6    | 26   | 0    | 13   | 1    | 576  | 41   | 26   | 1057 | 0    |
| Future Vol, veh/h        | 0    | 0    | 6    | 26   | 0    | 13   | 1    | 576  | 41   | 26   | 1057 | 0    |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Stop | Stop | Stop | Stop | Stop | Stop | Free | Free | Free | Free | Free | Free |
| RT Channelized           | -    | -    | None | -    | -    | None | -    | -    | None | -    | -    | None |
| Storage Length           | -    | -    | 0    | -    | -    | -    | -    | -    | -    | 50   | -    | -    |
| Veh in Median Storage, # | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Grade, %                 | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Peak Hour Factor         | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   |
| Heavy Vehicles, %        | 8    | 8    | 8    | 8    | 8    | 8    | 8    | 8    | 8    | 8    | 8    | 8    |
| Mvmt Flow                | 0    | 0    | 7    | 28   | 0    | 14   | 1    | 626  | 45   | 28   | 1149 | 0    |

| Major/Minor          | Minor2 | Minor1 | Major1 | Major2 |
|----------------------|--------|--------|--------|--------|
| Conflicting Flow All | -      | -      | 575    | 1282   |
| Stage 1              | -      | -      | 651    | 651    |
| Stage 2              | -      | -      | 631    | 1205   |
| Critical Hdwy        | -      | -      | 7.06   | 7.11   |
| Critical Hdwy Stg 1  | -      | -      | 7.46   | 5.66   |
| Critical Hdwy Stg 2  | -      | -      | 6.66   | 5.66   |
| Follow-up Hdwy       | -      | -      | 3.38   | 3.73   |
| Pot Cap-1 Maneuver   | 0      | 0      | 446    | 269    |
| Stage 1              | 0      | 0      | 803    | 742    |
| Stage 2              | 0      | 0      | 409    | 243    |
| Platoon blocked, %   | -      | -      | 1      | 1      |
| Mov Cap-1 Maneuver   | -      | -      | 446    | 258    |
| Mov Cap-2 Maneuver   | -      | -      | 258    | 106    |
| Stage 1              | -      | -      | 800    | 740    |
| Stage 2              | -      | -      | 391    | 236    |

| Approach             | EB   | WB   | NB | SB  |
|----------------------|------|------|----|-----|
| HCM Control Delay, s | 13.2 | 17.4 | 0  | 0.2 |
| HCM LOS              | B    | C    |    |     |

| Minor Lane/Major Mvmt | NBL   | NBT | NBR | EBLn1 | WBLn1 | SBL  | SBT |
|-----------------------|-------|-----|-----|-------|-------|------|-----|
| Capacity (veh/h)      | 571   | -   | -   | 446   | 332   | 927  | -   |
| HCM Lane V/C Ratio    | 0.002 | -   | -   | 0.015 | 0.128 | 0.03 | -   |
| HCM Control Delay (s) | 11.3  | -   | -   | 13.2  | 17.4  | 9    | -   |
| HCM Lane LOS          | B     | -   | -   | B     | C     | A    | -   |
| HCM 95th %tile Q(veh) | 0     | -   | -   | 0     | 0.4   | 0.1  | -   |

Notes  
 -: Volume exceeds capacity    \$: Delay exceeds 300s    +: Computation Not Defined    \*: All major volume in platoon

Deer Valley 30  
3: 19th Ave & Patio Drwy/Parkview Ln

2024 Background PM Mitigated  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Int Delay, s/veh         | 0.6  |      |      |      |      |      |      |      |      |      |      |      |
| Movement                 | EBL  | EBT  | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
| Lane Configurations      |      |      | ↕    |      | ↕    |      |      | ↕↕↕  |      | ↕    | ↕↕   |      |
| Traffic Vol, veh/h       | 0    | 0    | 6    | 26   | 0    | 13   | 1    | 896  | 41   | 26   | 679  | 0    |
| Future Vol, veh/h        | 0    | 0    | 6    | 26   | 0    | 13   | 1    | 896  | 41   | 26   | 679  | 0    |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Stop | Stop | Stop | Stop | Stop | Stop | Free | Free | Free | Free | Free | Free |
| RT Channelized           | -    | -    | None | -    | -    | None | -    | -    | None | -    | -    | None |
| Storage Length           | -    | -    | 0    | -    | -    | -    | -    | -    | -    | 50   | -    | -    |
| Veh in Median Storage, # | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Grade, %                 | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Peak Hour Factor         | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   |
| Heavy Vehicles, %        | 8    | 8    | 8    | 8    | 8    | 8    | 8    | 8    | 8    | 8    | 8    | 8    |
| Mvmt Flow                | 0    | 0    | 7    | 28   | 0    | 14   | 1    | 974  | 45   | 28   | 738  | 0    |

| Major/Minor          | Minor2 | Minor1 | Major1 | Major2 |
|----------------------|--------|--------|--------|--------|
| Conflicting Flow All | -      | -      | 369    | 1424   |
| Stage 1              | -      | -      | 999    | 999    |
| Stage 2              | -      | -      | 425    | 794    |
| Critical Hdwy        | -      | -      | 7.06   | 7.11   |
| Critical Hdwy Stg 1  | -      | -      | 7.46   | 5.66   |
| Critical Hdwy Stg 2  | -      | -      | 6.66   | 5.66   |
| Follow-up Hdwy       | -      | -      | 3.38   | 3.73   |
| Pot Cap-1 Maneuver   | 0      | 0      | 611    | 311    |
| Stage 1              | 0      | 0      | 688    | 651    |
| Stage 2              | 0      | 0      | 544    | 384    |
| Platoon blocked, %   | -      | -      | 1      | 1      |
| Mov Cap-1 Maneuver   | -      | -      | 611    | 299    |
| Mov Cap-2 Maneuver   | -      | -      | 299    | 160    |
| Stage 1              | -      | -      | 686    | 649    |
| Stage 2              | -      | -      | 520    | 371    |

| Approach             | EB | WB | NB | SB  |
|----------------------|----|----|----|-----|
| HCM Control Delay, s | 11 | 16 | 0  | 0.4 |
| HCM LOS              | B  | C  |    |     |

| Minor Lane/Major Mvmt | NBL   | NBT | NBR | EBLn1 | WBLn1 | SBL   | SBT |
|-----------------------|-------|-----|-----|-------|-------|-------|-----|
| Capacity (veh/h)      | 825   | -   | -   | 611   | 371   | 810   | -   |
| HCM Lane V/C Ratio    | 0.001 | -   | -   | 0.011 | 0.114 | 0.035 | -   |
| HCM Control Delay (s) | 9.4   | -   | -   | 11    | 16    | 9.6   | -   |
| HCM Lane LOS          | A     | -   | -   | B     | C     | A     | -   |
| HCM 95th %tile Q(veh) | 0     | -   | -   | 0     | 0.4   | 0.1   | -   |

Notes  
 -: Volume exceeds capacity    \$: Delay exceeds 300s    +: Computation Not Defined    \*: All major volume in platoon

Deer Valley 30  
4: Alameda Rd & 19th Ave

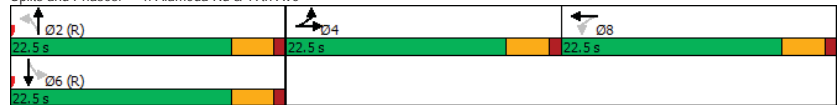
2024 Background AM Mitigated  
Timings

| Lane Group           | EBL   | EBT   | WBL   | WBT   | NBL   | NBT   | SBL   | SBT   |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations  | ↔     | ↔     | ↔     | ↔     | ↔     | ↔     | ↔     | ↔     |
| Traffic Volume (vph) | 9     | 0     | 31    | 0     | 18    | 593   | 123   | 951   |
| Future Volume (vph)  | 9     | 0     | 31    | 0     | 18    | 593   | 123   | 951   |
| Turn Type            | Split | NA    | Perm  | NA    | Perm  | NA    | Perm  | NA    |
| Protected Phases     | 4     | 4     |       | 8     |       | 2     |       | 6     |
| Permitted Phases     |       |       | 8     |       | 2     |       | 6     |       |
| Detector Phase       | 4     | 4     | 8     | 8     | 2     | 2     | 6     | 6     |
| Switch Phase         |       |       |       |       |       |       |       |       |
| Minimum Initial (s)  | 5.0   | 5.0   | 5.0   | 5.0   | 5.0   | 5.0   | 5.0   | 5.0   |
| Minimum Split (s)    | 22.5  | 22.5  | 22.5  | 22.5  | 22.5  | 22.5  | 22.5  | 22.5  |
| Total Split (s)      | 22.5  | 22.5  | 22.5  | 22.5  | 22.5  | 22.5  | 22.5  | 22.5  |
| Total Split (%)      | 33.3% | 33.3% | 33.3% | 33.3% | 33.3% | 33.3% | 33.3% | 33.3% |
| Yellow Time (s)      | 3.5   | 3.5   | 3.5   | 3.5   | 3.5   | 3.5   | 3.5   | 3.5   |
| All-Red Time (s)     | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   |
| Lost Time Adjust (s) | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Lost Time (s)  | 4.5   | 4.5   | 4.5   | 4.5   | 4.5   | 4.5   | 4.5   | 4.5   |
| Lead/Lag             |       |       |       |       |       |       |       |       |
| Lead-Lag Optimize?   |       |       |       |       |       |       |       |       |
| Recall Mode          | None  | None  | None  | None  | C-Max | C-Max | C-Max | C-Max |
| Act Effct Green (s)  | 6.0   | 6.0   | 7.4   | 7.4   | 50.5  | 50.5  | 50.5  | 50.5  |
| Actuated g/C Ratio   | 0.09  | 0.09  | 0.11  | 0.11  | 0.75  | 0.75  | 0.75  | 0.75  |
| v/c Ratio            | 0.07  | 0.11  | 0.22  | 0.04  | 0.06  | 0.23  | 0.31  | 0.42  |
| Control Delay        | 28.8  | 0.4   | 30.2  | 0.1   | 7.3   | 4.8   | 9.6   | 7.0   |
| Queue Delay          | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Delay          | 28.8  | 0.4   | 30.2  | 0.1   | 7.3   | 4.8   | 9.6   | 7.0   |
| LOS                  | C     | A     | C     | A     | A     | A     | A     | A     |
| Approach Delay       |       | 4.4   |       | 16.9  |       | 4.9   |       | 7.3   |
| Approach LOS         |       | A     |       | B     |       | A     |       | A     |

Intersection Summary

Cycle Length: 67.5  
 Actuated Cycle Length: 67.5  
 Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green  
 Natural Cycle: 80  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.42  
 Intersection Signal Delay: 6.6  
 Intersection Capacity Utilization 50.5%  
 Intersection LOS: A  
 ICU Level of Service A  
 Analysis Period (min) 15

Splits and Phases: 4: Alameda Rd & 19th Ave



Deer Valley 30  
4: Alameda Rd & 19th Ave

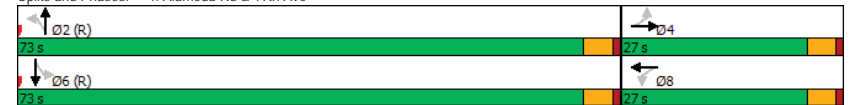
2024 Background PM Mitigated  
Timings

| Lane Group           | EBL   | EBT   | WBL   | WBT   | NBL   | NBT   | SBL   | SBT   |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations  | ↔     | ↔     | ↔     | ↔     | ↔     | ↔     | ↔     | ↔     |
| Traffic Volume (vph) | 14    | 0     | 150   | 0     | 85    | 1106  | 28    | 667   |
| Future Volume (vph)  | 14    | 0     | 150   | 0     | 85    | 1106  | 28    | 667   |
| Turn Type            | Perm  | NA    | Perm  | NA    | Perm  | NA    | Perm  | NA    |
| Protected Phases     |       | 4     |       | 8     |       | 2     |       | 6     |
| Permitted Phases     | 4     |       | 8     |       | 2     |       | 6     |       |
| Detector Phase       | 4     | 4     | 8     | 8     | 2     | 2     | 6     | 6     |
| Switch Phase         |       |       |       |       |       |       |       |       |
| Minimum Initial (s)  | 5.0   | 5.0   | 5.0   | 5.0   | 5.0   | 5.0   | 5.0   | 5.0   |
| Minimum Split (s)    | 22.5  | 22.5  | 22.5  | 22.5  | 22.5  | 22.5  | 22.5  | 22.5  |
| Total Split (s)      | 27.0  | 27.0  | 27.0  | 27.0  | 73.0  | 73.0  | 73.0  | 73.0  |
| Total Split (%)      | 27.0% | 27.0% | 27.0% | 27.0% | 73.0% | 73.0% | 73.0% | 73.0% |
| Yellow Time (s)      | 3.5   | 3.5   | 3.5   | 3.5   | 3.5   | 3.5   | 3.5   | 3.5   |
| All-Red Time (s)     | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   |
| Lost Time Adjust (s) | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Lost Time (s)  | 4.5   | 4.5   | 4.5   | 4.5   | 4.5   | 4.5   | 4.5   | 4.5   |
| Lead/Lag             |       |       |       |       |       |       |       |       |
| Lead-Lag Optimize?   |       |       |       |       |       |       |       |       |
| Recall Mode          | None  | None  | None  | None  | C-Max | C-Max | C-Max | C-Max |
| Act Effct Green (s)  | 17.5  | 17.5  | 17.5  | 17.5  | 73.5  | 73.5  | 73.5  | 73.5  |
| Actuated g/C Ratio   | 0.18  | 0.18  | 0.18  | 0.18  | 0.74  | 0.74  | 0.74  | 0.74  |
| v/c Ratio            | 0.08  | 0.14  | 0.74  | 0.37  | 0.20  | 0.35  | 0.12  | 0.30  |
| Control Delay        | 32.9  | 0.6   | 58.8  | 12.6  | 6.3   | 5.4   | 6.2   | 5.3   |
| Queue Delay          | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Delay          | 32.9  | 0.6   | 58.8  | 12.6  | 6.3   | 5.4   | 6.2   | 5.3   |
| LOS                  | C     | A     | E     | B     | A     | A     | A     | A     |
| Approach Delay       |       | 6.5   |       | 38.4  |       | 5.5   |       | 5.4   |
| Approach LOS         |       | A     |       | D     |       | A     |       | A     |

Intersection Summary

Cycle Length: 100  
 Actuated Cycle Length: 100  
 Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green  
 Natural Cycle: 45  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.74  
 Intersection Signal Delay: 9.4  
 Intersection Capacity Utilization 52.5%  
 Intersection LOS: A  
 ICU Level of Service A  
 Analysis Period (min) 15

Splits and Phases: 4: Alameda Rd & 19th Ave





Deer Valley 30  
5: 19th Ave & Sarah Bass PI

2024 Background AM Mitigated  
HCM 6th TWSC

| Intersection             |        |        |        |       |      |      |
|--------------------------|--------|--------|--------|-------|------|------|
| Int Delay, s/veh         | 0.6    |        |        |       |      |      |
| Movement                 | EBL    | EBR    | NBL    | NBT   | SBT  | SBR  |
| Lane Configurations      |        |        |        |       |      |      |
| Traffic Vol, veh/h       | 13     | 36     | 27     | 786   | 837  | 9    |
| Future Vol, veh/h        | 13     | 36     | 27     | 786   | 837  | 9    |
| Conflicting Peds, #/hr   | 0      | 0      | 0      | 0     | 0    | 0    |
| Sign Control             | Stop   | Stop   | Free   | Free  | Free | Free |
| RT Channelized           | -      | None   | -      | None  | -    | None |
| Storage Length           | 0      | 0      | 150    | -     | -    | -    |
| Veh in Median Storage, # | 0      | -      | -      | 0     | 0    | -    |
| Grade, %                 | 0      | -      | -      | 0     | 0    | -    |
| Peak Hour Factor         | 92     | 92     | 92     | 92    | 92   | 92   |
| Heavy Vehicles, %        | 8      | 8      | 8      | 8     | 8    | 8    |
| Mvmt Flow                | 14     | 39     | 29     | 854   | 910  | 10   |
| Major/Minor              | Minor2 | Major1 | Major2 |       |      |      |
| Conflicting Flow All     | 1315   | 460    | 920    | 0     | -    | 0    |
| Stage 1                  | 915    | -      | -      | -     | -    | -    |
| Stage 2                  | 400    | -      | -      | -     | -    | -    |
| Critical Hdwy            | 6.41   | 7.06   | 4.26   | -     | -    | -    |
| Critical Hdwy Stg 1      | 5.96   | -      | -      | -     | -    | -    |
| Critical Hdwy Stg 2      | 6.16   | -      | -      | -     | -    | -    |
| Follow-up Hdwy           | 3.73   | 3.38   | 2.28   | -     | -    | -    |
| Pot Cap-1 Maneuver       | 170    | 532    | 701    | -     | -    | -    |
| Stage 1                  | 328    | -      | -      | -     | -    | -    |
| Stage 2                  | 595    | -      | -      | -     | -    | -    |
| Platoon blocked, %       | -      | -      | -      | -     | -    | -    |
| Mov Cap-1 Maneuver       | 163    | 532    | 701    | -     | -    | -    |
| Mov Cap-2 Maneuver       | 251    | -      | -      | -     | -    | -    |
| Stage 1                  | 315    | -      | -      | -     | -    | -    |
| Stage 2                  | 595    | -      | -      | -     | -    | -    |
| Approach                 | EB     | NB     | SB     |       |      |      |
| HCM Control Delay, s     | 14.4   | 0.3    | 0      |       |      |      |
| HCM LOS                  | B      |        |        |       |      |      |
| Minor Lane/Major Mvmt    | NBL    | NBT    | EBLn1  | EBLn2 | SBT  | SBR  |
| Capacity (veh/h)         | 701    | -      | 251    | 532   | -    | -    |
| HCM Lane V/C Ratio       | 0.042  | -      | 0.056  | 0.074 | -    | -    |
| HCM Control Delay (s)    | 10.4   | -      | 20.2   | 12.3  | -    | -    |
| HCM Lane LOS             | B      | -      | C      | B     | -    | -    |
| HCM 95th %tile Q(veh)    | 0.1    | -      | 0.2    | 0.2   | -    | -    |

Deer Valley 30  
5: 19th Ave & Sarah Bass PI

2024 Background PM Mitigated  
HCM 6th TWSC

| Intersection             |        |        |        |       |      |      |
|--------------------------|--------|--------|--------|-------|------|------|
| Int Delay, s/veh         | 0.5    |        |        |       |      |      |
| Movement                 | EBL    | EBR    | NBL    | NBT   | SBT  | SBR  |
| Lane Configurations      |        |        |        |       |      |      |
| Traffic Vol, veh/h       | 16     | 37     | 10     | 1024  | 901  | 6    |
| Future Vol, veh/h        | 16     | 37     | 10     | 1024  | 901  | 6    |
| Conflicting Peds, #/hr   | 0      | 0      | 0      | 0     | 0    | 0    |
| Sign Control             | Stop   | Stop   | Free   | Free  | Free | Free |
| RT Channelized           | -      | None   | -      | None  | -    | None |
| Storage Length           | 0      | 0      | 150    | -     | -    | -    |
| Veh in Median Storage, # | 0      | -      | -      | 0     | 0    | -    |
| Grade, %                 | 0      | -      | -      | 0     | 0    | -    |
| Peak Hour Factor         | 92     | 92     | 92     | 92    | 92   | 92   |
| Heavy Vehicles, %        | 8      | 8      | 8      | 8     | 8    | 8    |
| Mvmt Flow                | 17     | 40     | 11     | 1113  | 979  | 7    |
| Major/Minor              | Minor2 | Major1 | Major2 |       |      |      |
| Conflicting Flow All     | 1450   | 493    | 986    | 0     | -    | 0    |
| Stage 1                  | 983    | -      | -      | -     | -    | -    |
| Stage 2                  | 467    | -      | -      | -     | -    | -    |
| Critical Hdwy            | 6.41   | 7.06   | 4.26   | -     | -    | -    |
| Critical Hdwy Stg 1      | 5.96   | -      | -      | -     | -    | -    |
| Critical Hdwy Stg 2      | 6.16   | -      | -      | -     | -    | -    |
| Follow-up Hdwy           | 3.73   | 3.38   | 2.28   | -     | -    | -    |
| Pot Cap-1 Maneuver       | 141    | 506    | 661    | -     | -    | -    |
| Stage 1                  | 302    | -      | -      | -     | -    | -    |
| Stage 2                  | 548    | -      | -      | -     | -    | -    |
| Platoon blocked, %       | -      | -      | -      | -     | -    | -    |
| Mov Cap-1 Maneuver       | 139    | 506    | 661    | -     | -    | -    |
| Mov Cap-2 Maneuver       | 231    | -      | -      | -     | -    | -    |
| Stage 1                  | 297    | -      | -      | -     | -    | -    |
| Stage 2                  | 548    | -      | -      | -     | -    | -    |
| Approach                 | EB     | NB     | SB     |       |      |      |
| HCM Control Delay, s     | 15.4   | 0.1    | 0      |       |      |      |
| HCM LOS                  | C      |        |        |       |      |      |
| Minor Lane/Major Mvmt    | NBL    | NBT    | EBLn1  | EBLn2 | SBT  | SBR  |
| Capacity (veh/h)         | 661    | -      | 231    | 506   | -    | -    |
| HCM Lane V/C Ratio       | 0.016  | -      | 0.075  | 0.079 | -    | -    |
| HCM Control Delay (s)    | 10.5   | -      | 21.8   | 12.7  | -    | -    |
| HCM Lane LOS             | B      | -      | C      | B     | -    | -    |
| HCM 95th %tile Q(veh)    | 0.1    | -      | 0.2    | 0.3   | -    | -    |

Deer Valley 30  
6: Pinnacle Peak Rd & 19th Ave

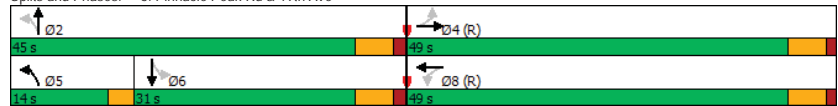
2024 Background AM Mitigated  
Timings

| Lane Group           | EBL   | EBT   | WBL   | WBT   | NBL   | NBT   | SBL   | SBT   |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations  | ↔     | ↕↔    | ↔     | ↕↔    | ↔     | ↕↔    | ↔     | ↕↔    |
| Traffic Volume (vph) | 363   | 856   | 69    | 256   | 169   | 489   | 142   | 659   |
| Future Volume (vph)  | 363   | 856   | 69    | 256   | 169   | 489   | 142   | 659   |
| Turn Type            | Perm  | NA    | Perm  | NA    | pm+pt | NA    | Perm  | NA    |
| Protected Phases     |       | 4     |       | 8     | 5     | 2     |       | 6     |
| Permitted Phases     | 4     |       | 8     |       | 2     |       | 6     |       |
| Detector Phase       | 4     | 4     | 8     | 8     | 5     | 2     | 6     | 6     |
| Switch Phase         |       |       |       |       |       |       |       |       |
| Minimum Initial (s)  | 15.0  | 15.0  | 15.0  | 15.0  | 5.0   | 15.0  | 15.0  | 15.0  |
| Minimum Split (s)    | 34.6  | 34.6  | 34.6  | 34.6  | 9.5   | 30.8  | 30.8  | 30.8  |
| Total Split (s)      | 49.0  | 49.0  | 49.0  | 49.0  | 14.0  | 45.0  | 31.0  | 31.0  |
| Total Split (%)      | 52.1% | 52.1% | 52.1% | 52.1% | 14.9% | 47.9% | 33.0% | 33.0% |
| Yellow Time (s)      | 4.3   | 4.3   | 4.3   | 4.3   | 3.0   | 4.3   | 4.3   | 4.3   |
| All-Red Time (s)     | 1.3   | 1.3   | 1.3   | 1.3   | 0.0   | 1.5   | 1.5   | 1.5   |
| Lost Time Adjust (s) | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Lost Time (s)  | 5.6   | 5.6   | 5.6   | 5.6   | 3.0   | 5.8   | 5.8   | 5.8   |
| Lead/Lag             |       |       |       |       | Lead  |       | Lag   | Lag   |
| Lead-Lag Optimize?   |       |       |       |       | Yes   |       | Yes   | Yes   |
| Recall Mode          | C-Max | C-Max | C-Max | C-Max | None  | Max   | Max   | Max   |
| Act Effct Green (s)  | 43.4  | 43.4  | 43.4  | 43.4  | 42.0  | 39.2  | 25.9  | 25.9  |
| Actuated g/C Ratio   | 0.46  | 0.46  | 0.46  | 0.46  | 0.45  | 0.42  | 0.28  | 0.28  |
| v/c Ratio            | 1.07  | 0.83  | 0.96  | 0.30  | 0.70  | 0.36  | 0.86  | 0.92  |
| Control Delay        | 94.4  | 26.8  | 124.0 | 9.6   | 32.3  | 17.3  | 74.6  | 49.0  |
| Queue Delay          | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Delay          | 94.4  | 26.8  | 124.0 | 9.6   | 32.3  | 17.3  | 74.6  | 49.0  |
| LOS                  | F     | C     | F     | A     | C     | B     | E     | D     |
| Approach Delay       |       | 42.9  |       | 25.3  |       | 20.4  |       | 53.0  |
| Approach LOS         |       | D     |       | C     |       | C     |       | D     |

Intersection Summary

Cycle Length: 94  
 Actuated Cycle Length: 94  
 Offset: 31 (33%), Referenced to phase 4:EBTL and 8:WBTL, Start of Green  
 Natural Cycle: 90  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 1.07  
 Intersection Signal Delay: 38.1  
 Intersection Capacity Utilization 94.8%  
 Intersection LOS: D  
 ICU Level of Service F  
 Analysis Period (min) 15

Splits and Phases: 6: Pinnacle Peak Rd & 19th Ave



Deer Valley 30  
6: Pinnacle Peak Rd & 19th Ave

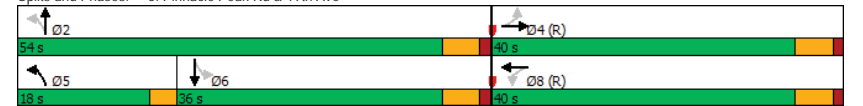
2024 Background PM Mitigated  
Timings

| Lane Group           | EBL   | EBT   | WBL   | WBT   | NBL   | NBT   | SBL   | SBT   |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations  | ↔     | ↕↔    | ↔     | ↕↔    | ↔     | ↕↔    | ↔     | ↕↔    |
| Traffic Volume (vph) | 142   | 229   | 119   | 766   | 408   | 817   | 165   | 622   |
| Future Volume (vph)  | 142   | 229   | 119   | 766   | 408   | 817   | 165   | 622   |
| Turn Type            | Perm  | NA    | Perm  | NA    | pm+pt | NA    | Perm  | NA    |
| Protected Phases     |       | 4     |       | 8     | 5     | 2     |       | 6     |
| Permitted Phases     | 4     |       | 8     |       | 2     |       | 6     |       |
| Detector Phase       | 4     | 4     | 8     | 8     | 5     | 2     | 6     | 6     |
| Switch Phase         |       |       |       |       |       |       |       |       |
| Minimum Initial (s)  | 15.0  | 15.0  | 15.0  | 15.0  | 5.0   | 15.0  | 15.0  | 15.0  |
| Minimum Split (s)    | 34.6  | 34.6  | 34.6  | 34.6  | 9.5   | 30.8  | 30.8  | 30.8  |
| Total Split (s)      | 40.0  | 40.0  | 40.0  | 40.0  | 18.0  | 54.0  | 36.0  | 36.0  |
| Total Split (%)      | 42.6% | 42.6% | 42.6% | 42.6% | 19.1% | 57.4% | 38.3% | 38.3% |
| Yellow Time (s)      | 4.3   | 4.3   | 4.3   | 4.3   | 3.0   | 4.3   | 4.3   | 4.3   |
| All-Red Time (s)     | 1.3   | 1.3   | 1.3   | 1.3   | 0.0   | 1.5   | 1.5   | 1.5   |
| Lost Time Adjust (s) | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Lost Time (s)  | 5.6   | 5.6   | 5.6   | 5.6   | 3.0   | 5.8   | 5.8   | 5.8   |
| Lead/Lag             |       |       |       |       | Lead  |       | Lag   | Lag   |
| Lead-Lag Optimize?   |       |       |       |       | Yes   |       | Yes   | Yes   |
| Recall Mode          | C-Max | C-Max | C-Max | C-Max | None  | Max   | Max   | Max   |
| Act Effct Green (s)  | 34.4  | 34.4  | 34.4  | 34.4  | 51.0  | 48.2  | 30.2  | 30.2  |
| Actuated g/C Ratio   | 0.37  | 0.37  | 0.37  | 0.37  | 0.54  | 0.51  | 0.32  | 0.32  |
| v/c Ratio            | 1.69  | 0.40  | 0.51  | 0.80  | 1.28  | 0.38  | 1.08  | 1.01  |
| Control Delay        | 379.5 | 11.2  | 31.9  | 32.1  | 170.0 | 14.2  | 126.4 | 62.6  |
| Queue Delay          | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Delay          | 379.5 | 11.2  | 31.9  | 32.1  | 170.0 | 14.2  | 126.4 | 62.6  |
| LOS                  | F     | B     | C     | C     | F     | B     | F     | E     |
| Approach Delay       |       | 95.8  |       | 32.0  |       | 64.4  |       | 71.8  |
| Approach LOS         |       | F     |       | C     |       | E     |       | E     |

Intersection Summary

Cycle Length: 94  
 Actuated Cycle Length: 94  
 Offset: 31 (33%), Referenced to phase 4:EBTL and 8:WBTL, Start of Green  
 Natural Cycle: 90  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 1.69  
 Intersection Signal Delay: 63.2  
 Intersection Capacity Utilization 106.4%  
 Intersection LOS: E  
 ICU Level of Service G  
 Analysis Period (min) 15

Splits and Phases: 6: Pinnacle Peak Rd & 19th Ave





Deer Valley 30  
7: 15th Ave & Happy Valley Rd

2024 Background AM Mitigated  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Int Delay, s/veh         | 1.1  |      |      |      |      |      |      |      |      |      |      |      |
| Movement                 | EBL  | EBT  | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
| Lane Configurations      | ↕    |      |      | ↕    |      |      | ↕    |      |      | ↕    |      |      |
| Traffic Vol, veh/h       | 6    | 676  | 23   | 14   | 376  | 0    | 19   | 0    | 10   | 2    | 0    | 6    |
| Future Vol, veh/h        | 6    | 676  | 23   | 14   | 376  | 0    | 19   | 0    | 10   | 2    | 0    | 6    |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Free | Free | Free | Free | Free | Free | Stop | Stop | Stop | Stop | Stop | Stop |
| RT Channelized           | -    | -    | None | -    | -    | None | -    | -    | None | -    | -    | None |
| Storage Length           | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    |
| Veh in Median Storage, # | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Grade, %                 | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Peak Hour Factor         | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   |
| Heavy Vehicles, %        | 8    | 8    | 8    | 8    | 8    | 8    | 8    | 8    | 8    | 8    | 8    | 8    |
| Mvmt Flow                | 7    | 735  | 25   | 15   | 409  | 0    | 21   | 0    | 11   | 2    | 0    | 7    |

| Major/Minor          | Major1 | Major2 | Minor1 | Minor2 |
|----------------------|--------|--------|--------|--------|
| Conflicting Flow All | 409    | 0      | 760    | 0      |
| Stage 1              | -      | -      | -      | -      |
| Stage 2              | -      | -      | -      | -      |
| Critical Hdwy        | 4.18   | -      | 4.18   | -      |
| Critical Hdwy Stg 1  | -      | -      | -      | -      |
| Critical Hdwy Stg 2  | -      | -      | -      | -      |
| Follow-up Hdwy       | 2.272  | -      | 2.272  | -      |
| Pot Cap-1 Maneuver   | 1150   | -      | 825    | -      |
| Stage 1              | -      | -      | -      | -      |
| Stage 2              | -      | -      | -      | -      |
| Platoon blocked, %   | 1      | -      | -      | -      |
| Mov Cap-1 Maneuver   | 1150   | -      | 825    | -      |
| Mov Cap-2 Maneuver   | -      | -      | -      | -      |
| Stage 1              | -      | -      | -      | -      |
| Stage 2              | -      | -      | -      | -      |

| Approach             | EB  | WB  | NB   | SB   |
|----------------------|-----|-----|------|------|
| HCM Control Delay, s | 0.1 | 0.3 | 30.8 | 15.8 |
| HCM LOS              |     |     | D    | C    |

| Minor Lane/Major Mvmt | NBLn1 | EBL   | EBT | EBR | WBL   | WBT | WBR | SBLn1 |
|-----------------------|-------|-------|-----|-----|-------|-----|-----|-------|
| Capacity (veh/h)      | 171   | 1150  | -   | -   | 825   | -   | -   | 342   |
| HCM Lane V/C Ratio    | 0.184 | 0.006 | -   | -   | 0.018 | -   | -   | 0.025 |
| HCM Control Delay (s) | 30.8  | 8.1   | 0   | -   | 9.4   | 0   | -   | 15.8  |
| HCM Lane LOS          | D     | A     | A   | -   | A     | A   | -   | C     |
| HCM 95th %tile Q(veh) | 0.7   | 0     | -   | -   | 0.1   | -   | -   | 0.1   |

Deer Valley 30  
7: 15th Ave & Happy Valley Rd

2024 Background PM Mitigated  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Int Delay, s/veh         | 0.4  |      |      |      |      |      |      |      |      |      |      |      |
| Movement                 | EBL  | EBT  | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
| Lane Configurations      | ↕    |      |      | ↕    |      |      | ↕    |      |      | ↕    |      |      |
| Traffic Vol, veh/h       | 2    | 527  | 3    | 8    | 1109 | 0    | 20   | 0    | 17   | 0    | 0    | 1    |
| Future Vol, veh/h        | 2    | 527  | 3    | 8    | 1109 | 0    | 20   | 0    | 17   | 0    | 0    | 1    |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Free | Free | Free | Free | Free | Free | Stop | Stop | Stop | Stop | Stop | Stop |
| RT Channelized           | -    | -    | None | -    | -    | None | -    | -    | None | -    | -    | None |
| Storage Length           | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    |
| Veh in Median Storage, # | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Grade, %                 | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Peak Hour Factor         | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   |
| Heavy Vehicles, %        | 8    | 8    | 8    | 8    | 8    | 8    | 8    | 8    | 8    | 8    | 8    | 8    |
| Mvmt Flow                | 2    | 573  | 3    | 9    | 1205 | 0    | 22   | 0    | 18   | 0    | 0    | 1    |

| Major/Minor          | Major1 | Major2 | Minor1 | Minor2 |
|----------------------|--------|--------|--------|--------|
| Conflicting Flow All | 1205   | 0      | 576    | 0      |
| Stage 1              | -      | -      | -      | -      |
| Stage 2              | -      | -      | -      | -      |
| Critical Hdwy        | 4.18   | -      | 4.18   | -      |
| Critical Hdwy Stg 1  | -      | -      | -      | -      |
| Critical Hdwy Stg 2  | -      | -      | -      | -      |
| Follow-up Hdwy       | 2.272  | -      | 2.272  | -      |
| Pot Cap-1 Maneuver   | *199   | -      | 968    | -      |
| Stage 1              | -      | -      | -      | -      |
| Stage 2              | -      | -      | -      | -      |
| Platoon blocked, %   | 1      | -      | -      | -      |
| Mov Cap-1 Maneuver   | *199   | -      | 968    | -      |
| Mov Cap-2 Maneuver   | -      | -      | -      | -      |
| Stage 1              | -      | -      | -      | -      |
| Stage 2              | -      | -      | -      | -      |

| Approach             | EB  | WB  | NB   | SB   |
|----------------------|-----|-----|------|------|
| HCM Control Delay, s | 0.1 | 0.1 | 12.7 | 32.1 |
| HCM LOS              |     |     | B    | D    |

| Minor Lane/Major Mvmt | NBLn1 | EBL   | EBT | EBR | WBL   | WBT | WBR | SBLn1 |
|-----------------------|-------|-------|-----|-----|-------|-----|-----|-------|
| Capacity (veh/h)      | 506   | *199  | -   | -   | 968   | -   | -   | 134   |
| HCM Lane V/C Ratio    | 0.079 | 0.011 | -   | -   | 0.009 | -   | -   | 0.008 |
| HCM Control Delay (s) | 12.7  | 23.3  | 0   | -   | 8.8   | 0   | -   | 32.1  |
| HCM Lane LOS          | B     | C     | A   | -   | A     | A   | -   | D     |
| HCM 95th %tile Q(veh) | 0.3   | 0     | -   | -   | 0     | -   | -   | 0     |

Notes  
 -: Volume exceeds capacity    \$: Delay exceeds 300s    +: Computation Not Defined    \*: All major volume in platoon



Deer Valley 30  
8: 7th Ave & Happy Valley Rd

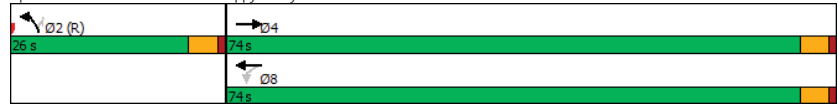
2024 Background AM Mitigated  
Timings

| Lane Group           | EBT   | WBL   | WBT   | NBL   | NBR   |
|----------------------|-------|-------|-------|-------|-------|
| Lane Configurations  | ↔     | ↔     | ↔     | ↔     | ↔     |
| Traffic Volume (vph) | 508   | 9     | 282   | 54    | 10    |
| Future Volume (vph)  | 508   | 9     | 282   | 54    | 10    |
| Turn Type            | NA    | Perm  | NA    | Prot  | Perm  |
| Protected Phases     | 4     |       | 8     | 2     |       |
| Permitted Phases     |       | 8     |       |       | 2     |
| Detector Phase       | 4     | 8     | 8     | 2     | 2     |
| Switch Phase         |       |       |       |       |       |
| Minimum Initial (s)  | 5.0   | 5.0   | 5.0   | 5.0   | 5.0   |
| Minimum Split (s)    | 22.5  | 22.5  | 22.5  | 22.5  | 22.5  |
| Total Split (s)      | 74.0  | 74.0  | 74.0  | 26.0  | 26.0  |
| Total Split (%)      | 74.0% | 74.0% | 74.0% | 26.0% | 26.0% |
| Yellow Time (s)      | 3.5   | 3.5   | 3.5   | 3.5   | 3.5   |
| All-Red Time (s)     | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   |
| Lost Time Adjust (s) | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Lost Time (s)  | 4.5   | 4.5   | 4.5   | 4.5   | 4.5   |
| Lead/Lag             |       |       |       |       |       |
| Lead-Lag Optimize?   |       |       |       |       |       |
| Recall Mode          | None  | None  | None  | C-Max | C-Max |
| Act Effct Green (s)  | 60.3  | 60.3  | 60.3  | 30.7  | 30.7  |
| Actuated g/C Ratio   | 0.60  | 0.60  | 0.60  | 0.31  | 0.31  |
| v/c Ratio            | 0.76  | 0.05  | 0.29  | 0.12  | 0.02  |
| Control Delay        | 17.8  | 5.8   | 9.4   | 21.6  | 9.4   |
| Queue Delay          | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Delay          | 17.8  | 5.8   | 9.4   | 21.6  | 9.4   |
| LOS                  | B     | A     | A     | C     | A     |
| Approach Delay       | 17.8  |       | 9.3   | 19.7  |       |
| Approach LOS         | B     |       | A     | B     |       |

Intersection Summary

|  |                        |
|--|------------------------|
| Cycle Length: 100  |                        |
| Actuated Cycle Length: 100                                       |                        |
| Offset: 0 (0%), Referenced to phase 2:NBL and 6.: Start of Green |                        |
| Natural Cycle: 60  |                        |
| Control Type: Actuated-Coordinated                               |                        |
| Maximum v/c Ratio: 0.76  |                        |
| Intersection Signal Delay: 15.6                                  | Intersection LOS: B    |
| Intersection Capacity Utilization 51.4%                          | ICU Level of Service A |
| Analysis Period (min) 15   |                        |

Splits and Phases: 8: 7th Ave & Happy Valley Rd



Deer Valley 30  
8: 7th Ave & Happy Valley Rd

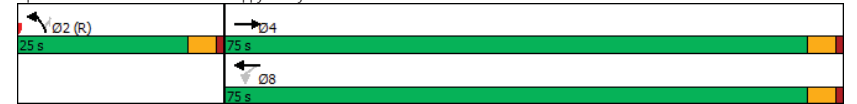
2024 Background PM Mitigated  
Timings

| Lane Group           | EBT   | WBL   | WBT   | NBL   | NBR   |
|----------------------|-------|-------|-------|-------|-------|
| Lane Configurations  | ↔     | ↔     | ↔     | ↔     | ↔     |
| Traffic Volume (vph) | 479   | 19    | 854   | 223   | 11    |
| Future Volume (vph)  | 479   | 19    | 854   | 223   | 11    |
| Turn Type            | NA    | Perm  | NA    | Prot  | Perm  |
| Protected Phases     | 4     |       | 8     | 2     |       |
| Permitted Phases     |       | 8     |       |       | 2     |
| Detector Phase       | 4     | 8     | 8     | 2     | 2     |
| Switch Phase         |       |       |       |       |       |
| Minimum Initial (s)  | 5.0   | 5.0   | 5.0   | 5.0   | 5.0   |
| Minimum Split (s)    | 22.5  | 22.5  | 22.5  | 22.5  | 22.5  |
| Total Split (s)      | 75.0  | 75.0  | 75.0  | 25.0  | 25.0  |
| Total Split (%)      | 75.0% | 75.0% | 75.0% | 25.0% | 25.0% |
| Yellow Time (s)      | 3.5   | 3.5   | 3.5   | 3.5   | 3.5   |
| All-Red Time (s)     | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   |
| Lost Time Adjust (s) | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Lost Time (s)  | 4.5   | 4.5   | 4.5   | 4.5   | 4.5   |
| Lead/Lag             |       |       |       |       |       |
| Lead-Lag Optimize?   |       |       |       |       |       |
| Recall Mode          | None  | None  | None  | C-Max | C-Max |
| Act Effct Green (s)  | 66.9  | 66.9  | 66.9  | 24.1  | 24.1  |
| Actuated g/C Ratio   | 0.67  | 0.67  | 0.67  | 0.24  | 0.24  |
| v/c Ratio            | 0.52  | 0.05  | 0.79  | 0.60  | 0.03  |
| Control Delay        | 9.5   | 4.9   | 17.0  | 38.7  | 14.2  |
| Queue Delay          | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Delay          | 9.5   | 4.9   | 17.0  | 38.7  | 14.2  |
| LOS                  | A     | A     | B     | D     | B     |
| Approach Delay       | 9.5   |       | 16.7  | 37.5  |       |
| Approach LOS         | A     |       | B     | D     |       |

Intersection Summary

|  |                        |
|--|------------------------|
| Cycle Length: 100  |                        |
| Actuated Cycle Length: 100                                       |                        |
| Offset: 0 (0%), Referenced to phase 2:NBL and 6.: Start of Green |                        |
| Natural Cycle: 70  |                        |
| Control Type: Actuated-Coordinated                               |                        |
| Maximum v/c Ratio: 0.79  |                        |
| Intersection Signal Delay: 17.2                                  | Intersection LOS: B    |
| Intersection Capacity Utilization 64.8%                          | ICU Level of Service C |
| Analysis Period (min) 15   |                        |

Splits and Phases: 8: 7th Ave & Happy Valley Rd



Deer Valley 30  
8: 7th Ave & Happy Valley Rd

2024 Background AM Mitigated  
HCM 6th Signalized Intersection Summary

|                              | →    | ↘    | ↙    | ←    | ↖    | ↗    |
|------------------------------|------|------|------|------|------|------|
| Movement                     | EBT  | EBR  | WBL  | WBT  | NBL  | NBR  |
| Lane Configurations          | ↔    | ↔    | ↔    | ↔    | ↔    | ↔    |
| Traffic Volume (veh/h)       | 508  | 214  | 9    | 282  | 54   | 10   |
| Future Volume (veh/h)        | 508  | 214  | 9    | 282  | 54   | 10   |
| Initial Q (Qb), veh          | 0    | 0    | 0    | 0    | 0    | 0    |
| Ped-Bike Adj(A_pbT)          |      | 1.00 | 1.00 |      | 1.00 | 1.00 |
| Parking Bus, Adj             | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Work Zone On Approach        | No   |      | No   |      | No   |      |
| Adj Sat Flow, veh/h/ln       | 1781 | 1781 | 1781 | 1781 | 1781 | 1781 |
| Adj Flow Rate, veh/h         | 552  | 233  | 10   | 307  | 59   | 11   |
| Peak Hour Factor             | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Percent Heavy Veh, %         | 8    | 8    | 8    | 8    | 8    | 8    |
| Cap, veh/h                   | 607  | 256  | 129  | 909  | 678  | 603  |
| Arrive On Green              | 0.51 | 0.51 | 0.51 | 0.51 | 0.40 | 0.40 |
| Sat Flow, veh/h              | 1189 | 502  | 657  | 1781 | 1697 | 1510 |
| Grp Volume(v), veh/h         | 0    | 785  | 10   | 307  | 59   | 11   |
| Grp Sat Flow(s),veh/h/ln     | 0    | 1691 | 657  | 1781 | 1697 | 1510 |
| Q Serve(g_s), s              | 0.0  | 42.4 | 1.4  | 10.2 | 2.2  | 0.4  |
| Cycle Q Clear(g_c), s        | 0.0  | 42.4 | 43.8 | 10.2 | 2.2  | 0.4  |
| Prop In Lane                 |      | 0.30 | 1.00 |      | 1.00 | 1.00 |
| Lane Grp Cap(c), veh/h       | 0    | 863  | 129  | 909  | 678  | 603  |
| V/C Ratio(X)                 | 0.00 | 0.91 | 0.08 | 0.34 | 0.09 | 0.02 |
| Avail Cap(c_a), veh/h        | 0    | 1175 | 250  | 1238 | 678  | 603  |
| HCM Platoon Ratio            | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(I)           | 0.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Uniform Delay (d), s/veh     | 0.0  | 22.4 | 42.4 | 14.5 | 18.7 | 18.2 |
| Incr Delay (d2), s/veh       | 0.0  | 8.3  | 0.3  | 0.2  | 0.3  | 0.1  |
| Initial Q Delay(d3),s/veh    | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| %ile BackOfQ(50%),veh/ln     | 0.0  | 17.7 | 0.2  | 4.0  | 0.9  | 0.2  |
| Unsig. Movement Delay, s/veh |      |      |      |      |      |      |
| LnGrp Delay(d),s/veh         | 0.0  | 30.7 | 42.6 | 14.7 | 18.9 | 18.2 |
| LnGrp LOS                    | A    | C    | D    | B    | B    | B    |
| Approach Vol, veh/h          | 785  |      |      | 317  | 70   |      |
| Approach Delay, s/veh        | 30.7 |      |      | 15.6 | 18.8 |      |
| Approach LOS                 | C    |      |      | B    | B    |      |
| Timer - Assigned Phs         |      | 2    |      | 4    |      | 8    |
| Phs Duration (G+Y+Rc), s     |      | 44.5 |      | 55.5 |      | 55.5 |
| Change Period (Y+Rc), s      |      | 4.5  |      | 4.5  |      | 4.5  |
| Max Green Setting (Gmax), s  |      | 21.5 |      | 69.5 |      | 69.5 |
| Max Q Clear Time (g_c+I1), s |      | 4.2  |      | 44.4 |      | 45.8 |
| Green Ext Time (p_c), s      |      | 0.1  |      | 6.6  |      | 1.9  |
| <b>Intersection Summary</b>  |      |      |      |      |      |      |
| HCM 6th Ctrl Delay           |      |      | 25.9 |      |      |      |
| HCM 6th LOS                  |      |      | C    |      |      |      |

Deer Valley 30  
8: 7th Ave & Happy Valley Rd

2024 Background PM Mitigated  
HCM 6th Signalized Intersection Summary

|                              | →    | ↘    | ↙    | ←    | ↖    | ↗    |
|------------------------------|------|------|------|------|------|------|
| Movement                     | EBT  | EBR  | WBL  | WBT  | NBL  | NBR  |
| Lane Configurations          | ↔    | ↔    | ↔    | ↔    | ↔    | ↔    |
| Traffic Volume (veh/h)       | 479  | 77   | 19   | 854  | 223  | 11   |
| Future Volume (veh/h)        | 479  | 77   | 19   | 854  | 223  | 11   |
| Initial Q (Qb), veh          | 0    | 0    | 0    | 0    | 0    | 0    |
| Ped-Bike Adj(A_pbT)          |      | 1.00 | 1.00 |      | 1.00 | 1.00 |
| Parking Bus, Adj             | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Work Zone On Approach        | No   |      | No   |      | No   |      |
| Adj Sat Flow, veh/h/ln       | 1781 | 1781 | 1781 | 1781 | 1781 | 1781 |
| Adj Flow Rate, veh/h         | 521  | 84   | 21   | 928  | 242  | 12   |
| Peak Hour Factor             | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Percent Heavy Veh, %         | 8    | 8    | 8    | 8    | 8    | 8    |
| Cap, veh/h                   | 851  | 137  | 335  | 1013 | 579  | 515  |
| Arrive On Green              | 0.57 | 0.57 | 0.57 | 0.57 | 0.34 | 0.34 |
| Sat Flow, veh/h              | 1497 | 241  | 776  | 1781 | 1697 | 1510 |
| Grp Volume(v), veh/h         | 0    | 605  | 21   | 928  | 242  | 12   |
| Grp Sat Flow(s),veh/h/ln     | 0    | 1738 | 776  | 1781 | 1697 | 1510 |
| Q Serve(g_s), s              | 0.0  | 23.0 | 1.8  | 46.9 | 11.0 | 0.5  |
| Cycle Q Clear(g_c), s        | 0.0  | 23.0 | 24.9 | 46.9 | 11.0 | 0.5  |
| Prop In Lane                 |      | 0.14 | 1.00 |      | 1.00 | 1.00 |
| Lane Grp Cap(c), veh/h       | 0    | 988  | 335  | 1013 | 579  | 515  |
| V/C Ratio(X)                 | 0.00 | 0.61 | 0.06 | 0.92 | 0.42 | 0.02 |
| Avail Cap(c_a), veh/h        | 0    | 1225 | 440  | 1256 | 579  | 515  |
| HCM Platoon Ratio            | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(I)           | 0.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Uniform Delay (d), s/veh     | 0.0  | 14.3 | 22.5 | 19.4 | 25.3 | 21.9 |
| Incr Delay (d2), s/veh       | 0.0  | 0.6  | 0.1  | 9.2  | 2.2  | 0.1  |
| Initial Q Delay(d3),s/veh    | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| %ile BackOfQ(50%),veh/ln     | 0.0  | 8.6  | 0.3  | 20.2 | 4.7  | 0.2  |
| Unsig. Movement Delay, s/veh |      |      |      |      |      |      |
| LnGrp Delay(d),s/veh         | 0.0  | 14.9 | 22.6 | 28.6 | 27.5 | 21.9 |
| LnGrp LOS                    | A    | B    | C    | C    | C    | C    |
| Approach Vol, veh/h          | 605  |      |      | 949  | 254  |      |
| Approach Delay, s/veh        | 14.9 |      |      | 28.5 | 27.3 |      |
| Approach LOS                 | B    |      |      | C    | C    |      |
| Timer - Assigned Phs         |      | 2    |      | 4    |      | 8    |
| Phs Duration (G+Y+Rc), s     |      | 38.6 |      | 61.4 |      | 61.4 |
| Change Period (Y+Rc), s      |      | 4.5  |      | 4.5  |      | 4.5  |
| Max Green Setting (Gmax), s  |      | 20.5 |      | 70.5 |      | 70.5 |
| Max Q Clear Time (g_c+I1), s |      | 13.0 |      | 25.0 |      | 48.9 |
| Green Ext Time (p_c), s      |      | 0.4  |      | 4.9  |      | 8.0  |
| <b>Intersection Summary</b>  |      |      |      |      |      |      |
| HCM 6th Ctrl Delay           |      |      | 23.8 |      |      |      |
| HCM 6th LOS                  |      |      | C    |      |      |      |

Deer Valley 30  
9: 7th Ave & Pinnacle Peak Rd

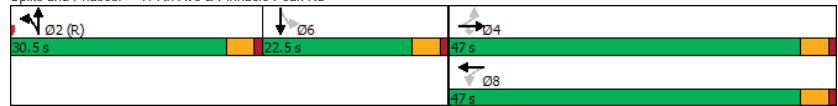
2024 Background AM Mitigated  
Timings

| Lane Group           | EBL   | EBT   | EBR   | WBL   | WBT   | NBL   | NBT   | SBL   | SBT   |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations  | ↔     | ↔     | ↔     | ↔     | ↔     | ↔     | ↔     | ↔     | ↔     |
| Traffic Volume (vph) | 175   | 455   | 282   | 46    | 366   | 79    | 85    | 59    | 38    |
| Future Volume (vph)  | 175   | 455   | 282   | 46    | 366   | 79    | 85    | 59    | 38    |
| Turn Type            | Perm  | NA    | Perm  | Perm  | NA    | Split | NA    | Perm  | NA    |
| Protected Phases     |       | 4     |       |       |       | 8     | 2     |       | 6     |
| Permitted Phases     | 4     |       | 4     | 8     |       |       |       | 6     |       |
| Detector Phase       | 4     | 4     | 4     | 8     | 8     | 2     | 2     | 6     | 6     |
| Switch Phase         |       |       |       |       |       |       |       |       |       |
| Minimum Initial (s)  | 5.0   | 5.0   | 5.0   | 5.0   | 5.0   | 5.0   | 5.0   | 5.0   | 5.0   |
| Minimum Split (s)    | 22.5  | 22.5  | 22.5  | 22.5  | 22.5  | 22.5  | 22.5  | 22.5  | 22.5  |
| Total Split (s)      | 47.0  | 47.0  | 47.0  | 47.0  | 47.0  | 30.5  | 30.5  | 22.5  | 22.5  |
| Total Split (%)      | 47.0% | 47.0% | 47.0% | 47.0% | 47.0% | 30.5% | 30.5% | 22.5% | 22.5% |
| Yellow Time (s)      | 3.5   | 3.5   | 3.5   | 3.5   | 3.5   | 3.5   | 3.5   | 3.5   | 3.5   |
| All-Red Time (s)     | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   |
| Lost Time Adjust (s) | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Lost Time (s)  | 4.5   | 4.5   | 4.5   | 4.5   | 4.5   | 4.5   | 4.5   | 4.5   | 4.5   |
| Lead/Lag             |       |       |       |       |       |       |       |       |       |
| Lead-Lag Optimize?   |       |       |       |       |       |       |       |       |       |
| Recall Mode          | None  | None  | None  | None  | None  | C-Max | C-Max | Max   | Max   |
| Act Effct Green (s)  | 42.5  | 42.5  | 42.5  | 42.5  | 42.5  | 26.0  | 26.0  | 18.0  | 18.0  |
| Actuated g/C Ratio   | 0.42  | 0.42  | 0.42  | 0.42  | 0.42  | 0.26  | 0.26  | 0.18  | 0.18  |
| v/c Ratio            | 1.40  | 0.66  | 0.38  | 0.23  | 0.83  | 0.20  | 0.27  | 0.30  | 0.24  |
| Control Delay        | 244.7 | 28.3  | 3.8   | 22.1  | 35.9  | 30.4  | 27.5  | 54.1  | 36.2  |
| Queue Delay          | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Delay          | 244.7 | 28.3  | 3.8   | 22.1  | 35.9  | 30.4  | 27.5  | 54.1  | 36.2  |
| LOS                  | F     | C     | A     | C     | D     | C     | C     | D     | D     |
| Approach Delay       |       | 62.2  |       |       | 34.8  |       | 28.7  |       | 44.2  |
| Approach LOS         |       | E     |       |       | C     |       | C     |       | D     |

Intersection Summary

|  |                        |
|--|------------------------|
| Cycle Length: 100  |                        |
| Actuated Cycle Length: 100                                 |                        |
| Offset: 0 (0%), Referenced to phase 2:NBTL, Start of Green |                        |
| Natural Cycle: 90  |                        |
| Control Type: Actuated-Coordinated                         |                        |
| Maximum v/c Ratio: 1.40                                    |                        |
| Intersection Signal Delay: 48.4                            | Intersection LOS: D    |
| Intersection Capacity Utilization 62.8%                    | ICU Level of Service B |
| Analysis Period (min) 15                                   |                        |

Splits and Phases: 9: 7th Ave & Pinnacle Peak Rd



Deer Valley 30  
9: 7th Ave & Pinnacle Peak Rd

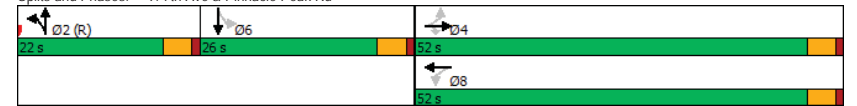
2024 Background PM Mitigated  
Timings

| Lane Group           | EBL   | EBT   | EBR   | WBL   | WBT   | NBL   | NBT   | SBL   | SBT   |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations  | ↔     | ↔     | ↔     | ↔     | ↔     | ↔     | ↔     | ↔     | ↔     |
| Traffic Volume (vph) | 39    | 389   | 74    | 30    | 440   | 207   | 38    | 185   | 83    |
| Future Volume (vph)  | 39    | 389   | 74    | 30    | 440   | 207   | 38    | 185   | 83    |
| Turn Type            | Perm  | NA    | Perm  | Perm  | NA    | Split | NA    | Perm  | NA    |
| Protected Phases     |       | 4     |       |       |       | 8     | 2     |       | 6     |
| Permitted Phases     | 4     |       | 4     | 8     |       |       |       | 6     |       |
| Detector Phase       | 4     | 4     | 4     | 8     | 8     | 2     | 2     | 6     | 6     |
| Switch Phase         |       |       |       |       |       |       |       |       |       |
| Minimum Initial (s)  | 5.0   | 5.0   | 5.0   | 5.0   | 5.0   | 5.0   | 5.0   | 5.0   | 5.0   |
| Minimum Split (s)    | 22.5  | 22.5  | 22.5  | 22.5  | 22.5  | 22.5  | 22.5  | 22.5  | 22.5  |
| Total Split (s)      | 52.0  | 52.0  | 52.0  | 52.0  | 52.0  | 22.0  | 22.0  | 26.0  | 26.0  |
| Total Split (%)      | 52.0% | 52.0% | 52.0% | 52.0% | 52.0% | 22.0% | 22.0% | 26.0% | 26.0% |
| Yellow Time (s)      | 3.5   | 3.5   | 3.5   | 3.5   | 3.5   | 3.5   | 3.5   | 3.5   | 3.5   |
| All-Red Time (s)     | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   |
| Lost Time Adjust (s) | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Lost Time (s)  | 4.5   | 4.5   | 4.5   | 4.5   | 4.5   | 4.5   | 4.5   | 4.5   | 4.5   |
| Lead/Lag             |       |       |       |       |       |       |       |       |       |
| Lead-Lag Optimize?   |       |       |       |       |       |       |       |       |       |
| Recall Mode          | None  | None  | None  | None  | None  | C-Max | C-Max | Max   | Max   |
| Act Effct Green (s)  | 38.1  | 38.1  | 38.1  | 38.1  | 38.1  | 26.9  | 26.9  | 21.5  | 21.5  |
| Actuated g/C Ratio   | 0.38  | 0.38  | 0.38  | 0.38  | 0.38  | 0.27  | 0.27  | 0.22  | 0.22  |
| v/c Ratio            | 0.33  | 0.63  | 0.13  | 0.15  | 0.82  | 0.50  | 0.18  | 0.76  | 0.67  |
| Control Delay        | 27.1  | 28.8  | 4.1   | 19.3  | 37.5  | 38.5  | 19.2  | 60.4  | 36.0  |
| Queue Delay          | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Delay          | 27.1  | 28.8  | 4.1   | 19.3  | 37.5  | 38.5  | 19.2  | 60.4  | 36.0  |
| LOS                  | C     | C     | A     | B     | D     | D     | B     | E     | D     |
| Approach Delay       |       | 25.0  |       |       | 36.5  |       | 33.3  |       | 46.3  |
| Approach LOS         |       | C     |       |       | D     |       | C     |       | D     |

Intersection Summary

|  |                        |
|--|------------------------|
| Cycle Length: 100  |                        |
| Actuated Cycle Length: 100                                 |                        |
| Offset: 0 (0%), Referenced to phase 2:NBTL, Start of Green |                        |
| Natural Cycle: 75  |                        |
| Control Type: Actuated-Coordinated                         |                        |
| Maximum v/c Ratio: 0.82                                    |                        |
| Intersection Signal Delay: 35.1                            | Intersection LOS: D    |
| Intersection Capacity Utilization 69.9%                    | ICU Level of Service C |
| Analysis Period (min) 15                                   |                        |

Splits and Phases: 9: 7th Ave & Pinnacle Peak Rd



Deer Valley 30  
9: 7th Ave & Pinnacle Peak Rd

2024 Background AM Mitigated  
HCM 6th Signalized Intersection Summary

| Movement                     |       |      |      |      |      |      |      |      |      |      |      |      |  |
|------------------------------|-------|------|------|------|------|------|------|------|------|------|------|------|--|
|                              | EBL   | EBT  | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |  |
| Lane Configurations          |       |      |      |      |      |      |      |      |      |      |      |      |  |
| Traffic Volume (veh/h)       | 175   | 455  | 282  | 46   | 366  | 190  | 79   | 85   | 26   | 59   | 38   | 35   |  |
| Future Volume (veh/h)        | 175   | 455  | 282  | 46   | 366  | 190  | 79   | 85   | 26   | 59   | 38   | 35   |  |
| Initial Q (Ob), veh          | 0     | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |  |
| Ped-Bike Adj(A_pbT)          | 1.00  |      | 1.00 | 1.00 |      | 1.00 | 1.00 |      | 1.00 | 1.00 |      | 1.00 |  |
| Parking Bus, Adj             | 1.00  | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |  |
| Work Zone On Approach        | No    | No   | No   | No   | No   | No   | No   | No   | No   | No   | No   | No   |  |
| Adj Sat Flow, veh/h/ln       | 1781  | 1781 | 1781 | 1781 | 1781 | 1781 | 1781 | 1781 | 1781 | 1781 | 1781 | 1781 |  |
| Adj Flow Rate, veh/h         | 190   | 495  | 307  | 50   | 398  | 207  | 86   | 92   | 28   | 64   | 41   | 38   |  |
| Peak Hour Factor             | 0.92  | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |  |
| Percent Heavy Veh, %         | 8     | 8    | 8    | 8    | 8    | 8    | 8    | 8    | 8    | 8    | 8    | 8    |  |
| Cap, veh/h                   | 150   | 757  | 642  | 204  | 469  | 244  | 441  | 341  | 104  | 305  | 153  | 142  |  |
| Arrive On Green              | 0.43  | 0.43 | 0.43 | 0.43 | 0.43 | 0.43 | 0.26 | 0.26 | 0.26 | 0.18 | 0.18 | 0.18 |  |
| Sat Flow, veh/h              | 776   | 1781 | 1510 | 646  | 1104 | 574  | 1697 | 1311 | 399  | 1697 | 851  | 789  |  |
| Grp Volume(v), veh/h         | 190   | 495  | 307  | 50   | 0    | 605  | 86   | 0    | 120  | 64   | 0    | 79   |  |
| Grp Sat Flow(s), veh/h/ln    | 776   | 1781 | 1510 | 646  | 0    | 1678 | 1697 | 0    | 1710 | 1697 | 0    | 1639 |  |
| Q Serve(g_s), s              | 10.1  | 22.1 | 14.7 | 6.7  | 0.0  | 32.4 | 4.0  | 0.0  | 5.6  | 3.2  | 0.0  | 4.2  |  |
| Cycle Q Clear(g_c), s        | 42.5  | 22.1 | 14.7 | 28.8 | 0.0  | 32.4 | 4.0  | 0.0  | 5.6  | 3.2  | 0.0  | 4.2  |  |
| Prop In Lane                 | 1.00  |      | 1.00 | 1.00 |      | 0.34 | 1.00 |      | 0.23 | 1.00 |      | 0.48 |  |
| Lane Grp Cap(c), veh/h       | 150   | 757  | 642  | 204  | 0    | 713  | 441  | 0    | 445  | 305  | 0    | 295  |  |
| V/C Ratio(X)                 | 1.26  | 0.65 | 0.48 | 0.25 | 0.00 | 0.85 | 0.19 | 0.00 | 0.27 | 0.21 | 0.00 | 0.27 |  |
| Avail Cap(c_a), veh/h        | 150   | 757  | 642  | 204  | 0    | 713  | 441  | 0    | 445  | 305  | 0    | 295  |  |
| HCM Platoon Ratio            | 1.00  | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |  |
| Upstream Filter(I)           | 0.44  | 0.44 | 0.44 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 | 1.00 |  |
| Uniform Delay (d), s/veh     | 47.4  | 22.9 | 20.8 | 34.4 | 0.0  | 25.9 | 28.8 | 0.0  | 29.4 | 34.9 | 0.0  | 35.3 |  |
| Incr Delay (d2), s/veh       | 140.4 | 0.9  | 0.2  | 0.6  | 0.0  | 9.4  | 1.0  | 0.0  | 1.5  | 1.6  | 0.0  | 2.2  |  |
| Initial Q Delay(d3), s/veh   | 0.0   | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |  |
| %ile BackOfQ(50%),veh/ln     | 9.6   | 9.2  | 5.1  | 1.1  | 0.0  | 14.2 | 1.7  | 0.0  | 2.5  | 1.5  | 0.0  | 1.8  |  |
| Unsig. Movement Delay, s/veh |       |      |      |      |      |      |      |      |      |      |      |      |  |
| LnGrp Delay(d), s/veh        | 187.8 | 23.8 | 21.0 | 35.0 | 0.0  | 35.3 | 29.8 | 0.0  | 30.9 | 36.5 | 0.0  | 37.5 |  |
| LnGrp LOS                    | F     | C    | C    | C    | A    | D    | C    | A    | C    | D    | A    | D    |  |
| Approach Vol, veh/h          |       | 992  |      |      | 655  |      |      | 206  |      |      |      | 143  |  |
| Approach Delay, s/veh        |       | 54.3 |      |      | 35.3 |      |      | 30.5 |      |      |      | 37.1 |  |
| Approach LOS                 |       | D    |      |      | D    |      |      | C    |      |      |      | D    |  |
| Timer - Assigned Phs         |       | 2    |      | 4    |      | 6    |      | 8    |      |      |      |      |  |
| Phs Duration (G+Y+Rc), s     |       | 30.5 |      | 47.0 |      | 22.5 |      | 47.0 |      |      |      |      |  |
| Change Period (Y+Rc), s      |       | 4.5  |      | 4.5  |      | 4.5  |      | 4.5  |      |      |      |      |  |
| Max Green Setting (Gmax), s  |       | 26.0 |      | 42.5 |      | 18.0 |      | 42.5 |      |      |      |      |  |
| Max Q Clear Time (g_c+I1), s |       | 7.6  |      | 44.5 |      | 6.2  |      | 34.4 |      |      |      |      |  |
| Green Ext Time (p_c), s      |       | 0.8  |      | 0.0  |      | 0.4  |      | 2.9  |      |      |      |      |  |
| Intersection Summary         |       |      |      |      |      |      |      |      |      |      |      |      |  |
| HCM 6th Ctrl Delay           |       | 44.4 |      |      |      |      |      |      |      |      |      |      |  |
| HCM 6th LOS                  |       | D    |      |      |      |      |      |      |      |      |      |      |  |

Deer Valley 30  
9: 7th Ave & Pinnacle Peak Rd

2024 Background PM Mitigated  
HCM 6th Signalized Intersection Summary

| Movement                     |  |      |      |      |      |      |      |      |      |      |      |      |  |
|------------------------------|--|------|------|------|------|------|------|------|------|------|------|------|--|
|                              | EBL  | EBT  | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |  |
| Lane Configurations          |  |      |      |      |      |      |      |      |      |      |      |      |  |
| Traffic Volume (veh/h)       | 39   | 389  | 74   | 30   | 440  | 62   | 207  | 38   | 40   | 185  | 83   | 170  |  |
| Future Volume (veh/h)        | 39   | 389  | 74   | 30   | 440  | 62   | 207  | 38   | 40   | 185  | 83   | 170  |  |
| Initial Q (Ob), veh          | 0  | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |  |
| Ped-Bike Adj(A_pbT)          | 1.00   |      | 1.00 | 1.00 |      | 1.00 | 1.00 |      | 1.00 | 1.00 |      | 1.00 |  |
| Parking Bus, Adj             | 1.00   | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |  |
| Work Zone On Approach        | No   | No   | No   | No   | No   | No   | No   | No   | No   | No   | No   | No   |  |
| Adj Sat Flow, veh/h/ln       | 1781   | 1781 | 1781 | 1781 | 1781 | 1781 | 1781 | 1781 | 1781 | 1781 | 1781 | 1781 |  |
| Adj Flow Rate, veh/h         | 42   | 423  | 80   | 33   | 478  | 67   | 225  | 41   | 43   | 201  | 90   | 131  |  |
| Peak Hour Factor             | 0.92   | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |  |
| Percent Heavy Veh, %         | 8  | 8    | 8    | 8    | 8    | 8    | 8    | 8    | 8    | 8    | 8    | 8    |  |
| Cap, veh/h                   | 150  | 673  | 570  | 229  | 577  | 81   | 462  | 217  | 227  | 365  | 141  | 205  |  |
| Arrive On Green              | 0.38   | 0.38 | 0.38 | 0.38 | 0.38 | 0.38 | 0.27 | 0.27 | 0.27 | 0.22 | 0.22 | 0.22 |  |
| Sat Flow, veh/h              | 821  | 1781 | 1510 | 853  | 1529 | 214  | 1697 | 796  | 835  | 1697 | 656  | 954  |  |
| Grp Volume(v), veh/h         | 42   | 423  | 80   | 33   | 0    | 545  | 225  | 0    | 84   | 201  | 0    | 221  |  |
| Grp Sat Flow(s), veh/h/ln    | 821  | 1781 | 1510 | 853  | 0    | 1743 | 1697 | 0    | 1631 | 1697 | 0    | 1610 |  |
| Q Serve(g_s), s              | 4.9  | 19.4 | 3.5  | 3.3  | 0.0  | 28.3 | 11.1 | 0.0  | 4.0  | 10.5 | 0.0  | 12.5 |  |
| Cycle Q Clear(g_c), s        | 33.2   | 19.4 | 3.5  | 22.7 | 0.0  | 28.3 | 11.1 | 0.0  | 4.0  | 10.5 | 0.0  | 12.5 |  |
| Prop In Lane                 | 1.00   |      | 1.00 | 1.00 |      | 0.12 | 1.00 |      | 0.51 | 1.00 |      | 0.59 |  |
| Lane Grp Cap(c), veh/h       | 150  | 673  | 570  | 229  | 0    | 658  | 462  | 0    | 444  | 365  | 0    | 346  |  |
| V/C Ratio(X)                 | 0.28   | 0.63 | 0.14 | 0.14 | 0.00 | 0.83 | 0.49 | 0.00 | 0.19 | 0.55 | 0.00 | 0.64 |  |
| Avail Cap(c_a), veh/h        | 229  | 846  | 717  | 312  | 0    | 828  | 462  | 0    | 444  | 365  | 0    | 346  |  |
| HCM Platoon Ratio            | 1.00   | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |  |
| Upstream Filter(I)           | 0.80   | 0.80 | 0.80 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 | 1.00 |  |
| Uniform Delay (d), s/veh     | 43.2   | 25.4 | 20.4 | 34.6 | 0.0  | 28.2 | 30.5 | 0.0  | 27.9 | 35.0 | 0.0  | 35.7 |  |
| Incr Delay (d2), s/veh       | 0.8  | 0.8  | 0.1  | 0.3  | 0.0  | 5.7  | 3.6  | 0.0  | 0.9  | 5.9  | 0.0  | 8.7  |  |
| Initial Q Delay(d3), s/veh   | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |  |
| %ile BackOfQ(50%),veh/ln     | 1.0  | 8.1  | 1.2  | 0.7  | 0.0  | 12.5 | 5.0  | 0.0  | 1.6  | 4.9  | 0.0  | 5.7  |  |
| Unsig. Movement Delay, s/veh |  |      |      |      |      |      |      |      |      |      |      |      |  |
| LnGrp Delay(d), s/veh        | 44.0   | 26.2 | 20.5 | 34.9 | 0.0  | 33.9 | 34.2 | 0.0  | 28.9 | 40.8 | 0.0  | 44.4 |  |
| LnGrp LOS                    | D  | C    | C    | C    | A    | C    | C    | A    | C    | D    | A    | D    |  |
| Approach Vol, veh/h          |  | 545  |      |      | 578  |      | 309  |      |      |      |      | 422  |  |
| Approach Delay, s/veh        |  | 26.7 |      |      | 33.9 |      | 32.7 |      |      |      |      | 42.7 |  |
| Approach LOS                 |  | C    |      |      | C    |      | C    |      |      |      |      | D    |  |
| Timer - Assigned Phs         |  | 2    |      | 4    |      | 6    |      | 8    |      |      |      |      |  |
| Phs Duration (G+Y+Rc), s     |  | 31.7 |      | 42.3 |      | 26.0 |      | 42.3 |      |      |      |      |  |
| Change Period (Y+Rc), s      |  | 4.5  |      | 4.5  |      | 4.5  |      | 4.5  |      |      |      |      |  |
| Max Green Setting (Gmax), s  |  | 17.5 |      | 47.5 |      | 21.5 |      | 47.5 |      |      |      |      |  |
| Max Q Clear Time (g_c+I1), s |  | 13.1 |      | 35.2 |      | 14.5 |      | 30.3 |      |      |      |      |  |
| Green Ext Time (p_c), s      |  | 0.5  |      | 2.6  |      | 1.1  |      | 3.6  |      |      |      |      |  |
| Intersection Summary         |  |      |      |      |      |      |      |      |      |      |      |      |  |
| HCM 6th Ctrl Delay           |  | 33.6 |      |      |      |      |      |      |      |      |      |      |  |
| HCM 6th LOS                  |  | C    |      |      |      |      |      |      |      |      |      |      |  |
| Notes                        | User approved pedestrian interval to be less than phase max green. |      |      |      |      |      |      |      |      |      |      |      |  |

Deer Valley 30  
10: 7th Ave & Alameda Rd

2024 Background AM Mitigated  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh         | 4.5  |      |      |      |      |      |
| Movement                 | EBL  | EBR  | NBL  | NBT  | SBT  | SBR  |
| Lane Configurations      | ↔    |      | ↔    | ↔    | ↔    |      |
| Traffic Vol, veh/h       | 14   | 43   | 214  | 50   | 155  | 68   |
| Future Vol, veh/h        | 14   | 43   | 214  | 50   | 155  | 68   |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Stop | Stop | Free | Free | Free | Free |
| RT Channelized           | -    | None | -    | None | -    | None |
| Storage Length           | 0    | -    | 150  | -    | -    | -    |
| Veh in Median Storage, # | 0    | -    | -    | 0    | 0    | -    |
| Grade, %                 | 0    | -    | -    | 0    | 0    | -    |
| Peak Hour Factor         | 92   | 92   | 92   | 92   | 92   | 92   |
| Heavy Vehicles, %        | 8    | 8    | 8    | 8    | 8    | 8    |
| Mvmt Flow                | 15   | 47   | 233  | 54   | 168  | 74   |

| Major/Minor          | Minor2 | Major1 | Major2 |   |   |   |
|----------------------|--------|--------|--------|---|---|---|
| Conflicting Flow All | 725    | 205    | 242    | 0 | - | 0 |
| Stage 1              | 205    | -      | -      | - | - | - |
| Stage 2              | 520    | -      | -      | - | - | - |
| Critical Hdwy        | 6.48   | 6.28   | 4.18   | - | - | - |
| Critical Hdwy Stg 1  | 5.48   | -      | -      | - | - | - |
| Critical Hdwy Stg 2  | 5.48   | -      | -      | - | - | - |
| Follow-up Hdwy       | 3.572  | 3.372  | 2.272  | - | - | - |
| Pot Cap-1 Maneuver   | 383    | 821    | 1290   | - | - | - |
| Stage 1              | 815    | -      | -      | - | - | - |
| Stage 2              | 585    | -      | -      | - | - | - |
| Platoon blocked, %   |        |        |        | - | - | - |
| Mov Cap-1 Maneuver   | 314    | 821    | 1290   | - | - | - |
| Mov Cap-2 Maneuver   | 314    | -      | -      | - | - | - |
| Stage 1              | 667    | -      | -      | - | - | - |
| Stage 2              | 585    | -      | -      | - | - | - |

| Approach             | EB   | NB  | SB |
|----------------------|------|-----|----|
| HCM Control Delay, s | 11.8 | 6.8 | 0  |
| HCM LOS              | B    |     |    |

| Minor Lane/Major Mvmt | NBL  | NBT | EBLn1 | SBT | SBR |
|-----------------------|------|-----|-------|-----|-----|
| Capacity (veh/h)      | 1290 | -   | 588   | -   | -   |
| HCM Lane V/C Ratio    | 0.18 | -   | 0.105 | -   | -   |
| HCM Control Delay (s) | 8.4  | -   | 11.8  | -   | -   |
| HCM Lane LOS          | A    | -   | B     | -   | -   |
| HCM 95th %tile Q(veh) | 0.7  | -   | 0.4   | -   | -   |

Deer Valley 30  
10: 7th Ave & Alameda Rd

2024 Background PM Mitigated  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh         | 6.2  |      |      |      |      |      |
| Movement                 | EBL  | EBR  | NBL  | NBT  | SBT  | SBR  |
| Lane Configurations      | ↔    |      | ↔    | ↔    | ↔    |      |
| Traffic Vol, veh/h       | 67   | 208  | 48   | 168  | 81   | 15   |
| Future Vol, veh/h        | 67   | 208  | 48   | 168  | 81   | 15   |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Stop | Stop | Free | Free | Free | Free |
| RT Channelized           | -    | None | -    | None | -    | None |
| Storage Length           | 0    | -    | 150  | -    | -    | -    |
| Veh in Median Storage, # | 0    | -    | -    | 0    | 0    | -    |
| Grade, %                 | 0    | -    | -    | 0    | 0    | -    |
| Peak Hour Factor         | 92   | 92   | 92   | 92   | 92   | 92   |
| Heavy Vehicles, %        | 8    | 8    | 8    | 8    | 8    | 8    |
| Mvmt Flow                | 73   | 226  | 52   | 183  | 88   | 16   |

| Major/Minor          | Minor2 | Major1 | Major2 |   |   |   |
|----------------------|--------|--------|--------|---|---|---|
| Conflicting Flow All | 383    | 96     | 104    | 0 | - | 0 |
| Stage 1              | 96     | -      | -      | - | - | - |
| Stage 2              | 287    | -      | -      | - | - | - |
| Critical Hdwy        | 6.48   | 6.28   | 4.18   | - | - | - |
| Critical Hdwy Stg 1  | 5.48   | -      | -      | - | - | - |
| Critical Hdwy Stg 2  | 5.48   | -      | -      | - | - | - |
| Follow-up Hdwy       | 3.572  | 3.372  | 2.272  | - | - | - |
| Pot Cap-1 Maneuver   | 608    | 944    | 1451   | - | - | - |
| Stage 1              | 913    | -      | -      | - | - | - |
| Stage 2              | 748    | -      | -      | - | - | - |
| Platoon blocked, %   |        |        |        | - | - | - |
| Mov Cap-1 Maneuver   | 586    | 944    | 1451   | - | - | - |
| Mov Cap-2 Maneuver   | 586    | -      | -      | - | - | - |
| Stage 1              | 880    | -      | -      | - | - | - |
| Stage 2              | 748    | -      | -      | - | - | - |

| Approach             | EB   | NB  | SB |
|----------------------|------|-----|----|
| HCM Control Delay, s | 11.9 | 1.7 | 0  |
| HCM LOS              | B    |     |    |

| Minor Lane/Major Mvmt | NBL   | NBT | EBLn1 | SBT | SBR |
|-----------------------|-------|-----|-------|-----|-----|
| Capacity (veh/h)      | 1451  | -   | 822   | -   | -   |
| HCM Lane V/C Ratio    | 0.036 | -   | 0.364 | -   | -   |
| HCM Control Delay (s) | 7.6   | -   | 11.9  | -   | -   |
| HCM Lane LOS          | A     | -   | B     | -   | -   |
| HCM 95th %tile Q(veh) | 0.1   | -   | 1.7   | -   | -   |

Deer Valley 30  
1: 19th Ave & Happy Valley Rd

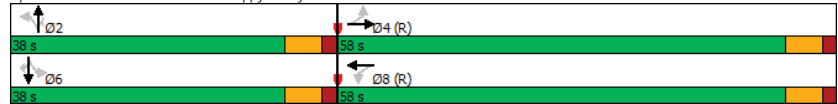
2024 Background AM Scenario B  
Timings

| Lane Group           | EBL   | EBT   | WBL   | WBT   | NBL   | NBT   | NBR   | SBL   | SBT   | SBR   |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations  | ↔     | ↔↔    | ↔     | ↔↔    | ↔     | ↔↔    | ↔     | ↔↔    | ↔↔    | ↔     |
| Traffic Volume (vph) | 87    | 348   | 150   | 295   | 153   | 257   | 102   | 267   | 408   | 96    |
| Future Volume (vph)  | 87    | 348   | 150   | 295   | 153   | 257   | 102   | 267   | 408   | 96    |
| Turn Type            | Perm  | NA    | Perm  | NA    | Perm  | NA    | Perm  | Perm  | NA    | Perm  |
| Protected Phases     |       | 4     |       | 8     |       | 2     |       | 2     | 6     | 6     |
| Permitted Phases     | 4     |       | 8     |       | 2     |       | 2     | 6     |       | 6     |
| Detector Phase       | 4     | 4     | 8     | 8     | 2     | 2     | 2     | 6     | 6     | 6     |
| Switch Phase         |       |       |       |       |       |       |       |       |       |       |
| Minimum Initial (s)  | 15.0  | 15.0  | 15.0  | 15.0  | 5.0   | 5.0   | 5.0   | 5.0   | 5.0   | 5.0   |
| Minimum Split (s)    | 41.0  | 41.0  | 41.0  | 41.0  | 43.1  | 43.1  | 43.1  | 43.1  | 43.1  | 43.1  |
| Total Split (s)      | 58.0  | 58.0  | 58.0  | 58.0  | 38.0  | 38.0  | 38.0  | 38.0  | 38.0  | 38.0  |
| Total Split (%)      | 60.4% | 60.4% | 60.4% | 60.4% | 39.6% | 39.6% | 39.6% | 39.6% | 39.6% | 39.6% |
| Yellow Time (s)      | 4.3   | 4.3   | 4.3   | 4.3   | 4.3   | 4.3   | 4.3   | 4.3   | 4.3   | 4.3   |
| All-Red Time (s)     | 1.7   | 1.7   | 1.7   | 1.7   | 1.8   | 1.8   | 1.8   | 1.8   | 1.8   | 1.8   |
| Lost Time Adjust (s) | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Lost Time (s)  | 6.0   | 6.0   | 6.0   | 6.0   | 6.1   | 6.1   | 6.1   | 6.1   | 6.1   | 6.1   |
| Lead/Lag             |       |       |       |       |       |       |       |       |       |       |
| Lead-Lag Optimize?   |       |       |       |       |       |       |       |       |       |       |
| Recall Mode          | C-Max | C-Max | C-Max | C-Max | Max   | Max   | Max   | Max   | Max   | Max   |
| Act Effct Green (s)  | 52.0  | 52.0  | 52.0  | 52.0  | 31.9  | 31.9  | 31.9  | 31.9  | 31.9  | 31.9  |
| Actuated g/C Ratio   | 0.54  | 0.54  | 0.54  | 0.54  | 0.33  | 0.33  | 0.33  | 0.33  | 0.33  | 0.33  |
| v/c Ratio            | 0.20  | 0.22  | 0.40  | 0.17  | 0.59  | 0.25  | 0.19  | 0.86  | 0.28  | 0.18  |
| Control Delay        | 12.8  | 7.7   | 16.6  | 8.1   | 36.8  | 24.1  | 5.5   | 55.5  | 24.2  | 5.6   |
| Queue Delay          | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Delay          | 12.8  | 7.7   | 16.6  | 8.1   | 36.8  | 24.1  | 5.5   | 55.5  | 24.2  | 5.6   |
| LOS                  | B     | A     | B     | A     | D     | C     | A     | E     | C     | A     |
| Approach Delay       |       | 8.4   |       | 10.4  |       | 24.2  |       |       | 32.7  |       |
| Approach LOS         |       | A     |       | B     |       | C     |       |       | C     |       |

Intersection Summary

Cycle Length: 96  
 Actuated Cycle Length: 96  
 Offset: 0 (0%), Referenced to phase 4:EBTL and 8:WBTL, Start of Green  
 Natural Cycle: 85  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.86  
 Intersection Signal Delay: 19.8  
 Intersection Capacity Utilization 67.1%  
 Analysis Period (min) 15  
 Intersection LOS: B  
 ICU Level of Service C

Splits and Phases: 1: 19th Ave & Happy Valley Rd



Deer Valley 30  
1: 19th Ave & Happy Valley Rd

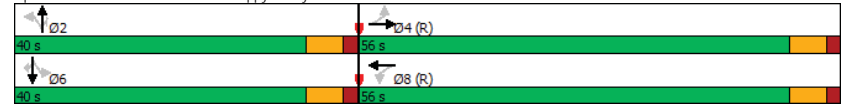
2024 Background PM Scenario B  
Timings

| Lane Group           | EBL   | EBT   | WBL   | WBT   | NBL   | NBT   | NBR   | SBL   | SBT   | SBR   |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations  | ↔     | ↔↔    | ↔     | ↔↔    | ↔     | ↔↔    | ↔     | ↔↔    | ↔↔    | ↔     |
| Traffic Volume (vph) | 167   | 383   | 165   | 747   | 304   | 481   | 125   | 177   | 228   | 122   |
| Future Volume (vph)  | 167   | 383   | 165   | 747   | 304   | 481   | 125   | 177   | 228   | 122   |
| Turn Type            | Perm  | NA    | Perm  | NA    | Perm  | NA    | Perm  | Perm  | NA    | Perm  |
| Protected Phases     |       | 4     |       | 8     |       | 2     |       | 2     | 6     | 6     |
| Permitted Phases     | 4     |       | 8     |       | 2     |       | 2     | 6     |       | 6     |
| Detector Phase       | 4     | 4     | 8     | 8     | 2     | 2     | 2     | 6     | 6     | 6     |
| Switch Phase         |       |       |       |       |       |       |       |       |       |       |
| Minimum Initial (s)  | 15.0  | 15.0  | 15.0  | 15.0  | 5.0   | 5.0   | 5.0   | 5.0   | 5.0   | 5.0   |
| Minimum Split (s)    | 41.0  | 41.0  | 41.0  | 41.0  | 43.1  | 43.1  | 43.1  | 43.1  | 43.1  | 43.1  |
| Total Split (s)      | 56.0  | 56.0  | 56.0  | 56.0  | 40.0  | 40.0  | 40.0  | 40.0  | 40.0  | 40.0  |
| Total Split (%)      | 58.3% | 58.3% | 58.3% | 58.3% | 41.7% | 41.7% | 41.7% | 41.7% | 41.7% | 41.7% |
| Yellow Time (s)      | 4.3   | 4.3   | 4.3   | 4.3   | 4.3   | 4.3   | 4.3   | 4.3   | 4.3   | 4.3   |
| All-Red Time (s)     | 1.7   | 1.7   | 1.7   | 1.7   | 1.8   | 1.8   | 1.8   | 1.8   | 1.8   | 1.8   |
| Lost Time Adjust (s) | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Lost Time (s)  | 6.0   | 6.0   | 6.0   | 6.0   | 6.1   | 6.1   | 6.1   | 6.1   | 6.1   | 6.1   |
| Lead/Lag             |       |       |       |       |       |       |       |       |       |       |
| Lead-Lag Optimize?   |       |       |       |       |       |       |       |       |       |       |
| Recall Mode          | C-Max | C-Max | C-Max | C-Max | Max   | Max   | Max   | Max   | Max   | Max   |
| Act Effct Green (s)  | 50.0  | 50.0  | 50.0  | 50.0  | 33.9  | 33.9  | 33.9  | 33.9  | 33.9  | 33.9  |
| Actuated g/C Ratio   | 0.52  | 0.52  | 0.52  | 0.52  | 0.35  | 0.35  | 0.35  | 0.35  | 0.35  | 0.35  |
| v/c Ratio            | 1.07  | 0.27  | 0.52  | 0.48  | 0.90  | 0.44  | 0.22  | 0.80  | 0.15  | 0.22  |
| Control Delay        | 116.3 | 8.2   | 21.9  | 13.4  | 58.9  | 25.3  | 4.9   | 53.9  | 21.5  | 4.9   |
| Queue Delay          | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Delay          | 116.3 | 8.2   | 21.9  | 13.4  | 58.9  | 25.3  | 4.9   | 53.9  | 21.5  | 4.9   |
| LOS                  | F     | A     | C     | B     | E     | C     | A     | D     | C     | A     |
| Approach Delay       |       | 31.4  |       | 14.5  |       | 33.7  |       |       | 28.5  |       |
| Approach LOS         |       | C     |       | B     |       | C     |       |       | C     |       |

Intersection Summary

Cycle Length: 96  
 Actuated Cycle Length: 96  
 Offset: 0 (0%), Referenced to phase 4:EBTL and 8:WBTL, Start of Green  
 Natural Cycle: 105  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 1.07  
 Intersection Signal Delay: 25.4  
 Intersection Capacity Utilization 78.0%  
 Analysis Period (min) 15  
 Intersection LOS: C  
 ICU Level of Service D

Splits and Phases: 1: 19th Ave & Happy Valley Rd



Deer Valley 30  
 1: 19th Ave & Happy Valley Rd

2024 Background AM Scenario B  
 HCM 6th Signalized Intersection Summary

| Movement                     | EBL  | EBT   | EBR  | WBL  | WBT  | WBR  | NBL  | NBT   | NBR  | SBL  | SBT  | SBR  |
|------------------------------|------|-------|------|------|------|------|------|-------|------|------|------|------|
| Lane Configurations          | ↔↔↔  |       |      | ↔↔   |      |      | ↔↔   |       |      | ↔↔↔  |      |      |
| Traffic Volume (veh/h)       | 87   | 348   | 172  | 150  | 295  | 110  | 153  | 257   | 102  | 267  | 408  | 96   |
| Future Volume (veh/h)        | 87   | 348   | 172  | 150  | 295  | 110  | 153  | 257   | 102  | 267  | 408  | 96   |
| Initial Q (Ob), veh          | 0    | 0     | 0    | 0    | 0    | 0    | 0    | 0     | 0    | 0    | 0    | 0    |
| Ped-Bike Adj(A_pbT)          | 1.00 |       | 1.00 | 1.00 |      | 1.00 | 1.00 |       | 1.00 | 1.00 |      | 1.00 |
| Parking Bus, Adj             | 1.00 | 1.00  | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00  | 1.00 | 1.00 | 1.00 | 1.00 |
| Work Zone On Approach        | No   |       |      | No   |      |      | No   |       |      | No   |      |      |
| Adj Sat Flow, veh/h/ln       | 1781 | 1781  | 1781 | 1781 | 1781 | 1781 | 1781 | 1781  | 1781 | 1781 | 1781 | 1781 |
| Adj Flow Rate, veh/h         | 95   | 378   | 187  | 163  | 321  | 120  | 166  | 279   | 111  | 290  | 443  | 104  |
| Peak Hour Factor             | 0.92 | 0.92  | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92  | 0.92 | 0.92 | 0.92 | 0.92 |
| Percent Heavy Veh, %         | 8    | 8     | 8    | 8    | 8    | 8    | 8    | 8     | 8    | 8    | 8    | 8    |
| Cap, veh/h                   | 520  | 1756  | 818  | 459  | 1921 | 678  | 292  | 1125  | 502  | 333  | 1616 | 502  |
| Arrive On Green              | 0.54 | 0.54  | 0.54 | 0.54 | 0.54 | 0.54 | 0.33 | 0.33  | 0.33 | 0.33 | 0.33 | 0.33 |
| Sat Flow, veh/h              | 903  | 3242  | 1510 | 806  | 3547 | 1251 | 819  | 3385  | 1510 | 947  | 4863 | 1510 |
| Grp Volume(v), veh/h         | 95   | 378   | 187  | 163  | 292  | 149  | 166  | 279   | 111  | 290  | 443  | 104  |
| Grp Sat Flow(s),veh/h/ln     | 903  | 1621  | 1510 | 806  | 1621 | 1556 | 819  | 1692  | 1510 | 947  | 1621 | 1510 |
| Q Serve(g_s), s              | 5.7  | 5.8   | 6.2  | 12.7 | 4.4  | 4.7  | 17.9 | 5.8   | 5.1  | 26.1 | 6.4  | 4.7  |
| Cycle Q Clear(g_c), s        | 10.4 | 5.8   | 6.2  | 19.0 | 4.4  | 4.7  | 24.4 | 5.8   | 5.1  | 31.9 | 6.4  | 4.7  |
| Prop In Lane                 | 1.00 |       | 1.00 | 1.00 |      | 0.80 | 1.00 |       | 1.00 | 1.00 |      | 1.00 |
| Lane Grp Cap(c), veh/h       | 520  | 1756  | 818  | 459  | 1756 | 843  | 292  | 1125  | 502  | 333  | 1616 | 502  |
| V/C Ratio(X)                 | 0.18 | 0.22  | 0.23 | 0.36 | 0.17 | 0.18 | 0.57 | 0.25  | 0.22 | 0.87 | 0.27 | 0.21 |
| Avail Cap(c_a), veh/h        | 520  | 1756  | 818  | 459  | 1756 | 843  | 292  | 1125  | 502  | 333  | 1616 | 502  |
| HCM Platoon Ratio            | 1.00 | 1.00  | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00  | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(I)           | 1.00 | 1.00  | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00  | 1.00 | 1.00 | 1.00 | 1.00 |
| Uniform Delay (d), s/veh     | 13.8 | 11.4  | 11.5 | 16.5 | 11.1 | 11.2 | 32.5 | 23.3  | 23.1 | 36.4 | 23.5 | 23.0 |
| Incr Delay (d2), s/veh       | 0.8  | 0.3   | 0.7  | 2.1  | 0.2  | 0.5  | 7.8  | 0.5   | 1.0  | 25.5 | 0.4  | 0.9  |
| Initial Q Delay(d3),s/veh    | 0.0  | 0.0   | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0   | 0.0  | 0.0  | 0.0  | 0.0  |
| %ile BackOfQ(50%),veh/ln     | 1.2  | 2.1   | 2.1  | 2.5  | 1.5  | 1.6  | 4.1  | 2.3   | 1.9  | 9.2  | 2.5  | 1.8  |
| Unsig. Movement Delay, s/veh |      |       |      |      |      |      |      |       |      |      |      |      |
| LnGrp Delay(d),s/veh         | 14.6 | 11.7  | 12.2 | 18.6 | 11.3 | 11.6 | 40.3 | 23.8  | 24.1 | 61.9 | 24.0 | 23.9 |
| LnGrp LOS                    | B    | B     | B    | B    | B    | B    | D    | C     | C    | E    | C    | C    |
| Approach Vol, veh/h          |      | 660   |      |      | 604  |      |      | 556   |      |      | 837  |      |
| Approach Delay, s/veh        |      | 12.2  |      |      | 13.3 |      |      | 28.8  |      |      | 37.1 |      |
| Approach LOS                 |      | B     |      |      | B    |      |      | C     |      |      | D    |      |
| Timer - Assigned Phs         |      | 2     |      |      | 4    |      |      | 6     |      |      | 8    |      |
| Phs Duration (G+Y+Rc), s     |      | 38.0  |      |      | 58.0 |      |      | 38.0  |      |      | 58.0 |      |
| Change Period (Y+Rc), s      |      | * 6.1 |      |      | * 6  |      |      | * 6.1 |      |      | * 6  |      |
| Max Green Setting (Gmax), s  |      | * 32  |      |      | * 52 |      |      | * 32  |      |      | * 52 |      |
| Max Q Clear Time (g_c+I1), s |      | 26.4  |      |      | 12.4 |      |      | 33.9  |      |      | 21.0 |      |
| Green Ext Time (p_c), s      |      | 1.6   |      |      | 5.0  |      |      | 0.0   |      |      | 4.4  |      |

| Intersection Summary |      |  |
|----------------------|------|--|
| HCM 6th Ctrl Delay   | 23.8 |  |
| HCM 6th LOS          | C    |  |

**Notes**  
 User approved pedestrian interval to be less than phase max green.  
 \* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Deer Valley 30  
 1: 19th Ave & Happy Valley Rd

2024 Background PM Scenario B  
 HCM 6th Signalized Intersection Summary

| Movement                     | EBL  | EBT   | EBR  | WBL  | WBT  | WBR  | NBL  | NBT   | NBR  | SBL  | SBT  | SBR  |
|------------------------------|------|-------|------|------|------|------|------|-------|------|------|------|------|
| Lane Configurations          | ↔↔↔  |       |      | ↔↔   |      |      | ↔↔   |       |      | ↔↔↔  |      |      |
| Traffic Volume (veh/h)       | 167  | 383   | 232  | 165  | 747  | 348  | 304  | 481   | 125  | 177  | 228  | 122  |
| Future Volume (veh/h)        | 167  | 383   | 232  | 165  | 747  | 348  | 304  | 481   | 125  | 177  | 228  | 122  |
| Initial Q (Ob), veh          | 0    | 0     | 0    | 0    | 0    | 0    | 0    | 0     | 0    | 0    | 0    | 0    |
| Ped-Bike Adj(A_pbT)          | 1.00 |       | 1.00 | 1.00 |      | 1.00 | 1.00 |       | 1.00 | 1.00 |      | 1.00 |
| Parking Bus, Adj             | 1.00 | 1.00  | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00  | 1.00 | 1.00 | 1.00 | 1.00 |
| Work Zone On Approach        | No   |       |      | No   |      |      | No   |       |      | No   |      |      |
| Adj Sat Flow, veh/h/ln       | 1781 | 1781  | 1781 | 1781 | 1781 | 1781 | 1781 | 1781  | 1781 | 1781 | 1781 | 1781 |
| Adj Flow Rate, veh/h         | 182  | 416   | 252  | 179  | 812  | 378  | 330  | 523   | 136  | 192  | 248  | 133  |
| Peak Hour Factor             | 0.92 | 0.92  | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92  | 0.92 | 0.92 | 0.92 | 0.92 |
| Percent Heavy Veh, %         | 8    | 8     | 8    | 8    | 8    | 8    | 8    | 8     | 8    | 8    | 8    | 8    |
| Cap, veh/h                   | 236  | 1689  | 786  | 386  | 1692 | 784  | 379  | 1195  | 533  | 248  | 1717 | 533  |
| Arrive On Green              | 0.52 | 0.52  | 0.52 | 0.52 | 0.52 | 0.52 | 0.35 | 0.35  | 0.35 | 0.35 | 0.35 | 0.35 |
| Sat Flow, veh/h              | 448  | 3242  | 1510 | 732  | 3248 | 1504 | 954  | 3385  | 1510 | 738  | 4863 | 1510 |
| Grp Volume(v), veh/h         | 182  | 416   | 252  | 179  | 810  | 380  | 330  | 523   | 136  | 192  | 248  | 133  |
| Grp Sat Flow(s),veh/h/ln     | 448  | 1621  | 1510 | 732  | 1621 | 1511 | 954  | 1692  | 1510 | 738  | 1621 | 1510 |
| Q Serve(g_s), s              | 34.6 | 6.8   | 9.2  | 17.9 | 15.3 | 15.4 | 30.6 | 11.3  | 6.1  | 22.6 | 3.3  | 6.0  |
| Cycle Q Clear(g_c), s        | 50.0 | 6.8   | 9.2  | 27.1 | 15.3 | 15.4 | 33.9 | 11.3  | 6.1  | 33.9 | 3.3  | 6.0  |
| Prop In Lane                 | 1.00 |       | 1.00 | 1.00 |      | 1.00 | 1.00 |       | 1.00 | 1.00 |      | 1.00 |
| Lane Grp Cap(c), veh/h       | 236  | 1689  | 786  | 386  | 1689 | 787  | 379  | 1195  | 533  | 248  | 1717 | 533  |
| V/C Ratio(X)                 | 0.77 | 0.25  | 0.32 | 0.46 | 0.48 | 0.48 | 0.87 | 0.44  | 0.26 | 0.77 | 0.14 | 0.25 |
| Avail Cap(c_a), veh/h        | 236  | 1689  | 786  | 386  | 1689 | 787  | 379  | 1195  | 533  | 248  | 1717 | 533  |
| HCM Platoon Ratio            | 1.00 | 1.00  | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00  | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(I)           | 1.00 | 1.00  | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00  | 1.00 | 1.00 | 1.00 | 1.00 |
| Uniform Delay (d), s/veh     | 32.7 | 12.6  | 13.2 | 21.0 | 14.7 | 14.7 | 33.9 | 23.8  | 22.1 | 37.8 | 21.2 | 22.0 |
| Incr Delay (d2), s/veh       | 21.2 | 0.3   | 1.1  | 4.0  | 1.0  | 2.1  | 23.0 | 1.2   | 1.2  | 20.5 | 0.2  | 1.1  |
| Initial Q Delay(d3),s/veh    | 0.0  | 0.0   | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0   | 0.0  | 0.0  | 0.0  | 0.0  |
| %ile BackOfQ(50%),veh/ln     | 5.7  | 2.4   | 3.2  | 3.4  | 5.6  | 5.5  | 10.1 | 4.6   | 2.3  | 6.0  | 1.3  | 2.3  |
| Unsig. Movement Delay, s/veh |      |       |      |      |      |      |      |       |      |      |      |      |
| LnGrp Delay(d),s/veh         | 53.8 | 13.0  | 14.3 | 25.0 | 15.7 | 16.8 | 56.9 | 24.9  | 23.2 | 58.3 | 21.3 | 23.1 |
| LnGrp LOS                    | D    | B     | B    | C    | B    | B    | E    | C     | C    | E    | C    | C    |
| Approach Vol, veh/h          |      | 850   |      |      | 1369 |      |      | 989   |      |      | 573  |      |
| Approach Delay, s/veh        |      | 22.1  |      |      | 17.2 |      |      | 35.4  |      |      | 34.2 |      |
| Approach LOS                 |      | C     |      |      | B    |      |      | D     |      |      | C    |      |
| Timer - Assigned Phs         |      | 2     |      |      | 4    |      |      | 6     |      |      | 8    |      |
| Phs Duration (G+Y+Rc), s     |      | 40.0  |      |      | 56.0 |      |      | 40.0  |      |      | 56.0 |      |
| Change Period (Y+Rc), s      |      | * 6.1 |      |      | * 6  |      |      | * 6.1 |      |      | * 6  |      |
| Max Green Setting (Gmax), s  |      | * 34  |      |      | * 50 |      |      | * 34  |      |      | * 50 |      |
| Max Q Clear Time (g_c+I1), s |      | 35.9  |      |      | 52.0 |      |      | 35.9  |      |      | 29.1 |      |
| Green Ext Time (p_c), s      |      | 0.0   |      |      | 0.0  |      |      | 0.0   |      |      | 10.3 |      |

| Intersection Summary |      |  |
|----------------------|------|--|
| HCM 6th Ctrl Delay   | 25.6 |  |
| HCM 6th LOS          | C    |  |

**Notes**  
 User approved pedestrian interval to be less than phase max green.  
 \* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Deer Valley 30  
2: 19th Ave & Optum Drwy

2024 Background AM Scenario B  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh         | 0.1  |      |      |      |      |      |
| Movement                 | EBL  | EBR  | NBL  | NBT  | SBT  | SBR  |
| Lane Configurations      | W    |      | W    | W    | W    | W    |
| Traffic Vol, veh/h       | 0    | 4    | 7    | 513  | 728  | 2    |
| Future Vol, veh/h        | 0    | 4    | 7    | 513  | 728  | 2    |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Stop | Stop | Free | Free | Free | Free |
| RT Channelized           | -    | None | -    | None | -    | None |
| Storage Length           | 0    | -    | 50   | -    | -    | -    |
| Veh in Median Storage, # | 0    | -    | -    | 0    | 0    | -    |
| Grade, %                 | 0    | -    | -    | 0    | 0    | -    |
| Peak Hour Factor         | 92   | 92   | 92   | 92   | 92   | 92   |
| Heavy Vehicles, %        | 8    | 8    | 8    | 8    | 8    | 8    |
| Mvmt Flow                | 0    | 4    | 8    | 558  | 791  | 2    |

| Major/Minor          | Minor2 | Major1 | Major2 |
|----------------------|--------|--------|--------|
| Conflicting Flow All | 1031   | 397    | 793    |
| Stage 1              | 792    | -      | -      |
| Stage 2              | 239    | -      | -      |
| Critical Hdwy        | 6.41   | 7.06   | 4.26   |
| Critical Hdwy Stg 1  | 5.96   | -      | -      |
| Critical Hdwy Stg 2  | 6.16   | -      | -      |
| Follow-up Hdwy       | 3.73   | 3.38   | 2.28   |
| Pot Cap-1 Maneuver   | 251    | 586    | 786    |
| Stage 1              | 381    | -      | -      |
| Stage 2              | 724    | -      | -      |
| Platoon blocked, %   | -      | -      | -      |
| Mov Cap-1 Maneuver   | 248    | 586    | 786    |
| Mov Cap-2 Maneuver   | 319    | -      | -      |
| Stage 1              | 377    | -      | -      |
| Stage 2              | 724    | -      | -      |

| Approach             | EB   | NB  | SB |
|----------------------|------|-----|----|
| HCM Control Delay, s | 11.2 | 0.1 | 0  |
| HCM LOS              | B    |     |    |

| Minor Lane/Major Mvmt | NBL  | NBT | EBLn1 | SBT | SBR |
|-----------------------|------|-----|-------|-----|-----|
| Capacity (veh/h)      | 786  | -   | 586   | -   | -   |
| HCM Lane V/C Ratio    | 0.01 | -   | 0.007 | -   | -   |
| HCM Control Delay (s) | 9.6  | -   | 11.2  | -   | -   |
| HCM Lane LOS          | A    | -   | B     | -   | -   |
| HCM 95th %tile Q(veh) | 0    | -   | 0     | -   | -   |

Deer Valley 30  
2: 19th Ave & Optum Drwy

2024 Background PM Scenario B  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh         | 0.1  |      |      |      |      |      |
| Movement                 | EBL  | EBR  | NBL  | NBT  | SBT  | SBR  |
| Lane Configurations      | W    |      | W    | W    | W    | W    |
| Traffic Vol, veh/h       | 0    | 4    | 7    | 910  | 623  | 2    |
| Future Vol, veh/h        | 0    | 4    | 7    | 910  | 623  | 2    |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Stop | Stop | Free | Free | Free | Free |
| RT Channelized           | -    | None | -    | None | -    | None |
| Storage Length           | 0    | -    | 50   | -    | -    | -    |
| Veh in Median Storage, # | 0    | -    | -    | 0    | 0    | -    |
| Grade, %                 | 0    | -    | -    | 0    | 0    | -    |
| Peak Hour Factor         | 92   | 92   | 92   | 92   | 92   | 92   |
| Heavy Vehicles, %        | 8    | 8    | 8    | 8    | 8    | 8    |
| Mvmt Flow                | 0    | 4    | 8    | 989  | 677  | 2    |

| Major/Minor          | Minor2 | Major1 | Major2 |
|----------------------|--------|--------|--------|
| Conflicting Flow All | 1090   | 340    | 679    |
| Stage 1              | 678    | -      | -      |
| Stage 2              | 412    | -      | -      |
| Critical Hdwy        | 6.41   | 7.06   | 4.26   |
| Critical Hdwy Stg 1  | 5.96   | -      | -      |
| Critical Hdwy Stg 2  | 6.16   | -      | -      |
| Follow-up Hdwy       | 3.73   | 3.38   | 2.28   |
| Pot Cap-1 Maneuver   | 231    | 639    | 870    |
| Stage 1              | 437    | -      | -      |
| Stage 2              | 586    | -      | -      |
| Platoon blocked, %   | -      | -      | -      |
| Mov Cap-1 Maneuver   | 229    | 639    | 870    |
| Mov Cap-2 Maneuver   | 328    | -      | -      |
| Stage 1              | 433    | -      | -      |
| Stage 2              | 586    | -      | -      |

| Approach             | EB   | NB  | SB |
|----------------------|------|-----|----|
| HCM Control Delay, s | 10.7 | 0.1 | 0  |
| HCM LOS              | B    |     |    |

| Minor Lane/Major Mvmt | NBL   | NBT | EBLn1 | SBT | SBR |
|-----------------------|-------|-----|-------|-----|-----|
| Capacity (veh/h)      | 870   | -   | 639   | -   | -   |
| HCM Lane V/C Ratio    | 0.009 | -   | 0.007 | -   | -   |
| HCM Control Delay (s) | 9.2   | -   | 10.7  | -   | -   |
| HCM Lane LOS          | A     | -   | B     | -   | -   |
| HCM 95th %tile Q(veh) | 0     | -   | 0     | -   | -   |



Deer Valley 30  
3: 19th Ave & Patio Drwy/Parkview Ln

2024 Background AM Scenario B  
HCM 6th TWSC

| Intersection             |        |        |        |        |       |       |      |      |      |      |      |      |
|--------------------------|--------|--------|--------|--------|-------|-------|------|------|------|------|------|------|
| Int Delay, s/veh         | 0.9    |        |        |        |       |       |      |      |      |      |      |      |
| Movement                 | EBL    | EBT    | EBR    | WBL    | WBT   | WBR   | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
| Lane Configurations      |        |        | ↗      |        | ↔     |       |      | ↖↗   |      | ↘    | ↖    |      |
| Traffic Vol, veh/h       | 0      | 0      | 6      | 26     | 0     | 13    | 1    | 506  | 41   | 26   | 707  | 0    |
| Future Vol, veh/h        | 0      | 0      | 6      | 26     | 0     | 13    | 1    | 506  | 41   | 26   | 707  | 0    |
| Conflicting Peds, #/hr   | 0      | 0      | 0      | 0      | 0     | 0     | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Stop   | Stop   | Stop   | Stop   | Stop  | Stop  | Free | Free | Free | Free | Free | Free |
| RT Channelized           | -      | -      | None   | -      | -     | None  | -    | -    | None | -    | -    | None |
| Storage Length           | -      | -      | 0      | -      | -     | -     | -    | -    | -    | 50   | -    | -    |
| Veh in Median Storage, # | -      | 0      | -      | -      | 0     | -     | -    | 0    | -    | -    | 0    | -    |
| Grade, %                 | -      | 0      | -      | -      | 0     | -     | -    | 0    | -    | -    | 0    | -    |
| Peak Hour Factor         | 92     | 92     | 92     | 92     | 92    | 92    | 92   | 92   | 92   | 92   | 92   | 92   |
| Heavy Vehicles, %        | 8      | 8      | 8      | 8      | 8     | 8     | 8    | 8    | 8    | 8    | 8    | 8    |
| Mvmt Flow                | 0      | 0      | 7      | 28     | 0     | 14    | 1    | 550  | 45   | 28   | 768  | 0    |
| Major/Minor              | Minor2 | Minor1 | Major1 | Major2 |       |       |      |      |      |      |      |      |
| Conflicting Flow All     | -      | -      | 384    | 1015   | 1399  | 298   | 768  | 0    | 0    | 595  | 0    | 0    |
| Stage 1                  | -      | -      | -      | 575    | 575   | -     | -    | -    | -    | -    | -    | -    |
| Stage 2                  | -      | -      | -      | 440    | 824   | -     | -    | -    | -    | -    | -    | -    |
| Critical Hdwy            | -      | -      | 7.06   | 7.11   | 6.66  | 7.26  | 4.26 | -    | -    | 5.46 | -    | -    |
| Critical Hdwy Stg 1      | -      | -      | -      | 7.46   | 5.66  | -     | -    | -    | -    | -    | -    | -    |
| Critical Hdwy Stg 2      | -      | -      | -      | 6.66   | 5.66  | -     | -    | -    | -    | -    | -    | -    |
| Follow-up Hdwy           | -      | -      | 3.38   | 3.73   | 4.08  | 3.98  | 2.28 | -    | -    | 3.18 | -    | -    |
| Pot Cap-1 Maneuver       | 0      | 0      | 597    | 210    | 132   | 582   | 804  | -    | -    | 590  | -    | 0    |
| Stage 1                  | 0      | 0      | -      | 389    | 486   | -     | -    | -    | -    | -    | -    | 0    |
| Stage 2                  | 0      | 0      | -      | 532    | 372   | -     | -    | -    | -    | -    | -    | 0    |
| Platoon blocked, %       | -      | -      | -      | -      | -     | -     | -    | -    | -    | -    | -    | -    |
| Mov Cap-1 Maneuver       | -      | -      | 597    | 200    | 126   | 582   | 804  | -    | -    | 590  | -    | -    |
| Mov Cap-2 Maneuver       | -      | -      | -      | 200    | 126   | -     | -    | -    | -    | -    | -    | -    |
| Stage 1                  | -      | -      | -      | 388    | 485   | -     | -    | -    | -    | -    | -    | -    |
| Stage 2                  | -      | -      | -      | 501    | 355   | -     | -    | -    | -    | -    | -    | -    |
| Approach                 | EB     | WB     | NB     | SB     |       |       |      |      |      |      |      |      |
| HCM Control Delay, s     | 11.1   | 21.8   | 0      | 0.4    |       |       |      |      |      |      |      |      |
| HCM LOS                  | B      | C      |        |        |       |       |      |      |      |      |      |      |
| Minor Lane/Major Mvmt    | NBL    | NBT    | NBR    | EBLn1  | WBLn1 | SBL   | SBT  |      |      |      |      |      |
| Capacity (veh/h)         | 804    | -      | -      | 597    | 256   | 590   | -    |      |      |      |      |      |
| HCM Lane V/C Ratio       | 0.001  | -      | -      | 0.011  | 0.166 | 0.048 | -    |      |      |      |      |      |
| HCM Control Delay (s)    | 9.5    | -      | -      | 11.1   | 21.8  | 11.4  | -    |      |      |      |      |      |
| HCM Lane LOS             | A      | -      | -      | B      | C     | B     | -    |      |      |      |      |      |
| HCM 95th %tile Q(veh)    | 0      | -      | -      | 0      | 0.6   | 0.2   | -    |      |      |      |      |      |

Deer Valley 30  
3: 19th Ave & Patio Drwy/Parkview Ln

2024 Background PM Scenario B  
HCM 6th TWSC

| Intersection             |        |        |        |        |       |       |      |      |      |      |      |      |
|--------------------------|--------|--------|--------|--------|-------|-------|------|------|------|------|------|------|
| Int Delay, s/veh         | 1      |        |        |        |       |       |      |      |      |      |      |      |
| Movement                 | EBL    | EBT    | EBR    | WBL    | WBT   | WBR   | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
| Lane Configurations      |        |        | ↗      |        | ↔     |       |      | ↖↗   |      | ↘    | ↖    |      |
| Traffic Vol, veh/h       | 0      | 0      | 6      | 26     | 0     | 13    | 1    | 557  | 41   | 26   | 602  | 0    |
| Future Vol, veh/h        | 0      | 0      | 6      | 26     | 0     | 13    | 1    | 557  | 41   | 26   | 602  | 0    |
| Conflicting Peds, #/hr   | 0      | 0      | 0      | 0      | 0     | 0     | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Stop   | Stop   | Stop   | Stop   | Stop  | Stop  | Free | Free | Free | Free | Free | Free |
| RT Channelized           | -      | -      | None   | -      | -     | None  | -    | -    | None | -    | -    | None |
| Storage Length           | -      | -      | 0      | -      | -     | -     | -    | -    | -    | 50   | -    | -    |
| Veh in Median Storage, # | -      | 0      | -      | -      | 0     | -     | -    | 0    | -    | -    | 0    | -    |
| Grade, %                 | -      | 0      | -      | -      | 0     | -     | -    | 0    | -    | -    | 0    | -    |
| Peak Hour Factor         | 92     | 92     | 92     | 92     | 92    | 92    | 92   | 92   | 92   | 92   | 92   | 92   |
| Heavy Vehicles, %        | 8      | 8      | 8      | 8      | 8     | 8     | 8    | 8    | 8    | 8    | 8    | 8    |
| Mvmt Flow                | 0      | 0      | 7      | 28     | 0     | 14    | 1    | 605  | 45   | 28   | 654  | 0    |
| Major/Minor              | Minor2 | Minor1 | Major1 | Major2 |       |       |      |      |      |      |      |      |
| Conflicting Flow All     | -      | -      | 327    | 1013   | 1340  | 325   | 654  | 0    | 0    | 650  | 0    | 0    |
| Stage 1                  | -      | -      | -      | 630    | 630   | -     | -    | -    | -    | -    | -    | -    |
| Stage 2                  | -      | -      | -      | 383    | 710   | -     | -    | -    | -    | -    | -    | -    |
| Critical Hdwy            | -      | -      | 7.06   | 7.11   | 6.66  | 7.26  | 4.26 | -    | -    | 5.46 | -    | -    |
| Critical Hdwy Stg 1      | -      | -      | -      | 7.46   | 5.66  | -     | -    | -    | -    | -    | -    | -    |
| Critical Hdwy Stg 2      | -      | -      | -      | 6.66   | 5.66  | -     | -    | -    | -    | -    | -    | -    |
| Follow-up Hdwy           | -      | -      | 3.38   | 3.73   | 4.08  | 3.98  | 2.28 | -    | -    | 3.18 | -    | -    |
| Pot Cap-1 Maneuver       | 0      | 0      | 651    | 211    | 144   | 559   | 889  | -    | -    | 555  | -    | 0    |
| Stage 1                  | 0      | 0      | -      | 356    | 458   | -     | -    | -    | -    | -    | -    | 0    |
| Stage 2                  | 0      | 0      | -      | 576    | 421   | -     | -    | -    | -    | -    | -    | 0    |
| Platoon blocked, %       | -      | -      | -      | -      | -     | -     | -    | -    | -    | -    | -    | -    |
| Mov Cap-1 Maneuver       | -      | -      | 651    | 200    | 137   | 559   | 889  | -    | -    | 555  | -    | -    |
| Mov Cap-2 Maneuver       | -      | -      | -      | 200    | 137   | -     | -    | -    | -    | -    | -    | -    |
| Stage 1                  | -      | -      | -      | 355    | 457   | -     | -    | -    | -    | -    | -    | -    |
| Stage 2                  | -      | -      | -      | 541    | 400   | -     | -    | -    | -    | -    | -    | -    |
| Approach                 | EB     | WB     | NB     | SB     |       |       |      |      |      |      |      |      |
| HCM Control Delay, s     | 10.6   | 22     | 0      | 0.5    |       |       |      |      |      |      |      |      |
| HCM LOS                  | B      | C      |        |        |       |       |      |      |      |      |      |      |
| Minor Lane/Major Mvmt    | NBL    | NBT    | NBR    | EBLn1  | WBLn1 | SBL   | SBT  |      |      |      |      |      |
| Capacity (veh/h)         | 889    | -      | -      | 651    | 254   | 555   | -    |      |      |      |      |      |
| HCM Lane V/C Ratio       | 0.001  | -      | -      | 0.01   | 0.167 | 0.051 | -    |      |      |      |      |      |
| HCM Control Delay (s)    | 9.1    | -      | -      | 10.6   | 22    | 11.8  | -    |      |      |      |      |      |
| HCM Lane LOS             | A      | -      | -      | B      | C     | B     | -    |      |      |      |      |      |
| HCM 95th %tile Q(veh)    | 0      | -      | -      | 0      | 0.6   | 0.2   | -    |      |      |      |      |      |

Deer Valley 30  
4: Alameda Rd & 19th Ave

2024 Background AM Scenario B  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Int Delay, s/veh         | 0.7  |      |      |      |      |      |      |      |      |      |      |      |
| Movement                 | EBL  | EBT  | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
| Lane Configurations      | ↔    |      | ↔    |      |      |      | ↔↔↔  |      | ↔↔   |      |      |      |
| Traffic Vol, veh/h       | 9    | 0    | 54   | 0    | 0    | 0    | 18   | 548  | 0    | 0    | 724  | 14   |
| Future Vol, veh/h        | 9    | 0    | 54   | 0    | 0    | 0    | 18   | 548  | 0    | 0    | 724  | 14   |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Stop | Stop | Stop | Stop | Stop | Stop | Free | Free | Free | Free | Free | Free |
| RT Channelized           | -    | -    | None | -    | -    | None | -    | -    | None | -    | -    | None |
| Storage Length           | 0    | -    | -    | 150  | -    | -    | 150  | -    | -    | 0    | -    | -    |
| Veh in Median Storage, # | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Grade, %                 | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Peak Hour Factor         | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   |
| Heavy Vehicles, %        | 8    | 8    | 8    | 8    | 8    | 8    | 8    | 8    | 8    | 8    | 8    | 8    |
| Mvmt Flow                | 10   | 0    | 59   | 0    | 0    | 0    | 20   | 596  | 0    | 0    | 787  | 15   |

| Major/Minor          | Minor2 | Minor1 | Major1 | Major2 |
|----------------------|--------|--------|--------|--------|
| Conflicting Flow All | 1073   | 1431   | 401    | 1030   |
| Stage 1              | 795    | 795    | -      | 636    |
| Stage 2              | 278    | 636    | -      | 394    |
| Critical Hdwy        | 7.11   | 6.66   | 7.06   | 7.11   |
| Critical Hdwy Stg 1  | 6.66   | 5.66   | -      | 7.46   |
| Critical Hdwy Stg 2  | 6.86   | 5.66   | -      | 6.66   |
| Follow-up Hdwy       | 3.73   | 4.08   | 3.38   | 3.73   |
| Pot Cap-1 Maneuver   | *369   | 211    | 582    | 398    |
| Stage 1              | *325   | 384    | -      | 775    |
| Stage 2              | *837   | 729    | -      | 567    |
| Platoon blocked, %   | 1      | 1      | 1      | 1      |
| Mov Cap-1 Maneuver   | *362   | 206    | 582    | 351    |
| Mov Cap-2 Maneuver   | *362   | 206    | -      | 351    |
| Stage 1              | *317   | 384    | -      | 755    |
| Stage 2              | *816   | 710    | -      | 510    |

| Approach             | EB   | WB | NB  | SB |
|----------------------|------|----|-----|----|
| HCM Control Delay, s | 12.4 | 0  | 0.3 | 0  |
| HCM LOS              | B    | A  |     |    |

| Minor Lane/Major Mvmt | NBL   | NBT | NBR | EBLn1 | EBLn2 | WBLn1 | WBLn2 | SBL | SBT | SBR |
|-----------------------|-------|-----|-----|-------|-------|-------|-------|-----|-----|-----|
| Capacity (veh/h)      | 780   | -   | -   | 362   | 582   | -     | -     | 979 | -   | -   |
| HCM Lane V/C Ratio    | 0.025 | -   | -   | 0.027 | 0.101 | -     | -     | -   | -   | -   |
| HCM Control Delay (s) | 9.7   | -   | -   | 15.2  | 11.9  | 0     | 0     | 0   | -   | -   |
| HCM Lane LOS          | A     | -   | -   | C     | B     | A     | A     | A   | -   | -   |
| HCM 95th %tile Q(veh) | 0.1   | -   | -   | 0.1   | 0.3   | -     | -     | 0   | -   | -   |

Notes  
 -: Volume exceeds capacity    \$: Delay exceeds 300s    +: Computation Not Defined    \*: All major volume in platoon

Deer Valley 30  
4: Alameda Rd & 19th Ave

2024 Background PM Scenario B  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Int Delay, s/veh         | 1    |      |      |      |      |      |      |      |      |      |      |      |
| Movement                 | EBL  | EBT  | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
| Lane Configurations      | ↔    |      | ↔    |      |      |      | ↔↔↔  |      | ↔↔   |      |      |      |
| Traffic Vol, veh/h       | 14   | 0    | 62   | 0    | 0    | 0    | 83   | 886  | 0    | 0    | 617  | 16   |
| Future Vol, veh/h        | 14   | 0    | 62   | 0    | 0    | 0    | 83   | 886  | 0    | 0    | 617  | 16   |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Stop | Stop | Stop | Stop | Stop | Stop | Free | Free | Free | Free | Free | Free |
| RT Channelized           | -    | -    | None | -    | -    | None | -    | -    | None | -    | -    | None |
| Storage Length           | 0    | -    | -    | 150  | -    | -    | 150  | -    | -    | 0    | -    | -    |
| Veh in Median Storage, # | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Grade, %                 | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Peak Hour Factor         | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   |
| Heavy Vehicles, %        | 8    | 8    | 8    | 8    | 8    | 8    | 8    | 8    | 8    | 8    | 8    | 8    |
| Mvmt Flow                | 15   | 0    | 67   | 0    | 0    | 0    | 90   | 963  | 0    | 0    | 671  | 17   |

| Major/Minor          | Minor2 | Minor1 | Major1 | Major2 |
|----------------------|--------|--------|--------|--------|
| Conflicting Flow All | 1245   | 1823   | 344    | 1479   |
| Stage 1              | 680    | 680    | -      | 1143   |
| Stage 2              | 565    | 1143   | -      | 336    |
| Critical Hdwy        | 7.11   | 6.66   | 7.06   | 7.11   |
| Critical Hdwy Stg 1  | 6.66   | 5.66   | -      | 7.46   |
| Critical Hdwy Stg 2  | 6.86   | 5.66   | -      | 6.66   |
| Follow-up Hdwy       | 3.73   | 4.08   | 3.38   | 3.73   |
| Pot Cap-1 Maneuver   | *477   | 168    | 635    | 304    |
| Stage 1              | *382   | 434    | -      | 570    |
| Stage 2              | *748   | 574    | -      | 614    |
| Platoon blocked, %   | 1      | 1      | 1      | 1      |
| Mov Cap-1 Maneuver   | *439   | 150    | 635    | 250    |
| Mov Cap-2 Maneuver   | *439   | 150    | -      | 250    |
| Stage 1              | *342   | 434    | -      | 510    |
| Stage 2              | *670   | 514    | -      | 549    |

| Approach             | EB   | WB | NB  | SB |
|----------------------|------|----|-----|----|
| HCM Control Delay, s | 11.7 | 0  | 0.8 | 0  |
| HCM LOS              | B    | A  |     |    |

| Minor Lane/Major Mvmt | NBL   | NBT | NBR | EBLn1 | EBLn2 | WBLn1 | WBLn2 | SBL | SBT | SBR |
|-----------------------|-------|-----|-----|-------|-------|-------|-------|-----|-----|-----|
| Capacity (veh/h)      | 863   | -   | -   | 439   | 635   | -     | -     | 878 | -   | -   |
| HCM Lane V/C Ratio    | 0.105 | -   | -   | 0.035 | 0.106 | -     | -     | -   | -   | -   |
| HCM Control Delay (s) | 9.7   | -   | -   | 13.5  | 11.3  | 0     | 0     | 0   | -   | -   |
| HCM Lane LOS          | A     | -   | -   | B     | B     | A     | A     | A   | -   | -   |
| HCM 95th %tile Q(veh) | 0.3   | -   | -   | 0.1   | 0.4   | -     | -     | 0   | -   | -   |

Notes  
 -: Volume exceeds capacity    \$: Delay exceeds 300s    +: Computation Not Defined    \*: All major volume in platoon

Deer Valley 30  
5: 19th Ave & Sarah Bass PI

2024 Background AM Scenario B  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh         | 0.7  |      |      |      |      |      |
| Movement                 | EBL  | EBR  | NBL  | NBT  | SBT  | SBR  |
| Lane Configurations      | ↔    | ↔    | ↔    | ↔↔   | ↔↔   | ↔↔   |
| Traffic Vol, veh/h       | 13   | 36   | 27   | 553  | 770  | 9    |
| Future Vol, veh/h        | 13   | 36   | 27   | 553  | 770  | 9    |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Stop | Stop | Free | Free | Free | Free |
| RT Channelized           | -    | None | -    | None | -    | None |
| Storage Length           | 0    | 0    | 150  | -    | -    | -    |
| Veh in Median Storage, # | 0    | -    | -    | 0    | 0    | -    |
| Grade, %                 | 0    | -    | -    | 0    | 0    | -    |
| Peak Hour Factor         | 92   | 92   | 92   | 92   | 92   | 92   |
| Heavy Vehicles, %        | 8    | 8    | 8    | 8    | 8    | 8    |
| Mvmt Flow                | 14   | 39   | 29   | 601  | 837  | 10   |

| Major/Minor          | Minor2 | Major1 | Major2 |   |     |
|----------------------|--------|--------|--------|---|-----|
| Conflicting Flow All | 1140   | 424    | 847    | 0 | - 0 |
| Stage 1              | 842    | -      | -      | - | -   |
| Stage 2              | 298    | -      | -      | - | -   |
| Critical Hdwy        | 6.41   | 7.06   | 4.26   | - | -   |
| Critical Hdwy Stg 1  | 5.96   | -      | -      | - | -   |
| Critical Hdwy Stg 2  | 6.16   | -      | -      | - | -   |
| Follow-up Hdwy       | 3.73   | 3.38   | 2.28   | - | -   |
| Pot Cap-1 Maneuver   | 216    | 562    | 749    | - | -   |
| Stage 1              | 359    | -      | -      | - | -   |
| Stage 2              | 674    | -      | -      | - | -   |
| Platoon blocked, %   | -      | -      | -      | - | -   |
| Mov Cap-1 Maneuver   | 208    | 562    | 749    | - | -   |
| Mov Cap-2 Maneuver   | 287    | -      | -      | - | -   |
| Stage 1              | 345    | -      | -      | - | -   |
| Stage 2              | 674    | -      | -      | - | -   |

| Approach             | EB   | NB  | SB |
|----------------------|------|-----|----|
| HCM Control Delay, s | 13.6 | 0.5 | 0  |
| HCM LOS              | B    |     |    |

| Minor Lane/Major Mvmt | NBL   | NBT | EBLn1 | EBLn2 | SBT | SBR |
|-----------------------|-------|-----|-------|-------|-----|-----|
| Capacity (veh/h)      | 749   | -   | 287   | 562   | -   | -   |
| HCM Lane V/C Ratio    | 0.039 | -   | 0.049 | 0.07  | -   | -   |
| HCM Control Delay (s) | 10    | -   | 18.2  | 11.9  | -   | -   |
| HCM Lane LOS          | B     | -   | C     | B     | -   | -   |
| HCM 95th %tile Q(veh) | 0.1   | -   | 0.2   | 0.2   | -   | -   |

Deer Valley 30  
5: 19th Ave & Sarah Bass PI

2024 Background PM Scenario B  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh         | 0.5  |      |      |      |      |      |
| Movement                 | EBL  | EBR  | NBL  | NBT  | SBT  | SBR  |
| Lane Configurations      | ↔    | ↔    | ↔    | ↔↔   | ↔↔   | ↔↔   |
| Traffic Vol, veh/h       | 16   | 37   | 10   | 954  | 674  | 6    |
| Future Vol, veh/h        | 16   | 37   | 10   | 954  | 674  | 6    |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Stop | Stop | Free | Free | Free | Free |
| RT Channelized           | -    | None | -    | None | -    | None |
| Storage Length           | 0    | 0    | 150  | -    | -    | -    |
| Veh in Median Storage, # | 0    | -    | -    | 0    | 0    | -    |
| Grade, %                 | 0    | -    | -    | 0    | 0    | -    |
| Peak Hour Factor         | 92   | 92   | 92   | 92   | 92   | 92   |
| Heavy Vehicles, %        | 8    | 8    | 8    | 8    | 8    | 8    |
| Mvmt Flow                | 17   | 40   | 11   | 1037 | 733  | 7    |

| Major/Minor          | Minor2 | Major1 | Major2 |   |     |
|----------------------|--------|--------|--------|---|-----|
| Conflicting Flow All | 1174   | 370    | 740    | 0 | - 0 |
| Stage 1              | 737    | -      | -      | - | -   |
| Stage 2              | 437    | -      | -      | - | -   |
| Critical Hdwy        | 6.41   | 7.06   | 4.26   | - | -   |
| Critical Hdwy Stg 1  | 5.96   | -      | -      | - | -   |
| Critical Hdwy Stg 2  | 6.16   | -      | -      | - | -   |
| Follow-up Hdwy       | 3.73   | 3.38   | 2.28   | - | -   |
| Pot Cap-1 Maneuver   | 206    | 610    | 824    | - | -   |
| Stage 1              | 407    | -      | -      | - | -   |
| Stage 2              | 568    | -      | -      | - | -   |
| Platoon blocked, %   | -      | -      | -      | - | -   |
| Mov Cap-1 Maneuver   | 203    | 610    | 824    | - | -   |
| Mov Cap-2 Maneuver   | 303    | -      | -      | - | -   |
| Stage 1              | 402    | -      | -      | - | -   |
| Stage 2              | 568    | -      | -      | - | -   |

| Approach             | EB   | NB  | SB |
|----------------------|------|-----|----|
| HCM Control Delay, s | 13.2 | 0.1 | 0  |
| HCM LOS              | B    |     |    |

| Minor Lane/Major Mvmt | NBL   | NBT | EBLn1 | EBLn2 | SBT | SBR |
|-----------------------|-------|-----|-------|-------|-----|-----|
| Capacity (veh/h)      | 824   | -   | 303   | 610   | -   | -   |
| HCM Lane V/C Ratio    | 0.013 | -   | 0.057 | 0.066 | -   | -   |
| HCM Control Delay (s) | 9.4   | -   | 17.6  | 11.3  | -   | -   |
| HCM Lane LOS          | A     | -   | C     | B     | -   | -   |
| HCM 95th %tile Q(veh) | 0     | -   | 0.2   | 0.2   | -   | -   |

Deer Valley 30  
6: Pinnacle Peak Rd & 19th Ave

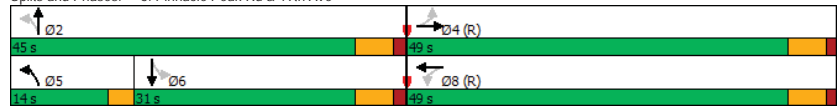
2024 Background AM Scenario B  
Timings

| Lane Group           | EBL   | EBT   | WBL   | WBT   | NBL   | NBT   | SBL   | SBT   |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations  | ↖     | ↗     | ↖     | ↗     | ↖     | ↗     | ↖     | ↗     |
| Traffic Volume (vph) | 86    | 387   | 57    | 176   | 169   | 436   | 99    | 648   |
| Future Volume (vph)  | 86    | 387   | 57    | 176   | 169   | 436   | 99    | 648   |
| Turn Type            | Perm  | NA    | Perm  | NA    | pm+pt | NA    | Perm  | NA    |
| Protected Phases     |       | 4     |       | 8     | 5     | 2     |       | 6     |
| Permitted Phases     | 4     |       | 8     |       | 2     |       | 6     |       |
| Detector Phase       | 4     | 4     | 8     | 8     | 5     | 2     | 6     | 6     |
| Switch Phase         |       |       |       |       |       |       |       |       |
| Minimum Initial (s)  | 15.0  | 15.0  | 15.0  | 15.0  | 5.0   | 15.0  | 15.0  | 15.0  |
| Minimum Split (s)    | 34.6  | 34.6  | 34.6  | 34.6  | 9.5   | 30.8  | 30.8  | 30.8  |
| Total Split (s)      | 49.0  | 49.0  | 49.0  | 49.0  | 14.0  | 45.0  | 31.0  | 31.0  |
| Total Split (%)      | 52.1% | 52.1% | 52.1% | 52.1% | 14.9% | 47.9% | 33.0% | 33.0% |
| Yellow Time (s)      | 4.3   | 4.3   | 4.3   | 4.3   | 3.0   | 4.3   | 4.3   | 4.3   |
| All-Red Time (s)     | 1.3   | 1.3   | 1.3   | 1.3   | 0.0   | 1.5   | 1.5   | 1.5   |
| Lost Time Adjust (s) | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Lost Time (s)  | 5.6   | 5.6   | 5.6   | 5.6   | 3.0   | 5.8   | 5.8   | 5.8   |
| Lead/Lag             |       |       |       |       | Lead  |       | Lag   | Lag   |
| Lead-Lag Optimize?   |       |       |       |       | Yes   |       | Yes   | Yes   |
| Recall Mode          | C-Max | C-Max | C-Max | C-Max | None  | Max   | Max   | Max   |
| Act Effct Green (s)  | 43.4  | 43.4  | 43.4  | 43.4  | 42.0  | 39.2  | 25.9  | 25.9  |
| Actuated g/C Ratio   | 0.46  | 0.46  | 0.46  | 0.46  | 0.45  | 0.42  | 0.28  | 0.28  |
| v/c Ratio            | 0.19  | 0.48  | 0.26  | 0.17  | 0.68  | 0.29  | 0.53  | 0.84  |
| Control Delay        | 16.3  | 11.4  | 19.3  | 11.3  | 30.2  | 16.4  | 40.4  | 41.6  |
| Queue Delay          | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Delay          | 16.3  | 11.4  | 19.3  | 11.3  | 30.2  | 16.4  | 40.4  | 41.6  |
| LOS                  | B     | B     | B     | B     | C     | B     | D     | D     |
| Approach Delay       |       | 12.0  |       | 12.9  |       | 19.7  |       | 41.4  |
| Approach LOS         |       | B     |       | B     |       | B     |       | D     |

Intersection Summary

Cycle Length: 94  
 Actuated Cycle Length: 94  
 Offset: 31 (33%), Referenced to phase 4:EBTL and 8:WBTL, Start of Green  
 Natural Cycle: 75  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.84  
 Intersection Signal Delay: 23.4  
 Intersection Capacity Utilization 79.7%  
 Intersection LOS: C  
 ICU Level of Service D  
 Analysis Period (min) 15

Splits and Phases: 6: Pinnacle Peak Rd & 19th Ave



Deer Valley 30  
6: Pinnacle Peak Rd & 19th Ave

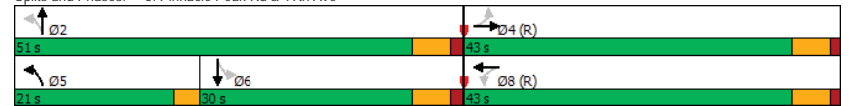
2024 Background PM Scenario B  
Timings

| Lane Group           | EBL   | EBT   | WBL   | WBT   | NBL   | NBT   | SBL   | SBT   |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations  | ↖     | ↗     | ↖     | ↗     | ↖     | ↗     | ↖     | ↗     |
| Traffic Volume (vph) | 80    | 145   | 57    | 327   | 408   | 805   | 50    | 570   |
| Future Volume (vph)  | 80    | 145   | 57    | 327   | 408   | 805   | 50    | 570   |
| Turn Type            | Perm  | NA    | Perm  | NA    | pm+pt | NA    | Perm  | NA    |
| Protected Phases     |       | 4     |       | 8     | 5     | 2     |       | 6     |
| Permitted Phases     | 4     |       | 8     |       | 2     |       | 6     |       |
| Detector Phase       | 4     | 4     | 8     | 8     | 5     | 2     | 6     | 6     |
| Switch Phase         |       |       |       |       |       |       |       |       |
| Minimum Initial (s)  | 15.0  | 15.0  | 15.0  | 15.0  | 5.0   | 15.0  | 15.0  | 15.0  |
| Minimum Split (s)    | 34.6  | 34.6  | 34.6  | 34.6  | 9.5   | 30.8  | 30.8  | 30.8  |
| Total Split (s)      | 43.0  | 43.0  | 43.0  | 43.0  | 21.0  | 51.0  | 30.0  | 30.0  |
| Total Split (%)      | 45.7% | 45.7% | 45.7% | 45.7% | 22.3% | 54.3% | 31.9% | 31.9% |
| Yellow Time (s)      | 4.3   | 4.3   | 4.3   | 4.3   | 3.0   | 4.3   | 4.3   | 4.3   |
| All-Red Time (s)     | 1.3   | 1.3   | 1.3   | 1.3   | 0.0   | 1.5   | 1.5   | 1.5   |
| Lost Time Adjust (s) | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Lost Time (s)  | 5.6   | 5.6   | 5.6   | 5.6   | 3.0   | 5.8   | 5.8   | 5.8   |
| Lead/Lag             |       |       |       |       | Lead  |       | Lag   | Lag   |
| Lead-Lag Optimize?   |       |       |       |       | Yes   |       | Yes   | Yes   |
| Recall Mode          | C-Max | C-Max | C-Max | C-Max | None  | Max   | Max   | Max   |
| Act Effct Green (s)  | 37.4  | 37.4  | 37.4  | 37.4  | 48.0  | 45.2  | 24.2  | 24.2  |
| Actuated g/C Ratio   | 0.40  | 0.40  | 0.40  | 0.40  | 0.51  | 0.48  | 0.26  | 0.26  |
| v/c Ratio            | 0.27  | 0.31  | 0.19  | 0.34  | 1.08  | 0.39  | 0.40  | 0.84  |
| Control Delay        | 22.0  | 7.6   | 20.4  | 18.8  | 93.5  | 16.1  | 39.2  | 42.5  |
| Queue Delay          | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Delay          | 22.0  | 7.6   | 20.4  | 18.8  | 93.5  | 16.1  | 39.2  | 42.5  |
| LOS                  | C     | A     | C     | B     | F     | B     | D     | D     |
| Approach Delay       |       | 10.0  |       | 19.0  |       | 41.5  |       | 42.3  |
| Approach LOS         |       | B     |       | B     |       | D     |       | D     |

Intersection Summary

Cycle Length: 94  
 Actuated Cycle Length: 94  
 Offset: 31 (33%), Referenced to phase 4:EBTL and 8:WBTL, Start of Green  
 Natural Cycle: 90  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 1.08  
 Intersection Signal Delay: 32.9  
 Intersection Capacity Utilization 83.7%  
 Intersection LOS: C  
 ICU Level of Service E  
 Analysis Period (min) 15

Splits and Phases: 6: Pinnacle Peak Rd & 19th Ave





Deer Valley 30  
7: 15th Ave & Happy Valley Rd

2024 Background AM Scenario B  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Int Delay, s/veh         | 0.9  |      |      |      |      |      |      |      |      |      |      |      |
| Movement                 | EBL  | EBT  | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
| Lane Configurations      | ↕    |      |      | ↕    |      |      | ↕    |      |      | ↕    |      |      |
| Traffic Vol, veh/h       | 6    | 486  | 23   | 14   | 339  | 0    | 19   | 0    | 10   | 2    | 0    | 6    |
| Future Vol, veh/h        | 6    | 486  | 23   | 14   | 339  | 0    | 19   | 0    | 10   | 2    | 0    | 6    |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Free | Free | Free | Free | Free | Free | Stop | Stop | Stop | Stop | Stop | Stop |
| RT Channelized           | -    | -    | None | -    | -    | None | -    | -    | None | -    | -    | None |
| Storage Length           | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    |
| Veh in Median Storage, # | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Grade, %                 | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Peak Hour Factor         | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   |
| Heavy Vehicles, %        | 8    | 8    | 8    | 8    | 8    | 8    | 8    | 8    | 8    | 8    | 8    | 8    |
| Mvmt Flow                | 7    | 528  | 25   | 15   | 368  | 0    | 21   | 0    | 11   | 2    | 0    | 7    |

| Major/Minor          | Major1 | Major2 | Minor1 | Minor2 |
|----------------------|--------|--------|--------|--------|
| Conflicting Flow All | 368    | 0      | 553    | 957    |
| Stage 1              | -      | -      | -      | 555    |
| Stage 2              | -      | -      | -      | 402    |
| Critical Hdwy        | 4.18   | -      | 4.18   | 7.18   |
| Critical Hdwy Stg 1  | -      | -      | -      | 6.18   |
| Critical Hdwy Stg 2  | -      | -      | -      | 6.18   |
| Follow-up Hdwy       | 2.272  | -      | 2.272  | 4.072  |
| Pot Cap-1 Maneuver   | 1158   | -      | 988    | 231    |
| Stage 1              | -      | -      | -      | 506    |
| Stage 2              | -      | -      | -      | 613    |
| Platoon blocked, %   | -      | -      | -      | -      |
| Mov Cap-1 Maneuver   | 1158   | -      | 988    | 224    |
| Mov Cap-2 Maneuver   | -      | -      | -      | 224    |
| Stage 1              | -      | -      | -      | 501    |
| Stage 2              | -      | -      | -      | 595    |

| Approach             | EB  | WB  | NB   | SB   |
|----------------------|-----|-----|------|------|
| HCM Control Delay, s | 0.1 | 0.3 | 19.5 | 13.3 |
| HCM LOS              |     |     | C    | B    |

| Minor Lane/Major Mvmt | NBLn1 | EBL   | EBT | EBR | WBL   | WBT | WBR | SBLn1 |
|-----------------------|-------|-------|-----|-----|-------|-----|-----|-------|
| Capacity (veh/h)      | 280   | 1158  | -   | -   | 988   | -   | -   | 443   |
| HCM Lane V/C Ratio    | 0.113 | 0.006 | -   | -   | 0.015 | -   | -   | 0.02  |
| HCM Control Delay (s) | 19.5  | 8.1   | 0   | -   | 8.7   | 0   | -   | 13.3  |
| HCM Lane LOS          | C     | A     | A   | -   | A     | A   | -   | B     |
| HCM 95th %tile Q(veh) | 0.4   | 0     | -   | -   | 0     | -   | -   | 0.1   |

Deer Valley 30  
7: 15th Ave & Happy Valley Rd

2024 Background PM Scenario B  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Int Delay, s/veh         | 1.1  |      |      |      |      |      |      |      |      |      |      |      |
| Movement                 | EBL  | EBT  | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
| Lane Configurations      | ↕    |      |      | ↕    |      |      | ↕    |      |      | ↕    |      |      |
| Traffic Vol, veh/h       | 2    | 487  | 3    | 8    | 927  | 0    | 20   | 0    | 17   | 0    | 0    | 1    |
| Future Vol, veh/h        | 2    | 487  | 3    | 8    | 927  | 0    | 20   | 0    | 17   | 0    | 0    | 1    |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Free | Free | Free | Free | Free | Free | Stop | Stop | Stop | Stop | Stop | Stop |
| RT Channelized           | -    | -    | None | -    | -    | None | -    | -    | None | -    | -    | None |
| Storage Length           | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    |
| Veh in Median Storage, # | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Grade, %                 | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Peak Hour Factor         | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   |
| Heavy Vehicles, %        | 8    | 8    | 8    | 8    | 8    | 8    | 8    | 8    | 8    | 8    | 8    | 8    |
| Mvmt Flow                | 2    | 529  | 3    | 9    | 1008 | 0    | 22   | 0    | 18   | 0    | 0    | 1    |

| Major/Minor          | Major1 | Major2 | Minor1 | Minor2 |
|----------------------|--------|--------|--------|--------|
| Conflicting Flow All | 1008   | 0      | 532    | 1562   |
| Stage 1              | -      | -      | -      | 535    |
| Stage 2              | -      | -      | -      | 1027   |
| Critical Hdwy        | 4.18   | -      | 4.18   | 7.18   |
| Critical Hdwy Stg 1  | -      | -      | -      | 6.18   |
| Critical Hdwy Stg 2  | -      | -      | -      | 6.18   |
| Follow-up Hdwy       | 2.272  | -      | 2.272  | 4.072  |
| Pot Cap-1 Maneuver   | 664    | -      | 1006   | 88     |
| Stage 1              | -      | -      | -      | 518    |
| Stage 2              | -      | -      | -      | 276    |
| Platoon blocked, %   | -      | -      | -      | -      |
| Mov Cap-1 Maneuver   | 664    | -      | 1006   | 86     |
| Mov Cap-2 Maneuver   | -      | -      | -      | 86     |
| Stage 1              | -      | -      | -      | 516    |
| Stage 2              | -      | -      | -      | 269    |

| Approach             | EB | WB  | NB   | SB   |
|----------------------|----|-----|------|------|
| HCM Control Delay, s | 0  | 0.1 | 40.8 | 17.7 |
| HCM LOS              |    |     | E    | C    |

| Minor Lane/Major Mvmt | NBLn1 | EBL   | EBT | EBR | WBL   | WBT | WBR | SBLn1 |
|-----------------------|-------|-------|-----|-----|-------|-----|-----|-------|
| Capacity (veh/h)      | 140   | 664   | -   | -   | 1006  | -   | -   | 284   |
| HCM Lane V/C Ratio    | 0.287 | 0.003 | -   | -   | 0.009 | -   | -   | 0.004 |
| HCM Control Delay (s) | 40.8  | 10.4  | 0   | -   | 8.6   | 0   | -   | 17.7  |
| HCM Lane LOS          | E     | B     | A   | -   | A     | A   | -   | C     |
| HCM 95th %tile Q(veh) | 1.1   | 0     | -   | -   | 0     | -   | -   | 0     |

Deer Valley 30  
8: 7th Ave & Happy Valley Rd

2024 Background AM Scenario B  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh         | 0.6  |      |      |      |      |      |
| Movement                 | EBT  | EBR  | WBL  | WBT  | NBL  | NBR  |
| Lane Configurations      | ↔    |      |      | ↕    | ↕    | ↕    |
| Traffic Vol, veh/h       | 508  | 24   | 9    | 282  | 17   | 10   |
| Future Vol, veh/h        | 508  | 24   | 9    | 282  | 17   | 10   |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Free | Free | Free | Free | Stop | Stop |
| RT Channelized           | -    | None | -    | None | -    | None |
| Storage Length           | -    | -    | -    | -    | -    | -    |
| Veh in Median Storage, # | 0    | -    | -    | 0    | 0    | -    |
| Grade, %                 | 0    | -    | -    | 0    | 0    | -    |
| Peak Hour Factor         | 92   | 92   | 92   | 92   | 92   | 92   |
| Heavy Vehicles, %        | 8    | 8    | 8    | 8    | 8    | 8    |
| Mvmt Flow                | 552  | 26   | 10   | 307  | 18   | 11   |

| Major/Minor          | Major1 | Major2 | Minor1 |   |       |
|----------------------|--------|--------|--------|---|-------|
| Conflicting Flow All | 0      | 0      | 578    | 0 | 892   |
| Stage 1              | -      | -      | -      | - | 565   |
| Stage 2              | -      | -      | -      | - | 327   |
| Critical Hdwy        | -      | -      | 4.18   | - | 6.48  |
| Critical Hdwy Stg 1  | -      | -      | -      | - | 5.48  |
| Critical Hdwy Stg 2  | -      | -      | -      | - | 5.48  |
| Follow-up Hdwy       | -      | -      | 2.272  | - | 3.372 |
| Pot Cap-1 Maneuver   | -      | -      | 967    | - | 305   |
| Stage 1              | -      | -      | -      | - | 557   |
| Stage 2              | -      | -      | -      | - | 717   |
| Platoon blocked, %   | -      | -      | -      | - | -     |
| Mov Cap-1 Maneuver   | -      | -      | 967    | - | 301   |
| Mov Cap-2 Maneuver   | -      | -      | -      | - | 301   |
| Stage 1              | -      | -      | -      | - | 557   |
| Stage 2              | -      | -      | -      | - | 708   |

| Approach             | EB | WB  | NB   |
|----------------------|----|-----|------|
| HCM Control Delay, s | 0  | 0.3 | 16.1 |
| HCM LOS              |    |     | C    |

| Minor Lane/Major Mvmt | NBLn1 | EBT | EBR | WBL  | WBT |
|-----------------------|-------|-----|-----|------|-----|
| Capacity (veh/h)      | 355   | -   | -   | 967  | -   |
| HCM Lane V/C Ratio    | 0.083 | -   | -   | 0.01 | -   |
| HCM Control Delay (s) | 16.1  | -   | -   | 8.8  | 0   |
| HCM Lane LOS          | C     | -   | -   | A    | A   |
| HCM 95th %tile Q(veh) | 0.3   | -   | -   | 0    | -   |

Deer Valley 30  
8: 7th Ave & Happy Valley Rd

2024 Background PM Scenario B  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh         | 1.7  |      |      |      |      |      |
| Movement                 | EBT  | EBR  | WBL  | WBT  | NBL  | NBR  |
| Lane Configurations      | ↔    |      |      | ↕    | ↕    | ↕    |
| Traffic Vol, veh/h       | 479  | 37   | 19   | 854  | 41   | 11   |
| Future Vol, veh/h        | 479  | 37   | 19   | 854  | 41   | 11   |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Free | Free | Free | Free | Stop | Stop |
| RT Channelized           | -    | None | -    | None | -    | None |
| Storage Length           | -    | -    | -    | -    | -    | -    |
| Veh in Median Storage, # | 0    | -    | -    | 0    | 0    | -    |
| Grade, %                 | 0    | -    | -    | 0    | 0    | -    |
| Peak Hour Factor         | 92   | 92   | 92   | 92   | 92   | 92   |
| Heavy Vehicles, %        | 8    | 8    | 8    | 8    | 8    | 8    |
| Mvmt Flow                | 521  | 40   | 21   | 928  | 45   | 12   |

| Major/Minor          | Major1 | Major2 | Minor1 |   |       |
|----------------------|--------|--------|--------|---|-------|
| Conflicting Flow All | 0      | 0      | 561    | 0 | 1511  |
| Stage 1              | -      | -      | -      | - | 541   |
| Stage 2              | -      | -      | -      | - | 970   |
| Critical Hdwy        | -      | -      | 4.18   | - | 6.48  |
| Critical Hdwy Stg 1  | -      | -      | -      | - | 5.48  |
| Critical Hdwy Stg 2  | -      | -      | -      | - | 5.48  |
| Follow-up Hdwy       | -      | -      | 2.272  | - | 3.372 |
| Pot Cap-1 Maneuver   | -      | -      | 981    | - | 128   |
| Stage 1              | -      | -      | -      | - | 572   |
| Stage 2              | -      | -      | -      | - | 359   |
| Platoon blocked, %   | -      | -      | -      | - | -     |
| Mov Cap-1 Maneuver   | -      | -      | 981    | - | 122   |
| Mov Cap-2 Maneuver   | -      | -      | -      | - | 122   |
| Stage 1              | -      | -      | -      | - | 572   |
| Stage 2              | -      | -      | -      | - | 343   |

| Approach             | EB | WB  | NB   |
|----------------------|----|-----|------|
| HCM Control Delay, s | 0  | 0.2 | 44.4 |
| HCM LOS              |    |     | E    |

| Minor Lane/Major Mvmt | NBLn1 | EBT | EBR | WBL   | WBT |
|-----------------------|-------|-----|-----|-------|-----|
| Capacity (veh/h)      | 146   | -   | -   | 981   | -   |
| HCM Lane V/C Ratio    | 0.387 | -   | -   | 0.021 | -   |
| HCM Control Delay (s) | 44.4  | -   | -   | 8.7   | 0   |
| HCM Lane LOS          | E     | -   | -   | A     | A   |
| HCM 95th %tile Q(veh) | 1.7   | -   | -   | 0.1   | -   |

Deer Valley 30  
9: 7th Ave & Pinnacle Peak Rd

2024 Background AM Scenario B  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Int Delay, s/veh         | 2    |      |      |      |      |      |      |      |      |      |      |      |
| Movement                 | EBL  | EBT  | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
| Lane Configurations      | ↔    | ↑    | ↔    | ↔    | ↔    |      | ↔    | ↔    |      | ↔    | ↔    |      |
| Traffic Vol, veh/h       | 0    | 192  | 119  | 33   | 227  | 0    | 54   | 0    | 24   | 0    | 0    | 0    |
| Future Vol, veh/h        | 0    | 192  | 119  | 33   | 227  | 0    | 54   | 0    | 24   | 0    | 0    | 0    |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Free | Free | Free | Free | Free | Free | Stop | Stop | Stop | Stop | Stop | Stop |
| RT Channelized           | -    | -    | None | -    | -    | None | -    | -    | None | -    | -    | None |
| Storage Length           | 150  | -    | 170  | 150  | -    | -    | 150  | -    | -    | 150  | -    | -    |
| Veh in Median Storage, # | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Grade, %                 | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Peak Hour Factor         | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   |
| Heavy Vehicles, %        | 8    | 8    | 8    | 8    | 8    | 8    | 8    | 8    | 8    | 8    | 8    | 8    |
| Mvmt Flow                | 0    | 209  | 129  | 36   | 247  | 0    | 59   | 0    | 26   | 0    | 0    | 0    |

| Major/Minor          | Major1 | Major2 | Minor1 | Minor2 |
|----------------------|--------|--------|--------|--------|
| Conflicting Flow All | 247    | 0      | 0      | 338    |
| Stage 1              | -      | -      | -      | -      |
| Stage 2              | -      | -      | -      | -      |
| Critical Hdwy        | 4.18   | -      | -      | 4.18   |
| Critical Hdwy Stg 1  | -      | -      | -      | -      |
| Critical Hdwy Stg 2  | -      | -      | -      | -      |
| Follow-up Hdwy       | 2.272  | -      | -      | 2.272  |
| Pot Cap-1 Maneuver   | 1285   | -      | -      | 1188   |
| Stage 1              | -      | -      | -      | -      |
| Stage 2              | -      | -      | -      | -      |
| Platoon blocked, %   | -      | -      | -      | -      |
| Mov Cap-1 Maneuver   | 1285   | -      | -      | 1188   |
| Mov Cap-2 Maneuver   | -      | -      | -      | -      |
| Stage 1              | -      | -      | -      | -      |
| Stage 2              | -      | -      | -      | -      |

| Approach             | EB | WB | NB   | SB |
|----------------------|----|----|------|----|
| HCM Control Delay, s | 0  | 1  | 12.9 | 0  |
| HCM LOS              |    |    | B    | A  |

| Minor Lane/Major Mvmt | NBLn1 | NBLn2 | EBL  | EBT | EBR | WBL  | WBT | WBR | SBLn1 | SBLn2 |
|-----------------------|-------|-------|------|-----|-----|------|-----|-----|-------|-------|
| Capacity (veh/h)      | 442   | 816   | 1285 | -   | -   | 1188 | -   | -   | -     | -     |
| HCM Lane V/C Ratio    | 0.133 | 0.032 | -    | -   | -   | 0.03 | -   | -   | -     | -     |
| HCM Control Delay (s) | 14.4  | 9.6   | 0    | -   | -   | 8.1  | -   | -   | 0     | 0     |
| HCM Lane LOS          | B     | A     | A    | -   | -   | A    | -   | -   | A     | A     |
| HCM 95th %tile Q(veh) | 0.5   | 0.1   | 0    | -   | -   | 0.1  | -   | -   | -     | -     |

Deer Valley 30  
9: 7th Ave & Pinnacle Peak Rd

2024 Background PM Scenario B  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Int Delay, s/veh         | 2.2  |      |      |      |      |      |      |      |      |      |      |      |
| Movement                 | EBL  | EBT  | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
| Lane Configurations      | ↔    | ↑    | ↔    | ↔    | ↔    |      | ↔    | ↔    |      | ↔    | ↔    |      |
| Traffic Vol, veh/h       | 0    | 252  | 48   | 28   | 195  | 0    | 58   | 0    | 28   | 0    | 0    | 0    |
| Future Vol, veh/h        | 0    | 252  | 48   | 28   | 195  | 0    | 58   | 0    | 28   | 0    | 0    | 0    |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Free | Free | Free | Free | Free | Free | Stop | Stop | Stop | Stop | Stop | Stop |
| RT Channelized           | -    | -    | None | -    | -    | None | -    | -    | None | -    | -    | None |
| Storage Length           | 150  | -    | 170  | 150  | -    | -    | 150  | -    | -    | 150  | -    | -    |
| Veh in Median Storage, # | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Grade, %                 | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Peak Hour Factor         | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   |
| Heavy Vehicles, %        | 8    | 8    | 8    | 8    | 8    | 8    | 8    | 8    | 8    | 8    | 8    | 8    |
| Mvmt Flow                | 0    | 274  | 52   | 30   | 212  | 0    | 63   | 0    | 30   | 0    | 0    | 0    |

| Major/Minor          | Major1 | Major2 | Minor1 | Minor2 |
|----------------------|--------|--------|--------|--------|
| Conflicting Flow All | 212    | 0      | 0      | 326    |
| Stage 1              | -      | -      | -      | -      |
| Stage 2              | -      | -      | -      | -      |
| Critical Hdwy        | 4.18   | -      | -      | 4.18   |
| Critical Hdwy Stg 1  | -      | -      | -      | -      |
| Critical Hdwy Stg 2  | -      | -      | -      | -      |
| Follow-up Hdwy       | 2.272  | -      | -      | 2.272  |
| Pot Cap-1 Maneuver   | 1323   | -      | -      | 1201   |
| Stage 1              | -      | -      | -      | -      |
| Stage 2              | -      | -      | -      | -      |
| Platoon blocked, %   | -      | -      | -      | -      |
| Mov Cap-1 Maneuver   | 1323   | -      | -      | 1201   |
| Mov Cap-2 Maneuver   | -      | -      | -      | -      |
| Stage 1              | -      | -      | -      | -      |
| Stage 2              | -      | -      | -      | -      |

| Approach             | EB | WB | NB   | SB |
|----------------------|----|----|------|----|
| HCM Control Delay, s | 0  | 1  | 13.2 | 0  |
| HCM LOS              |    |    | B    | A  |

| Minor Lane/Major Mvmt | NBLn1 | NBLn2 | EBL  | EBT | EBR | WBL   | WBT | WBR | SBLn1 | SBLn2 |
|-----------------------|-------|-------|------|-----|-----|-------|-----|-----|-------|-------|
| Capacity (veh/h)      | 431   | 751   | 1323 | -   | -   | 1201  | -   | -   | -     | -     |
| HCM Lane V/C Ratio    | 0.146 | 0.041 | -    | -   | -   | 0.025 | -   | -   | -     | -     |
| HCM Control Delay (s) | 14.8  | 10    | 0    | -   | -   | 8.1   | -   | -   | 0     | 0     |
| HCM Lane LOS          | B     | B     | A    | -   | -   | A     | -   | -   | A     | A     |
| HCM 95th %tile Q(veh) | 0.5   | 0.1   | 0    | -   | -   | 0.1   | -   | -   | -     | -     |



Deer Valley 30  
11: 15th Ave & Parkview Ln

2024 Background AM Scenario B  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh         | 0    |      |      |      |      |      |
| Movement                 | EBT  | EBR  | WBL  | WBT  | NBL  | NBR  |
| Lane Configurations      | ↻    |      |      | ↻    | ↻    |      |
| Traffic Vol, veh/h       | 0    | 0    | 0    | 0    | 0    | 0    |
| Future Vol, veh/h        | 0    | 0    | 0    | 0    | 0    | 0    |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Free | Free | Free | Free | Stop | Stop |
| RT Channelized           | -    | None | -    | None | -    | None |
| Storage Length           | -    | -    | -    | -    | 0    | -    |
| Veh in Median Storage, # | 0    | -    | -    | 0    | 0    | -    |
| Grade, %                 | 0    | -    | -    | 0    | 0    | -    |
| Peak Hour Factor         | 92   | 92   | 92   | 92   | 92   | 92   |
| Heavy Vehicles, %        | 8    | 8    | 8    | 8    | 8    | 8    |
| Mvmt Flow                | 0    | 0    | 0    | 0    | 0    | 0    |

| Major/Minor          | Major1 | Major2 | Minor1 |   |       |
|----------------------|--------|--------|--------|---|-------|
| Conflicting Flow All | 0      | 0      | 1      | 0 | 2     |
| Stage 1              | -      | -      | -      | - | 1     |
| Stage 2              | -      | -      | -      | - | 1     |
| Critical Hdwy        | -      | -      | 4.18   | - | 6.48  |
| Critical Hdwy Stg 1  | -      | -      | -      | - | 5.48  |
| Critical Hdwy Stg 2  | -      | -      | -      | - | 5.48  |
| Follow-up Hdwy       | -      | -      | 2.272  | - | 3.372 |
| Pot Cap-1 Maneuver   | -      | -      | 1583   | - | 1005  |
| Stage 1              | -      | -      | -      | - | 1007  |
| Stage 2              | -      | -      | -      | - | 1007  |
| Platoon blocked, %   | -      | -      | -      | - | -     |
| Mov Cap-1 Maneuver   | -      | -      | 1583   | - | 1005  |
| Mov Cap-2 Maneuver   | -      | -      | -      | - | 1005  |
| Stage 1              | -      | -      | -      | - | 1007  |
| Stage 2              | -      | -      | -      | - | 1007  |

| Approach             | EB | WB | NB |
|----------------------|----|----|----|
| HCM Control Delay, s | 0  | 0  | 0  |
| HCM LOS              |    |    | A  |

| Minor Lane/Major Mvmt | NBLn1 | EBT | EBR | WBL  | WBT |
|-----------------------|-------|-----|-----|------|-----|
| Capacity (veh/h)      | -     | -   | -   | 1583 | -   |
| HCM Lane V/C Ratio    | -     | -   | -   | -    | -   |
| HCM Control Delay (s) | 0     | -   | -   | 0    | -   |
| HCM Lane LOS          | A     | -   | -   | A    | -   |
| HCM 95th %tile Q(veh) | -     | -   | -   | 0    | -   |

Deer Valley 30  
11: 15th Ave & Parkview Ln

2024 Background PM Scenario B  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh         | 0    |      |      |      |      |      |
| Movement                 | EBT  | EBR  | WBL  | WBT  | NBL  | NBR  |
| Lane Configurations      | ↻    |      |      | ↻    | ↻    |      |
| Traffic Vol, veh/h       | 0    | 0    | 0    | 0    | 0    | 0    |
| Future Vol, veh/h        | 0    | 0    | 0    | 0    | 0    | 0    |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Free | Free | Free | Free | Stop | Stop |
| RT Channelized           | -    | None | -    | None | -    | None |
| Storage Length           | -    | -    | -    | -    | 0    | -    |
| Veh in Median Storage, # | 0    | -    | -    | 0    | 0    | -    |
| Grade, %                 | 0    | -    | -    | 0    | 0    | -    |
| Peak Hour Factor         | 92   | 92   | 92   | 92   | 92   | 92   |
| Heavy Vehicles, %        | 8    | 8    | 8    | 8    | 8    | 8    |
| Mvmt Flow                | 0    | 0    | 0    | 0    | 0    | 0    |

| Major/Minor          | Major1 | Major2 | Minor1 |   |       |
|----------------------|--------|--------|--------|---|-------|
| Conflicting Flow All | 0      | 0      | 1      | 0 | 2     |
| Stage 1              | -      | -      | -      | - | 1     |
| Stage 2              | -      | -      | -      | - | 1     |
| Critical Hdwy        | -      | -      | 4.18   | - | 6.48  |
| Critical Hdwy Stg 1  | -      | -      | -      | - | 5.48  |
| Critical Hdwy Stg 2  | -      | -      | -      | - | 5.48  |
| Follow-up Hdwy       | -      | -      | 2.272  | - | 3.372 |
| Pot Cap-1 Maneuver   | -      | -      | 1583   | - | 1005  |
| Stage 1              | -      | -      | -      | - | 1007  |
| Stage 2              | -      | -      | -      | - | 1007  |
| Platoon blocked, %   | -      | -      | -      | - | -     |
| Mov Cap-1 Maneuver   | -      | -      | 1583   | - | 1005  |
| Mov Cap-2 Maneuver   | -      | -      | -      | - | 1005  |
| Stage 1              | -      | -      | -      | - | 1007  |
| Stage 2              | -      | -      | -      | - | 1007  |

| Approach             | EB | WB | NB |
|----------------------|----|----|----|
| HCM Control Delay, s | 0  | 0  | 0  |
| HCM LOS              |    |    | A  |

| Minor Lane/Major Mvmt | NBLn1 | EBT | EBR | WBL  | WBT |
|-----------------------|-------|-----|-----|------|-----|
| Capacity (veh/h)      | -     | -   | -   | 1583 | -   |
| HCM Lane V/C Ratio    | -     | -   | -   | -    | -   |
| HCM Control Delay (s) | 0     | -   | -   | 0    | -   |
| HCM Lane LOS          | A     | -   | -   | A    | -   |
| HCM 95th %tile Q(veh) | -     | -   | -   | 0    | -   |

Deer Valley 30  
12: Alameda Rd & Access A

2024 Background AM Scenario B  
HCM 6th TWSC

| Intersection             |        |        |        |      |       |       |
|--------------------------|--------|--------|--------|------|-------|-------|
| Int Delay, s/veh         | 0      |        |        |      |       |       |
| Movement                 | EBL    | EBT    | WBT    | WBR  | SBL   | SBR   |
| Lane Configurations      |        | ↕      | ↕      |      | ↕     |       |
| Traffic Vol, veh/h       | 0      | 0      | 0      | 0    | 0     | 0     |
| Future Vol, veh/h        | 0      | 0      | 0      | 0    | 0     | 0     |
| Conflicting Peds, #/hr   | 0      | 0      | 0      | 0    | 0     | 0     |
| Sign Control             | Free   | Free   | Free   | Free | Stop  | Stop  |
| RT Channelized           | -      | None   | -      | None | -     | None  |
| Storage Length           | -      | -      | -      | -    | 0     | -     |
| Veh in Median Storage, # | -      | 0      | 0      | -    | 0     | -     |
| Grade, %                 | -      | 0      | 0      | -    | 0     | -     |
| Peak Hour Factor         | 92     | 92     | 92     | 92   | 92    | 92    |
| Heavy Vehicles, %        | 8      | 8      | 8      | 8    | 8     | 8     |
| Mvmt Flow                | 0      | 0      | 0      | 0    | 0     | 0     |
| Major/Minor              | Major1 | Major2 | Minor2 |      |       |       |
| Conflicting Flow All     | 1      | 0      | -      | 0    | 1     | 1     |
| Stage 1                  | -      | -      | -      | -    | 1     | -     |
| Stage 2                  | -      | -      | -      | -    | 0     | -     |
| Critical Hdwy            | 4.18   | -      | -      | -    | 6.48  | 6.28  |
| Critical Hdwy Stg 1      | -      | -      | -      | -    | 5.48  | -     |
| Critical Hdwy Stg 2      | -      | -      | -      | -    | 5.48  | -     |
| Follow-up Hdwy           | 2.272  | -      | -      | -    | 3.572 | 3.372 |
| Pot Cap-1 Maneuver       | 1583   | -      | -      | -    | 1007  | 1066  |
| Stage 1                  | -      | -      | -      | -    | 1007  | -     |
| Stage 2                  | -      | -      | -      | -    | -     | -     |
| Platoon blocked, %       | -      | -      | -      | -    | -     | -     |
| Mov Cap-1 Maneuver       | 1583   | -      | -      | -    | 1007  | 1066  |
| Mov Cap-2 Maneuver       | -      | -      | -      | -    | 1007  | -     |
| Stage 1                  | -      | -      | -      | -    | 1007  | -     |
| Stage 2                  | -      | -      | -      | -    | -     | -     |
| Approach                 | EB     | WB     | SB     |      |       |       |
| HCM Control Delay, s     | 0      | 0      | 0      |      |       |       |
| HCM LOS                  | A      |        |        |      |       |       |
| Minor Lane/Major Mvmt    | EBL    | EBT    | WBT    | WBR  | SBLn1 | SBRn1 |
| Capacity (veh/h)         | 1583   | -      | -      | -    | -     | -     |
| HCM Lane V/C Ratio       | -      | -      | -      | -    | -     | -     |
| HCM Control Delay (s)    | 0      | -      | -      | -    | 0     | -     |
| HCM Lane LOS             | A      | -      | -      | -    | A     | -     |
| HCM 95th %tile Q(veh)    | 0      | -      | -      | -    | -     | -     |

Deer Valley 30  
12: Alameda Rd & Access A

2024 Background PM Scenario B  
HCM 6th TWSC

| Intersection             |        |        |        |      |       |       |
|--------------------------|--------|--------|--------|------|-------|-------|
| Int Delay, s/veh         | 0      |        |        |      |       |       |
| Movement                 | EBL    | EBT    | WBT    | WBR  | SBL   | SBR   |
| Lane Configurations      |        | ↕      | ↕      |      | ↕     |       |
| Traffic Vol, veh/h       | 0      | 0      | 0      | 0    | 0     | 0     |
| Future Vol, veh/h        | 0      | 0      | 0      | 0    | 0     | 0     |
| Conflicting Peds, #/hr   | 0      | 0      | 0      | 0    | 0     | 0     |
| Sign Control             | Free   | Free   | Free   | Free | Stop  | Stop  |
| RT Channelized           | -      | None   | -      | None | -     | None  |
| Storage Length           | -      | -      | -      | -    | 0     | -     |
| Veh in Median Storage, # | -      | 0      | 0      | -    | 0     | -     |
| Grade, %                 | -      | 0      | 0      | -    | 0     | -     |
| Peak Hour Factor         | 92     | 92     | 92     | 92   | 92    | 92    |
| Heavy Vehicles, %        | 8      | 8      | 8      | 8    | 8     | 8     |
| Mvmt Flow                | 0      | 0      | 0      | 0    | 0     | 0     |
| Major/Minor              | Major1 | Major2 | Minor2 |      |       |       |
| Conflicting Flow All     | 1      | 0      | -      | 0    | 1     | 1     |
| Stage 1                  | -      | -      | -      | -    | 1     | -     |
| Stage 2                  | -      | -      | -      | -    | 0     | -     |
| Critical Hdwy            | 4.18   | -      | -      | -    | 6.48  | 6.28  |
| Critical Hdwy Stg 1      | -      | -      | -      | -    | 5.48  | -     |
| Critical Hdwy Stg 2      | -      | -      | -      | -    | 5.48  | -     |
| Follow-up Hdwy           | 2.272  | -      | -      | -    | 3.572 | 3.372 |
| Pot Cap-1 Maneuver       | 1583   | -      | -      | -    | 1007  | 1066  |
| Stage 1                  | -      | -      | -      | -    | 1007  | -     |
| Stage 2                  | -      | -      | -      | -    | -     | -     |
| Platoon blocked, %       | -      | -      | -      | -    | -     | -     |
| Mov Cap-1 Maneuver       | 1583   | -      | -      | -    | 1007  | 1066  |
| Mov Cap-2 Maneuver       | -      | -      | -      | -    | 1007  | -     |
| Stage 1                  | -      | -      | -      | -    | 1007  | -     |
| Stage 2                  | -      | -      | -      | -    | -     | -     |
| Approach                 | EB     | WB     | SB     |      |       |       |
| HCM Control Delay, s     | 0      | 0      | 0      |      |       |       |
| HCM LOS                  | A      |        |        |      |       |       |
| Minor Lane/Major Mvmt    | EBL    | EBT    | WBT    | WBR  | SBLn1 | SBRn1 |
| Capacity (veh/h)         | 1583   | -      | -      | -    | -     | -     |
| HCM Lane V/C Ratio       | -      | -      | -      | -    | -     | -     |
| HCM Control Delay (s)    | 0      | -      | -      | -    | 0     | -     |
| HCM Lane LOS             | A      | -      | -      | -    | A     | -     |
| HCM 95th %tile Q(veh)    | 0      | -      | -      | -    | -     | -     |

Deer Valley 30  
13: Alameda Rd & Access B

2024 Background AM Scenario B  
HCM 6th TWSC

| Intersection             |        |        |        |      |       |       |
|--------------------------|--------|--------|--------|------|-------|-------|
| Int Delay, s/veh         | 0      |        |        |      |       |       |
| Movement                 | EBL    | EBT    | WBT    | WBR  | SBL   | SBR   |
| Lane Configurations      |        | ↕      | ↕      |      | ↕     | ↕     |
| Traffic Vol, veh/h       | 0      | 0      | 0      | 0    | 0     | 0     |
| Future Vol, veh/h        | 0      | 0      | 0      | 0    | 0     | 0     |
| Conflicting Peds, #/hr   | 0      | 0      | 0      | 0    | 0     | 0     |
| Sign Control             | Free   | Free   | Free   | Free | Stop  | Stop  |
| RT Channelized           | -      | None   | -      | None | -     | None  |
| Storage Length           | -      | -      | -      | -    | 0     | -     |
| Veh in Median Storage, # | -      | 0      | 0      | -    | 0     | -     |
| Grade, %                 | -      | 0      | 0      | -    | 0     | -     |
| Peak Hour Factor         | 92     | 92     | 92     | 92   | 92    | 92    |
| Heavy Vehicles, %        | 8      | 8      | 8      | 8    | 8     | 8     |
| Mvmt Flow                | 0      | 0      | 0      | 0    | 0     | 0     |
| Major/Minor              | Major1 | Major2 | Minor2 |      |       |       |
| Conflicting Flow All     | 1      | 0      | -      | 0    | 1     | 1     |
| Stage 1                  | -      | -      | -      | -    | 1     | -     |
| Stage 2                  | -      | -      | -      | -    | 0     | -     |
| Critical Hdwy            | 4.18   | -      | -      | -    | 6.48  | 6.28  |
| Critical Hdwy Stg 1      | -      | -      | -      | -    | 5.48  | -     |
| Critical Hdwy Stg 2      | -      | -      | -      | -    | 5.48  | -     |
| Follow-up Hdwy           | 2.272  | -      | -      | -    | 3.572 | 3.372 |
| Pot Cap-1 Maneuver       | 1583   | -      | -      | -    | 1007  | 1066  |
| Stage 1                  | -      | -      | -      | -    | 1007  | -     |
| Stage 2                  | -      | -      | -      | -    | -     | -     |
| Platoon blocked, %       | -      | -      | -      | -    | -     | -     |
| Mov Cap-1 Maneuver       | 1583   | -      | -      | -    | 1007  | 1066  |
| Mov Cap-2 Maneuver       | -      | -      | -      | -    | 1007  | -     |
| Stage 1                  | -      | -      | -      | -    | 1007  | -     |
| Stage 2                  | -      | -      | -      | -    | -     | -     |
| Approach                 | EB     | WB     | SB     |      |       |       |
| HCM Control Delay, s     | 0      | 0      | 0      |      |       |       |
| HCM LOS                  | A      |        |        |      |       |       |
| Minor Lane/Major Mvmt    | EBL    | EBT    | WBT    | WBR  | SBLn1 | SBRn1 |
| Capacity (veh/h)         | 1583   | -      | -      | -    | -     | -     |
| HCM Lane V/C Ratio       | -      | -      | -      | -    | -     | -     |
| HCM Control Delay (s)    | 0      | -      | -      | -    | 0     | -     |
| HCM Lane LOS             | A      | -      | -      | -    | A     | -     |
| HCM 95th %tile Q(veh)    | 0      | -      | -      | -    | -     | -     |

Deer Valley 30  
13: Alameda Rd & Access B

2024 Background PM Scenario B  
HCM 6th TWSC

| Intersection             |        |        |        |      |       |       |
|--------------------------|--------|--------|--------|------|-------|-------|
| Int Delay, s/veh         | 0      |        |        |      |       |       |
| Movement                 | EBL    | EBT    | WBT    | WBR  | SBL   | SBR   |
| Lane Configurations      |        | ↕      | ↕      |      | ↕     | ↕     |
| Traffic Vol, veh/h       | 0      | 0      | 0      | 0    | 0     | 0     |
| Future Vol, veh/h        | 0      | 0      | 0      | 0    | 0     | 0     |
| Conflicting Peds, #/hr   | 0      | 0      | 0      | 0    | 0     | 0     |
| Sign Control             | Free   | Free   | Free   | Free | Stop  | Stop  |
| RT Channelized           | -      | None   | -      | None | -     | None  |
| Storage Length           | -      | -      | -      | -    | 0     | -     |
| Veh in Median Storage, # | -      | 0      | 0      | -    | 0     | -     |
| Grade, %                 | -      | 0      | 0      | -    | 0     | -     |
| Peak Hour Factor         | 92     | 92     | 92     | 92   | 92    | 92    |
| Heavy Vehicles, %        | 8      | 8      | 8      | 8    | 8     | 8     |
| Mvmt Flow                | 0      | 0      | 0      | 0    | 0     | 0     |
| Major/Minor              | Major1 | Major2 | Minor2 |      |       |       |
| Conflicting Flow All     | 1      | 0      | -      | 0    | 1     | 1     |
| Stage 1                  | -      | -      | -      | -    | 1     | -     |
| Stage 2                  | -      | -      | -      | -    | 0     | -     |
| Critical Hdwy            | 4.18   | -      | -      | -    | 6.48  | 6.28  |
| Critical Hdwy Stg 1      | -      | -      | -      | -    | 5.48  | -     |
| Critical Hdwy Stg 2      | -      | -      | -      | -    | 5.48  | -     |
| Follow-up Hdwy           | 2.272  | -      | -      | -    | 3.572 | 3.372 |
| Pot Cap-1 Maneuver       | 1583   | -      | -      | -    | 1007  | 1066  |
| Stage 1                  | -      | -      | -      | -    | 1007  | -     |
| Stage 2                  | -      | -      | -      | -    | -     | -     |
| Platoon blocked, %       | -      | -      | -      | -    | -     | -     |
| Mov Cap-1 Maneuver       | 1583   | -      | -      | -    | 1007  | 1066  |
| Mov Cap-2 Maneuver       | -      | -      | -      | -    | 1007  | -     |
| Stage 1                  | -      | -      | -      | -    | 1007  | -     |
| Stage 2                  | -      | -      | -      | -    | -     | -     |
| Approach                 | EB     | WB     | SB     |      |       |       |
| HCM Control Delay, s     | 0      | 0      | 0      |      |       |       |
| HCM LOS                  | A      |        |        |      |       |       |
| Minor Lane/Major Mvmt    | EBL    | EBT    | WBT    | WBR  | SBLn1 | SBRn1 |
| Capacity (veh/h)         | 1583   | -      | -      | -    | -     | -     |
| HCM Lane V/C Ratio       | -      | -      | -      | -    | -     | -     |
| HCM Control Delay (s)    | 0      | -      | -      | -    | 0     | -     |
| HCM Lane LOS             | A      | -      | -      | -    | A     | -     |
| HCM 95th %tile Q(veh)    | 0      | -      | -      | -    | -     | -     |

Deer Valley 30  
14: Alameda Rd & Access C

2024 Background AM Scenario B  
HCM 6th TWSC

| Intersection             |        |        |        |       |       |       |
|--------------------------|--------|--------|--------|-------|-------|-------|
| Int Delay, s/veh         | 0      |        |        |       |       |       |
| Movement                 | EBL    | EBT    | WBT    | WBR   | SBL   | SBR   |
| Lane Configurations      |        | ↕      | ↕      |       | ↕     | ↕     |
| Traffic Vol, veh/h       | 0      | 0      | 0      | 0     | 0     | 0     |
| Future Vol, veh/h        | 0      | 0      | 0      | 0     | 0     | 0     |
| Conflicting Peds, #/hr   | 0      | 0      | 0      | 0     | 0     | 0     |
| Sign Control             | Free   | Free   | Free   | Free  | Stop  | Stop  |
| RT Channelized           | -      | None   | -      | None  | -     | None  |
| Storage Length           | -      | -      | -      | -     | 0     | -     |
| Veh in Median Storage, # | -      | 0      | 0      | -     | 0     | -     |
| Grade, %                 | -      | 0      | 0      | -     | 0     | -     |
| Peak Hour Factor         | 92     | 92     | 92     | 92    | 92    | 92    |
| Heavy Vehicles, %        | 8      | 8      | 8      | 8     | 8     | 8     |
| Mvmt Flow                | 0      | 0      | 0      | 0     | 0     | 0     |
| Major/Minor              | Major1 | Major2 | Minor2 |       |       |       |
| Conflicting Flow All     | 1      | 0      | 0      | 1     | 1     |       |
| Stage 1                  | -      | -      | -      | 1     | -     |       |
| Stage 2                  | -      | -      | -      | 0     | -     |       |
| Critical Hdwy            | 4.18   | -      | -      | 6.48  | 6.28  |       |
| Critical Hdwy Stg 1      | -      | -      | -      | 5.48  | -     |       |
| Critical Hdwy Stg 2      | -      | -      | -      | 5.48  | -     |       |
| Follow-up Hdwy           | 2.272  | -      | -      | 3.572 | 3.372 |       |
| Pot Cap-1 Maneuver       | 1583   | -      | -      | 1007  | 1066  |       |
| Stage 1                  | -      | -      | -      | 1007  | -     |       |
| Stage 2                  | -      | -      | -      | -     | -     |       |
| Platoon blocked, %       | -      | -      | -      | -     | -     |       |
| Mov Cap-1 Maneuver       | 1583   | -      | -      | 1007  | 1066  |       |
| Mov Cap-2 Maneuver       | -      | -      | -      | 1007  | -     |       |
| Stage 1                  | -      | -      | -      | 1007  | -     |       |
| Stage 2                  | -      | -      | -      | -     | -     |       |
| Approach                 | EB     | WB     | SB     |       |       |       |
| HCM Control Delay, s     | 0      | 0      | 0      |       |       |       |
| HCM LOS                  |        |        |        | A     |       |       |
| Minor Lane/Major Mvmt    | EBL    | EBT    | WBT    | WBR   | SBLn1 | SBRn1 |
| Capacity (veh/h)         | 1583   | -      | -      | -     | -     | -     |
| HCM Lane V/C Ratio       | -      | -      | -      | -     | -     | -     |
| HCM Control Delay (s)    | 0      | -      | -      | -     | 0     | -     |
| HCM Lane LOS             | A      | -      | -      | -     | A     | -     |
| HCM 95th %tile Q(veh)    | 0      | -      | -      | -     | -     | -     |

Deer Valley 30  
14: Alameda Rd & Access C

2024 Background PM Scenario B  
HCM 6th TWSC

| Intersection             |        |        |        |       |       |       |
|--------------------------|--------|--------|--------|-------|-------|-------|
| Int Delay, s/veh         | 0      |        |        |       |       |       |
| Movement                 | EBL    | EBT    | WBT    | WBR   | SBL   | SBR   |
| Lane Configurations      |        | ↕      | ↕      |       | ↕     | ↕     |
| Traffic Vol, veh/h       | 0      | 0      | 0      | 0     | 0     | 0     |
| Future Vol, veh/h        | 0      | 0      | 0      | 0     | 0     | 0     |
| Conflicting Peds, #/hr   | 0      | 0      | 0      | 0     | 0     | 0     |
| Sign Control             | Free   | Free   | Free   | Free  | Stop  | Stop  |
| RT Channelized           | -      | None   | -      | None  | -     | None  |
| Storage Length           | -      | -      | -      | -     | 0     | -     |
| Veh in Median Storage, # | -      | 0      | 0      | -     | 0     | -     |
| Grade, %                 | -      | 0      | 0      | -     | 0     | -     |
| Peak Hour Factor         | 92     | 92     | 92     | 92    | 92    | 92    |
| Heavy Vehicles, %        | 8      | 8      | 8      | 8     | 8     | 8     |
| Mvmt Flow                | 0      | 0      | 0      | 0     | 0     | 0     |
| Major/Minor              | Major1 | Major2 | Minor2 |       |       |       |
| Conflicting Flow All     | 1      | 0      | 0      | 1     | 1     |       |
| Stage 1                  | -      | -      | -      | 1     | -     |       |
| Stage 2                  | -      | -      | -      | 0     | -     |       |
| Critical Hdwy            | 4.18   | -      | -      | 6.48  | 6.28  |       |
| Critical Hdwy Stg 1      | -      | -      | -      | 5.48  | -     |       |
| Critical Hdwy Stg 2      | -      | -      | -      | 5.48  | -     |       |
| Follow-up Hdwy           | 2.272  | -      | -      | 3.572 | 3.372 |       |
| Pot Cap-1 Maneuver       | 1583   | -      | -      | 1007  | 1066  |       |
| Stage 1                  | -      | -      | -      | 1007  | -     |       |
| Stage 2                  | -      | -      | -      | -     | -     |       |
| Platoon blocked, %       | -      | -      | -      | -     | -     |       |
| Mov Cap-1 Maneuver       | 1583   | -      | -      | 1007  | 1066  |       |
| Mov Cap-2 Maneuver       | -      | -      | -      | 1007  | -     |       |
| Stage 1                  | -      | -      | -      | 1007  | -     |       |
| Stage 2                  | -      | -      | -      | -     | -     |       |
| Approach                 | EB     | WB     | SB     |       |       |       |
| HCM Control Delay, s     | 0      | 0      | 0      |       |       |       |
| HCM LOS                  |        |        |        | A     |       |       |
| Minor Lane/Major Mvmt    | EBL    | EBT    | WBT    | WBR   | SBLn1 | SBRn1 |
| Capacity (veh/h)         | 1583   | -      | -      | -     | -     | -     |
| HCM Lane V/C Ratio       | -      | -      | -      | -     | -     | -     |
| HCM Control Delay (s)    | 0      | -      | -      | -     | 0     | -     |
| HCM Lane LOS             | A      | -      | -      | -     | A     | -     |
| HCM 95th %tile Q(veh)    | 0      | -      | -      | -     | -     | -     |

Deer Valley 30  
15: Alameda Rd & 15th Ave

2024 Background AM Scenario B  
HCM 6th TWSC

| Intersection             |        |        |        |      |       |       |
|--------------------------|--------|--------|--------|------|-------|-------|
| Int Delay, s/veh         | 0      |        |        |      |       |       |
| Movement                 | EBL    | EBT    | WBT    | WBR  | SBL   | SBR   |
| Lane Configurations      |        | ↕      | ↕      |      | ↕     | ↕     |
| Traffic Vol, veh/h       | 0      | 0      | 0      | 0    | 0     | 0     |
| Future Vol, veh/h        | 0      | 0      | 0      | 0    | 0     | 0     |
| Conflicting Peds, #/hr   | 0      | 0      | 0      | 0    | 0     | 0     |
| Sign Control             | Free   | Free   | Free   | Free | Stop  | Stop  |
| RT Channelized           | -      | None   | -      | None | -     | None  |
| Storage Length           | -      | -      | -      | -    | 0     | -     |
| Veh in Median Storage, # | -      | 0      | 0      | -    | 0     | -     |
| Grade, %                 | -      | 0      | 0      | -    | 0     | -     |
| Peak Hour Factor         | 92     | 92     | 92     | 92   | 92    | 92    |
| Heavy Vehicles, %        | 8      | 8      | 8      | 8    | 8     | 8     |
| Mvmt Flow                | 0      | 0      | 0      | 0    | 0     | 0     |
| Major/Minor              | Major1 | Major2 | Minor2 |      |       |       |
| Conflicting Flow All     | 1      | 0      | -      | 0    | 1     | 1     |
| Stage 1                  | -      | -      | -      | -    | 1     | -     |
| Stage 2                  | -      | -      | -      | -    | 0     | -     |
| Critical Hdwy            | 4.18   | -      | -      | -    | 6.48  | 6.28  |
| Critical Hdwy Stg 1      | -      | -      | -      | -    | 5.48  | -     |
| Critical Hdwy Stg 2      | -      | -      | -      | -    | 5.48  | -     |
| Follow-up Hdwy           | 2.272  | -      | -      | -    | 3.572 | 3.372 |
| Pot Cap-1 Maneuver       | 1583   | -      | -      | -    | 1007  | 1066  |
| Stage 1                  | -      | -      | -      | -    | 1007  | -     |
| Stage 2                  | -      | -      | -      | -    | -     | -     |
| Platoon blocked, %       | -      | -      | -      | -    | -     | -     |
| Mov Cap-1 Maneuver       | 1583   | -      | -      | -    | 1007  | 1066  |
| Mov Cap-2 Maneuver       | -      | -      | -      | -    | 1007  | -     |
| Stage 1                  | -      | -      | -      | -    | 1007  | -     |
| Stage 2                  | -      | -      | -      | -    | -     | -     |
| Approach                 | EB     | WB     | SB     |      |       |       |
| HCM Control Delay, s     | 0      | 0      | 0      |      |       |       |
| HCM LOS                  | A      |        |        |      |       |       |
| Minor Lane/Major Mvmt    | EBL    | EBT    | WBT    | WBR  | SBLn1 | SBRn1 |
| Capacity (veh/h)         | 1583   | -      | -      | -    | -     | -     |
| HCM Lane V/C Ratio       | -      | -      | -      | -    | -     | -     |
| HCM Control Delay (s)    | 0      | -      | -      | -    | 0     | -     |
| HCM Lane LOS             | A      | -      | -      | -    | A     | -     |
| HCM 95th %tile Q(veh)    | 0      | -      | -      | -    | -     | -     |

Deer Valley 30  
15: Alameda Rd & 15th Ave

2024 Background PM Scenario B  
HCM 6th TWSC

| Intersection             |        |        |        |      |       |       |
|--------------------------|--------|--------|--------|------|-------|-------|
| Int Delay, s/veh         | 0      |        |        |      |       |       |
| Movement                 | EBL    | EBT    | WBT    | WBR  | SBL   | SBR   |
| Lane Configurations      |        | ↕      | ↕      |      | ↕     | ↕     |
| Traffic Vol, veh/h       | 0      | 0      | 0      | 0    | 0     | 0     |
| Future Vol, veh/h        | 0      | 0      | 0      | 0    | 0     | 0     |
| Conflicting Peds, #/hr   | 0      | 0      | 0      | 0    | 0     | 0     |
| Sign Control             | Free   | Free   | Free   | Free | Stop  | Stop  |
| RT Channelized           | -      | None   | -      | None | -     | None  |
| Storage Length           | -      | -      | -      | -    | 0     | -     |
| Veh in Median Storage, # | -      | 0      | 0      | -    | 0     | -     |
| Grade, %                 | -      | 0      | 0      | -    | 0     | -     |
| Peak Hour Factor         | 92     | 92     | 92     | 92   | 92    | 92    |
| Heavy Vehicles, %        | 8      | 8      | 8      | 8    | 8     | 8     |
| Mvmt Flow                | 0      | 0      | 0      | 0    | 0     | 0     |
| Major/Minor              | Major1 | Major2 | Minor2 |      |       |       |
| Conflicting Flow All     | 1      | 0      | -      | 0    | 1     | 1     |
| Stage 1                  | -      | -      | -      | -    | 1     | -     |
| Stage 2                  | -      | -      | -      | -    | 0     | -     |
| Critical Hdwy            | 4.18   | -      | -      | -    | 6.48  | 6.28  |
| Critical Hdwy Stg 1      | -      | -      | -      | -    | 5.48  | -     |
| Critical Hdwy Stg 2      | -      | -      | -      | -    | 5.48  | -     |
| Follow-up Hdwy           | 2.272  | -      | -      | -    | 3.572 | 3.372 |
| Pot Cap-1 Maneuver       | 1583   | -      | -      | -    | 1007  | 1066  |
| Stage 1                  | -      | -      | -      | -    | 1007  | -     |
| Stage 2                  | -      | -      | -      | -    | -     | -     |
| Platoon blocked, %       | -      | -      | -      | -    | -     | -     |
| Mov Cap-1 Maneuver       | 1583   | -      | -      | -    | 1007  | 1066  |
| Mov Cap-2 Maneuver       | -      | -      | -      | -    | 1007  | -     |
| Stage 1                  | -      | -      | -      | -    | 1007  | -     |
| Stage 2                  | -      | -      | -      | -    | -     | -     |
| Approach                 | EB     | WB     | SB     |      |       |       |
| HCM Control Delay, s     | 0      | 0      | 0      |      |       |       |
| HCM LOS                  | A      |        |        |      |       |       |
| Minor Lane/Major Mvmt    | EBL    | EBT    | WBT    | WBR  | SBLn1 | SBRn1 |
| Capacity (veh/h)         | 1583   | -      | -      | -    | -     | -     |
| HCM Lane V/C Ratio       | -      | -      | -      | -    | -     | -     |
| HCM Control Delay (s)    | 0      | -      | -      | -    | 0     | -     |
| HCM Lane LOS             | A      | -      | -      | -    | A     | -     |
| HCM 95th %tile Q(veh)    | 0      | -      | -      | -    | -     | -     |

Deer Valley 30  
16: Access D

2024 Background AM Scenario B  
HCM 6th TWSC

| Intersection             |        |        |        |       |      |       |
|--------------------------|--------|--------|--------|-------|------|-------|
| Int Delay, s/veh         | 0      |        |        |       |      |       |
| Movement                 | EBL    | EBT    | WBT    | WBR   | SBL  | SBR   |
| Lane Configurations      |        | ↕      | ↑      |       |      | ↕     |
| Traffic Vol, veh/h       | 0      | 0      | 0      | 0     | 0    | 0     |
| Future Vol, veh/h        | 0      | 0      | 0      | 0     | 0    | 0     |
| Conflicting Peds, #/hr   | 0      | 0      | 0      | 0     | 0    | 0     |
| Sign Control             | Free   | Free   | Free   | Free  | Stop | Stop  |
| RT Channelized           | -      | None   | -      | None  | -    | None  |
| Storage Length           | -      | -      | -      | -     | -    | 0     |
| Veh in Median Storage, # | -      | 0      | 0      | -     | 0    | -     |
| Grade, %                 | -      | 0      | 0      | -     | 0    | -     |
| Peak Hour Factor         | 92     | 92     | 92     | 92    | 92   | 92    |
| Heavy Vehicles, %        | 8      | 8      | 8      | 8     | 8    | 8     |
| Mvmt Flow                | 0      | 0      | 0      | 0     | 0    | 0     |
| Major/Minor              | Major1 | Major2 | Minor2 |       |      |       |
| Conflicting Flow All     | 1      | 0      | -      | 0     | -    | 1     |
| Stage 1                  | -      | -      | -      | -     | -    | -     |
| Stage 2                  | -      | -      | -      | -     | -    | -     |
| Critical Hdwy            | 4.18   | -      | -      | -     | -    | 6.28  |
| Critical Hdwy Stg 1      | -      | -      | -      | -     | -    | -     |
| Critical Hdwy Stg 2      | -      | -      | -      | -     | -    | -     |
| Follow-up Hdwy           | 2.272  | -      | -      | -     | -    | 3.372 |
| Pot Cap-1 Maneuver       | 1583   | -      | -      | 0     | 0    | 1066  |
| Stage 1                  | -      | -      | -      | 0     | 0    | -     |
| Stage 2                  | -      | -      | -      | 0     | 0    | -     |
| Platoon blocked, %       | -      | -      | -      | -     | -    | -     |
| Mov Cap-1 Maneuver       | 1583   | -      | -      | -     | -    | 1066  |
| Mov Cap-2 Maneuver       | -      | -      | -      | -     | -    | -     |
| Stage 1                  | -      | -      | -      | -     | -    | -     |
| Stage 2                  | -      | -      | -      | -     | -    | -     |
| Approach                 | EB     | WB     | SB     |       |      |       |
| HCM Control Delay, s     | 0      | 0      | 0      |       |      |       |
| HCM LOS                  |        |        | A      |       |      |       |
| Minor Lane/Major Mvmt    | EBL    | EBT    | WBT    | SBLn1 |      |       |
| Capacity (veh/h)         | 1583   | -      | -      | -     |      |       |
| HCM Lane V/C Ratio       | -      | -      | -      | -     |      |       |
| HCM Control Delay (s)    | 0      | -      | -      | 0     |      |       |
| HCM Lane LOS             | A      | -      | -      | A     |      |       |
| HCM 95th %tile Q(veh)    | 0      | -      | -      | -     |      |       |

Deer Valley 30  
16: Access D

2024 Background PM Scenario B  
HCM 6th TWSC

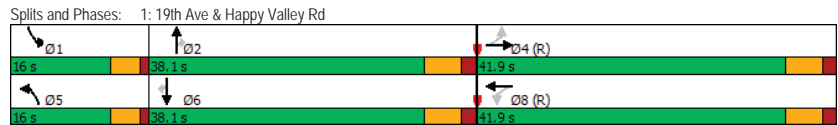
| Intersection             |        |        |        |       |      |       |
|--------------------------|--------|--------|--------|-------|------|-------|
| Int Delay, s/veh         | 0      |        |        |       |      |       |
| Movement                 | EBL    | EBT    | WBT    | WBR   | SBL  | SBR   |
| Lane Configurations      |        | ↕      | ↑      |       |      | ↕     |
| Traffic Vol, veh/h       | 0      | 0      | 0      | 0     | 0    | 0     |
| Future Vol, veh/h        | 0      | 0      | 0      | 0     | 0    | 0     |
| Conflicting Peds, #/hr   | 0      | 0      | 0      | 0     | 0    | 0     |
| Sign Control             | Free   | Free   | Free   | Free  | Stop | Stop  |
| RT Channelized           | -      | None   | -      | None  | -    | None  |
| Storage Length           | -      | -      | -      | -     | -    | 0     |
| Veh in Median Storage, # | -      | 0      | 0      | -     | 0    | -     |
| Grade, %                 | -      | 0      | 0      | -     | 0    | -     |
| Peak Hour Factor         | 92     | 92     | 92     | 92    | 92   | 92    |
| Heavy Vehicles, %        | 8      | 8      | 8      | 8     | 8    | 8     |
| Mvmt Flow                | 0      | 0      | 0      | 0     | 0    | 0     |
| Major/Minor              | Major1 | Major2 | Minor2 |       |      |       |
| Conflicting Flow All     | 1      | 0      | -      | 0     | -    | 1     |
| Stage 1                  | -      | -      | -      | -     | -    | -     |
| Stage 2                  | -      | -      | -      | -     | -    | -     |
| Critical Hdwy            | 4.18   | -      | -      | -     | -    | 6.28  |
| Critical Hdwy Stg 1      | -      | -      | -      | -     | -    | -     |
| Critical Hdwy Stg 2      | -      | -      | -      | -     | -    | -     |
| Follow-up Hdwy           | 2.272  | -      | -      | -     | -    | 3.372 |
| Pot Cap-1 Maneuver       | 1583   | -      | -      | 0     | 0    | 1066  |
| Stage 1                  | -      | -      | -      | 0     | 0    | -     |
| Stage 2                  | -      | -      | -      | 0     | 0    | -     |
| Platoon blocked, %       | -      | -      | -      | -     | -    | -     |
| Mov Cap-1 Maneuver       | 1583   | -      | -      | -     | -    | 1066  |
| Mov Cap-2 Maneuver       | -      | -      | -      | -     | -    | -     |
| Stage 1                  | -      | -      | -      | -     | -    | -     |
| Stage 2                  | -      | -      | -      | -     | -    | -     |
| Approach                 | EB     | WB     | SB     |       |      |       |
| HCM Control Delay, s     | 0      | 0      | 0      |       |      |       |
| HCM LOS                  |        |        | A      |       |      |       |
| Minor Lane/Major Mvmt    | EBL    | EBT    | WBT    | SBLn1 |      |       |
| Capacity (veh/h)         | 1583   | -      | -      | -     |      |       |
| HCM Lane V/C Ratio       | -      | -      | -      | -     |      |       |
| HCM Control Delay (s)    | 0      | -      | -      | 0     |      |       |
| HCM Lane LOS             | A      | -      | -      | A     |      |       |
| HCM 95th %tile Q(veh)    | 0      | -      | -      | -     |      |       |

Deer Valley 30  
1: 19th Ave & Happy Valley Rd

2024 Background AM Mitigated Scenario B  
Timings

| Lane Group           | EBL   | EBT   | WBL   | WBT   | NBL   | NBT   | NBR   | SBL   | SBT   | SBR   |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations  | ↔     | ↔↔    | ↔     | ↔↔    | ↔     | ↔     | ↔     | ↔     | ↔↔    | ↔     |
| Traffic Volume (vph) | 87    | 348   | 150   | 295   | 153   | 257   | 102   | 267   | 408   | 96    |
| Future Volume (vph)  | 87    | 348   | 150   | 295   | 153   | 257   | 102   | 267   | 408   | 96    |
| Turn Type            | Perm  | NA    | Perm  | NA    | Prot  | NA    | Perm  | Prot  | NA    | Perm  |
| Protected Phases     |       | 4     |       | 8     |       | 5     | 2     |       | 1     | 6     |
| Permitted Phases     | 4     |       | 8     |       |       |       | 2     |       |       | 6     |
| Detector Phase       | 4     | 4     | 8     | 8     | 5     | 2     | 2     | 1     | 6     | 6     |
| Switch Phase         |       |       |       |       |       |       |       |       |       |       |
| Minimum Initial (s)  | 15.0  | 15.0  | 15.0  | 15.0  | 5.0   | 5.0   | 5.0   | 5.0   | 5.0   | 5.0   |
| Minimum Split (s)    | 41.0  | 41.0  | 41.0  | 41.0  | 9.5   | 43.1  | 43.1  | 9.5   | 43.1  | 43.1  |
| Total Split (s)      | 41.9  | 41.9  | 41.9  | 41.9  | 16.0  | 38.1  | 38.1  | 16.0  | 38.1  | 38.1  |
| Total Split (%)      | 43.6% | 43.6% | 43.6% | 43.6% | 16.7% | 39.7% | 39.7% | 16.7% | 39.7% | 39.7% |
| Yellow Time (s)      | 4.3   | 4.3   | 4.3   | 4.3   | 3.5   | 4.3   | 4.3   | 3.5   | 4.3   | 4.3   |
| All-Red Time (s)     | 1.7   | 1.7   | 1.7   | 1.7   | 1.0   | 1.8   | 1.8   | 1.0   | 1.8   | 1.8   |
| Lost Time Adjust (s) | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Lost Time (s)  | 6.0   | 6.0   | 6.0   | 6.0   | 4.5   | 6.1   | 6.1   | 4.5   | 6.1   | 6.1   |
| Lead/Lag             |       |       |       |       | Lead  | Lag   | Lag   | Lead  | Lag   | Lag   |
| Lead-Lag Optimize?   |       |       |       |       | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   |
| Recall Mode          | C-Max | C-Max | C-Max | C-Max | None  | Max   | Max   | None  | Max   | Max   |
| Act Effct Green (s)  | 35.9  | 35.9  | 35.9  | 35.9  | 9.9   | 32.3  | 32.3  | 11.2  | 33.6  | 33.6  |
| Actuated g/C Ratio   | 0.37  | 0.37  | 0.37  | 0.37  | 0.10  | 0.34  | 0.34  | 0.12  | 0.35  | 0.35  |
| v/c Ratio            | 0.30  | 0.31  | 0.61  | 0.25  | 0.50  | 0.25  | 0.19  | 0.77  | 0.26  | 0.18  |
| Control Delay        | 24.4  | 15.9  | 35.9  | 15.6  | 45.7  | 23.9  | 5.5   | 55.3  | 23.2  | 5.5   |
| Queue Delay          | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Delay          | 24.4  | 15.9  | 35.9  | 15.6  | 45.7  | 23.9  | 5.5   | 55.3  | 23.2  | 5.5   |
| LOS                  | C     | B     | D     | B     | D     | C     | A     | E     | C     | A     |
| Approach Delay       |       | 17.1  |       | 21.1  |       | 26.8  |       |       | 32.1  |       |
| Approach LOS         |       | B     |       | C     |       | C     |       |       | C     |       |

**Intersection Summary**  
 Cycle Length: 96  
 Actuated Cycle Length: 96  
 Offset: 0 (0%), Referenced to phase 4:EBTL and 8:WBTL, Start of Green  
 Natural Cycle: 95  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.77  
 Intersection Signal Delay: 24.8  
 Intersection Capacity Utilization 58.6%  
 Analysis Period (min) 15  
 Intersection LOS: C  
 ICU Level of Service B

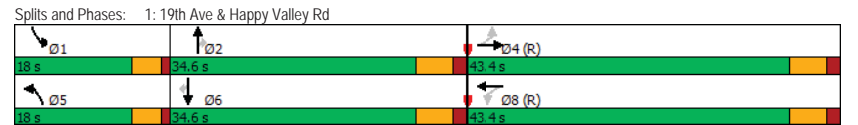


Deer Valley 30  
1: 19th Ave & Happy Valley Rd

2024 Background PM Mitigated Scenario B  
Timings

| Lane Group           | EBL   | EBT   | WBL   | WBT   | NBL   | NBT   | NBR   | SBL   | SBT   | SBR   |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations  | ↔     | ↔↔    | ↔     | ↔↔    | ↔     | ↔     | ↔     | ↔     | ↔↔    | ↔     |
| Traffic Volume (vph) | 167   | 383   | 165   | 747   | 304   | 481   | 125   | 177   | 228   | 122   |
| Future Volume (vph)  | 167   | 383   | 165   | 747   | 304   | 481   | 125   | 177   | 228   | 122   |
| Turn Type            | Perm  | NA    | Perm  | NA    | Prot  | NA    | Perm  | Prot  | NA    | Perm  |
| Protected Phases     |       | 4     |       | 8     |       | 5     | 2     |       | 1     | 6     |
| Permitted Phases     | 4     |       | 8     |       |       |       | 2     |       |       | 6     |
| Detector Phase       | 4     | 4     | 8     | 8     | 5     | 2     | 2     | 1     | 6     | 6     |
| Switch Phase         |       |       |       |       |       |       |       |       |       |       |
| Minimum Initial (s)  | 15.0  | 15.0  | 15.0  | 15.0  | 5.0   | 5.0   | 5.0   | 5.0   | 5.0   | 5.0   |
| Minimum Split (s)    | 41.0  | 41.0  | 41.0  | 41.0  | 9.5   | 43.1  | 43.1  | 9.5   | 43.1  | 43.1  |
| Total Split (s)      | 43.4  | 43.4  | 43.4  | 43.4  | 18.0  | 34.6  | 34.6  | 18.0  | 34.6  | 34.6  |
| Total Split (%)      | 45.2% | 45.2% | 45.2% | 45.2% | 18.8% | 36.0% | 36.0% | 18.8% | 36.0% | 36.0% |
| Yellow Time (s)      | 4.3   | 4.3   | 4.3   | 4.3   | 3.5   | 4.3   | 4.3   | 3.5   | 4.3   | 4.3   |
| All-Red Time (s)     | 1.7   | 1.7   | 1.7   | 1.7   | 1.0   | 1.8   | 1.8   | 1.0   | 1.8   | 1.8   |
| Lost Time Adjust (s) | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Lost Time (s)  | 6.0   | 6.0   | 6.0   | 6.0   | 4.5   | 6.1   | 6.1   | 4.5   | 6.1   | 6.1   |
| Lead/Lag             |       |       |       |       | Lead  | Lag   | Lag   | Lead  | Lag   | Lag   |
| Lead-Lag Optimize?   |       |       |       |       | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   |
| Recall Mode          | C-Max | C-Max | C-Max | C-Max | None  | Max   | Max   | None  | Max   | Max   |
| Act Effct Green (s)  | 37.4  | 37.4  | 37.4  | 37.4  | 13.0  | 31.1  | 31.1  | 10.9  | 29.0  | 29.0  |
| Actuated g/C Ratio   | 0.39  | 0.39  | 0.39  | 0.39  | 0.14  | 0.32  | 0.32  | 0.11  | 0.30  | 0.30  |
| v/c Ratio            | 1.80  | 0.36  | 0.74  | 0.64  | 0.75  | 0.48  | 0.24  | 0.52  | 0.17  | 0.26  |
| Control Delay        | 421.4 | 15.2  | 46.4  | 22.5  | 51.7  | 28.3  | 5.7   | 45.1  | 25.2  | 12.1  |
| Queue Delay          | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Delay          | 421.4 | 15.2  | 46.4  | 22.5  | 51.7  | 28.3  | 5.7   | 45.1  | 25.2  | 12.1  |
| LOS                  | F     | B     | D     | C     | D     | C     | A     | D     | C     | B     |
| Approach Delay       |       | 102.1 |       | 25.7  |       | 33.0  |       |       | 28.8  |       |
| Approach LOS         |       | F     |       | C     |       | C     |       |       | C     |       |

**Intersection Summary**  
 Cycle Length: 96  
 Actuated Cycle Length: 96  
 Offset: 0 (0%), Referenced to phase 4:EBTL and 8:WBTL, Start of Green  
 Natural Cycle: 145  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 1.80  
 Intersection Signal Delay: 45.3  
 Intersection Capacity Utilization 71.9%  
 Analysis Period (min) 15  
 Intersection LOS: D  
 ICU Level of Service C



Deer Valley 30  
1: 19th Ave & Happy Valley Rd

2024 Background AM Mitigated Scenario B  
HCM 6th Signalized Intersection Summary

| Movement                     | EBL  | EBT   | EBR  | WBL  | WBT   | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
|------------------------------|------|-------|------|------|-------|------|------|------|------|------|------|------|
| Lane Configurations          | ← ↑↑ |       |      | ← ↑↑ |       |      | ← ↑↑ |      |      | ← ↑↑ |      |      |
| Traffic Volume (veh/h)       | 87   | 348   | 172  | 150  | 295   | 110  | 153  | 257  | 102  | 267  | 408  | 96   |
| Future Volume (veh/h)        | 87   | 348   | 172  | 150  | 295   | 110  | 153  | 257  | 102  | 267  | 408  | 96   |
| Initial Q (Ob), veh          | 0    | 0     | 0    | 0    | 0     | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Ped-Bike Adj(A_pbT)          | 1.00 |       |      | 1.00 |       |      | 1.00 |      |      | 1.00 |      |      |
| Parking Bus, Adj             | 1.00 |       |      | 1.00 |       |      | 1.00 |      |      | 1.00 |      |      |
| Work Zone On Approach        | No   |       |      | No   |       |      | No   |      |      | No   |      |      |
| Adj Sat Flow, veh/h/ln       | 1781 | 1781  | 1781 | 1781 | 1781  | 1781 | 1781 | 1781 | 1781 | 1781 | 1781 | 1781 |
| Adj Flow Rate, veh/h         | 95   | 378   | 187  | 163  | 321   | 120  | 166  | 279  | 111  | 290  | 443  | 104  |
| Peak Hour Factor             | 0.92 | 0.92  | 0.92 | 0.92 | 0.92  | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Percent Heavy Veh, %         | 8    |       |      | 8    |       |      | 8    |      |      | 8    |      |      |
| Cap, veh/h                   | 364  | 1250  | 582  | 315  | 1367  | 482  | 235  | 1128 | 503  | 357  | 1801 | 559  |
| Arrive On Green              | 0.39 | 0.39  | 0.39 | 0.39 | 0.39  | 0.39 | 0.07 | 0.33 | 0.33 | 0.11 | 0.37 | 0.37 |
| Sat Flow, veh/h              | 903  | 3242  | 1510 | 806  | 3547  | 1251 | 3291 | 3385 | 1510 | 3291 | 4863 | 1510 |
| Grp Volume(v), veh/h         | 95   | 378   | 187  | 163  | 292   | 149  | 166  | 279  | 111  | 290  | 443  | 104  |
| Grp Sat Flow(s), veh/h/ln    | 903  | 3242  | 1510 | 806  | 3547  | 1251 | 3291 | 3385 | 1510 | 3291 | 4863 | 1510 |
| Q Serve(g_s), s              | 7.7  | 7.8   | 8.3  | 17.1 | 5.8   | 6.3  | 4.7  | 5.7  | 5.1  | 8.3  | 6.1  | 4.5  |
| Cycle Q Clear(g_c), s        | 13.9 | 7.8   | 8.3  | 25.4 | 5.8   | 6.3  | 4.7  | 5.7  | 5.1  | 8.3  | 6.1  | 4.5  |
| Prop In Lane                 | 1.00 |       | 1.00 |      | 1.00  |      | 1.00 |      | 1.00 |      | 1.00 |      |
| Lane Grp Cap(c), veh/h       | 364  | 1250  | 582  | 315  | 1250  | 600  | 235  | 1128 | 503  | 357  | 1801 | 559  |
| V/C Ratio(X)                 | 0.26 | 0.30  | 0.32 | 0.52 | 0.23  | 0.25 | 0.71 | 0.25 | 0.22 | 0.81 | 0.25 | 0.19 |
| Avail Cap(c_a), veh/h        | 364  | 1250  | 582  | 315  | 1250  | 600  | 394  | 1128 | 503  | 394  | 1801 | 559  |
| HCM Platoon Ratio            | 1.00 |       |      | 1.00 |       |      | 1.00 |      |      | 1.00 |      |      |
| Upstream Filter(I)           | 1.00 |       |      | 1.00 |       |      | 1.00 |      |      | 1.00 |      |      |
| Uniform Delay (d), s/veh     | 24.8 | 20.5  | 20.7 | 29.6 | 19.9  | 20.1 | 43.6 | 23.2 | 23.0 | 41.8 | 20.9 | 20.4 |
| Incr Delay (d2), s/veh       | 1.7  | 0.6   | 1.5  | 5.9  | 0.4   | 1.0  | 3.9  | 0.5  | 1.0  | 11.3 | 0.3  | 0.7  |
| Initial Q Delay(d3), s/veh   | 0.0  | 0.0   | 0.0  | 0.0  | 0.0   | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| %ile BackOfQ(50%), veh/ln    | 1.8  | 3.0   | 3.1  | 3.8  | 2.2   | 2.4  | 2.0  | 2.3  | 1.9  | 3.9  | 2.3  | 1.7  |
| Unsig. Movement Delay, s/veh |      |       |      |      |       |      |      |      |      |      |      |      |
| LnGrp Delay(d), s/veh        | 26.5 | 21.1  | 22.2 | 35.6 | 20.4  | 21.0 | 47.5 | 23.8 | 24.0 | 53.2 | 21.3 | 21.2 |
| LnGrp LOS                    | C    | B     | C    | D    | C     | C    | D    | C    | C    | D    | C    | C    |
| Approach Vol, veh/h          | 660  |       |      | 604  |       |      | 556  |      |      | 837  |      |      |
| Approach Delay, s/veh        | 22.2 |       |      | 24.6 |       |      | 30.9 |      |      | 32.3 |      |      |
| Approach LOS                 | C    |       |      | C    |       |      | C    |      |      | C    |      |      |
| Timer - Assigned Phs         | 1    | 2     | 4    | 5    | 6     | 8    |      |      |      |      |      |      |
| Phs Duration (G+Y+Rc), s     | 14.9 | 38.1  | 43.0 | 11.4 | 41.6  | 43.0 |      |      |      |      |      |      |
| Change Period (Y+Rc), s      | 4.5  | * 6.1 | * 6  | 4.5  | * 6.1 | * 6  |      |      |      |      |      |      |
| Max Green Setting (Gmax), s  | 11.5 | * 32  | * 36 | 11.5 | * 32  | * 36 |      |      |      |      |      |      |
| Max Q Clear Time (g_c+I1), s | 10.3 | 7.7   | 15.9 | 6.7  | 8.1   | 27.4 |      |      |      |      |      |      |
| Green Ext Time (p_c), s      | 0.1  | 2.2   | 4.3  | 0.2  | 3.5   | 2.5  |      |      |      |      |      |      |

| Intersection Summary |      |  |
|----------------------|------|--|
| HCM 6th Ctrl Delay   | 27.8 |  |
| HCM 6th LOS          | C    |  |

Notes  
User approved pedestrian interval to be less than phase max green.  
\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Deer Valley 30  
1: 19th Ave & Happy Valley Rd

2024 Background PM Mitigated Scenario B  
HCM 6th Signalized Intersection Summary

| Movement                     | EBL   | EBT   | EBR  | WBL  | WBT   | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
|------------------------------|-------|-------|------|------|-------|------|------|------|------|------|------|------|
| Lane Configurations          | ← ↑↑  |       |      | ← ↑↑ |       |      | ← ↑↑ |      |      | ← ↑↑ |      |      |
| Traffic Volume (veh/h)       | 167   | 383   | 232  | 165  | 747   | 348  | 304  | 481  | 125  | 177  | 228  | 122  |
| Future Volume (veh/h)        | 167   | 383   | 232  | 165  | 747   | 348  | 304  | 481  | 125  | 177  | 228  | 122  |
| Initial Q (Ob), veh          | 0     | 0     | 0    | 0    | 0     | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Ped-Bike Adj(A_pbT)          | 1.00  |       |      | 1.00 |       |      | 1.00 |      |      | 1.00 |      |      |
| Parking Bus, Adj             | 1.00  |       |      | 1.00 |       |      | 1.00 |      |      | 1.00 |      |      |
| Work Zone On Approach        | No    |       |      | No   |       |      | No   |      |      | No   |      |      |
| Adj Sat Flow, veh/h/ln       | 1781  | 1781  | 1781 | 1781 | 1781  | 1781 | 1781 | 1781 | 1781 | 1781 | 1781 | 1781 |
| Adj Flow Rate, veh/h         | 182   | 416   | 252  | 179  | 812   | 378  | 330  | 523  | 136  | 192  | 248  | 133  |
| Peak Hour Factor             | 0.92  | 0.92  | 0.92 | 0.92 | 0.92  | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Percent Heavy Veh, %         | 8     |       |      | 8    |       |      | 8    |      |      | 8    |      |      |
| Cap, veh/h                   | 169   | 1325  | 617  | 288  | 1328  | 615  | 400  | 1144 | 510  | 265  | 1444 | 448  |
| Arrive On Green              | 0.41  | 0.41  | 0.41 | 0.41 | 0.41  | 0.41 | 0.12 | 0.34 | 0.34 | 0.08 | 0.30 | 0.30 |
| Sat Flow, veh/h              | 448   | 3242  | 1510 | 732  | 3248  | 1504 | 3291 | 3385 | 1510 | 3291 | 4863 | 1510 |
| Grp Volume(v), veh/h         | 182   | 416   | 252  | 179  | 810   | 380  | 330  | 523  | 136  | 192  | 248  | 133  |
| Grp Sat Flow(s), veh/h/ln    | 448   | 3242  | 1510 | 732  | 3248  | 1511 | 3291 | 3385 | 1510 | 3291 | 4863 | 1510 |
| Q Serve(g_s), s              | 20.2  | 8.4   | 11.4 | 22.0 | 18.9  | 19.0 | 9.4  | 11.6 | 6.3  | 5.5  | 3.6  | 6.5  |
| Cycle Q Clear(g_c), s        | 39.2  | 8.4   | 11.4 | 33.4 | 18.9  | 19.0 | 9.4  | 11.6 | 6.3  | 5.5  | 3.6  | 6.5  |
| Prop In Lane                 | 1.00  |       | 1.00 |      | 1.00  |      | 1.00 |      | 1.00 |      | 1.00 |      |
| Lane Grp Cap(c), veh/h       | 169   | 1325  | 617  | 288  | 1325  | 617  | 400  | 1144 | 510  | 265  | 1444 | 448  |
| V/C Ratio(X)                 | 1.08  | 0.31  | 0.41 | 0.62 | 0.61  | 0.61 | 0.83 | 0.46 | 0.27 | 0.73 | 0.17 | 0.30 |
| Avail Cap(c_a), veh/h        | 169   | 1325  | 617  | 288  | 1325  | 617  | 463  | 1144 | 510  | 463  | 1444 | 448  |
| HCM Platoon Ratio            | 1.00  |       |      | 1.00 |       |      | 1.00 |      |      | 1.00 |      |      |
| Upstream Filter(I)           | 1.00  |       |      | 1.00 |       |      | 1.00 |      |      | 1.00 |      |      |
| Uniform Delay (d), s/veh     | 42.4  | 19.3  | 20.1 | 32.0 | 22.4  | 22.4 | 41.2 | 24.9 | 23.1 | 43.1 | 25.0 | 26.0 |
| Incr Delay (d2), s/veh       | 90.6  | 0.6   | 2.0  | 9.8  | 2.1   | 4.5  | 10.3 | 1.3  | 1.3  | 3.8  | 0.3  | 1.7  |
| Initial Q Delay(d3), s/veh   | 0.0   | 0.0   | 0.0  | 0.0  | 0.0   | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| %ile BackOfQ(50%), veh/ln    | 8.3   | 3.2   | 4.2  | 4.6  | 7.3   | 7.3  | 4.3  | 4.8  | 2.4  | 2.3  | 1.4  | 2.5  |
| Unsig. Movement Delay, s/veh |       |       |      |      |       |      |      |      |      |      |      |      |
| LnGrp Delay(d), s/veh        | 133.0 | 19.9  | 22.1 | 41.8 | 24.5  | 26.9 | 51.5 | 26.2 | 24.4 | 46.9 | 25.3 | 27.7 |
| LnGrp LOS                    | F     | B     | C    | D    | C     | C    | D    | C    | C    | D    | C    | C    |
| Approach Vol, veh/h          | 850   |       |      | 1369 |       |      | 989  |      |      | 573  |      |      |
| Approach Delay, s/veh        | 44.8  |       |      | 27.4 |       |      | 34.4 |      |      | 33.1 |      |      |
| Approach LOS                 | D     |       |      | C    |       |      | C    |      |      | C    |      |      |
| Timer - Assigned Phs         | 1     | 2     | 4    | 5    | 6     | 8    |      |      |      |      |      |      |
| Phs Duration (G+Y+Rc), s     | 12.2  | 38.5  | 45.2 | 16.2 | 34.6  | 45.2 |      |      |      |      |      |      |
| Change Period (Y+Rc), s      | 4.5   | * 6.1 | * 6  | 4.5  | * 6.1 | * 6  |      |      |      |      |      |      |
| Max Green Setting (Gmax), s  | 13.5  | * 29  | * 37 | 13.5 | * 29  | * 37 |      |      |      |      |      |      |
| Max Q Clear Time (g_c+I1), s | 7.5   | 13.6  | 41.2 | 11.4 | 8.5   | 35.4 |      |      |      |      |      |      |
| Green Ext Time (p_c), s      | 0.3   | 3.5   | 0.0  | 0.3  | 2.0   | 1.5  |      |      |      |      |      |      |

| Intersection Summary |      |  |
|----------------------|------|--|
| HCM 6th Ctrl Delay   | 34.0 |  |
| HCM 6th LOS          | C    |  |

Notes  
User approved pedestrian interval to be less than phase max green.  
\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



## **APPENDIX H**

### **2024 BUILD PEAK HOUR ANALYSIS**

Deer Valley 30  
1: 19th Ave & Happy Valley Rd

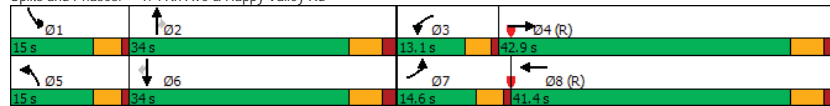
2024 Total AM Scenario A  
Timings

| Lane Group           | EBL   | EBT   | WBL   | WBT   | NBL   | NBT   | NBR   | SBL   | SBT   | SBR   |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations  | ↔↔    | ↔↔↔   | ↔↔    | ↔↔↔   | ↔↔    | ↔↔    | ↔     | ↔↔    | ↔↔↔   | ↔     |
| Traffic Volume (vph) | 87    | 511   | 150   | 326   | 222   | 268   | 102   | 294   | 468   | 96    |
| Future Volume (vph)  | 87    | 511   | 150   | 326   | 222   | 268   | 102   | 294   | 468   | 96    |
| Turn Type            | Prot  | NA    | Prot  | NA    | Prot  | NA    | Perm  | Prot  | NA    | Perm  |
| Protected Phases     | 7     | 4     | 3     | 8     | 5     | 2     |       | 1     | 6     |       |
| Permitted Phases     |       |       |       |       |       |       | 2     |       |       | 6     |
| Detector Phase       | 7     | 4     | 3     | 8     | 5     | 2     | 2     | 1     | 6     | 6     |
| Switch Phase         |       |       |       |       |       |       |       |       |       |       |
| Minimum Initial (s)  | 5.0   | 15.0  | 5.0   | 15.0  | 5.0   | 5.0   | 5.0   | 5.0   | 5.0   | 5.0   |
| Minimum Split (s)    | 9.5   | 41.0  | 9.5   | 41.0  | 9.5   | 43.1  | 43.1  | 9.5   | 43.1  | 43.1  |
| Total Split (s)      | 14.6  | 42.9  | 13.1  | 41.4  | 15.0  | 34.0  | 34.0  | 15.0  | 34.0  | 34.0  |
| Total Split (%)      | 13.9% | 40.9% | 12.5% | 39.4% | 14.3% | 32.4% | 32.4% | 14.3% | 32.4% | 32.4% |
| Yellow Time (s)      | 3.5   | 4.3   | 3.5   | 4.3   | 3.5   | 4.3   | 4.3   | 3.5   | 4.3   | 4.3   |
| All-Red Time (s)     | 1.0   | 1.7   | 1.0   | 1.7   | 1.0   | 1.8   | 1.8   | 1.0   | 1.8   | 1.8   |
| Lost Time Adjust (s) | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Lost Time (s)  | 4.5   | 6.0   | 4.5   | 6.0   | 4.5   | 6.1   | 6.1   | 4.5   | 6.1   | 6.1   |
| Lead/Lag             | Lead  | Lag   | Lead  | Lag   | Lead  | Lag   | Lag   | Lead  | Lag   | Lag   |
| Lead-Lag Optimize?   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   |
| Recall Mode          | None  | C-Max | None  | C-Max | None  | Max   | Max   | None  | Max   | Max   |
| Act Effct Green (s)  | 8.3   | 37.1  | 8.4   | 39.3  | 10.3  | 27.9  | 27.9  | 10.5  | 28.1  | 28.1  |
| Actuated g/C Ratio   | 0.08  | 0.35  | 0.08  | 0.37  | 0.10  | 0.27  | 0.27  | 0.10  | 0.27  | 0.27  |
| v/c Ratio            | 0.37  | 0.65  | 0.63  | 0.27  | 0.76  | 0.33  | 0.23  | 0.99  | 0.40  | 0.21  |
| Control Delay        | 49.6  | 23.1  | 58.2  | 19.5  | 62.1  | 32.3  | 5.5   | 95.2  | 32.7  | 4.7   |
| Queue Delay          | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Delay          | 49.6  | 23.1  | 58.2  | 19.5  | 62.1  | 32.3  | 5.5   | 95.2  | 32.7  | 4.7   |
| LOS                  | D     | C     | E     | B     | E     | C     | A     | F     | C     | A     |
| Approach Delay       |       | 25.2  |       | 29.3  |       | 38.8  |       |       | 51.0  |       |
| Approach LOS         |       | C     |       | C     |       | D     |       |       | D     |       |

Intersection Summary

Cycle Length: 105  
 Actuated Cycle Length: 105  
 Offset: 0 (0%), Referenced to phase 4:EBT and 8:WBT, Start of Green  
 Natural Cycle: 105  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.99  
 Intersection Signal Delay: 35.5  
 Intersection Capacity Utilization 59.3%  
 Intersection LOS: D  
 ICU Level of Service B  
 Analysis Period (min) 15

Splits and Phases: 1: 19th Ave & Happy Valley Rd



Deer Valley 30  
1: 19th Ave & Happy Valley Rd

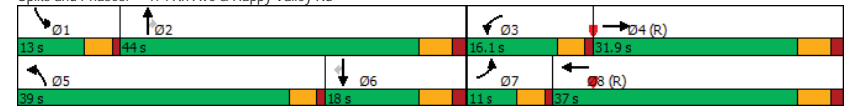
2024 Total PM Scenario A  
Timings

| Lane Group           | EBL   | EBT   | WBL   | WBT   | NBL   | NBT   | NBR   | SBL   | SBT   | SBR   |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations  | ↔↔    | ↔↔↔   | ↔↔    | ↔↔↔   | ↔↔    | ↔↔    | ↔     | ↔↔    | ↔↔↔   | ↔     |
| Traffic Volume (vph) | 167   | 417   | 165   | 904   | 631   | 536   | 125   | 183   | 239   | 122   |
| Future Volume (vph)  | 167   | 417   | 165   | 904   | 631   | 536   | 125   | 183   | 239   | 122   |
| Turn Type            | Prot  | NA    | Prot  | NA    | Prot  | NA    | Perm  | Prot  | NA    | Perm  |
| Protected Phases     | 7     | 4     | 3     | 8     | 5     | 2     |       | 1     | 6     |       |
| Permitted Phases     |       |       |       |       |       |       | 2     |       |       | 6     |
| Detector Phase       | 7     | 4     | 3     | 8     | 5     | 2     | 2     | 1     | 6     | 6     |
| Switch Phase         |       |       |       |       |       |       |       |       |       |       |
| Minimum Initial (s)  | 5.0   | 15.0  | 5.0   | 15.0  | 5.0   | 5.0   | 5.0   | 5.0   | 5.0   | 5.0   |
| Minimum Split (s)    | 9.5   | 31.0  | 9.5   | 34.0  | 9.5   | 43.1  | 43.1  | 9.5   | 22.0  | 22.0  |
| Total Split (s)      | 11.0  | 31.9  | 16.1  | 37.0  | 39.0  | 44.0  | 44.0  | 13.0  | 18.0  | 18.0  |
| Total Split (%)      | 10.5% | 30.4% | 15.3% | 35.2% | 37.1% | 41.9% | 41.9% | 12.4% | 17.1% | 17.1% |
| Yellow Time (s)      | 3.5   | 4.3   | 3.5   | 4.3   | 3.5   | 4.3   | 4.3   | 3.5   | 4.3   | 4.3   |
| All-Red Time (s)     | 1.0   | 1.7   | 1.0   | 1.7   | 1.0   | 1.8   | 1.8   | 1.0   | 1.8   | 1.8   |
| Lost Time Adjust (s) | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Lost Time (s)  | 4.5   | 6.0   | 4.5   | 6.0   | 4.5   | 6.1   | 6.1   | 4.5   | 6.1   | 6.1   |
| Lead/Lag             | Lead  | Lag   | Lead  | Lag   | Lead  | Lag   | Lag   | Lead  | Lag   | Lag   |
| Lead-Lag Optimize?   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   |
| Recall Mode          | None  | C-Max | None  | C-Max | None  | Max   | Max   | None  | Max   | Max   |
| Act Effct Green (s)  | 6.5   | 27.1  | 10.4  | 31.0  | 27.7  | 37.9  | 37.9  | 8.5   | 18.7  | 18.7  |
| Actuated g/C Ratio   | 0.06  | 0.26  | 0.10  | 0.30  | 0.26  | 0.36  | 0.36  | 0.08  | 0.18  | 0.18  |
| v/c Ratio            | 0.91  | 0.61  | 0.56  | 0.97  | 0.80  | 0.48  | 0.21  | 0.76  | 0.30  | 0.30  |
| Control Delay        | 93.8  | 29.2  | 51.8  | 53.0  | 43.5  | 27.6  | 2.5   | 66.5  | 40.0  | 1.8   |
| Queue Delay          | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Delay          | 93.8  | 29.2  | 51.8  | 53.0  | 43.5  | 27.6  | 2.5   | 66.5  | 40.0  | 1.8   |
| LOS                  | F     | C     | D     | D     | D     | C     | A     | E     | D     | A     |
| Approach Delay       |       | 41.3  |       | 52.9  |       | 32.9  |       |       | 40.3  |       |
| Approach LOS         |       | D     |       | D     |       | C     |       |       | D     |       |

Intersection Summary

Cycle Length: 105  
 Actuated Cycle Length: 105  
 Offset: 0 (0%), Referenced to phase 4:EBT and 8:WBT, Start of Green  
 Natural Cycle: 100  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.97  
 Intersection Signal Delay: 42.6  
 Intersection Capacity Utilization 70.8%  
 Intersection LOS: D  
 ICU Level of Service C  
 Analysis Period (min) 15

Splits and Phases: 1: 19th Ave & Happy Valley Rd





Deer Valley 30  
2: 19th Ave & Optum Drwy

2024 Total AM Scenario A  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh         | 0.1  |      |      |      |      |      |
| Movement                 | EBL  | EBR  | NBL  | NBT  | SBT  | SBR  |
| Lane Configurations      | W    |      | T    | T    | T    | T    |
| Traffic Vol, veh/h       | 0    | 4    | 7    | 593  | 1142 | 2    |
| Future Vol, veh/h        | 0    | 4    | 7    | 593  | 1142 | 2    |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Stop | Stop | Free | Free | Free | Free |
| RT Channelized           | -    | None | -    | None | -    | None |
| Storage Length           | 0    | -    | 50   | -    | -    | -    |
| Veh in Median Storage, # | 0    | -    | -    | 0    | 0    | -    |
| Grade, %                 | 0    | -    | -    | 0    | 0    | -    |
| Peak Hour Factor         | 92   | 92   | 92   | 92   | 92   | 92   |
| Heavy Vehicles, %        | 8    | 8    | 8    | 8    | 8    | 8    |
| Mvmt Flow                | 0    | 4    | 8    | 645  | 1241 | 2    |

| Major/Minor          | Minor2 | Major1 | Major2 |   |     |
|----------------------|--------|--------|--------|---|-----|
| Conflicting Flow All | 1516   | 622    | 1243   | 0 | - 0 |
| Stage 1              | 1242   | -      | -      | - | -   |
| Stage 2              | 274    | -      | -      | - | -   |
| Critical Hdwy        | 6.41   | 7.06   | 4.26   | - | - - |
| Critical Hdwy Stg 1  | 5.96   | -      | -      | - | -   |
| Critical Hdwy Stg 2  | 6.16   | -      | -      | - | -   |
| Follow-up Hdwy       | 3.73   | 3.38   | 2.28   | - | - - |
| Pot Cap-1 Maneuver   | 129    | 415    | 524    | - | - - |
| Stage 1              | 220    | -      | -      | - | -   |
| Stage 2              | 694    | -      | -      | - | -   |
| Platoon blocked, %   |        |        |        |   |     |
| Mov Cap-1 Maneuver   | 127    | 415    | 524    | - | - - |
| Mov Cap-2 Maneuver   | 187    | -      | -      | - | -   |
| Stage 1              | 217    | -      | -      | - | -   |
| Stage 2              | 694    | -      | -      | - | -   |

| Approach             | EB   | NB  | SB |
|----------------------|------|-----|----|
| HCM Control Delay, s | 13.8 | 0.1 | 0  |
| HCM LOS              | B    |     |    |

| Minor Lane/Major Mvmt | NBL   | NBT | EBLn1 | SBT | SBR |
|-----------------------|-------|-----|-------|-----|-----|
| Capacity (veh/h)      | 524   | -   | 415   | -   | -   |
| HCM Lane V/C Ratio    | 0.015 | -   | 0.01  | -   | -   |
| HCM Control Delay (s) | 12    | -   | 13.8  | -   | -   |
| HCM Lane LOS          | B     | -   | B     | -   | -   |
| HCM 95th %tile Q(veh) | 0     | -   | 0     | -   | -   |

Deer Valley 30  
2: 19th Ave & Optum Drwy

2024 Total PM Scenario A  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh         | 0.1  |      |      |      |      |      |
| Movement                 | EBL  | EBR  | NBL  | NBT  | SBT  | SBR  |
| Lane Configurations      | W    |      | T    | T    | T    | T    |
| Traffic Vol, veh/h       | 0    | 4    | 7    | 1292 | 707  | 2    |
| Future Vol, veh/h        | 0    | 4    | 7    | 1292 | 707  | 2    |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Stop | Stop | Free | Free | Free | Free |
| RT Channelized           | -    | None | -    | None | -    | None |
| Storage Length           | 0    | -    | 50   | -    | -    | -    |
| Veh in Median Storage, # | 0    | -    | -    | 0    | 0    | -    |
| Grade, %                 | 0    | -    | -    | 0    | 0    | -    |
| Peak Hour Factor         | 92   | 92   | 92   | 92   | 92   | 92   |
| Heavy Vehicles, %        | 8    | 8    | 8    | 8    | 8    | 8    |
| Mvmt Flow                | 0    | 4    | 8    | 1404 | 768  | 2    |

| Major/Minor          | Minor2 | Major1 | Major2 |   |     |
|----------------------|--------|--------|--------|---|-----|
| Conflicting Flow All | 1347   | 385    | 770    | 0 | - 0 |
| Stage 1              | 769    | -      | -      | - | -   |
| Stage 2              | 578    | -      | -      | - | -   |
| Critical Hdwy        | 6.41   | 7.06   | 4.26   | - | - - |
| Critical Hdwy Stg 1  | 5.96   | -      | -      | - | -   |
| Critical Hdwy Stg 2  | 6.16   | -      | -      | - | -   |
| Follow-up Hdwy       | 3.73   | 3.38   | 2.28   | - | - - |
| Pot Cap-1 Maneuver   | 163    | 597    | 802    | - | - - |
| Stage 1              | 392    | -      | -      | - | -   |
| Stage 2              | 477    | -      | -      | - | -   |
| Platoon blocked, %   |        |        |        |   |     |
| Mov Cap-1 Maneuver   | 161    | 597    | 802    | - | - - |
| Mov Cap-2 Maneuver   | 268    | -      | -      | - | -   |
| Stage 1              | 388    | -      | -      | - | -   |
| Stage 2              | 477    | -      | -      | - | -   |

| Approach             | EB   | NB  | SB |
|----------------------|------|-----|----|
| HCM Control Delay, s | 11.1 | 0.1 | 0  |
| HCM LOS              | B    |     |    |

| Minor Lane/Major Mvmt | NBL   | NBT | EBLn1 | SBT | SBR |
|-----------------------|-------|-----|-------|-----|-----|
| Capacity (veh/h)      | 802   | -   | 597   | -   | -   |
| HCM Lane V/C Ratio    | 0.009 | -   | 0.007 | -   | -   |
| HCM Control Delay (s) | 9.5   | -   | 11.1  | -   | -   |
| HCM Lane LOS          | A     | -   | B     | -   | -   |
| HCM 95th %tile Q(veh) | 0     | -   | 0     | -   | -   |

Deer Valley 30  
3: 19th Ave & Patio Drwy/Parkview Ln

2024 Total AM Scenario A  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Int Delay, s/veh 1       |      |      |      |      |      |      |      |      |      |      |      |      |
| Movement                 | EBL  | EBT  | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
| Lane Configurations      |      |      | ↗    | ↔    | ↔    |      |      | ↖↖   |      | ↘    | ↖    |      |
| Traffic Vol, veh/h       | 0    | 0    | 6    | 26   | 0    | 13   | 1    | 586  | 41   | 26   | 1121 | 0    |
| Future Vol, veh/h        | 0    | 0    | 6    | 26   | 0    | 13   | 1    | 586  | 41   | 26   | 1121 | 0    |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Stop | Stop | Stop | Stop | Stop | Stop | Free | Free | Free | Free | Free | Free |
| RT Channelized           | -    | -    | None | -    | -    | None | -    | -    | None | -    | -    | None |
| Storage Length           | -    | -    | 0    | -    | -    | -    | -    | -    | -    | 50   | -    | -    |
| Veh in Median Storage, # | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Grade, %                 | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Peak Hour Factor         | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   |
| Heavy Vehicles, %        | 8    | 8    | 8    | 8    | 8    | 8    | 8    | 8    | 8    | 8    | 8    | 8    |
| Mvmt Flow                | 0    | 0    | 7    | 28   | 0    | 14   | 1    | 637  | 45   | 28   | 1218 | 0    |

| Major/Minor          | Minor2 | Minor1 | Major1 | Major2 |
|----------------------|--------|--------|--------|--------|
| Conflicting Flow All | -      | -      | 609    | 1327   |
| Stage 1              | -      | -      | 662    | 662    |
| Stage 2              | -      | -      | 665    | 1274   |
| Critical Hdwy        | -      | -      | 7.06   | 7.11   |
| Critical Hdwy Stg 1  | -      | -      | 7.46   | 5.66   |
| Critical Hdwy Stg 2  | -      | -      | 6.66   | 5.66   |
| Follow-up Hdwy       | -      | -      | 3.38   | 3.73   |
| Pot Cap-1 Maneuver   | 0      | 0      | 424    | 129    |
| Stage 1              | 0      | 0      | 338    | 443    |
| Stage 2              | 0      | 0      | 390    | 225    |
| Platoon blocked, %   | -      | -      | -      | -      |
| Mov Cap-1 Maneuver   | -      | -      | 424    | 122    |
| Mov Cap-2 Maneuver   | -      | -      | 122    | 58     |
| Stage 1              | -      | -      | 337    | 442    |
| Stage 2              | -      | -      | 364    | 213    |

| Approach             | EB   | WB   | NB | SB  |
|----------------------|------|------|----|-----|
| HCM Control Delay, s | 13.6 | 34.2 | 0  | 0.3 |
| HCM LOS              | B    | D    |    |     |

| Minor Lane/Major Mvmt | NBL   | NBT | NBR | EBLn1 | WBLn1 | SBL   | SBT |
|-----------------------|-------|-----|-----|-------|-------|-------|-----|
| Capacity (veh/h)      | 536   | -   | -   | 424   | 165   | 536   | -   |
| HCM Lane V/C Ratio    | 0.002 | -   | -   | 0.015 | 0.257 | 0.053 | -   |
| HCM Control Delay (s) | 11.7  | -   | -   | 13.6  | 34.2  | 12.1  | -   |
| HCM Lane LOS          | B     | -   | -   | B     | D     | B     | -   |
| HCM 95th %tile Q(veh) | 0     | -   | -   | 0     | 1     | 0.2   | -   |

Deer Valley 30  
3: 19th Ave & Patio Drwy/Parkview Ln

2024 Total PM Scenario A  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Int Delay, s/veh 1.3     |      |      |      |      |      |      |      |      |      |      |      |      |
| Movement                 | EBL  | EBT  | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
| Lane Configurations      |      |      | ↗    | ↔    | ↔    |      |      | ↖↖   |      | ↘    | ↖    |      |
| Traffic Vol, veh/h       | 0    | 0    | 6    | 26   | 0    | 13   | 1    | 939  | 41   | 26   | 686  | 0    |
| Future Vol, veh/h        | 0    | 0    | 6    | 26   | 0    | 13   | 1    | 939  | 41   | 26   | 686  | 0    |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Stop | Stop | Stop | Stop | Stop | Stop | Free | Free | Free | Free | Free | Free |
| RT Channelized           | -    | -    | None | -    | -    | None | -    | -    | None | -    | -    | None |
| Storage Length           | -    | -    | 0    | -    | -    | -    | -    | -    | -    | 50   | -    | -    |
| Veh in Median Storage, # | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Grade, %                 | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Peak Hour Factor         | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   |
| Heavy Vehicles, %        | 8    | 8    | 8    | 8    | 8    | 8    | 8    | 8    | 8    | 8    | 8    | 8    |
| Mvmt Flow                | 0    | 0    | 7    | 28   | 0    | 14   | 1    | 1021 | 45   | 28   | 746  | 0    |

| Major/Minor          | Minor2 | Minor1 | Major1 | Major2 |
|----------------------|--------|--------|--------|--------|
| Conflicting Flow All | -      | -      | 373    | 1475   |
| Stage 1              | -      | -      | 1046   | 1046   |
| Stage 2              | -      | -      | 429    | 802    |
| Critical Hdwy        | -      | -      | 7.06   | 7.11   |
| Critical Hdwy Stg 1  | -      | -      | 7.46   | 5.66   |
| Critical Hdwy Stg 2  | -      | -      | 6.66   | 5.66   |
| Follow-up Hdwy       | -      | -      | 3.38   | 3.73   |
| Pot Cap-1 Maneuver   | 0      | 0      | 607    | 102    |
| Stage 1              | 0      | 0      | 181    | 291    |
| Stage 2              | 0      | 0      | 541    | 381    |
| Platoon blocked, %   | -      | -      | -      | -      |
| Mov Cap-1 Maneuver   | -      | -      | 607    | 94     |
| Mov Cap-2 Maneuver   | -      | -      | 94     | 63     |
| Stage 1              | -      | -      | 180    | 290    |
| Stage 2              | -      | -      | 492    | 350    |

| Approach             | EB | WB   | NB | SB  |
|----------------------|----|------|----|-----|
| HCM Control Delay, s | 11 | 47.4 | 0  | 0.6 |
| HCM LOS              | B  | E    |    |     |

| Minor Lane/Major Mvmt | NBL   | NBT | NBR | EBLn1 | WBLn1 | SBL   | SBT |
|-----------------------|-------|-----|-----|-------|-------|-------|-----|
| Capacity (veh/h)      | 820   | -   | -   | 607   | 126   | 347   | -   |
| HCM Lane V/C Ratio    | 0.001 | -   | -   | 0.011 | 0.336 | 0.081 | -   |
| HCM Control Delay (s) | 9.4   | -   | -   | 11    | 47.4  | 16.3  | -   |
| HCM Lane LOS          | A     | -   | -   | B     | E     | C     | -   |
| HCM 95th %tile Q(veh) | 0     | -   | -   | 0     | 1.3   | 0.3   | -   |

Deer Valley 30  
4: Alameda Rd & 19th Ave

2024 Total AM Scenario A  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Int Delay, s/veh         | 11.2 |      |      |      |      |      |      |      |      |      |      |      |
| Movement                 | EBL  | EBT  | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
| Lane Configurations      | ↔    |      | ↔    |      | ↔    |      | ↔↔↔  |      | ↔    |      | ↔    |      |
| Traffic Vol, veh/h       | 9    | 0    | 56   | 42   | 0    | 35   | 18   | 593  | 224  | 187  | 951  | 14   |
| Future Vol, veh/h        | 9    | 0    | 56   | 42   | 0    | 35   | 18   | 593  | 224  | 187  | 951  | 14   |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Stop | Stop | Stop | Stop | Stop | Stop | Free | Free | Free | Free | Free | Free |
| RT Channelized           | -    | -    | None | -    | -    | None | -    | -    | None | -    | -    | None |
| Storage Length           | 0    | -    | -    | 150  | -    | -    | 150  | -    | -    | 0    | -    | -    |
| Veh in Median Storage, # | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Grade, %                 | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Peak Hour Factor         | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   |
| Heavy Vehicles, %        | 8    | 8    | 8    | 8    | 8    | 8    | 8    | 8    | 8    | 8    | 8    | 8    |
| Mvmt Flow                | 10   | 0    | 61   | 46   | 0    | 38   | 20   | 645  | 243  | 203  | 1034 | 15   |

| Major/Minor          | Minor2 | Minor1 | Major1 | Major2 |
|----------------------|--------|--------|--------|--------|
| Conflicting Flow All | 1746   | 2376   | 525    | 1730   |
| Stage 1              | 1448   | 1448   | -      | 807    |
| Stage 2              | 298    | 928    | -      | 923    |
| Critical Hdwy        | 7.11   | 6.66   | 7.06   | 7.11   |
| Critical Hdwy Stg 1  | 6.66   | 5.66   | -      | 7.46   |
| Critical Hdwy Stg 2  | 6.86   | 5.66   | -      | 6.66   |
| Follow-up Hdwy       | 3.73   | 4.08   | 3.38   | 3.73   |
| Pot Cap-1 Maneuver   | 66     | 31     | 482    | 68     |
| Stage 1              | 128    | 184    | -      | 267    |
| Stage 2              | 636    | 332    | -      | 272    |
| Platoon blocked, %   | -      | -      | -      | -      |
| Mov Cap-1 Maneuver   | 37     | 16     | 482    | -      |
| Mov Cap-2 Maneuver   | 37     | 16     | -      | -      |
| Stage 1              | 124    | 96     | -      | 258    |
| Stage 2              | 566    | 321    | -      | 124    |

| Approach             | EB   | WB    | NB  | SB  |
|----------------------|------|-------|-----|-----|
| HCM Control Delay, s | 30.2 | 230.7 | 0.2 | 3.4 |
| HCM LOS              | D    | F     |     |     |

| Minor Lane/Major Mvmt | NBL   | NBT | NBR | EBLn1 | EBLn2 | WBLn1 | WBLn2 | SBL   | SBT | SBR |
|-----------------------|-------|-----|-----|-------|-------|-------|-------|-------|-----|-----|
| Capacity (veh/h)      | 625   | -   | -   | 37    | 482   | 36    | 468   | 425   | -   | -   |
| HCM Lane V/C Ratio    | 0.031 | -   | -   | 0.264 | 0.126 | 1.268 | 0.081 | 0.478 | -   | -   |
| HCM Control Delay (s) | 10.9  | -   | -   | 134.2 | 13.55 | 411.7 | 13.4  | 21    | -   | -   |
| HCM Lane LOS          | B     | -   | -   | F     | B     | F     | B     | C     | -   | -   |
| HCM 95th %tile Q(veh) | 0.1   | -   | -   | 0.9   | 0.4   | 4.8   | 0.3   | 2.5   | -   | -   |

Notes  
 -: Volume exceeds capacity    \$: Delay exceeds 300s    +: Computation Not Defined    \*: All major volume in platoon

Deer Valley 30  
4: Alameda Rd & 19th Ave

2024 Total PM Scenario A  
HCM 6th TWSC

| Intersection             |       |      |      |      |      |      |      |      |      |      |      |      |
|--------------------------|-------|------|------|------|------|------|------|------|------|------|------|------|
| Int Delay, s/veh         | 176.4 |      |      |      |      |      |      |      |      |      |      |      |
| Movement                 | EBL   | EBT  | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
| Lane Configurations      | ↔     |      | ↔    |      | ↔    |      | ↔↔↔  |      | ↔    |      | ↔    |      |
| Traffic Vol, veh/h       | 14    | 0    | 62   | 197  | 0    | 162  | 85   | 1106 | 43   | 35   | 667  | 16   |
| Future Vol, veh/h        | 14    | 0    | 62   | 197  | 0    | 162  | 85   | 1106 | 43   | 35   | 667  | 16   |
| Conflicting Peds, #/hr   | 0     | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Stop  | Stop | Stop | Stop | Stop | Stop | Free | Free | Free | Free | Free | Free |
| RT Channelized           | -     | -    | None | -    | -    | None | -    | -    | None | -    | -    | None |
| Storage Length           | 0     | -    | -    | 150  | -    | -    | 150  | -    | -    | 0    | -    | -    |
| Veh in Median Storage, # | -     | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Grade, %                 | -     | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Peak Hour Factor         | 92    | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   |
| Heavy Vehicles, %        | 8     | 8    | 8    | 8    | 8    | 8    | 8    | 8    | 8    | 8    | 8    | 8    |
| Mvmt Flow                | 15    | 0    | 67   | 214  | 0    | 176  | 92   | 1202 | 47   | 38   | 725  | 17   |

| Major/Minor          | Minor2 | Minor1 | Major1 | Major2 |
|----------------------|--------|--------|--------|--------|
| Conflicting Flow All | 1475   | 2243   | 371    | 1849   |
| Stage 1              | 810    | 810    | -      | 1410   |
| Stage 2              | 665    | 1433   | -      | 439    |
| Critical Hdwy        | 7.11   | 6.66   | 7.06   | 7.11   |
| Critical Hdwy Stg 1  | 6.66   | 5.66   | -      | 7.46   |
| Critical Hdwy Stg 2  | 6.86   | 5.66   | -      | 6.66   |
| Follow-up Hdwy       | 3.73   | 4.08   | 3.38   | 3.73   |
| Pot Cap-1 Maneuver   | 102    | 38     | 609    | -      |
| Stage 1              | 319    | 377    | -      | 99     |
| Stage 2              | 376    | 188    | -      | 533    |
| Platoon blocked, %   | -      | -      | -      | -      |
| Mov Cap-1 Maneuver   | 42     | 29     | 609    | -      |
| Mov Cap-2 Maneuver   | 42     | 29     | -      | -      |
| Stage 1              | 283    | 326    | -      | 88     |
| Stage 2              | 168    | 167    | -      | 410    |

| Approach             | EB | WB        | NB  | SB |
|----------------------|----|-----------|-----|----|
| HCM Control Delay, s | 34 | \$ 1161.3 | 0.7 | 1  |
| HCM LOS              | D  | F         |     |    |

| Minor Lane/Major Mvmt | NBL   | NBT | NBR | EBLn1 | EBLn2 | WBLn1 | WBLn2 | SBL   | SBT | SBR |
|-----------------------|-------|-----|-----|-------|-------|-------|-------|-------|-----|-----|
| Capacity (veh/h)      | 822   | -   | -   | 42    | 609   | 41    | 355   | 281   | -   | -   |
| HCM Lane V/C Ratio    | 0.112 | -   | -   | 0.362 | 0.111 | 5.223 | 0.496 | 0.135 | -   | -   |
| HCM Control Delay (s) | 9.9   | -   | -   | 133.1 | 11.6  | 2096  | 24.7  | 19.8  | -   | -   |
| HCM Lane LOS          | A     | -   | -   | F     | B     | F     | C     | C     | -   | -   |
| HCM 95th %tile Q(veh) | 0.4   | -   | -   | 1.2   | 0.4   | 24.9  | 2.6   | 0.5   | -   | -   |

Notes  
 -: Volume exceeds capacity    \$: Delay exceeds 300s    +: Computation Not Defined    \*: All major volume in platoon

Deer Valley 30  
5: 19th Ave & Sarah Bass PI

2024 Total AM Scenario A  
HCM 6th TWSC

| Intersection             |        |        |        |       |      |      |
|--------------------------|--------|--------|--------|-------|------|------|
| Int Delay, s/veh         | 0.5    |        |        |       |      |      |
| Movement                 | EBL    | EBR    | NBL    | NBT   | SBT  | SBR  |
| Lane Configurations      | ↔      | ↔      | ↔      | ↔↔    | ↔↔   | ↔↔   |
| Traffic Vol, veh/h       | 13     | 36     | 27     | 855   | 848  | 9    |
| Future Vol, veh/h        | 13     | 36     | 27     | 855   | 848  | 9    |
| Conflicting Peds, #/hr   | 0      | 0      | 0      | 0     | 0    | 0    |
| Sign Control             | Stop   | Stop   | Free   | Free  | Free | Free |
| RT Channelized           | -      | None   | -      | None  | -    | None |
| Storage Length           | 0      | 0      | 150    | -     | -    | -    |
| Veh in Median Storage, # | 0      | -      | -      | 0     | 0    | -    |
| Grade, %                 | 0      | -      | -      | 0     | 0    | -    |
| Peak Hour Factor         | 92     | 92     | 92     | 92    | 92   | 92   |
| Heavy Vehicles, %        | 8      | 8      | 8      | 8     | 8    | 8    |
| Mvmt Flow                | 14     | 39     | 29     | 929   | 922  | 10   |
| Major/Minor              | Minor2 | Major1 | Major2 |       |      |      |
| Conflicting Flow All     | 1357   | 466    | 932    | 0     | -    | 0    |
| Stage 1                  | 927    | -      | -      | -     | -    | -    |
| Stage 2                  | 430    | -      | -      | -     | -    | -    |
| Critical Hdwy            | 6.41   | 7.06   | 4.26   | -     | -    | -    |
| Critical Hdwy Stg 1      | 5.96   | -      | -      | -     | -    | -    |
| Critical Hdwy Stg 2      | 6.16   | -      | -      | -     | -    | -    |
| Follow-up Hdwy           | 3.73   | 3.38   | 2.28   | -     | -    | -    |
| Pot Cap-1 Maneuver       | 160    | 527    | 694    | -     | -    | -    |
| Stage 1                  | 324    | -      | -      | -     | -    | -    |
| Stage 2                  | 573    | -      | -      | -     | -    | -    |
| Platoon blocked, %       | -      | -      | -      | -     | -    | -    |
| Mov Cap-1 Maneuver       | 153    | 527    | 694    | -     | -    | -    |
| Mov Cap-2 Maneuver       | 244    | -      | -      | -     | -    | -    |
| Stage 1                  | 310    | -      | -      | -     | -    | -    |
| Stage 2                  | 573    | -      | -      | -     | -    | -    |
| Approach                 | EB     | NB     | SB     |       |      |      |
| HCM Control Delay, s     | 14.6   | 0.3    | 0      |       |      |      |
| HCM LOS                  | B      |        |        |       |      |      |
| Minor Lane/Major Mvmt    | NBL    | NBT    | EBLn1  | EBLn2 | SBT  | SBR  |
| Capacity (veh/h)         | 694    | -      | 244    | 527   | -    | -    |
| HCM Lane V/C Ratio       | 0.042  | -      | 0.058  | 0.074 | -    | -    |
| HCM Control Delay (s)    | 10.4   | -      | 20.7   | 12.4  | -    | -    |
| HCM Lane LOS             | B      | -      | C      | B     | -    | -    |
| HCM 95th %tile Q(veh)    | 0.1    | -      | 0.2    | 0.2   | -    | -    |

Deer Valley 30  
5: 19th Ave & Sarah Bass PI

2024 Total PM Scenario A  
HCM 6th TWSC

| Intersection             |        |        |        |       |      |      |
|--------------------------|--------|--------|--------|-------|------|------|
| Int Delay, s/veh         | 0.5    |        |        |       |      |      |
| Movement                 | EBL    | EBR    | NBL    | NBT   | SBT  | SBR  |
| Lane Configurations      | ↔      | ↔      | ↔      | ↔↔    | ↔↔   | ↔↔   |
| Traffic Vol, veh/h       | 16     | 37     | 10     | 1032  | 948  | 6    |
| Future Vol, veh/h        | 16     | 37     | 10     | 1032  | 948  | 6    |
| Conflicting Peds, #/hr   | 0      | 0      | 0      | 0     | 0    | 0    |
| Sign Control             | Stop   | Stop   | Free   | Free  | Free | Free |
| RT Channelized           | -      | None   | -      | None  | -    | None |
| Storage Length           | 0      | 0      | 150    | -     | -    | -    |
| Veh in Median Storage, # | 0      | -      | -      | 0     | 0    | -    |
| Grade, %                 | 0      | -      | -      | 0     | 0    | -    |
| Peak Hour Factor         | 92     | 92     | 92     | 92    | 92   | 92   |
| Heavy Vehicles, %        | 8      | 8      | 8      | 8     | 8    | 8    |
| Mvmt Flow                | 17     | 40     | 11     | 1122  | 1030 | 7    |
| Major/Minor              | Minor2 | Major1 | Major2 |       |      |      |
| Conflicting Flow All     | 1505   | 519    | 1037   | 0     | -    | 0    |
| Stage 1                  | 1034   | -      | -      | -     | -    | -    |
| Stage 2                  | 471    | -      | -      | -     | -    | -    |
| Critical Hdwy            | 6.41   | 7.06   | 4.26   | -     | -    | -    |
| Critical Hdwy Stg 1      | 5.96   | -      | -      | -     | -    | -    |
| Critical Hdwy Stg 2      | 6.16   | -      | -      | -     | -    | -    |
| Follow-up Hdwy           | 3.73   | 3.38   | 2.28   | -     | -    | -    |
| Pot Cap-1 Maneuver       | 131    | 486    | 631    | -     | -    | -    |
| Stage 1                  | 284    | -      | -      | -     | -    | -    |
| Stage 2                  | 545    | -      | -      | -     | -    | -    |
| Platoon blocked, %       | -      | -      | -      | -     | -    | -    |
| Mov Cap-1 Maneuver       | 129    | 486    | 631    | -     | -    | -    |
| Mov Cap-2 Maneuver       | 218    | -      | -      | -     | -    | -    |
| Stage 1                  | 279    | -      | -      | -     | -    | -    |
| Stage 2                  | 545    | -      | -      | -     | -    | -    |
| Approach                 | EB     | NB     | SB     |       |      |      |
| HCM Control Delay, s     | 16.1   | 0.1    | 0      |       |      |      |
| HCM LOS                  | C      |        |        |       |      |      |
| Minor Lane/Major Mvmt    | NBL    | NBT    | EBLn1  | EBLn2 | SBT  | SBR  |
| Capacity (veh/h)         | 631    | -      | 218    | 486   | -    | -    |
| HCM Lane V/C Ratio       | 0.017  | -      | 0.08   | 0.083 | -    | -    |
| HCM Control Delay (s)    | 10.8   | -      | 22.9   | 13.1  | -    | -    |
| HCM Lane LOS             | B      | -      | C      | B     | -    | -    |
| HCM 95th %tile Q(veh)    | 0.1    | -      | 0.3    | 0.3   | -    | -    |

Deer Valley 30  
6: Pinnacle Peak Rd & 19th Ave

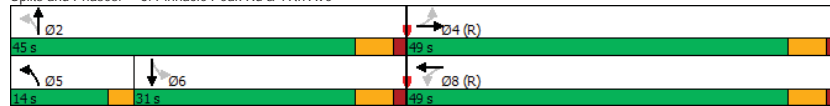
2024 Total AM Scenario A  
Timings

| Lane Group           | EBL   | EBT   | WBL   | WBT   | NBL   | NBT   | SBL   | SBT   |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations  | ↖     | ↗     | ↖     | ↗     | ↖     | ↗     | ↖     | ↗     |
| Traffic Volume (vph) | 418   | 856   | 69    | 256   | 169   | 500   | 143   | 661   |
| Future Volume (vph)  | 418   | 856   | 69    | 256   | 169   | 500   | 143   | 661   |
| Turn Type            | Perm  | NA    | Perm  | NA    | pm+pt | NA    | Perm  | NA    |
| Protected Phases     |       | 4     |       | 8     |       | 5     |       | 2     |
| Permitted Phases     | 4     |       | 8     |       | 2     |       | 6     |       |
| Detector Phase       | 4     | 4     | 8     | 8     | 5     | 2     | 6     | 6     |
| Switch Phase         |       |       |       |       |       |       |       |       |
| Minimum Initial (s)  | 15.0  | 15.0  | 15.0  | 15.0  | 5.0   | 15.0  | 15.0  | 15.0  |
| Minimum Split (s)    | 34.6  | 34.6  | 34.6  | 34.6  | 9.5   | 30.8  | 30.8  | 30.8  |
| Total Split (s)      | 49.0  | 49.0  | 49.0  | 49.0  | 14.0  | 45.0  | 31.0  | 31.0  |
| Total Split (%)      | 52.1% | 52.1% | 52.1% | 52.1% | 14.9% | 47.9% | 33.0% | 33.0% |
| Yellow Time (s)      | 4.3   | 4.3   | 4.3   | 4.3   | 3.0   | 4.3   | 4.3   | 4.3   |
| All-Red Time (s)     | 1.3   | 1.3   | 1.3   | 1.3   | 0.0   | 1.5   | 1.5   | 1.5   |
| Lost Time Adjust (s) | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Lost Time (s)  | 5.6   | 5.6   | 5.6   | 5.6   | 3.0   | 5.8   | 5.8   | 5.8   |
| Lead/Lag             |       |       |       |       | Lead  |       | Lag   | Lag   |
| Lead-Lag Optimize?   |       |       |       |       | Yes   |       | Yes   | Yes   |
| Recall Mode          | C-Max | C-Max | C-Max | C-Max | None  | Max   | Max   | Max   |
| Act Effct Green (s)  | 43.4  | 43.4  | 43.4  | 43.4  | 42.0  | 39.2  | 25.9  | 25.9  |
| Actuated g/C Ratio   | 0.46  | 0.46  | 0.46  | 0.46  | 0.45  | 0.42  | 0.28  | 0.28  |
| v/c Ratio            | 1.24  | 0.83  | 0.96  | 0.31  | 0.70  | 0.37  | 0.88  | 0.93  |
| Control Delay        | 154.4 | 26.8  | 124.0 | 9.5   | 32.3  | 17.4  | 77.7  | 50.5  |
| Queue Delay          | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Delay          | 154.4 | 26.8  | 124.0 | 9.5   | 32.3  | 17.4  | 77.7  | 50.5  |
| LOS                  | F     | C     | F     | A     | C     | B     | E     | D     |
| Approach Delay       |       | 60.5  |       | 25.1  |       | 20.4  |       | 54.7  |
| Approach LOS         |       | E     |       | C     |       | C     |       | D     |

Intersection Summary

Cycle Length: 94  
 Actuated Cycle Length: 94  
 Offset: 31 (33%), Referenced to phase 4:EBTL and 8:WBTL, Start of Green  
 Natural Cycle: 90  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 1.24  
 Intersection Signal Delay: 45.8  
 Intersection Capacity Utilization 95.1%  
 Intersection LOS: D  
 ICU Level of Service F  
 Analysis Period (min) 15

Splits and Phases: 6: Pinnacle Peak Rd & 19th Ave



Deer Valley 30  
6: Pinnacle Peak Rd & 19th Ave

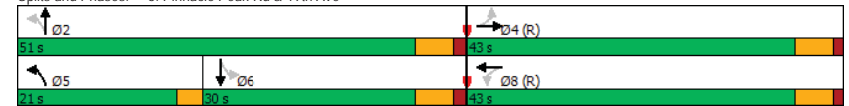
2024 Total PM Scenario A  
Timings

| Lane Group           | EBL   | EBT   | WBL   | WBT   | NBL   | NBT   | SBL   | SBT   |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations  | ↖     | ↗     | ↖     | ↗     | ↖     | ↗     | ↖     | ↗     |
| Traffic Volume (vph) | 148   | 229   | 119   | 766   | 408   | 818   | 167   | 629   |
| Future Volume (vph)  | 148   | 229   | 119   | 766   | 408   | 818   | 167   | 629   |
| Turn Type            | Perm  | NA    | Perm  | NA    | pm+pt | NA    | Perm  | NA    |
| Protected Phases     |       | 4     |       | 8     |       | 5     |       | 2     |
| Permitted Phases     | 4     |       | 8     |       | 2     |       | 6     |       |
| Detector Phase       | 4     | 4     | 8     | 8     | 5     | 2     | 6     | 6     |
| Switch Phase         |       |       |       |       |       |       |       |       |
| Minimum Initial (s)  | 15.0  | 15.0  | 15.0  | 15.0  | 5.0   | 15.0  | 15.0  | 15.0  |
| Minimum Split (s)    | 34.6  | 34.6  | 34.6  | 34.6  | 9.5   | 30.8  | 30.8  | 30.8  |
| Total Split (s)      | 43.0  | 43.0  | 43.0  | 43.0  | 21.0  | 51.0  | 30.0  | 30.0  |
| Total Split (%)      | 45.7% | 45.7% | 45.7% | 45.7% | 22.3% | 54.3% | 31.9% | 31.9% |
| Yellow Time (s)      | 4.3   | 4.3   | 4.3   | 4.3   | 3.0   | 4.3   | 4.3   | 4.3   |
| All-Red Time (s)     | 1.3   | 1.3   | 1.3   | 1.3   | 0.0   | 1.5   | 1.5   | 1.5   |
| Lost Time Adjust (s) | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Lost Time (s)  | 5.6   | 5.6   | 5.6   | 5.6   | 3.0   | 5.8   | 5.8   | 5.8   |
| Lead/Lag             |       |       |       |       | Lead  |       | Lag   | Lag   |
| Lead-Lag Optimize?   |       |       |       |       | Yes   |       | Yes   | Yes   |
| Recall Mode          | C-Max | C-Max | C-Max | C-Max | None  | Max   | Max   | Max   |
| Act Effct Green (s)  | 37.4  | 37.4  | 37.4  | 37.4  | 48.0  | 45.2  | 24.2  | 24.2  |
| Actuated g/C Ratio   | 0.40  | 0.40  | 0.40  | 0.40  | 0.51  | 0.48  | 0.26  | 0.26  |
| v/c Ratio            | 1.41  | 0.37  | 0.45  | 0.74  | 1.10  | 0.41  | 1.37  | 1.29  |
| Control Delay        | 257.0 | 10.0  | 27.3  | 27.6  | 100.9 | 16.2  | 237.5 | 167.6 |
| Queue Delay          | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Delay          | 257.0 | 10.0  | 27.3  | 27.6  | 100.9 | 16.2  | 237.5 | 167.6 |
| LOS                  | F     | B     | C     | C     | F     | B     | F     | F     |
| Approach Delay       |       | 68.7  |       | 27.5  |       | 43.4  |       | 177.4 |
| Approach LOS         |       | E     |       | C     |       | D     |       | F     |

Intersection Summary

Cycle Length: 94  
 Actuated Cycle Length: 94  
 Offset: 31 (33%), Referenced to phase 4:EBTL and 8:WBTL, Start of Green  
 Natural Cycle: 90  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 1.41  
 Intersection Signal Delay: 82.5  
 Intersection Capacity Utilization 107.8%  
 Intersection LOS: F  
 ICU Level of Service G  
 Analysis Period (min) 15

Splits and Phases: 6: Pinnacle Peak Rd & 19th Ave







Deer Valley 30  
7: 15th Ave & Happy Valley Rd

2024 Total AM Scenario A  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Int Delay, s/veh         | 1    |      |      |      |      |      |      |      |      |      |      |      |
| Movement                 | EBL  | EBT  | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
| Lane Configurations      | ↕    |      | ↕    |      | ↕    |      | ↕    |      | ↕    |      | ↕    |      |
| Traffic Vol, veh/h       | 6    | 676  | 23   | 14   | 376  | 0    | 19   | 0    | 10   | 2    | 0    | 6    |
| Future Vol, veh/h        | 6    | 676  | 23   | 14   | 376  | 0    | 19   | 0    | 10   | 2    | 0    | 6    |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Free | Free | Free | Free | Free | Free | Stop | Stop | Stop | Stop | Stop | Stop |
| RT Channelized           | -    | -    | None | -    | -    | None | -    | -    | None | -    | -    | None |
| Storage Length           | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    |
| Veh in Median Storage, # | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Grade, %                 | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Peak Hour Factor         | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   |
| Heavy Vehicles, %        | 8    | 8    | 8    | 8    | 8    | 8    | 8    | 8    | 8    | 8    | 8    | 8    |
| Mvmt Flow                | 7    | 735  | 25   | 15   | 409  | 0    | 21   | 0    | 11   | 2    | 0    | 7    |

| Major/Minor          | Major1 | Major2 | Minor1 | Minor2 |
|----------------------|--------|--------|--------|--------|
| Conflicting Flow All | 409    | 0      | 760    | 0      |
| Stage 1              | -      | -      | -      | -      |
| Stage 2              | -      | -      | -      | -      |
| Critical Hdwy        | 4.18   | -      | 4.18   | -      |
| Critical Hdwy Stg 1  | -      | -      | -      | -      |
| Critical Hdwy Stg 2  | -      | -      | -      | -      |
| Follow-up Hdwy       | 2.272  | -      | 2.272  | -      |
| Pot Cap-1 Maneuver   | 1118   | -      | 825    | -      |
| Stage 1              | -      | -      | -      | -      |
| Stage 2              | -      | -      | -      | -      |
| Platoon blocked, %   | -      | -      | -      | -      |
| Mov Cap-1 Maneuver   | 1118   | -      | 825    | -      |
| Mov Cap-2 Maneuver   | -      | -      | -      | -      |
| Stage 1              | -      | -      | -      | -      |
| Stage 2              | -      | -      | -      | -      |

| Approach             | EB  | WB  | NB   | SB   |
|----------------------|-----|-----|------|------|
| HCM Control Delay, s | 0.1 | 0.3 | 27.5 | 15.6 |
| HCM LOS              |     |     | D    | C    |

| Minor Lane/Major Mvmt | NBLn1 | EBL   | EBT | EBR | WBL   | WBT | WBR | SBLn1 |
|-----------------------|-------|-------|-----|-----|-------|-----|-----|-------|
| Capacity (veh/h)      | 191   | 1118  | -   | -   | 825   | -   | -   | 347   |
| HCM Lane V/C Ratio    | 0.165 | 0.006 | -   | -   | 0.018 | -   | -   | 0.025 |
| HCM Control Delay (s) | 27.5  | 8.2   | 0   | -   | 9.4   | 0   | -   | 15.6  |
| HCM Lane LOS          | D     | A     | A   | -   | A     | A   | -   | C     |
| HCM 95th %tile Q(veh) | 0.6   | 0     | -   | -   | 0.1   | -   | -   | 0.1   |

Deer Valley 30  
7: 15th Ave & Happy Valley Rd

2024 Total PM Scenario A  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Int Delay, s/veh         | 1.6  |      |      |      |      |      |      |      |      |      |      |      |
| Movement                 | EBL  | EBT  | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
| Lane Configurations      | ↕    |      | ↕    |      | ↕    |      | ↕    |      | ↕    |      | ↕    |      |
| Traffic Vol, veh/h       | 2    | 527  | 3    | 8    | 1109 | 0    | 20   | 0    | 17   | 0    | 0    | 1    |
| Future Vol, veh/h        | 2    | 527  | 3    | 8    | 1109 | 0    | 20   | 0    | 17   | 0    | 0    | 1    |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Free | Free | Free | Free | Free | Free | Stop | Stop | Stop | Stop | Stop | Stop |
| RT Channelized           | -    | -    | None | -    | -    | None | -    | -    | None | -    | -    | None |
| Storage Length           | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    |
| Veh in Median Storage, # | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Grade, %                 | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Peak Hour Factor         | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   |
| Heavy Vehicles, %        | 8    | 8    | 8    | 8    | 8    | 8    | 8    | 8    | 8    | 8    | 8    | 8    |
| Mvmt Flow                | 2    | 573  | 3    | 9    | 1205 | 0    | 22   | 0    | 18   | 0    | 0    | 1    |

| Major/Minor          | Major1 | Major2 | Minor1 | Minor2 |
|----------------------|--------|--------|--------|--------|
| Conflicting Flow All | 1205   | 0      | 576    | 0      |
| Stage 1              | -      | -      | -      | -      |
| Stage 2              | -      | -      | -      | -      |
| Critical Hdwy        | 4.18   | -      | 4.18   | -      |
| Critical Hdwy Stg 1  | -      | -      | -      | -      |
| Critical Hdwy Stg 2  | -      | -      | -      | -      |
| Follow-up Hdwy       | 2.272  | -      | 2.272  | -      |
| Pot Cap-1 Maneuver   | 558    | -      | 968    | -      |
| Stage 1              | -      | -      | -      | -      |
| Stage 2              | -      | -      | -      | -      |
| Platoon blocked, %   | -      | -      | -      | -      |
| Mov Cap-1 Maneuver   | 558    | -      | 968    | -      |
| Mov Cap-2 Maneuver   | -      | -      | -      | -      |
| Stage 1              | -      | -      | -      | -      |
| Stage 2              | -      | -      | -      | -      |

| Approach             | EB | WB  | NB   | SB   |
|----------------------|----|-----|------|------|
| HCM Control Delay, s | 0  | 0.1 | 67.2 | 21.6 |
| HCM LOS              |    |     | F    | C    |

| Minor Lane/Major Mvmt | NBLn1 | EBL   | EBT | EBR | WBL   | WBT | WBR | SBLn1 |
|-----------------------|-------|-------|-----|-----|-------|-----|-----|-------|
| Capacity (veh/h)      | 96    | 558   | -   | -   | 968   | -   | -   | 218   |
| HCM Lane V/C Ratio    | 0.419 | 0.004 | -   | -   | 0.009 | -   | -   | 0.005 |
| HCM Control Delay (s) | 67.2  | 11.5  | 0   | -   | 8.8   | 0   | -   | 21.6  |
| HCM Lane LOS          | F     | B     | A   | -   | A     | A   | -   | C     |
| HCM 95th %tile Q(veh) | 1.7   | 0     | -   | -   | 0     | -   | -   | 0     |

Deer Valley 30  
8: 7th Ave & Happy Valley Rd

2024 Total AM Scenario A  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh         | 1.4  |      |      |      |      |      |
| Movement                 | EBT  | EBR  | WBL  | WBT  | NBL  | NBR  |
| Lane Configurations      | ↻    |      |      | ↻    | ↻    |      |
| Traffic Vol, veh/h       | 508  | 214  | 9    | 282  | 54   | 10   |
| Future Vol, veh/h        | 508  | 214  | 9    | 282  | 54   | 10   |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Free | Free | Free | Free | Stop | Stop |
| RT Channelized           | -    | None | -    | None | -    | None |
| Storage Length           | -    | -    | -    | -    | -    | -    |
| Veh in Median Storage, # | 0    | -    | -    | 0    | 0    | -    |
| Grade, %                 | 0    | -    | -    | 0    | 0    | -    |
| Peak Hour Factor         | 92   | 92   | 92   | 92   | 92   | 92   |
| Heavy Vehicles, %        | 8    | 8    | 8    | 8    | 8    | 8    |
| Mvmt Flow                | 552  | 233  | 10   | 307  | 59   | 11   |

| Major/Minor          | Major1 | Major2 | Minor1 |   |       |
|----------------------|--------|--------|--------|---|-------|
| Conflicting Flow All | 0      | 0      | 785    | 0 | 996   |
| Stage 1              | -      | -      | -      | - | 669   |
| Stage 2              | -      | -      | -      | - | 327   |
| Critical Hdwy        | -      | -      | 4.18   | - | 6.48  |
| Critical Hdwy Stg 1  | -      | -      | -      | - | 5.48  |
| Critical Hdwy Stg 2  | -      | -      | -      | - | 5.48  |
| Follow-up Hdwy       | -      | -      | 2.272  | - | 3.572 |
| Pot Cap-1 Maneuver   | -      | -      | 808    | - | 264   |
| Stage 1              | -      | -      | -      | - | 498   |
| Stage 2              | -      | -      | -      | - | 717   |
| Platoon blocked, %   | -      | -      | -      | - | -     |
| Mov Cap-1 Maneuver   | -      | -      | 808    | - | 260   |
| Mov Cap-2 Maneuver   | -      | -      | -      | - | 260   |
| Stage 1              | -      | -      | -      | - | 498   |
| Stage 2              | -      | -      | -      | - | 706   |

| Approach             | EB | WB  | NB   |
|----------------------|----|-----|------|
| HCM Control Delay, s | 0  | 0.3 | 22.2 |
| HCM LOS              |    |     | C    |

| Minor Lane/Major Mvmt | NBLn1 | EBT | EBR | WBL   | WBT |
|-----------------------|-------|-----|-----|-------|-----|
| Capacity (veh/h)      | 278   | -   | -   | 808   | -   |
| HCM Lane V/C Ratio    | 0.25  | -   | -   | 0.012 | -   |
| HCM Control Delay (s) | 22.2  | -   | -   | 9.5   | 0   |
| HCM Lane LOS          | C     | -   | -   | A     | A   |
| HCM 95th %tile Q(veh) | 1     | -   | -   | 0     | -   |

Deer Valley 30  
8: 7th Ave & Happy Valley Rd

2024 Total PM Scenario A  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh         | 80.9 |      |      |      |      |      |
| Movement                 | EBT  | EBR  | WBL  | WBT  | NBL  | NBR  |
| Lane Configurations      | ↻    |      |      | ↻    | ↻    |      |
| Traffic Vol, veh/h       | 479  | 77   | 19   | 854  | 223  | 11   |
| Future Vol, veh/h        | 479  | 77   | 19   | 854  | 223  | 11   |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Free | Free | Free | Free | Stop | Stop |
| RT Channelized           | -    | None | -    | None | -    | None |
| Storage Length           | -    | -    | -    | -    | -    | -    |
| Veh in Median Storage, # | 0    | -    | -    | 0    | 0    | -    |
| Grade, %                 | 0    | -    | -    | 0    | 0    | -    |
| Peak Hour Factor         | 92   | 92   | 92   | 92   | 92   | 92   |
| Heavy Vehicles, %        | 8    | 8    | 8    | 8    | 8    | 8    |
| Mvmt Flow                | 521  | 84   | 21   | 928  | 242  | 12   |

| Major/Minor          | Major1 | Major2 | Minor1 |   |       |
|----------------------|--------|--------|--------|---|-------|
| Conflicting Flow All | 0      | 0      | 605    | 0 | 1533  |
| Stage 1              | -      | -      | -      | - | 563   |
| Stage 2              | -      | -      | -      | - | 970   |
| Critical Hdwy        | -      | -      | 4.18   | - | 6.48  |
| Critical Hdwy Stg 1  | -      | -      | -      | - | 5.48  |
| Critical Hdwy Stg 2  | -      | -      | -      | - | 5.48  |
| Follow-up Hdwy       | -      | -      | 2.272  | - | 3.572 |
| Pot Cap-1 Maneuver   | -      | -      | 944    | - | 124   |
| Stage 1              | -      | -      | -      | - | 558   |
| Stage 2              | -      | -      | -      | - | 359   |
| Platoon blocked, %   | -      | -      | -      | - | -     |
| Mov Cap-1 Maneuver   | -      | -      | 944    | - | 118   |
| Mov Cap-2 Maneuver   | -      | -      | -      | - | 118   |
| Stage 1              | -      | -      | -      | - | 558   |
| Stage 2              | -      | -      | -      | - | 342   |

| Approach             | EB | WB  | NB     |
|----------------------|----|-----|--------|
| HCM Control Delay, s | 0  | 0.2 | \$ 574 |
| HCM LOS              |    |     | F      |

| Minor Lane/Major Mvmt | NBLn1  | EBT | EBR | WBL   | WBT |
|-----------------------|--------|-----|-----|-------|-----|
| Capacity (veh/h)      | 122    | -   | -   | 944   | -   |
| HCM Lane V/C Ratio    | 2.085  | -   | -   | 0.022 | -   |
| HCM Control Delay (s) | \$ 574 | -   | -   | 8.9   | 0   |
| HCM Lane LOS          | F      | -   | -   | A     | A   |
| HCM 95th %tile Q(veh) | 21.1   | -   | -   | 0.1   | -   |

Notes  
 -: Volume exceeds capacity    \$: Delay exceeds 300s    +: Computation Not Defined    \*: All major volume in platoon

Deer Valley 30  
9: 7th Ave & Pinnacle Peak Rd

2024 Total AM Scenario A  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Int Delay, s/veh         | 79.3 |      |      |      |      |      |      |      |      |      |      |      |
| Movement                 | EBL  | EBT  | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
| Lane Configurations      | ↔    | ↕    | ↔    | ↔    | ↕    | ↔    | ↔    | ↕    | ↔    | ↔    | ↕    | ↔    |
| Traffic Vol, veh/h       | 175  | 455  | 282  | 46   | 366  | 228  | 79   | 96   | 26   | 65   | 40   | 35   |
| Future Vol, veh/h        | 175  | 455  | 282  | 46   | 366  | 228  | 79   | 96   | 26   | 65   | 40   | 35   |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Free | Free | Free | Free | Free | Free | Stop | Stop | Stop | Stop | Stop | Stop |
| RT Channelized           | -    | -    | None | -    | -    | None | -    | -    | None | -    | -    | None |
| Storage Length           | 150  | -    | 170  | 150  | -    | -    | 150  | -    | -    | 150  | -    | -    |
| Veh in Median Storage, # | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Grade, %                 | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Peak Hour Factor         | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   |
| Heavy Vehicles, %        | 8    | 8    | 8    | 8    | 8    | 8    | 8    | 8    | 8    | 8    | 8    | 8    |
| Mvmt Flow                | 190  | 495  | 307  | 50   | 398  | 248  | 86   | 104  | 28   | 71   | 43   | 38   |

| Major/Minor          | Major1 | Major2 | Minor1 | Minor2 |
|----------------------|--------|--------|--------|--------|
| Conflicting Flow All | 646    | 0      | 0      | 802    |
| Stage 1              | -      | -      | -      | -      |
| Stage 2              | -      | -      | -      | -      |
| Critical Hdwy        | 4.18   | -      | -      | 4.18   |
| Critical Hdwy Stg 1  | -      | -      | -      | -      |
| Critical Hdwy Stg 2  | -      | -      | -      | -      |
| Follow-up Hdwy       | 2.272  | -      | -      | 2.272  |
| Pot Cap-1 Maneuver   | 911    | -      | -      | 796    |
| Stage 1              | -      | -      | -      | -      |
| Stage 2              | -      | -      | -      | -      |
| Platoon blocked, %   | -      | -      | -      | -      |
| Mov Cap-1 Maneuver   | 911    | -      | -      | 796    |
| Mov Cap-2 Maneuver   | -      | -      | -      | -      |
| Stage 1              | -      | -      | -      | -      |
| Stage 2              | -      | -      | -      | -      |

| Approach             | EB  | WB  | NB       | SB |
|----------------------|-----|-----|----------|----|
| HCM Control Delay, s | 1.9 | 0.7 | \$ 736.2 |    |
| HCM LOS              |     |     | F        | -  |

| Minor Lane/Major Mvmt | NBLn1      | NBLn2 | EBL   | EBT | EBR | WBL   | WBT | WBR | SBLn1 | SBLn2 |
|-----------------------|------------|-------|-------|-----|-----|-------|-----|-----|-------|-------|
| Capacity (veh/h)      | 26         | 91    | 911   | -   | -   | 796   | -   | -   | -     | 98    |
| HCM Lane V/C Ratio    | 3.303      | 1.457 | 0.209 | -   | -   | 0.063 | -   | -   | -     | 0.832 |
| HCM Control Delay (s) | \$ 1350.25 | 338.6 | 10    | -   | -   | 9.8   | -   | -   | -     | 127.1 |
| HCM Lane LOS          | F          | F     | A     | -   | -   | A     | -   | -   | -     | F     |
| HCM 95th %tile Q(veh) | 10.5       | 10.1  | 0.8   | -   | -   | 0.2   | -   | -   | -     | 4.6   |

Notes  
 -: Volume exceeds capacity    \$: Delay exceeds 300s    +: Computation Not Defined    \*: All major volume in platoon

Deer Valley 30  
9: 7th Ave & Pinnacle Peak Rd

2024 Total PM Scenario A  
HCM 6th TWSC

| Intersection             |       |      |      |      |      |      |      |      |      |      |      |      |
|--------------------------|-------|------|------|------|------|------|------|------|------|------|------|------|
| Int Delay, s/veh         | 256.9 |      |      |      |      |      |      |      |      |      |      |      |
| Movement                 | EBL   | EBT  | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
| Lane Configurations      | ↔     | ↕    | ↔    | ↔    | ↕    | ↔    | ↔    | ↕    | ↔    | ↔    | ↕    | ↔    |
| Traffic Vol, veh/h       | 39    | 389  | 74   | 30   | 440  | 66   | 207  | 39   | 40   | 211  | 90   | 170  |
| Future Vol, veh/h        | 39    | 389  | 74   | 30   | 440  | 66   | 207  | 39   | 40   | 211  | 90   | 170  |
| Conflicting Peds, #/hr   | 0     | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Free  | Free | Free | Free | Free | Free | Stop | Stop | Stop | Stop | Stop | Stop |
| RT Channelized           | -     | -    | None | -    | -    | None | -    | -    | None | -    | -    | None |
| Storage Length           | 150   | -    | 170  | 150  | -    | -    | 150  | -    | -    | 150  | -    | -    |
| Veh in Median Storage, # | -     | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Grade, %                 | -     | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Peak Hour Factor         | 92    | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   |
| Heavy Vehicles, %        | 8     | 8    | 8    | 8    | 8    | 8    | 8    | 8    | 8    | 8    | 8    | 8    |
| Mvmt Flow                | 42    | 423  | 80   | 33   | 478  | 72   | 225  | 42   | 43   | 229  | 98   | 185  |

| Major/Minor          | Major1 | Major2 | Minor1 | Minor2 |
|----------------------|--------|--------|--------|--------|
| Conflicting Flow All | 550    | 0      | 0      | 503    |
| Stage 1              | -      | -      | -      | -      |
| Stage 2              | -      | -      | -      | -      |
| Critical Hdwy        | 4.18   | -      | -      | 4.18   |
| Critical Hdwy Stg 1  | -      | -      | -      | -      |
| Critical Hdwy Stg 2  | -      | -      | -      | -      |
| Follow-up Hdwy       | 2.272  | -      | -      | 2.272  |
| Pot Cap-1 Maneuver   | 990    | -      | -      | 1031   |
| Stage 1              | -      | -      | -      | -      |
| Stage 2              | -      | -      | -      | -      |
| Platoon blocked, %   | -      | -      | -      | -      |
| Mov Cap-1 Maneuver   | 990    | -      | -      | 1031   |
| Mov Cap-2 Maneuver   | -      | -      | -      | -      |
| Stage 1              | -      | -      | -      | -      |
| Stage 2              | -      | -      | -      | -      |

| Approach             | EB  | WB  | NB        | SB    |
|----------------------|-----|-----|-----------|-------|
| HCM Control Delay, s | 0.7 | 0.5 | \$ 1176.9 | 263.1 |
| HCM LOS              |     |     | F         | F     |

| Minor Lane/Major Mvmt | NBLn1     | NBLn2 | EBL   | EBT | EBR | WBL   | WBT | WBR | SBLn1 | SBLn2  |
|-----------------------|-----------|-------|-------|-----|-----|-------|-----|-----|-------|--------|
| Capacity (veh/h)      | 53        | 287   | 990   | -   | -   | 1031  | -   | -   | -     | 119    |
| HCM Lane V/C Ratio    | 4.245     | 0.299 | 0.043 | -   | -   | 0.032 | -   | -   | -     | 1.927  |
| HCM Control Delay (s) | \$ 1617.3 | 22.8  | 8.8   | -   | -   | 8.6   | -   | -   | -     | \$ 508 |
| HCM Lane LOS          | F         | C     | A     | -   | -   | A     | -   | -   | -     | F      |
| HCM 95th %tile Q(veh) | 24.9      | 1.2   | 0.1   | -   | -   | 0.1   | -   | -   | -     | 18.5   |

Notes  
 -: Volume exceeds capacity    \$: Delay exceeds 300s    +: Computation Not Defined    \*: All major volume in platoon

Deer Valley 30  
10: 7th Ave & Alameda Rd

2024 Total AM Scenario A  
HCM 6th TWSC

| Intersection             |        |        |        |      |      |      |
|--------------------------|--------|--------|--------|------|------|------|
| Int Delay, s/veh         | 5.1    |        |        |      |      |      |
| Movement                 | EBL    | EBR    | NBL    | NBT  | SBT  | SBR  |
| Lane Configurations      | ↔      |        | ↔      | ↔    | ↔    |      |
| Traffic Vol, veh/h       | 14     | 51     | 263    | 50   | 155  | 68   |
| Future Vol, veh/h        | 14     | 51     | 263    | 50   | 155  | 68   |
| Conflicting Peds, #/hr   | 0      | 0      | 0      | 0    | 0    | 0    |
| Sign Control             | Stop   | Stop   | Free   | Free | Free | Free |
| RT Channelized           | -      | None   | -      | None | -    | None |
| Storage Length           | 0      | -      | 150    | -    | -    | -    |
| Veh in Median Storage, # | 0      | -      | -      | 0    | 0    | -    |
| Grade, %                 | 0      | -      | -      | 0    | 0    | -    |
| Peak Hour Factor         | 92     | 92     | 92     | 92   | 92   | 92   |
| Heavy Vehicles, %        | 8      | 8      | 8      | 8    | 8    | 8    |
| Mvmt Flow                | 15     | 55     | 286    | 54   | 168  | 74   |
| Major/Minor              | Minor2 | Major1 | Major2 |      |      |      |
| Conflicting Flow All     | 831    | 205    | 242    | 0    | -    | 0    |
| Stage 1                  | 205    | -      | -      | -    | -    | -    |
| Stage 2                  | 626    | -      | -      | -    | -    | -    |
| Critical Hdwy            | 6.48   | 6.28   | 4.18   | -    | -    | -    |
| Critical Hdwy Stg 1      | 5.48   | -      | -      | -    | -    | -    |
| Critical Hdwy Stg 2      | 5.48   | -      | -      | -    | -    | -    |
| Follow-up Hdwy           | 3.572  | 3.372  | 2.272  | -    | -    | -    |
| Pot Cap-1 Maneuver       | 332    | 821    | 1290   | -    | -    | -    |
| Stage 1                  | 815    | -      | -      | -    | -    | -    |
| Stage 2                  | 522    | -      | -      | -    | -    | -    |
| Platoon blocked, %       | -      | -      | -      | -    | -    | -    |
| Mov Cap-1 Maneuver       | 258    | 821    | 1290   | -    | -    | -    |
| Mov Cap-2 Maneuver       | 258    | -      | -      | -    | -    | -    |
| Stage 1                  | 634    | -      | -      | -    | -    | -    |
| Stage 2                  | 522    | -      | -      | -    | -    | -    |
| Approach                 | EB     | NB     | SB     |      |      |      |
| HCM Control Delay, s     | 12.4   | 7.2    | 0      |      |      |      |
| HCM LOS                  | B      |        |        |      |      |      |
| Minor Lane/Major Mvmt    | NBL    | NBT    | EBLn1  | SBT  | SBR  |      |
| Capacity (veh/h)         | 1290   | -      | 559    | -    | -    |      |
| HCM Lane V/C Ratio       | 0.222  | -      | 0.126  | -    | -    |      |
| HCM Control Delay (s)    | 8.6    | -      | 12.4   | -    | -    |      |
| HCM Lane LOS             | A      | -      | B      | -    | -    |      |
| HCM 95th %tile Q(veh)    | 0.8    | -      | 0.4    | -    | -    |      |

Deer Valley 30  
10: 7th Ave & Alameda Rd

2024 Total PM Scenario A  
HCM 6th TWSC

| Intersection             |        |        |        |      |      |      |
|--------------------------|--------|--------|--------|------|------|------|
| Int Delay, s/veh         | 6.7    |        |        |      |      |      |
| Movement                 | EBL    | EBR    | NBL    | NBT  | SBT  | SBR  |
| Lane Configurations      | ↔      |        | ↔      | ↔    | ↔    |      |
| Traffic Vol, veh/h       | 67     | 241    | 53     | 168  | 81   | 15   |
| Future Vol, veh/h        | 67     | 241    | 53     | 168  | 81   | 15   |
| Conflicting Peds, #/hr   | 0      | 0      | 0      | 0    | 0    | 0    |
| Sign Control             | Stop   | Stop   | Free   | Free | Free | Free |
| RT Channelized           | -      | None   | -      | None | -    | None |
| Storage Length           | 0      | -      | 150    | -    | -    | -    |
| Veh in Median Storage, # | 0      | -      | -      | 0    | 0    | -    |
| Grade, %                 | 0      | -      | -      | 0    | 0    | -    |
| Peak Hour Factor         | 92     | 92     | 92     | 92   | 92   | 92   |
| Heavy Vehicles, %        | 8      | 8      | 8      | 8    | 8    | 8    |
| Mvmt Flow                | 73     | 262    | 58     | 183  | 88   | 16   |
| Major/Minor              | Minor2 | Major1 | Major2 |      |      |      |
| Conflicting Flow All     | 395    | 96     | 104    | 0    | -    | 0    |
| Stage 1                  | 96     | -      | -      | -    | -    | -    |
| Stage 2                  | 299    | -      | -      | -    | -    | -    |
| Critical Hdwy            | 6.48   | 6.28   | 4.18   | -    | -    | -    |
| Critical Hdwy Stg 1      | 5.48   | -      | -      | -    | -    | -    |
| Critical Hdwy Stg 2      | 5.48   | -      | -      | -    | -    | -    |
| Follow-up Hdwy           | 3.572  | 3.372  | 2.272  | -    | -    | -    |
| Pot Cap-1 Maneuver       | 598    | 944    | 1451   | -    | -    | -    |
| Stage 1                  | 913    | -      | -      | -    | -    | -    |
| Stage 2                  | 739    | -      | -      | -    | -    | -    |
| Platoon blocked, %       | -      | -      | -      | -    | -    | -    |
| Mov Cap-1 Maneuver       | 574    | 944    | 1451   | -    | -    | -    |
| Mov Cap-2 Maneuver       | 574    | -      | -      | -    | -    | -    |
| Stage 1                  | 876    | -      | -      | -    | -    | -    |
| Stage 2                  | 739    | -      | -      | -    | -    | -    |
| Approach                 | EB     | NB     | SB     |      |      |      |
| HCM Control Delay, s     | 12.3   | 1.8    | 0      |      |      |      |
| HCM LOS                  | B      |        |        |      |      |      |
| Minor Lane/Major Mvmt    | NBL    | NBT    | EBLn1  | SBT  | SBR  |      |
| Capacity (veh/h)         | 1451   | -      | 828    | -    | -    |      |
| HCM Lane V/C Ratio       | 0.04   | -      | 0.404  | -    | -    |      |
| HCM Control Delay (s)    | 7.6    | -      | 12.3   | -    | -    |      |
| HCM Lane LOS             | A      | -      | B      | -    | -    |      |
| HCM 95th %tile Q(veh)    | 0.1    | -      | 2      | -    | -    |      |

Deer Valley 30  
11: 15th Ave & Parkview Ln

2024 Total AM Scenario A  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh         | 0    |      |      |      |      |      |
| Movement                 | EBT  | EBR  | WBL  | WBT  | NBL  | NBR  |
| Lane Configurations      | ↔    |      |      | ↕    | ↕    |      |
| Traffic Vol, veh/h       | 0    | 0    | 0    | 0    | 0    | 0    |
| Future Vol, veh/h        | 0    | 0    | 0    | 0    | 0    | 0    |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Free | Free | Free | Free | Stop | Stop |
| RT Channelized           | -    | None | -    | None | -    | None |
| Storage Length           | -    | -    | -    | -    | 0    | -    |
| Veh in Median Storage, # | 0    | -    | -    | 0    | 0    | -    |
| Grade, %                 | 0    | -    | -    | 0    | 0    | -    |
| Peak Hour Factor         | 92   | 92   | 92   | 92   | 92   | 92   |
| Heavy Vehicles, %        | 8    | 8    | 8    | 8    | 8    | 8    |
| Mvmt Flow                | 0    | 0    | 0    | 0    | 0    | 0    |

| Major/Minor          | Major1 | Major2 | Minor1 |
|----------------------|--------|--------|--------|
| Conflicting Flow All | 0      | 0      | 1      |
| Stage 1              | -      | -      | 1      |
| Stage 2              | -      | -      | 1      |
| Critical Hdwy        | -      | 4.18   | 6.48   |
| Critical Hdwy Stg 1  | -      | -      | 5.48   |
| Critical Hdwy Stg 2  | -      | -      | 5.48   |
| Follow-up Hdwy       | -      | 2.272  | 3.372  |
| Pot Cap-1 Maneuver   | -      | 1583   | 1005   |
| Stage 1              | -      | -      | 1007   |
| Stage 2              | -      | -      | 1007   |
| Platoon blocked, %   | -      | -      | -      |
| Mov Cap-1 Maneuver   | -      | 1583   | 1005   |
| Mov Cap-2 Maneuver   | -      | -      | 1005   |
| Stage 1              | -      | -      | 1007   |
| Stage 2              | -      | -      | 1007   |

| Approach             | EB | WB | NB |
|----------------------|----|----|----|
| HCM Control Delay, s | 0  | 0  | 0  |
| HCM LOS              |    |    | A  |

| Minor Lane/Major Mvmt | NBLn1 | EBT | EBR | WBL  | WBT |
|-----------------------|-------|-----|-----|------|-----|
| Capacity (veh/h)      | -     | -   | -   | 1583 | -   |
| HCM Lane V/C Ratio    | -     | -   | -   | -    | -   |
| HCM Control Delay (s) | 0     | -   | -   | 0    | -   |
| HCM Lane LOS          | A     | -   | -   | A    | -   |
| HCM 95th %tile Q(veh) | -     | -   | -   | 0    | -   |

Deer Valley 30  
11: 15th Ave & Parkview Ln

2024 Total PM Scenario A  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh         | 0    |      |      |      |      |      |
| Movement                 | EBT  | EBR  | WBL  | WBT  | NBL  | NBR  |
| Lane Configurations      | ↔    |      |      | ↕    | ↕    |      |
| Traffic Vol, veh/h       | 0    | 0    | 0    | 0    | 0    | 0    |
| Future Vol, veh/h        | 0    | 0    | 0    | 0    | 0    | 0    |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Free | Free | Free | Free | Stop | Stop |
| RT Channelized           | -    | None | -    | None | -    | None |
| Storage Length           | -    | -    | -    | -    | 0    | -    |
| Veh in Median Storage, # | 0    | -    | -    | 0    | 0    | -    |
| Grade, %                 | 0    | -    | -    | 0    | 0    | -    |
| Peak Hour Factor         | 92   | 92   | 92   | 92   | 92   | 92   |
| Heavy Vehicles, %        | 8    | 8    | 8    | 8    | 8    | 8    |
| Mvmt Flow                | 0    | 0    | 0    | 0    | 0    | 0    |

| Major/Minor          | Major1 | Major2 | Minor1 |
|----------------------|--------|--------|--------|
| Conflicting Flow All | 0      | 0      | 1      |
| Stage 1              | -      | -      | 1      |
| Stage 2              | -      | -      | 1      |
| Critical Hdwy        | -      | 4.18   | 6.48   |
| Critical Hdwy Stg 1  | -      | -      | 5.48   |
| Critical Hdwy Stg 2  | -      | -      | 5.48   |
| Follow-up Hdwy       | -      | 2.272  | 3.372  |
| Pot Cap-1 Maneuver   | -      | 1583   | 1005   |
| Stage 1              | -      | -      | 1007   |
| Stage 2              | -      | -      | 1007   |
| Platoon blocked, %   | -      | -      | -      |
| Mov Cap-1 Maneuver   | -      | 1583   | 1005   |
| Mov Cap-2 Maneuver   | -      | -      | 1005   |
| Stage 1              | -      | -      | 1007   |
| Stage 2              | -      | -      | 1007   |

| Approach             | EB | WB | NB |
|----------------------|----|----|----|
| HCM Control Delay, s | 0  | 0  | 0  |
| HCM LOS              |    |    | A  |

| Minor Lane/Major Mvmt | NBLn1 | EBT | EBR | WBL  | WBT |
|-----------------------|-------|-----|-----|------|-----|
| Capacity (veh/h)      | -     | -   | -   | 1583 | -   |
| HCM Lane V/C Ratio    | -     | -   | -   | -    | -   |
| HCM Control Delay (s) | 0     | -   | -   | 0    | -   |
| HCM Lane LOS          | A     | -   | -   | A    | -   |
| HCM 95th %tile Q(veh) | -     | -   | -   | 0    | -   |

Deer Valley 30  
12: Alameda Rd & Access A

2024 Total AM Scenario A  
HCM 6th TWSC

| Intersection             |        |        |        |       |       |       |
|--------------------------|--------|--------|--------|-------|-------|-------|
| Int Delay, s/veh         | 0.4    |        |        |       |       |       |
| Movement                 | EBL    | EBT    | WBT    | WBR   | SBL   | SBR   |
| Lane Configurations      |        | ↕      | ↕      |       | ↕     | ↕     |
| Traffic Vol, veh/h       | 23     | 388    | 73     | 6     | 1     | 4     |
| Future Vol, veh/h        | 23     | 388    | 73     | 6     | 1     | 4     |
| Conflicting Peds, #/hr   | 0      | 0      | 0      | 0     | 0     | 0     |
| Sign Control             | Free   | Free   | Free   | Free  | Stop  | Stop  |
| RT Channelized           | -      | None   | -      | None  | -     | None  |
| Storage Length           | -      | -      | -      | -     | 0     | -     |
| Veh in Median Storage, # | -      | 0      | 0      | -     | 0     | -     |
| Grade, %                 | -      | 0      | 0      | -     | 0     | -     |
| Peak Hour Factor         | 92     | 92     | 92     | 92    | 92    | 92    |
| Heavy Vehicles, %        | 8      | 8      | 8      | 8     | 8     | 8     |
| Mvmt Flow                | 25     | 422    | 79     | 7     | 1     | 4     |
| Major/Minor              | Major1 | Major2 | Minor2 |       |       |       |
| Conflicting Flow All     | 86     | 0      | 0      | 555   | 83    |       |
| Stage 1                  | -      | -      | -      | 83    | -     |       |
| Stage 2                  | -      | -      | -      | 472   | -     |       |
| Critical Hdwy            | 4.18   | -      | -      | 6.48  | 6.28  |       |
| Critical Hdwy Stg 1      | -      | -      | -      | 5.48  | -     |       |
| Critical Hdwy Stg 2      | -      | -      | -      | 5.48  | -     |       |
| Follow-up Hdwy           | 2.272  | -      | -      | 3.572 | 3.372 |       |
| Pot Cap-1 Maneuver       | 1473   | -      | -      | 483   | 960   |       |
| Stage 1                  | -      | -      | -      | 925   | -     |       |
| Stage 2                  | -      | -      | -      | 615   | -     |       |
| Platoon blocked, %       | -      | -      | -      | -     | -     |       |
| Mov Cap-1 Maneuver       | 1473   | -      | -      | 472   | 960   |       |
| Mov Cap-2 Maneuver       | -      | -      | -      | 472   | -     |       |
| Stage 1                  | -      | -      | -      | 905   | -     |       |
| Stage 2                  | -      | -      | -      | 615   | -     |       |
| Approach                 | EB     | WB     | SB     |       |       |       |
| HCM Control Delay, s     | 0.4    | 0      | 9.6    |       |       |       |
| HCM LOS                  |        |        |        | A     |       |       |
| Minor Lane/Major Mvmt    | EBL    | EBT    | WBT    | WBR   | SBLn1 | SBRn1 |
| Capacity (veh/h)         | 1473   | -      | -      | -     | 796   |       |
| HCM Lane V/C Ratio       | 0.017  | -      | -      | -     | 0.007 |       |
| HCM Control Delay (s)    | 7.5    | 0      | -      | -     | 9.6   |       |
| HCM Lane LOS             | A      | A      | -      | -     | A     |       |
| HCM 95th %tile Q(veh)    | 0.1    | -      | -      | -     | 0     |       |

Deer Valley 30  
12: Alameda Rd & Access A

2024 Total PM Scenario A  
HCM 6th TWSC

| Intersection             |        |        |        |       |       |       |
|--------------------------|--------|--------|--------|-------|-------|-------|
| Int Delay, s/veh         | 0.4    |        |        |       |       |       |
| Movement                 | EBL    | EBT    | WBT    | WBR   | SBL   | SBR   |
| Lane Configurations      |        | ↕      | ↕      |       | ↕     | ↕     |
| Traffic Vol, veh/h       | 2      | 76     | 346    | 1     | 3     | 13    |
| Future Vol, veh/h        | 2      | 76     | 346    | 1     | 3     | 13    |
| Conflicting Peds, #/hr   | 0      | 0      | 0      | 0     | 0     | 0     |
| Sign Control             | Free   | Free   | Free   | Free  | Stop  | Stop  |
| RT Channelized           | -      | None   | -      | None  | -     | None  |
| Storage Length           | -      | -      | -      | -     | 0     | -     |
| Veh in Median Storage, # | -      | 0      | 0      | -     | 0     | -     |
| Grade, %                 | -      | 0      | 0      | -     | 0     | -     |
| Peak Hour Factor         | 92     | 92     | 92     | 92    | 92    | 92    |
| Heavy Vehicles, %        | 8      | 8      | 8      | 8     | 8     | 8     |
| Mvmt Flow                | 2      | 83     | 376    | 1     | 3     | 14    |
| Major/Minor              | Major1 | Major2 | Minor2 |       |       |       |
| Conflicting Flow All     | 377    | 0      | 0      | 464   | 377   |       |
| Stage 1                  | -      | -      | -      | 377   | -     |       |
| Stage 2                  | -      | -      | -      | 87    | -     |       |
| Critical Hdwy            | 4.18   | -      | -      | 6.48  | 6.28  |       |
| Critical Hdwy Stg 1      | -      | -      | -      | 5.48  | -     |       |
| Critical Hdwy Stg 2      | -      | -      | -      | 5.48  | -     |       |
| Follow-up Hdwy           | 2.272  | -      | -      | 3.572 | 3.372 |       |
| Pot Cap-1 Maneuver       | 1149   | -      | -      | 546   | 656   |       |
| Stage 1                  | -      | -      | -      | 681   | -     |       |
| Stage 2                  | -      | -      | -      | 921   | -     |       |
| Platoon blocked, %       | -      | -      | -      | -     | -     |       |
| Mov Cap-1 Maneuver       | 1149   | -      | -      | 545   | 656   |       |
| Mov Cap-2 Maneuver       | -      | -      | -      | 545   | -     |       |
| Stage 1                  | -      | -      | -      | 680   | -     |       |
| Stage 2                  | -      | -      | -      | 921   | -     |       |
| Approach                 | EB     | WB     | SB     |       |       |       |
| HCM Control Delay, s     | 0.2    | 0      | 10.9   |       |       |       |
| HCM LOS                  |        |        |        | B     |       |       |
| Minor Lane/Major Mvmt    | EBL    | EBT    | WBT    | WBR   | SBLn1 | SBRn1 |
| Capacity (veh/h)         | 1149   | -      | -      | -     | 632   |       |
| HCM Lane V/C Ratio       | 0.002  | -      | -      | -     | 0.028 |       |
| HCM Control Delay (s)    | 8.1    | 0      | -      | -     | 10.9  |       |
| HCM Lane LOS             | A      | A      | -      | -     | B     |       |
| HCM 95th %tile Q(veh)    | 0      | -      | -      | -     | 0.1   |       |

Deer Valley 30  
13: Alameda Rd & Access B

2024 Total AM Scenario A  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh         | 0.4  |      |      |      |      |      |
| Movement                 | EBL  | EBT  | WBT  | WBR  | SBL  | SBR  |
| Lane Configurations      |      | ↕    | ↕    |      | ↕    |      |
| Traffic Vol, veh/h       | 18   | 371  | 76   | 9    | 2    | 3    |
| Future Vol, veh/h        | 18   | 371  | 76   | 9    | 2    | 3    |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Free | Free | Free | Free | Stop | Stop |
| RT Channelized           | -    | None | -    | None | -    | None |
| Storage Length           | -    | -    | -    | -    | 0    | -    |
| Veh in Median Storage, # | -    | 0    | 0    | -    | 0    | -    |
| Grade, %                 | -    | 0    | 0    | -    | 0    | -    |
| Peak Hour Factor         | 92   | 92   | 92   | 92   | 92   | 92   |
| Heavy Vehicles, %        | 8    | 8    | 8    | 8    | 8    | 8    |
| Mvmt Flow                | 20   | 403  | 83   | 10   | 2    | 3    |

| Major/Minor          | Major1 | Major2 | Minor2 |       |       |
|----------------------|--------|--------|--------|-------|-------|
| Conflicting Flow All | 93     | 0      | 0      | 531   | 88    |
| Stage 1              | -      | -      | -      | 88    | -     |
| Stage 2              | -      | -      | -      | 443   | -     |
| Critical Hdwy        | 4.18   | -      | -      | 6.48  | 6.28  |
| Critical Hdwy Stg 1  | -      | -      | -      | 5.48  | -     |
| Critical Hdwy Stg 2  | -      | -      | -      | 5.48  | -     |
| Follow-up Hdwy       | 2.272  | -      | -      | 3.572 | 3.372 |
| Pot Cap-1 Maneuver   | 1464   | -      | -      | 499   | 954   |
| Stage 1              | -      | -      | -      | 921   | -     |
| Stage 2              | -      | -      | -      | 635   | -     |
| Platoon blocked, %   | -      | -      | -      | -     | -     |
| Mov Cap-1 Maneuver   | 1464   | -      | -      | 490   | 954   |
| Mov Cap-2 Maneuver   | -      | -      | -      | 490   | -     |
| Stage 1              | -      | -      | -      | 904   | -     |
| Stage 2              | -      | -      | -      | 635   | -     |

| Approach             | EB  | WB | SB   |
|----------------------|-----|----|------|
| HCM Control Delay, s | 0.3 | 0  | 10.2 |
| HCM LOS              |     |    | B    |

| Minor Lane/Major Mvmt | EBL   | EBT | WBT | WBR | SBLn1 |
|-----------------------|-------|-----|-----|-----|-------|
| Capacity (veh/h)      | 1464  | -   | -   | -   | 692   |
| HCM Lane V/C Ratio    | 0.013 | -   | -   | -   | 0.008 |
| HCM Control Delay (s) | 7.5   | 0   | -   | -   | 10.2  |
| HCM Lane LOS          | A     | A   | -   | -   | B     |
| HCM 95th %tile Q(veh) | 0     | -   | -   | -   | 0     |

Deer Valley 30  
13: Alameda Rd & Access B

2024 Total PM Scenario A  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh         | 0.4  |      |      |      |      |      |
| Movement                 | EBL  | EBT  | WBT  | WBR  | SBL  | SBR  |
| Lane Configurations      |      | ↕    | ↕    |      | ↕    |      |
| Traffic Vol, veh/h       | 2    | 77   | 337  | 1    | 5    | 10   |
| Future Vol, veh/h        | 2    | 77   | 337  | 1    | 5    | 10   |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Free | Free | Free | Free | Stop | Stop |
| RT Channelized           | -    | None | -    | None | -    | None |
| Storage Length           | -    | -    | -    | -    | 0    | -    |
| Veh in Median Storage, # | -    | 0    | 0    | -    | 0    | -    |
| Grade, %                 | -    | 0    | 0    | -    | 0    | -    |
| Peak Hour Factor         | 92   | 92   | 92   | 92   | 92   | 92   |
| Heavy Vehicles, %        | 8    | 8    | 8    | 8    | 8    | 8    |
| Mvmt Flow                | 2    | 84   | 366  | 1    | 5    | 11   |

| Major/Minor          | Major1 | Major2 | Minor2 |       |       |
|----------------------|--------|--------|--------|-------|-------|
| Conflicting Flow All | 367    | 0      | 0      | 455   | 367   |
| Stage 1              | -      | -      | -      | 367   | -     |
| Stage 2              | -      | -      | -      | 88    | -     |
| Critical Hdwy        | 4.18   | -      | -      | 6.48  | 6.28  |
| Critical Hdwy Stg 1  | -      | -      | -      | 5.48  | -     |
| Critical Hdwy Stg 2  | -      | -      | -      | 5.48  | -     |
| Follow-up Hdwy       | 2.272  | -      | -      | 3.572 | 3.372 |
| Pot Cap-1 Maneuver   | 1159   | -      | -      | 552   | 665   |
| Stage 1              | -      | -      | -      | 688   | -     |
| Stage 2              | -      | -      | -      | 921   | -     |
| Platoon blocked, %   | -      | -      | -      | -     | -     |
| Mov Cap-1 Maneuver   | 1159   | -      | -      | 551   | 665   |
| Mov Cap-2 Maneuver   | -      | -      | -      | 551   | -     |
| Stage 1              | -      | -      | -      | 687   | -     |
| Stage 2              | -      | -      | -      | 921   | -     |

| Approach             | EB  | WB | SB   |
|----------------------|-----|----|------|
| HCM Control Delay, s | 0.2 | 0  | 10.9 |
| HCM LOS              |     |    | B    |

| Minor Lane/Major Mvmt | EBL   | EBT | WBT | WBR | SBLn1 |
|-----------------------|-------|-----|-----|-----|-------|
| Capacity (veh/h)      | 1159  | -   | -   | -   | 622   |
| HCM Lane V/C Ratio    | 0.002 | -   | -   | -   | 0.026 |
| HCM Control Delay (s) | 8.1   | 0   | -   | -   | 10.9  |
| HCM Lane LOS          | A     | A   | -   | -   | B     |
| HCM 95th %tile Q(veh) | 0     | -   | -   | -   | 0.1   |



Deer Valley 30  
14: Alameda Rd & Access C

2024 Total AM Scenario A  
HCM 6th TWSC

| Intersection             |        |        |        |       |       |       |
|--------------------------|--------|--------|--------|-------|-------|-------|
| Int Delay, s/veh         | 0.5    |        |        |       |       |       |
| Movement                 | EBL    | EBT    | WBT    | WBR   | SBL   | SBR   |
| Lane Configurations      |        | ↕      | ↕      |       | ↕     | ↕     |
| Traffic Vol, veh/h       | 24     | 348    | 81     | 7     | 1     | 4     |
| Future Vol, veh/h        | 24     | 348    | 81     | 7     | 1     | 4     |
| Conflicting Peds, #/hr   | 0      | 0      | 0      | 0     | 0     | 0     |
| Sign Control             | Free   | Free   | Free   | Free  | Stop  | Stop  |
| RT Channelized           | -      | None   | -      | None  | -     | None  |
| Storage Length           | -      | -      | -      | -     | 0     | -     |
| Veh in Median Storage, # | -      | 0      | 0      | -     | 0     | -     |
| Grade, %                 | -      | 0      | 0      | -     | 0     | -     |
| Peak Hour Factor         | 92     | 92     | 92     | 92    | 92    | 92    |
| Heavy Vehicles, %        | 8      | 8      | 8      | 8     | 8     | 8     |
| Mvmt Flow                | 26     | 378    | 88     | 8     | 1     | 4     |
| Major/Minor              | Major1 | Major2 | Minor2 |       |       |       |
| Conflicting Flow All     | 96     | 0      | 0      | 522   | 92    |       |
| Stage 1                  | -      | -      | -      | 92    | -     |       |
| Stage 2                  | -      | -      | -      | 430   | -     |       |
| Critical Hdwy            | 4.18   | -      | -      | 6.48  | 6.28  |       |
| Critical Hdwy Stg 1      | -      | -      | -      | 5.48  | -     |       |
| Critical Hdwy Stg 2      | -      | -      | -      | 5.48  | -     |       |
| Follow-up Hdwy           | 2.272  | -      | -      | 3.572 | 3.372 |       |
| Pot Cap-1 Maneuver       | 1461   | -      | -      | 505   | 949   |       |
| Stage 1                  | -      | -      | -      | 917   | -     |       |
| Stage 2                  | -      | -      | -      | 643   | -     |       |
| Platoon blocked, %       | -      | -      | -      | -     | -     |       |
| Mov Cap-1 Maneuver       | 1461   | -      | -      | 493   | 949   |       |
| Mov Cap-2 Maneuver       | -      | -      | -      | 493   | -     |       |
| Stage 1                  | -      | -      | -      | 896   | -     |       |
| Stage 2                  | -      | -      | -      | 643   | -     |       |
| Approach                 | EB     | WB     | SB     |       |       |       |
| HCM Control Delay, s     | 0.5    | 0      | 9.5    |       |       |       |
| HCM LOS                  | A      |        |        |       |       |       |
| Minor Lane/Major Mvmt    | EBL    | EBT    | WBT    | WBR   | SBLn1 | SBRn1 |
| Capacity (veh/h)         | 1461   | -      | -      | -     | 801   |       |
| HCM Lane V/C Ratio       | 0.018  | -      | -      | -     | 0.007 |       |
| HCM Control Delay (s)    | 7.5    | 0      | -      | -     | 9.5   |       |
| HCM Lane LOS             | A      | A      | -      | -     | A     |       |
| HCM 95th %tile Q(veh)    | 0.1    | -      | -      | -     | 0     |       |

Deer Valley 30  
14: Alameda Rd & Access C

2024 Total PM Scenario A  
HCM 6th TWSC

| Intersection             |        |        |        |       |       |       |
|--------------------------|--------|--------|--------|-------|-------|-------|
| Int Delay, s/veh         | 0.6    |        |        |       |       |       |
| Movement                 | EBL    | EBT    | WBT    | WBR   | SBL   | SBR   |
| Lane Configurations      |        | ↕      | ↕      |       | ↕     | ↕     |
| Traffic Vol, veh/h       | 3      | 80     | 320    | 1     | 5     | 18    |
| Future Vol, veh/h        | 3      | 80     | 320    | 1     | 5     | 18    |
| Conflicting Peds, #/hr   | 0      | 0      | 0      | 0     | 0     | 0     |
| Sign Control             | Free   | Free   | Free   | Free  | Stop  | Stop  |
| RT Channelized           | -      | None   | -      | None  | -     | None  |
| Storage Length           | -      | -      | -      | -     | 0     | -     |
| Veh in Median Storage, # | -      | 0      | 0      | -     | 0     | -     |
| Grade, %                 | -      | 0      | 0      | -     | 0     | -     |
| Peak Hour Factor         | 92     | 92     | 92     | 92    | 92    | 92    |
| Heavy Vehicles, %        | 8      | 8      | 8      | 8     | 8     | 8     |
| Mvmt Flow                | 3      | 87     | 348    | 1     | 5     | 20    |
| Major/Minor              | Major1 | Major2 | Minor2 |       |       |       |
| Conflicting Flow All     | 349    | 0      | 0      | 442   | 349   |       |
| Stage 1                  | -      | -      | -      | 349   | -     |       |
| Stage 2                  | -      | -      | -      | 93    | -     |       |
| Critical Hdwy            | 4.18   | -      | -      | 6.48  | 6.28  |       |
| Critical Hdwy Stg 1      | -      | -      | -      | 5.48  | -     |       |
| Critical Hdwy Stg 2      | -      | -      | -      | 5.48  | -     |       |
| Follow-up Hdwy           | 2.272  | -      | -      | 3.572 | 3.372 |       |
| Pot Cap-1 Maneuver       | 1177   | -      | -      | 562   | 681   |       |
| Stage 1                  | -      | -      | -      | 701   | -     |       |
| Stage 2                  | -      | -      | -      | 916   | -     |       |
| Platoon blocked, %       | -      | -      | -      | -     | -     |       |
| Mov Cap-1 Maneuver       | 1177   | -      | -      | 560   | 681   |       |
| Mov Cap-2 Maneuver       | -      | -      | -      | 560   | -     |       |
| Stage 1                  | -      | -      | -      | 699   | -     |       |
| Stage 2                  | -      | -      | -      | 916   | -     |       |
| Approach                 | EB     | WB     | SB     |       |       |       |
| HCM Control Delay, s     | 0.3    | 0      | 10.8   |       |       |       |
| HCM LOS                  | B      |        |        |       |       |       |
| Minor Lane/Major Mvmt    | EBL    | EBT    | WBT    | WBR   | SBLn1 | SBRn1 |
| Capacity (veh/h)         | 1177   | -      | -      | -     | 650   |       |
| HCM Lane V/C Ratio       | 0.003  | -      | -      | -     | 0.038 |       |
| HCM Control Delay (s)    | 8.1    | 0      | -      | -     | 10.8  |       |
| HCM Lane LOS             | A      | A      | -      | -     | B     |       |
| HCM 95th %tile Q(veh)    | 0      | -      | -      | -     | 0.1   |       |

Deer Valley 30  
15: Alameda Rd & 15th Ave

2024 Total AM Scenario A  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh         | 0.8  |      |      |      |      |      |
| Movement                 | EBL  | EBT  | WBT  | WBR  | SBL  | SBR  |
| Lane Configurations      |      | ↕    | ↕    |      | ↕    |      |
| Traffic Vol, veh/h       | 38   | 311  | 82   | 10   | 2    | 6    |
| Future Vol, veh/h        | 38   | 311  | 82   | 10   | 2    | 6    |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Free | Free | Free | Free | Stop | Stop |
| RT Channelized           | -    | None | -    | None | -    | None |
| Storage Length           | -    | -    | -    | -    | 0    | -    |
| Veh in Median Storage, # | -    | 0    | 0    | -    | 0    | -    |
| Grade, %                 | -    | 0    | 0    | -    | 0    | -    |
| Peak Hour Factor         | 92   | 92   | 92   | 92   | 92   | 92   |
| Heavy Vehicles, %        | 8    | 8    | 8    | 8    | 8    | 8    |
| Mvmt Flow                | 41   | 338  | 89   | 11   | 2    | 7    |

| Major/Minor          | Major1 | Major2 | Minor2 |       |       |
|----------------------|--------|--------|--------|-------|-------|
| Conflicting Flow All | 100    | 0      | 0      | 515   | 95    |
| Stage 1              | -      | -      | -      | 95    | -     |
| Stage 2              | -      | -      | -      | 420   | -     |
| Critical Hdwy        | 4.18   | -      | -      | 6.48  | 6.28  |
| Critical Hdwy Stg 1  | -      | -      | -      | 5.48  | -     |
| Critical Hdwy Stg 2  | -      | -      | -      | 5.48  | -     |
| Follow-up Hdwy       | 2.272  | -      | -      | 3.572 | 3.372 |
| Pot Cap-1 Maneuver   | 1456   | -      | -      | 509   | 945   |
| Stage 1              | -      | -      | -      | 914   | -     |
| Stage 2              | -      | -      | -      | 650   | -     |
| Platoon blocked, %   | -      | -      | -      | -     | -     |
| Mov Cap-1 Maneuver   | 1456   | -      | -      | 491   | 945   |
| Mov Cap-2 Maneuver   | -      | -      | -      | 491   | -     |
| Stage 1              | -      | -      | -      | 882   | -     |
| Stage 2              | -      | -      | -      | 650   | -     |

| Approach             | EB  | WB | SB  |
|----------------------|-----|----|-----|
| HCM Control Delay, s | 0.8 | 0  | 9.7 |
| HCM LOS              |     |    | A   |

| Minor Lane/Major Mvmt | EBL   | EBT | WBT | WBR | SBLn1 |
|-----------------------|-------|-----|-----|-----|-------|
| Capacity (veh/h)      | 1456  | -   | -   | -   | 768   |
| HCM Lane V/C Ratio    | 0.028 | -   | -   | -   | 0.011 |
| HCM Control Delay (s) | 7.5   | 0   | -   | -   | 9.7   |
| HCM Lane LOS          | A     | A   | -   | -   | A     |
| HCM 95th %tile Q(veh) | 0.1   | -   | -   | -   | 0     |

Deer Valley 30  
15: Alameda Rd & 15th Ave

2024 Total PM Scenario A  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh         | 1    |      |      |      |      |      |
| Movement                 | EBL  | EBT  | WBT  | WBR  | SBL  | SBR  |
| Lane Configurations      |      | ↕    | ↕    |      | ↕    |      |
| Traffic Vol, veh/h       | 5    | 80   | 293  | 1    | 7    | 28   |
| Future Vol, veh/h        | 5    | 80   | 293  | 1    | 7    | 28   |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Free | Free | Free | Free | Stop | Stop |
| RT Channelized           | -    | None | -    | None | -    | None |
| Storage Length           | -    | -    | -    | -    | 0    | -    |
| Veh in Median Storage, # | -    | 0    | 0    | -    | 0    | -    |
| Grade, %                 | -    | 0    | 0    | -    | 0    | -    |
| Peak Hour Factor         | 92   | 92   | 92   | 92   | 92   | 92   |
| Heavy Vehicles, %        | 8    | 8    | 8    | 8    | 8    | 8    |
| Mvmt Flow                | 5    | 87   | 318  | 1    | 8    | 30   |

| Major/Minor          | Major1 | Major2 | Minor2 |       |       |
|----------------------|--------|--------|--------|-------|-------|
| Conflicting Flow All | 319    | 0      | 0      | 416   | 319   |
| Stage 1              | -      | -      | -      | 319   | -     |
| Stage 2              | -      | -      | -      | 97    | -     |
| Critical Hdwy        | 4.18   | -      | -      | 6.48  | 6.28  |
| Critical Hdwy Stg 1  | -      | -      | -      | 5.48  | -     |
| Critical Hdwy Stg 2  | -      | -      | -      | 5.48  | -     |
| Follow-up Hdwy       | 2.272  | -      | -      | 3.572 | 3.372 |
| Pot Cap-1 Maneuver   | 1208   | -      | -      | 582   | 708   |
| Stage 1              | -      | -      | -      | 723   | -     |
| Stage 2              | -      | -      | -      | 912   | -     |
| Platoon blocked, %   | -      | -      | -      | -     | -     |
| Mov Cap-1 Maneuver   | 1208   | -      | -      | 580   | 708   |
| Mov Cap-2 Maneuver   | -      | -      | -      | 580   | -     |
| Stage 1              | -      | -      | -      | 720   | -     |
| Stage 2              | -      | -      | -      | 912   | -     |

| Approach             | EB  | WB | SB   |
|----------------------|-----|----|------|
| HCM Control Delay, s | 0.5 | 0  | 10.6 |
| HCM LOS              |     |    | B    |

| Minor Lane/Major Mvmt | EBL   | EBT | WBT | WBR | SBLn1 |
|-----------------------|-------|-----|-----|-----|-------|
| Capacity (veh/h)      | 1208  | -   | -   | -   | 678   |
| HCM Lane V/C Ratio    | 0.004 | -   | -   | -   | 0.056 |
| HCM Control Delay (s) | 8     | 0   | -   | -   | 10.6  |
| HCM Lane LOS          | A     | A   | -   | -   | B     |
| HCM 95th %tile Q(veh) | 0     | -   | -   | -   | 0.2   |

Deer Valley 30  
16: Alameda Rd & Access D

2024 Total AM Scenario A  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh         | 0.7  |      |      |      |      |      |
| Movement                 | EBL  | EBT  | WBT  | WBR  | SBL  | SBR  |
| Lane Configurations      |      | ↕    | ↕    |      | ↕    | ↕    |
| Traffic Vol, veh/h       | 30   | 283  | 88   | 17   | 2    | 4    |
| Future Vol, veh/h        | 30   | 283  | 88   | 17   | 2    | 4    |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Free | Free | Free | Free | Stop | Stop |
| RT Channelized           | -    | None | -    | None | -    | None |
| Storage Length           | -    | -    | -    | -    | 0    | -    |
| Veh in Median Storage, # | -    | 0    | 0    | -    | 0    | -    |
| Grade, %                 | -    | 0    | 0    | -    | 0    | -    |
| Peak Hour Factor         | 92   | 92   | 92   | 92   | 92   | 92   |
| Heavy Vehicles, %        | 8    | 8    | 8    | 8    | 8    | 8    |
| Mvmt Flow                | 33   | 308  | 96   | 18   | 2    | 4    |

| Major/Minor          | Major1 | Major2 | Minor2 |       |       |
|----------------------|--------|--------|--------|-------|-------|
| Conflicting Flow All | 114    | 0      | 0      | 479   | 105   |
| Stage 1              | -      | -      | -      | 105   | -     |
| Stage 2              | -      | -      | -      | 374   | -     |
| Critical Hdwy        | 4.18   | -      | -      | 6.48  | 6.28  |
| Critical Hdwy Stg 1  | -      | -      | -      | 5.48  | -     |
| Critical Hdwy Stg 2  | -      | -      | -      | 5.48  | -     |
| Follow-up Hdwy       | 2.272  | -      | -      | 3.572 | 3.372 |
| Pot Cap-1 Maneuver   | 1439   | -      | -      | 535   | 933   |
| Stage 1              | -      | -      | -      | 904   | -     |
| Stage 2              | -      | -      | -      | 683   | -     |
| Platoon blocked, %   | -      | -      | -      | -     | -     |
| Mov Cap-1 Maneuver   | 1439   | -      | -      | 520   | 933   |
| Mov Cap-2 Maneuver   | -      | -      | -      | 520   | -     |
| Stage 1              | -      | -      | -      | 879   | -     |
| Stage 2              | -      | -      | -      | 683   | -     |

| Approach             | EB  | WB | SB  |
|----------------------|-----|----|-----|
| HCM Control Delay, s | 0.7 | 0  | 9.9 |
| HCM LOS              |     |    | A   |

| Minor Lane/Major Mvmt | EBL   | EBT | WBT | WBR | SBLn1 |
|-----------------------|-------|-----|-----|-----|-------|
| Capacity (veh/h)      | 1439  | -   | -   | -   | 738   |
| HCM Lane V/C Ratio    | 0.023 | -   | -   | -   | 0.009 |
| HCM Control Delay (s) | 7.6   | 0   | -   | -   | 9.9   |
| HCM Lane LOS          | A     | A   | -   | -   | A     |
| HCM 95th %tile Q(veh) | 0.1   | -   | -   | -   | 0     |

Deer Valley 30  
16: Alameda Rd & Access D

2024 Total PM Scenario A  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh         | 1    |      |      |      |      |      |
| Movement                 | EBL  | EBT  | WBT  | WBR  | SBL  | SBR  |
| Lane Configurations      |      | ↕    | ↕    |      | ↕    | ↕    |
| Traffic Vol, veh/h       | 4    | 84   | 272  | 2    | 12   | 22   |
| Future Vol, veh/h        | 4    | 84   | 272  | 2    | 12   | 22   |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Free | Free | Free | Free | Stop | Stop |
| RT Channelized           | -    | None | -    | None | -    | None |
| Storage Length           | -    | -    | -    | -    | 0    | -    |
| Veh in Median Storage, # | -    | 0    | 0    | -    | 0    | -    |
| Grade, %                 | -    | 0    | 0    | -    | 0    | -    |
| Peak Hour Factor         | 92   | 92   | 92   | 92   | 92   | 92   |
| Heavy Vehicles, %        | 8    | 8    | 8    | 8    | 8    | 8    |
| Mvmt Flow                | 4    | 91   | 296  | 2    | 13   | 24   |

| Major/Minor          | Major1 | Major2 | Minor2 |       |       |
|----------------------|--------|--------|--------|-------|-------|
| Conflicting Flow All | 298    | 0      | 0      | 396   | 297   |
| Stage 1              | -      | -      | -      | 297   | -     |
| Stage 2              | -      | -      | -      | 99    | -     |
| Critical Hdwy        | 4.18   | -      | -      | 6.48  | 6.28  |
| Critical Hdwy Stg 1  | -      | -      | -      | 5.48  | -     |
| Critical Hdwy Stg 2  | -      | -      | -      | 5.48  | -     |
| Follow-up Hdwy       | 2.272  | -      | -      | 3.572 | 3.372 |
| Pot Cap-1 Maneuver   | 1230   | -      | -      | 598   | 728   |
| Stage 1              | -      | -      | -      | 740   | -     |
| Stage 2              | -      | -      | -      | 910   | -     |
| Platoon blocked, %   | -      | -      | -      | -     | -     |
| Mov Cap-1 Maneuver   | 1230   | -      | -      | 596   | 728   |
| Mov Cap-2 Maneuver   | -      | -      | -      | 596   | -     |
| Stage 1              | -      | -      | -      | 738   | -     |
| Stage 2              | -      | -      | -      | 910   | -     |

| Approach             | EB  | WB | SB   |
|----------------------|-----|----|------|
| HCM Control Delay, s | 0.4 | 0  | 10.6 |
| HCM LOS              |     |    | B    |

| Minor Lane/Major Mvmt | EBL   | EBT | WBT | WBR | SBLn1 |
|-----------------------|-------|-----|-----|-----|-------|
| Capacity (veh/h)      | 1230  | -   | -   | -   | 675   |
| HCM Lane V/C Ratio    | 0.004 | -   | -   | -   | 0.055 |
| HCM Control Delay (s) | 7.9   | 0   | -   | -   | 10.6  |
| HCM Lane LOS          | A     | A   | -   | -   | B     |
| HCM 95th %tile Q(veh) | 0     | -   | -   | -   | 0.2   |

Deer Valley 30  
2: 19th Ave & Optum Drwy

2024 Total AM Scenario A Mitigated  
HCM 6th TWSC

| Intersection             |      |      |       |      |      |      |
|--------------------------|------|------|-------|------|------|------|
| Int Delay, s/veh         | 0.1  |      |       |      |      |      |
| Movement                 | EBL  | EBR  | NBL   | NBT  | SBT  | SBR  |
| Lane Configurations      | ↔    |      | ↔ ↑↑↑ |      | ↔ ↑↑ |      |
| Traffic Vol, veh/h       | 0    | 4    | 7     | 593  | 1142 | 2    |
| Future Vol, veh/h        | 0    | 4    | 7     | 593  | 1142 | 2    |
| Conflicting Peds, #/hr   | 0    | 0    | 0     | 0    | 0    | 0    |
| Sign Control             | Stop | Stop | Free  | Free | Free | Free |
| RT Channelized           | -    | None | -     | None | -    | None |
| Storage Length           | 0    | -    | 50    | -    | -    | -    |
| Veh in Median Storage, # | 0    | -    | -     | 0    | 0    | -    |
| Grade, %                 | 0    | -    | -     | 0    | 0    | -    |
| Peak Hour Factor         | 92   | 92   | 92    | 92   | 92   | 92   |
| Heavy Vehicles, %        | 8    | 8    | 8     | 8    | 8    | 8    |
| Mvmt Flow                | 0    | 4    | 8     | 645  | 1241 | 2    |

| Major/Minor          | Minor2 | Major1 | Major2 |   |   |   |
|----------------------|--------|--------|--------|---|---|---|
| Conflicting Flow All | 1516   | 622    | 1243   | 0 | - | 0 |
| Stage 1              | 1242   | -      | -      | - | - | - |
| Stage 2              | 274    | -      | -      | - | - | - |
| Critical Hdwy        | 6.41   | 7.06   | 4.26   | - | - | - |
| Critical Hdwy Stg 1  | 5.96   | -      | -      | - | - | - |
| Critical Hdwy Stg 2  | 6.16   | -      | -      | - | - | - |
| Follow-up Hdwy       | 3.73   | 3.38   | 2.28   | - | - | - |
| Pot Cap-1 Maneuver   | *217   | 415    | 524    | - | - | - |
| Stage 1              | *220   | -      | -      | - | - | - |
| Stage 2              | *828   | -      | -      | - | - | - |
| Platoon blocked, %   | 1      | -      | -      | - | - | - |
| Mov Cap-1 Maneuver   | *213   | 415    | 524    | - | - | - |
| Mov Cap-2 Maneuver   | *198   | -      | -      | - | - | - |
| Stage 1              | *217   | -      | -      | - | - | - |
| Stage 2              | *828   | -      | -      | - | - | - |

| Approach             | EB   | NB  | SB |
|----------------------|------|-----|----|
| HCM Control Delay, s | 13.8 | 0.1 | 0  |
| HCM LOS              | B    |     |    |

| Minor Lane/Major Mvmt | NBL   | NBT | EBLn1 | SBT | SBR |
|-----------------------|-------|-----|-------|-----|-----|
| Capacity (veh/h)      | 524   | -   | 415   | -   | -   |
| HCM Lane V/C Ratio    | 0.015 | -   | 0.01  | -   | -   |
| HCM Control Delay (s) | 12    | -   | 13.8  | -   | -   |
| HCM Lane LOS          | B     | -   | B     | -   | -   |
| HCM 95th %tile Q(veh) | 0     | -   | 0     | -   | -   |

Notes  
 -: Volume exceeds capacity    \$: Delay exceeds 300s    +: Computation Not Defined    \*: All major volume in platoon

Deer Valley 30  
2: 19th Ave & Optum Drwy

2024 Total PM Scenario A Mitigated  
HCM 6th TWSC

| Intersection             |      |      |       |      |      |      |
|--------------------------|------|------|-------|------|------|------|
| Int Delay, s/veh         | 0.1  |      |       |      |      |      |
| Movement                 | EBL  | EBR  | NBL   | NBT  | SBT  | SBR  |
| Lane Configurations      | ↔    |      | ↔ ↑↑↑ |      | ↔ ↑↑ |      |
| Traffic Vol, veh/h       | 0    | 4    | 7     | 1292 | 707  | 2    |
| Future Vol, veh/h        | 0    | 4    | 7     | 1292 | 707  | 2    |
| Conflicting Peds, #/hr   | 0    | 0    | 0     | 0    | 0    | 0    |
| Sign Control             | Stop | Stop | Free  | Free | Free | Free |
| RT Channelized           | -    | None | -     | None | -    | None |
| Storage Length           | 0    | -    | 50    | -    | -    | -    |
| Veh in Median Storage, # | 0    | -    | -     | 0    | 0    | -    |
| Grade, %                 | 0    | -    | -     | 0    | 0    | -    |
| Peak Hour Factor         | 92   | 92   | 92    | 92   | 92   | 92   |
| Heavy Vehicles, %        | 8    | 8    | 8     | 8    | 8    | 8    |
| Mvmt Flow                | 0    | 4    | 8     | 1404 | 768  | 2    |

| Major/Minor          | Minor2 | Major1 | Major2 |   |   |   |
|----------------------|--------|--------|--------|---|---|---|
| Conflicting Flow All | 1347   | 385    | 770    | 0 | - | 0 |
| Stage 1              | 769    | -      | -      | - | - | - |
| Stage 2              | 578    | -      | -      | - | - | - |
| Critical Hdwy        | 6.41   | 7.06   | 4.26   | - | - | - |
| Critical Hdwy Stg 1  | 5.96   | -      | -      | - | - | - |
| Critical Hdwy Stg 2  | 6.16   | -      | -      | - | - | - |
| Follow-up Hdwy       | 3.73   | 3.38   | 2.28   | - | - | - |
| Pot Cap-1 Maneuver   | *650   | 597    | 802    | - | - | - |
| Stage 1              | *392   | -      | -      | - | - | - |
| Stage 2              | *650   | -      | -      | - | - | - |
| Platoon blocked, %   | 1      | -      | -      | - | - | - |
| Mov Cap-1 Maneuver   | *643   | 597    | 802    | - | - | - |
| Mov Cap-2 Maneuver   | *593   | -      | -      | - | - | - |
| Stage 1              | *388   | -      | -      | - | - | - |
| Stage 2              | *650   | -      | -      | - | - | - |

| Approach             | EB   | NB  | SB |
|----------------------|------|-----|----|
| HCM Control Delay, s | 11.1 | 0.1 | 0  |
| HCM LOS              | B    |     |    |

| Minor Lane/Major Mvmt | NBL   | NBT | EBLn1 | SBT | SBR |
|-----------------------|-------|-----|-------|-----|-----|
| Capacity (veh/h)      | 802   | -   | 597   | -   | -   |
| HCM Lane V/C Ratio    | 0.009 | -   | 0.007 | -   | -   |
| HCM Control Delay (s) | 9.5   | -   | 11.1  | -   | -   |
| HCM Lane LOS          | A     | -   | B     | -   | -   |
| HCM 95th %tile Q(veh) | 0     | -   | 0     | -   | -   |

Notes  
 -: Volume exceeds capacity    \$: Delay exceeds 300s    +: Computation Not Defined    \*: All major volume in platoon

Deer Valley 30  
3: 19th Ave & Patio Drwy/Parkview Ln

2024 Total AM Scenario A Mitigated  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Int Delay, s/veh         | 0.6  |      |      |      |      |      |      |      |      |      |      |      |
| Movement                 | EBL  | EBT  | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
| Lane Configurations      |      |      | ↕    |      | ↕    |      |      | ↕↕↕  |      | ↕    | ↕↕   |      |
| Traffic Vol, veh/h       | 0    | 0    | 6    | 26   | 0    | 13   | 1    | 586  | 41   | 26   | 1121 | 0    |
| Future Vol, veh/h        | 0    | 0    | 6    | 26   | 0    | 13   | 1    | 586  | 41   | 26   | 1121 | 0    |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Stop | Stop | Stop | Stop | Stop | Free | Free | Free | Free | Free | Free | Free |
| RT Channelized           | -    | -    | None | -    | -    | None | -    | -    | None | -    | -    | None |
| Storage Length           | -    | -    | 0    | -    | -    | -    | -    | -    | -    | 50   | -    | -    |
| Veh in Median Storage, # | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Grade, %                 | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Peak Hour Factor         | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   |
| Heavy Vehicles, %        | 8    | 8    | 8    | 8    | 8    | 8    | 8    | 8    | 8    | 8    | 8    | 8    |
| Mvmt Flow                | 0    | 0    | 7    | 28   | 0    | 14   | 1    | 637  | 45   | 28   | 1218 | 0    |

| Major/Minor          | Minor2 | Minor1 | Major1 | Major2 |
|----------------------|--------|--------|--------|--------|
| Conflicting Flow All | -      | -      | 609    | 1327   |
| Stage 1              | -      | -      | 662    | 662    |
| Stage 2              | -      | -      | 665    | 1274   |
| Critical Hdwy        | -      | -      | 7.06   | 7.11   |
| Critical Hdwy Stg 1  | -      | -      | 7.46   | 5.66   |
| Critical Hdwy Stg 2  | -      | -      | 6.66   | 5.66   |
| Follow-up Hdwy       | -      | -      | 3.38   | 3.73   |
| Pot Cap-1 Maneuver   | 0      | 0      | 424    | 248    |
| Stage 1              | 0      | 0      | 787    | 733    |
| Stage 2              | 0      | 0      | 390    | 225    |
| Platoon blocked, %   | -      | -      | 1      | 1      |
| Mov Cap-1 Maneuver   | -      | -      | 424    | 238    |
| Mov Cap-2 Maneuver   | -      | -      | 238    | 93     |
| Stage 1              | -      | -      | 785    | 731    |
| Stage 2              | -      | -      | 372    | 218    |

| Approach             | EB   | WB   | NB | SB  |
|----------------------|------|------|----|-----|
| HCM Control Delay, s | 13.6 | 18.4 | 0  | 0.2 |
| HCM LOS              | B    | C    |    |     |

| Minor Lane/Major Mvmt | NBL   | NBT | NBR | EBLn1 | WBLn1 | SBL   | SBT |
|-----------------------|-------|-----|-----|-------|-------|-------|-----|
| Capacity (veh/h)      | 536   | -   | -   | 424   | 310   | 915   | -   |
| HCM Lane V/C Ratio    | 0.002 | -   | -   | 0.015 | 0.137 | 0.031 | -   |
| HCM Control Delay (s) | 11.7  | -   | -   | 13.6  | 18.4  | 9.1   | -   |
| HCM Lane LOS          | B     | -   | -   | B     | C     | A     | -   |
| HCM 95th %tile Q(veh) | 0     | -   | -   | 0     | 0.5   | 0.1   | -   |

Notes  
 -: Volume exceeds capacity    \$: Delay exceeds 300s    +: Computation Not Defined    \*: All major volume in platoon

Deer Valley 30  
3: 19th Ave & Patio Drwy/Parkview Ln

2024 Total PM Scenario A Mitigated  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Int Delay, s/veh         | 0.5  |      |      |      |      |      |      |      |      |      |      |      |
| Movement                 | EBL  | EBT  | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
| Lane Configurations      |      |      | ↕    |      | ↕    |      |      | ↕↕↕  |      | ↕    | ↕↕   |      |
| Traffic Vol, veh/h       | 0    | 0    | 6    | 26   | 0    | 13   | 1    | 939  | 41   | 26   | 686  | 0    |
| Future Vol, veh/h        | 0    | 0    | 6    | 26   | 0    | 13   | 1    | 939  | 41   | 26   | 686  | 0    |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Stop | Stop | Stop | Stop | Stop | Free | Free | Free | Free | Free | Free | Free |
| RT Channelized           | -    | -    | None | -    | -    | None | -    | -    | None | -    | -    | None |
| Storage Length           | -    | -    | 0    | -    | -    | -    | -    | -    | -    | 50   | -    | -    |
| Veh in Median Storage, # | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Grade, %                 | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Peak Hour Factor         | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   |
| Heavy Vehicles, %        | 8    | 8    | 8    | 8    | 8    | 8    | 8    | 8    | 8    | 8    | 8    | 8    |
| Mvmt Flow                | 0    | 0    | 7    | 28   | 0    | 14   | 1    | 1021 | 45   | 28   | 746  | 0    |

| Major/Minor          | Minor2 | Minor1 | Major1 | Major2 |
|----------------------|--------|--------|--------|--------|
| Conflicting Flow All | -      | -      | 373    | 1475   |
| Stage 1              | -      | -      | 1046   | 1046   |
| Stage 2              | -      | -      | 429    | 802    |
| Critical Hdwy        | -      | -      | 7.06   | 7.11   |
| Critical Hdwy Stg 1  | -      | -      | 7.46   | 5.66   |
| Critical Hdwy Stg 2  | -      | -      | 6.66   | 5.66   |
| Follow-up Hdwy       | -      | -      | 3.38   | 3.73   |
| Pot Cap-1 Maneuver   | 0      | 0      | 607    | 339    |
| Stage 1              | 0      | 0      | 733    | 670    |
| Stage 2              | 0      | 0      | 541    | 381    |
| Platoon blocked, %   | -      | -      | 1      | 1      |
| Mov Cap-1 Maneuver   | -      | -      | 607    | 326    |
| Mov Cap-2 Maneuver   | -      | -      | 326    | 166    |
| Stage 1              | -      | -      | 731    | 668    |
| Stage 2              | -      | -      | 518    | 368    |

| Approach             | EB | WB   | NB | SB  |
|----------------------|----|------|----|-----|
| HCM Control Delay, s | 11 | 15.2 | 0  | 0.3 |
| HCM LOS              | B  | C    |    |     |

| Minor Lane/Major Mvmt | NBL   | NBT | NBR | EBLn1 | WBLn1 | SBL   | SBT |
|-----------------------|-------|-----|-----|-------|-------|-------|-----|
| Capacity (veh/h)      | 820   | -   | -   | 607   | 395   | 860   | -   |
| HCM Lane V/C Ratio    | 0.001 | -   | -   | 0.011 | 0.107 | 0.033 | -   |
| HCM Control Delay (s) | 9.4   | -   | -   | 11    | 15.2  | 9.3   | -   |
| HCM Lane LOS          | A     | -   | -   | B     | C     | A     | -   |
| HCM 95th %tile Q(veh) | 0     | -   | -   | 0     | 0.4   | 0.1   | -   |

Notes  
 -: Volume exceeds capacity    \$: Delay exceeds 300s    +: Computation Not Defined    \*: All major volume in platoon

Deer Valley 30  
4: Alameda Rd & 19th Ave

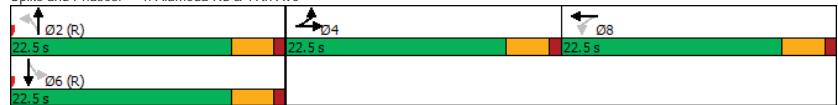
2024 Total AM Scenario A Mitigated  
Timings

| Lane Group           | EBL   | EBT   | WBL   | WBT   | NBL   | NBT   | SBL   | SBT   |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations  | ↖     | ↗     | ↖     | ↗     | ↖     | ↗     | ↖     | ↗     |
| Traffic Volume (vph) | 9     | 0     | 42    | 0     | 18    | 593   | 187   | 951   |
| Future Volume (vph)  | 9     | 0     | 42    | 0     | 18    | 593   | 187   | 951   |
| Turn Type            | Split | NA    | Perm  | NA    | Perm  | NA    | Perm  | NA    |
| Protected Phases     | 4     | 4     |       | 8     |       | 2     |       | 6     |
| Permitted Phases     |       |       | 8     |       | 2     |       | 6     |       |
| Detector Phase       | 4     | 4     | 8     | 8     | 2     | 2     | 6     | 6     |
| Switch Phase         |       |       |       |       |       |       |       |       |
| Minimum Initial (s)  | 5.0   | 5.0   | 5.0   | 5.0   | 5.0   | 5.0   | 5.0   | 5.0   |
| Minimum Split (s)    | 22.5  | 22.5  | 22.5  | 22.5  | 22.5  | 22.5  | 22.5  | 22.5  |
| Total Split (s)      | 22.5  | 22.5  | 22.5  | 22.5  | 22.5  | 22.5  | 22.5  | 22.5  |
| Total Split (%)      | 33.3% | 33.3% | 33.3% | 33.3% | 33.3% | 33.3% | 33.3% | 33.3% |
| Yellow Time (s)      | 3.5   | 3.5   | 3.5   | 3.5   | 3.5   | 3.5   | 3.5   | 3.5   |
| All-Red Time (s)     | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   |
| Lost Time Adjust (s) | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Lost Time (s)  | 4.5   | 4.5   | 4.5   | 4.5   | 4.5   | 4.5   | 4.5   | 4.5   |
| Lead/Lag             |       |       |       |       |       |       |       |       |
| Lead-Lag Optimize?   |       |       |       |       |       |       |       |       |
| Recall Mode          | None  | None  | None  | None  | C-Max | C-Max | C-Max | C-Max |
| Act Effct Green (s)  | 6.0   | 6.0   | 8.0   | 8.0   | 50.0  | 50.0  | 50.0  | 50.0  |
| Actuated g/C Ratio   | 0.09  | 0.09  | 0.12  | 0.12  | 0.74  | 0.74  | 0.74  | 0.74  |
| v/c Ratio            | 0.07  | 0.11  | 0.31  | 0.06  | 0.06  | 0.26  | 0.51  | 0.42  |
| Control Delay        | 28.8  | 0.4   | 31.8  | 0.2   | 7.8   | 5.0   | 17.0  | 7.5   |
| Queue Delay          | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Delay          | 28.8  | 0.4   | 31.8  | 0.2   | 7.8   | 5.0   | 17.0  | 7.5   |
| LOS                  | C     | A     | C     | A     | A     | A     | B     | A     |
| Approach Delay       |       | 4.4   |       | 17.5  |       | 5.1   |       | 9.0   |
| Approach LOS         |       | A     |       | B     |       | A     |       | A     |

Intersection Summary

Cycle Length: 67.5  
 Actuated Cycle Length: 67.5  
 Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green  
 Natural Cycle: 90  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.51  
 Intersection Signal Delay: 7.6  
 Intersection Capacity Utilization 51.1%  
 Analysis Period (min) 15  
 Intersection LOS: A  
 ICU Level of Service A

Splits and Phases: 4: Alameda Rd & 19th Ave



Deer Valley 30  
4: Alameda Rd & 19th Ave

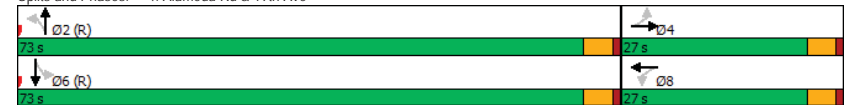
2024 Total PM Scenario A Mitigated  
Timings

| Lane Group           | EBL   | EBT   | WBL   | WBT   | NBL   | NBT   | SBL   | SBT   |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations  | ↖     | ↗     | ↖     | ↗     | ↖     | ↗     | ↖     | ↗     |
| Traffic Volume (vph) | 14    | 0     | 197   | 0     | 85    | 1106  | 35    | 667   |
| Future Volume (vph)  | 14    | 0     | 197   | 0     | 85    | 1106  | 35    | 667   |
| Turn Type            | Perm  | NA    | Perm  | NA    | Perm  | NA    | Perm  | NA    |
| Protected Phases     |       | 4     |       | 8     |       | 2     |       | 6     |
| Permitted Phases     | 4     |       | 8     |       | 2     |       | 6     |       |
| Detector Phase       | 4     | 4     | 8     | 8     | 2     | 2     | 6     | 6     |
| Switch Phase         |       |       |       |       |       |       |       |       |
| Minimum Initial (s)  | 5.0   | 5.0   | 5.0   | 5.0   | 5.0   | 5.0   | 5.0   | 5.0   |
| Minimum Split (s)    | 22.5  | 22.5  | 22.5  | 22.5  | 22.5  | 22.5  | 22.5  | 22.5  |
| Total Split (s)      | 27.0  | 27.0  | 27.0  | 27.0  | 73.0  | 73.0  | 73.0  | 73.0  |
| Total Split (%)      | 27.0% | 27.0% | 27.0% | 27.0% | 73.0% | 73.0% | 73.0% | 73.0% |
| Yellow Time (s)      | 3.5   | 3.5   | 3.5   | 3.5   | 3.5   | 3.5   | 3.5   | 3.5   |
| All-Red Time (s)     | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   |
| Lost Time Adjust (s) | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Lost Time (s)  | 4.5   | 4.5   | 4.5   | 4.5   | 4.5   | 4.5   | 4.5   | 4.5   |
| Lead/Lag             |       |       |       |       |       |       |       |       |
| Lead-Lag Optimize?   |       |       |       |       |       |       |       |       |
| Recall Mode          | None  | None  | None  | None  | C-Max | C-Max | C-Max | C-Max |
| Act Effct Green (s)  | 20.2  | 20.2  | 20.2  | 20.2  | 70.8  | 70.8  | 70.8  | 70.8  |
| Actuated g/C Ratio   | 0.20  | 0.20  | 0.20  | 0.20  | 0.71  | 0.71  | 0.71  | 0.71  |
| v/c Ratio            | 0.08  | 0.13  | 0.85  | 0.45  | 0.21  | 0.37  | 0.16  | 0.31  |
| Control Delay        | 32.1  | 0.5   | 66.5  | 18.1  | 7.0   | 6.3   | 7.4   | 6.2   |
| Queue Delay          | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Delay          | 32.1  | 0.5   | 66.5  | 18.1  | 7.0   | 6.3   | 7.4   | 6.2   |
| LOS                  | C     | A     | E     | B     | A     | A     | A     | A     |
| Approach Delay       |       | 6.3   |       | 44.6  |       | 6.4   |       | 6.2   |
| Approach LOS         |       | A     |       | D     |       | A     |       | A     |

Intersection Summary


Cycle Length: 100  
 Actuated Cycle Length: 100  
 Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green  
 Natural Cycle: 50  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.85  
 Intersection Signal Delay: 12.1  
 Intersection Capacity Utilization 55.3%  
 Analysis Period (min) 15  
 Intersection LOS: B  
 ICU Level of Service B

Splits and Phases: 4: Alameda Rd & 19th Ave



Deer Valley 30  
4: Alameda Rd & 19th Ave


2024 Total AM Scenario A Mitigated  
HCM 6th Signalized Intersection Summary



| Movement                     | EBL  | EBT  | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
|------------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Lane Configurations          | ↔    | ↗    | ↘    | ↔    | ↗    | ↘    | ↔    | ↗    | ↘    | ↔    | ↗    | ↘    |
| Traffic Volume (veh/h)       | 9    | 0    | 56   | 42   | 0    | 35   | 18   | 593  | 224  | 187  | 951  | 14   |
| Future Volume (veh/h)        | 9    | 0    | 56   | 42   | 0    | 35   | 18   | 593  | 224  | 187  | 951  | 14   |
| Initial Q (Ob), veh          | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Ped-Bike Adj(A_pbT)          | 1.00 |      | 1.00 | 1.00 |      | 1.00 | 1.00 |      | 1.00 | 1.00 |      | 1.00 |
| Parking Bus, Adj             | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Work Zone On Approach        | No   |      | No   |      | No   |      | No   |      | No   |      | No   |      |
| Adj Sat Flow, veh/h/ln       | 1781 | 1781 | 1781 | 1781 | 1781 | 1781 | 1781 | 1781 | 1781 | 1781 | 1781 | 1781 |
| Adj Flow Rate, veh/h         | 10   | 0    | 61   | 46   | 0    | 38   | 20   | 645  | 243  | 203  | 1034 | 15   |
| Peak Hour Factor             | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Percent Heavy Veh, %         | 8    | 8    | 8    | 8    | 8    | 8    | 8    | 8    | 8    | 8    | 8    | 8    |
| Cap, veh/h                   | 92   | 0    | 82   | 99   | 0    | 88   | 389  | 2409 | 891  | 474  | 2352 | 34   |
| Arrive On Green              | 0.05 | 0.00 | 0.05 | 0.06 | 0.00 | 0.06 | 0.69 | 0.69 | 0.69 | 0.69 | 0.69 | 0.69 |
| Sat Flow, veh/h              | 1697 | 0    | 1510 | 1697 | 0    | 1510 | 512  | 3498 | 1293 | 596  | 3415 | 50   |
| Grp Volume(v), veh/h         | 10   | 0    | 61   | 46   | 0    | 38   | 20   | 597  | 291  | 203  | 512  | 537  |
| Grp Sat Flow(s), veh/h/ln    | 1697 | 0    | 1510 | 1697 | 0    | 1510 | 512  | 1621 | 1549 | 596  | 1692 | 1773 |
| Q Serve(g_s), s              | 0.4  | 0.0  | 2.7  | 1.8  | 0.0  | 1.7  | 1.2  | 4.8  | 4.9  | 13.5 | 9.2  | 9.2  |
| Cycle Q Clear(g_c), s        | 0.4  | 0.0  | 2.7  | 1.8  | 0.0  | 1.7  | 10.4 | 4.8  | 4.9  | 18.4 | 9.2  | 9.2  |
| Prop In Lane                 | 1.00 |      | 1.00 | 1.00 |      | 1.00 | 1.00 |      | 0.84 | 1.00 |      | 0.03 |
| Lane Grp Cap(c), veh/h       | 92   | 0    | 82   | 99   | 0    | 88   | 389  | 2233 | 1067 | 474  | 1166 | 1221 |
| V/C Ratio(X)                 | 0.11 | 0.00 | 0.74 | 0.46 | 0.00 | 0.43 | 0.05 | 0.27 | 0.27 | 0.43 | 0.44 | 0.44 |
| Avail Cap(c_a), veh/h        | 449  | 0    | 400  | 449  | 0    | 400  | 389  | 2233 | 1067 | 474  | 1166 | 1221 |
| HCM Platoon Ratio            | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(I)           | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Uniform Delay (d), s/veh     | 30.6 | 0.0  | 31.7 | 31.0 | 0.0  | 30.9 | 7.1  | 4.0  | 4.1  | 7.6  | 4.7  | 4.7  |
| Incr Delay (d2), s/veh       | 0.5  | 0.0  | 12.5 | 3.3  | 0.0  | 3.3  | 0.3  | 0.3  | 0.6  | 2.8  | 1.2  | 1.2  |
| Initial Q Delay(d3), s/veh   | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| %ile BackOfQ(50%), veh/ln    | 0.2  | 0.0  | 1.2  | 0.8  | 0.0  | 0.7  | 0.1  | 1.2  | 1.3  | 1.7  | 2.6  | 2.7  |
| Unsig. Movement Delay, s/veh |      |      |      |      |      |      |      |      |      |      |      |      |
| LnGrp Delay(d), s/veh        | 31.1 | 0.0  | 44.1 | 34.3 | 0.0  | 34.2 | 7.3  | 4.3  | 4.7  | 10.4 | 5.9  | 5.9  |
| LnGrp LOS                    | C    | A    | D    | C    | A    | C    | A    | A    | A    | B    | A    | A    |
| Approach Vol, veh/h          |      | 71   |      |      | 84   |      |      | 908  |      |      | 1252 |      |
| Approach Delay, s/veh        |      | 42.3 |      |      | 34.3 |      |      | 4.5  |      |      | 6.6  |      |
| Approach LOS                 |      | D    |      |      | C    |      |      | A    |      |      | A    |      |
| Timer - Assigned Phs         |      | 2    |      | 4    |      | 6    |      | 8    |      |      |      |      |
| Phs Duration (G+Y+Rc), s     |      | 51.3 |      | 8.2  |      | 51.3 |      | 8.5  |      |      | 26.7 |      |
| Change Period (Y+Rc), s      |      | 4.5  |      | 4.5  |      | 4.5  |      | 4.5  |      |      | 4.5  |      |
| Max Green Setting (Gmax), s  |      | 18.0 |      | 18.0 |      | 18.0 |      | 18.0 |      |      | 22.5 |      |
| Max Q Clear Time (g_c+I1), s |      | 12.4 |      | 4.7  |      | 20.4 |      | 3.8  |      |      | 16.7 |      |
| Green Ext Time (p_c), s      |      | 2.8  |      | 0.2  |      | 0.0  |      | 0.2  |      |      | 0.2  |      |
| <b>Intersection Summary</b>  |      |      |      |      |      |      |      |      |      |      |      |      |
| HCM 6th Ctrl Delay           | 7.9  |      |      |      |      |      |      |      |      |      |      |      |
| HCM 6th LOS                  | A    |      |      |      |      |      |      |      |      |      |      |      |

Deer Valley 30  
4: Alameda Rd & 19th Ave

2024 Total PM Scenario A Mitigated  
HCM 6th Signalized Intersection Summary



| Movement                     | EBL  | EBT  | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
|------------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Lane Configurations          | ↔    | ↗    | ↘    | ↔    | ↗    | ↘    | ↔    | ↗    | ↘    | ↔    | ↗    | ↘    |
| Traffic Volume (veh/h)       | 14   | 0    | 62   | 197  | 0    | 162  | 85   | 1106 | 43   | 35   | 667  | 16   |
| Future Volume (veh/h)        | 14   | 0    | 62   | 197  | 0    | 162  | 85   | 1106 | 43   | 35   | 667  | 16   |
| Initial Q (Ob), veh          | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Ped-Bike Adj(A_pbT)          | 1.00 |      | 1.00 | 1.00 |      | 1.00 | 1.00 |      | 1.00 | 1.00 |      | 1.00 |
| Parking Bus, Adj             | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Work Zone On Approach        | No   |      | No   |      | No   |      | No   |      | No   |      | No   |      |
| Adj Sat Flow, veh/h/ln       | 1781 | 1781 | 1781 | 1781 | 1781 | 1781 | 1781 | 1781 | 1781 | 1781 | 1781 | 1781 |
| Adj Flow Rate, veh/h         | 15   | 0    | 67   | 214  | 0    | 176  | 92   | 1202 | 47   | 38   | 725  | 17   |
| Peak Hour Factor             | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Percent Heavy Veh, %         | 8    | 8    | 8    | 8    | 8    | 8    | 8    | 8    | 8    | 8    | 8    | 8    |
| Cap, veh/h                   | 209  | 0    | 335  | 308  | 0    | 335  | 484  | 3305 | 129  | 319  | 2326 | 55   |
| Arrive On Green              | 0.22 | 0.00 | 0.22 | 0.22 | 0.00 | 0.22 | 0.69 | 0.69 | 0.69 | 0.69 | 0.69 | 0.69 |
| Sat Flow, veh/h              | 1151 | 0    | 1510 | 1271 | 0    | 1510 | 683  | 4802 | 188  | 424  | 3380 | 79   |
| Grp Volume(v), veh/h         | 15   | 0    | 67   | 214  | 0    | 176  | 92   | 811  | 438  | 38   | 363  | 379  |
| Grp Sat Flow(s), veh/h/ln    | 1151 | 0    | 1510 | 1271 | 0    | 1510 | 683  | 1621 | 1748 | 424  | 1692 | 1767 |
| Q Serve(g_s), s              | 1.2  | 0.0  | 3.6  | 16.5 | 0.0  | 10.3 | 6.2  | 10.4 | 10.4 | 4.1  | 8.5  | 8.5  |
| Cycle Q Clear(g_c), s        | 11.4 | 0.0  | 3.6  | 20.1 | 0.0  | 10.3 | 14.7 | 10.4 | 10.4 | 14.5 | 8.5  | 8.5  |
| Prop In Lane                 | 1.00 |      | 1.00 | 1.00 |      | 1.00 | 1.00 |      | 0.11 | 1.00 |      | 0.04 |
| Lane Grp Cap(c), veh/h       | 209  | 0    | 335  | 308  | 0    | 335  | 484  | 2231 | 1203 | 319  | 1165 | 1216 |
| V/C Ratio(X)                 | 0.07 | 0.00 | 0.20 | 0.69 | 0.00 | 0.53 | 0.19 | 0.36 | 0.36 | 0.12 | 0.31 | 0.31 |
| Avail Cap(c_a), veh/h        | 213  | 0    | 340  | 312  | 0    | 340  | 484  | 2231 | 1203 | 319  | 1165 | 1216 |
| HCM Platoon Ratio            | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(I)           | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Uniform Delay (d), s/veh     | 39.3 | 0.0  | 31.7 | 39.9 | 0.0  | 34.3 | 9.1  | 6.5  | 6.5  | 9.5  | 6.2  | 6.2  |
| Incr Delay (d2), s/veh       | 0.1  | 0.0  | 0.3  | 6.4  | 0.0  | 1.4  | 0.9  | 0.5  | 0.9  | 0.8  | 0.7  | 0.7  |
| Initial Q Delay(d3), s/veh   | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| %ile BackOfQ(50%), veh/ln    | 0.3  | 0.0  | 1.3  | 5.6  | 0.0  | 3.9  | 1.0  | 3.3  | 3.7  | 0.4  | 2.9  | 3.0  |
| Unsig. Movement Delay, s/veh |      |      |      |      |      |      |      |      |      |      |      |      |
| LnGrp Delay(d), s/veh        | 39.4 | 0.0  | 32.0 | 46.3 | 0.0  | 35.7 | 10.0 | 6.9  | 7.3  | 10.3 | 6.9  | 6.9  |
| LnGrp LOS                    | D    | A    | C    | D    | A    | D    | A    | A    | A    | B    | A    | A    |
| Approach Vol, veh/h          |      | 82   |      |      | 390  |      |      | 1341 |      |      | 780  |      |
| Approach Delay, s/veh        |      | 33.3 |      |      | 41.5 |      |      | 7.3  |      |      | 7.0  |      |
| Approach LOS                 |      | C    |      |      | D    |      |      | A    |      |      | A    |      |
| Timer - Assigned Phs         |      | 2    |      | 4    |      | 6    |      | 8    |      |      |      |      |
| Phs Duration (G+Y+Rc), s     |      | 73.3 |      | 26.7 |      | 73.3 |      | 26.7 |      |      | 22.5 |      |
| Change Period (Y+Rc), s      |      | 4.5  |      | 4.5  |      | 4.5  |      | 4.5  |      |      | 4.5  |      |
| Max Green Setting (Gmax), s  |      | 68.5 |      | 22.5 |      | 68.5 |      | 22.5 |      |      | 22.5 |      |
| Max Q Clear Time (g_c+I1), s |      | 16.7 |      | 13.4 |      | 16.5 |      | 22.1 |      |      | 16.7 |      |
| Green Ext Time (p_c), s      |      | 13.4 |      | 0.2  |      | 6.4  |      | 0.1  |      |      | 0.1  |      |
| <b>Intersection Summary</b>  |      |      |      |      |      |      |      |      |      |      |      |      |
| HCM 6th Ctrl Delay           | 13.2 |      |      |      |      |      |      |      |      |      |      |      |
| HCM 6th LOS                  | B    |      |      |      |      |      |      |      |      |      |      |      |

Deer Valley 30  
5: 19th Ave & Sarah Bass PI

2024 Total AM Scenario A Mitigated  
HCM 6th TWSC

| Intersection             |        |        |        |       |      |      |
|--------------------------|--------|--------|--------|-------|------|------|
| Int Delay, s/veh         | 0.5    |        |        |       |      |      |
| Movement                 | EBL    | EBR    | NBL    | NBT   | SBT  | SBR  |
| Lane Configurations      | ↔      | ↔      | ↔      | ↔↔    | ↔↔   | ↔↔   |
| Traffic Vol, veh/h       | 13     | 36     | 27     | 855   | 848  | 9    |
| Future Vol, veh/h        | 13     | 36     | 27     | 855   | 848  | 9    |
| Conflicting Peds, #/hr   | 0      | 0      | 0      | 0     | 0    | 0    |
| Sign Control             | Stop   | Stop   | Free   | Free  | Free | Free |
| RT Channelized           | -      | None   | -      | None  | -    | None |
| Storage Length           | 0      | 0      | 150    | -     | -    | -    |
| Veh in Median Storage, # | 0      | -      | -      | 0     | 0    | -    |
| Grade, %                 | 0      | -      | -      | 0     | 0    | -    |
| Peak Hour Factor         | 92     | 92     | 92     | 92    | 92   | 92   |
| Heavy Vehicles, %        | 8      | 8      | 8      | 8     | 8    | 8    |
| Mvmt Flow                | 14     | 39     | 29     | 929   | 922  | 10   |
| Major/Minor              | Minor2 | Major1 | Major2 |       |      |      |
| Conflicting Flow All     | 1357   | 466    | 932    | 0     | -    | 0    |
| Stage 1                  | 927    | -      | -      | -     | -    | -    |
| Stage 2                  | 430    | -      | -      | -     | -    | -    |
| Critical Hdwy            | 6.41   | 7.06   | 4.26   | -     | -    | -    |
| Critical Hdwy Stg 1      | 5.96   | -      | -      | -     | -    | -    |
| Critical Hdwy Stg 2      | 6.16   | -      | -      | -     | -    | -    |
| Follow-up Hdwy           | 3.73   | 3.38   | 2.28   | -     | -    | -    |
| Pot Cap-1 Maneuver       | 160    | 527    | 694    | -     | -    | -    |
| Stage 1                  | 324    | -      | -      | -     | -    | -    |
| Stage 2                  | 573    | -      | -      | -     | -    | -    |
| Platoon blocked, %       | -      | -      | -      | -     | -    | -    |
| Mov Cap-1 Maneuver       | 153    | 527    | 694    | -     | -    | -    |
| Mov Cap-2 Maneuver       | 244    | -      | -      | -     | -    | -    |
| Stage 1                  | 310    | -      | -      | -     | -    | -    |
| Stage 2                  | 573    | -      | -      | -     | -    | -    |
| Approach                 | EB     | NB     | SB     |       |      |      |
| HCM Control Delay, s     | 14.6   | 0.3    | 0      |       |      |      |
| HCM LOS                  | B      |        |        |       |      |      |
| Minor Lane/Major Mvmt    | NBL    | NBT    | EBLn1  | EBLn2 | SBT  | SBR  |
| Capacity (veh/h)         | 694    | -      | 244    | 527   | -    | -    |
| HCM Lane V/C Ratio       | 0.042  | -      | 0.058  | 0.074 | -    | -    |
| HCM Control Delay (s)    | 10.4   | -      | 20.7   | 12.4  | -    | -    |
| HCM Lane LOS             | B      | -      | C      | B     | -    | -    |
| HCM 95th %tile Q(veh)    | 0.1    | -      | 0.2    | 0.2   | -    | -    |

Deer Valley 30  
5: 19th Ave & Sarah Bass PI

2024 Total PM Scenario A Mitigated  
HCM 6th TWSC

| Intersection             |        |        |        |       |      |      |
|--------------------------|--------|--------|--------|-------|------|------|
| Int Delay, s/veh         | 0.5    |        |        |       |      |      |
| Movement                 | EBL    | EBR    | NBL    | NBT   | SBT  | SBR  |
| Lane Configurations      | ↔      | ↔      | ↔      | ↔↔    | ↔↔   | ↔↔   |
| Traffic Vol, veh/h       | 16     | 37     | 10     | 1032  | 948  | 6    |
| Future Vol, veh/h        | 16     | 37     | 10     | 1032  | 948  | 6    |
| Conflicting Peds, #/hr   | 0      | 0      | 0      | 0     | 0    | 0    |
| Sign Control             | Stop   | Stop   | Free   | Free  | Free | Free |
| RT Channelized           | -      | None   | -      | None  | -    | None |
| Storage Length           | 0      | 0      | 150    | -     | -    | -    |
| Veh in Median Storage, # | 0      | -      | -      | 0     | 0    | -    |
| Grade, %                 | 0      | -      | -      | 0     | 0    | -    |
| Peak Hour Factor         | 92     | 92     | 92     | 92    | 92   | 92   |
| Heavy Vehicles, %        | 8      | 8      | 8      | 8     | 8    | 8    |
| Mvmt Flow                | 17     | 40     | 11     | 1122  | 1030 | 7    |
| Major/Minor              | Minor2 | Major1 | Major2 |       |      |      |
| Conflicting Flow All     | 1505   | 519    | 1037   | 0     | -    | 0    |
| Stage 1                  | 1034   | -      | -      | -     | -    | -    |
| Stage 2                  | 471    | -      | -      | -     | -    | -    |
| Critical Hdwy            | 6.41   | 7.06   | 4.26   | -     | -    | -    |
| Critical Hdwy Stg 1      | 5.96   | -      | -      | -     | -    | -    |
| Critical Hdwy Stg 2      | 6.16   | -      | -      | -     | -    | -    |
| Follow-up Hdwy           | 3.73   | 3.38   | 2.28   | -     | -    | -    |
| Pot Cap-1 Maneuver       | 131    | 486    | 631    | -     | -    | -    |
| Stage 1                  | 284    | -      | -      | -     | -    | -    |
| Stage 2                  | 545    | -      | -      | -     | -    | -    |
| Platoon blocked, %       | -      | -      | -      | -     | -    | -    |
| Mov Cap-1 Maneuver       | 129    | 486    | 631    | -     | -    | -    |
| Mov Cap-2 Maneuver       | 218    | -      | -      | -     | -    | -    |
| Stage 1                  | 279    | -      | -      | -     | -    | -    |
| Stage 2                  | 545    | -      | -      | -     | -    | -    |
| Approach                 | EB     | NB     | SB     |       |      |      |
| HCM Control Delay, s     | 16.1   | 0.1    | 0      |       |      |      |
| HCM LOS                  | C      |        |        |       |      |      |
| Minor Lane/Major Mvmt    | NBL    | NBT    | EBLn1  | EBLn2 | SBT  | SBR  |
| Capacity (veh/h)         | 631    | -      | 218    | 486   | -    | -    |
| HCM Lane V/C Ratio       | 0.017  | -      | 0.08   | 0.083 | -    | -    |
| HCM Control Delay (s)    | 10.8   | -      | 22.9   | 13.1  | -    | -    |
| HCM Lane LOS             | B      | -      | C      | B     | -    | -    |
| HCM 95th %tile Q(veh)    | 0.1    | -      | 0.3    | 0.3   | -    | -    |



Deer Valley 30  
6: Pinnacle Peak Rd & 19th Ave

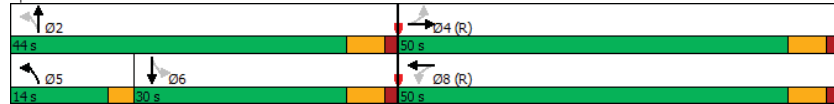
2024 Total AM Scenario A Mitigated  
Timings

| Lane Group           | EBL   | EBT   | WBL   | WBT   | NBL   | NBT   | SBL   | SBT   |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations  | ↖     | ↗     | ↖     | ↗     | ↖     | ↗     | ↖     | ↗     |
| Traffic Volume (vph) | 418   | 856   | 69    | 256   | 169   | 500   | 143   | 661   |
| Future Volume (vph)  | 418   | 856   | 69    | 256   | 169   | 500   | 143   | 661   |
| Turn Type            | Perm  | NA    | Perm  | NA    | pm+pt | NA    | Perm  | NA    |
| Protected Phases     |       | 4     |       | 8     |       | 5     |       | 2     |
| Permitted Phases     | 4     |       | 8     |       | 2     |       | 6     |       |
| Detector Phase       | 4     | 4     | 8     | 8     | 5     | 2     | 6     | 6     |
| Switch Phase         |       |       |       |       |       |       |       |       |
| Minimum Initial (s)  | 15.0  | 15.0  | 15.0  | 15.0  | 5.0   | 15.0  | 15.0  | 15.0  |
| Minimum Split (s)    | 34.6  | 34.6  | 34.6  | 34.6  | 9.5   | 30.8  | 30.8  | 30.8  |
| Total Split (s)      | 50.0  | 50.0  | 50.0  | 50.0  | 14.0  | 44.0  | 30.0  | 30.0  |
| Total Split (%)      | 53.2% | 53.2% | 53.2% | 53.2% | 14.9% | 46.8% | 31.9% | 31.9% |
| Yellow Time (s)      | 4.3   | 4.3   | 4.3   | 4.3   | 3.0   | 4.3   | 4.3   | 4.3   |
| All-Red Time (s)     | 1.3   | 1.3   | 1.3   | 1.3   | 0.0   | 1.5   | 1.5   | 1.5   |
| Lost Time Adjust (s) | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Lost Time (s)  | 5.6   | 5.6   | 5.6   | 5.6   | 3.0   | 5.8   | 5.8   | 5.8   |
| Lead/Lag             |       |       |       |       | Lead  |       | Lag   | Lag   |
| Lead-Lag Optimize?   |       |       |       |       | Yes   |       | Yes   | Yes   |
| Recall Mode          | C-Max | C-Max | C-Max | C-Max | None  | Max   | Max   | Max   |
| Act Effct Green (s)  | 44.4  | 44.4  | 44.4  | 44.4  | 41.0  | 38.2  | 24.9  | 24.9  |
| Actuated g/C Ratio   | 0.47  | 0.47  | 0.47  | 0.47  | 0.44  | 0.41  | 0.26  | 0.26  |
| v/c Ratio            | 1.20  | 0.81  | 0.88  | 0.30  | 0.69  | 0.37  | 0.91  | 0.97  |
| Control Delay        | 140.8 | 25.2  | 99.4  | 9.4   | 32.5  | 17.9  | 86.8  | 58.1  |
| Queue Delay          | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Delay          | 140.8 | 25.2  | 99.4  | 9.4   | 32.5  | 17.9  | 86.8  | 58.1  |
| LOS                  | F     | C     | F     | A     | C     | B     | F     | E     |
| Approach Delay       |       | 55.7  |       | 21.7  |       | 20.8  |       | 62.5  |
| Approach LOS         |       | E     |       | C     |       | C     |       | E     |

Intersection Summary

Cycle Length: 94  
 Actuated Cycle Length: 94  
 Offset: 31 (33%), Referenced to phase 4:EBTL and 8:WBTL, Start of Green  
 Natural Cycle: 90  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 1.20  
 Intersection Signal Delay: 45.3  
 Intersection Capacity Utilization 95.1%  
 Intersection LOS: D  
 ICU Level of Service F  
 Analysis Period (min) 15

Splits and Phases: 6: Pinnacle Peak Rd & 19th Ave



Deer Valley 30  
6: Pinnacle Peak Rd & 19th Ave

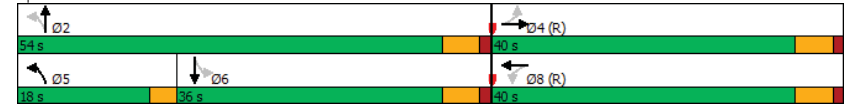
2024 Total PM Scenario A Mitigated  
Timings

| Lane Group           | EBL   | EBT   | WBL   | WBT   | NBL   | NBT   | SBL   | SBT   |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations  | ↖     | ↗     | ↖     | ↗     | ↖     | ↗     | ↖     | ↗     |
| Traffic Volume (vph) | 148   | 229   | 119   | 766   | 408   | 818   | 167   | 629   |
| Future Volume (vph)  | 148   | 229   | 119   | 766   | 408   | 818   | 167   | 629   |
| Turn Type            | Perm  | NA    | Perm  | NA    | pm+pt | NA    | Perm  | NA    |
| Protected Phases     |       | 4     |       | 8     |       | 5     |       | 2     |
| Permitted Phases     | 4     |       | 8     |       | 2     |       | 6     |       |
| Detector Phase       | 4     | 4     | 8     | 8     | 5     | 2     | 6     | 6     |
| Switch Phase         |       |       |       |       |       |       |       |       |
| Minimum Initial (s)  | 15.0  | 15.0  | 15.0  | 15.0  | 5.0   | 15.0  | 15.0  | 15.0  |
| Minimum Split (s)    | 34.6  | 34.6  | 34.6  | 34.6  | 9.5   | 30.8  | 30.8  | 30.8  |
| Total Split (s)      | 40.0  | 40.0  | 40.0  | 40.0  | 18.0  | 54.0  | 36.0  | 36.0  |
| Total Split (%)      | 42.6% | 42.6% | 42.6% | 42.6% | 19.1% | 57.4% | 38.3% | 38.3% |
| Yellow Time (s)      | 4.3   | 4.3   | 4.3   | 4.3   | 3.0   | 4.3   | 4.3   | 4.3   |
| All-Red Time (s)     | 1.3   | 1.3   | 1.3   | 1.3   | 0.0   | 1.5   | 1.5   | 1.5   |
| Lost Time Adjust (s) | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Lost Time (s)  | 5.6   | 5.6   | 5.6   | 5.6   | 3.0   | 5.8   | 5.8   | 5.8   |
| Lead/Lag             |       |       |       |       | Lead  |       | Lag   | Lag   |
| Lead-Lag Optimize?   |       |       |       |       | Yes   |       | Yes   | Yes   |
| Recall Mode          | C-Max | C-Max | C-Max | C-Max | None  | Max   | Max   | Max   |
| Act Effct Green (s)  | 34.4  | 34.4  | 34.4  | 34.4  | 51.0  | 48.2  | 30.2  | 30.2  |
| Actuated g/C Ratio   | 0.37  | 0.37  | 0.37  | 0.37  | 0.54  | 0.51  | 0.32  | 0.32  |
| v/c Ratio            | 1.77  | 0.40  | 0.51  | 0.80  | 1.28  | 0.38  | 1.10  | 1.06  |
| Control Delay        | 411.5 | 11.2  | 31.9  | 32.1  | 170.0 | 14.2  | 131.8 | 77.2  |
| Queue Delay          | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Delay          | 411.5 | 11.2  | 31.9  | 32.1  | 170.0 | 14.2  | 131.8 | 77.2  |
| LOS                  | F     | B     | C     | C     | F     | B     | F     | E     |
| Approach Delay       |       | 106.4 |       | 32.0  |       | 64.4  |       | 84.8  |
| Approach LOS         |       | F     |       | C     |       | E     |       | F     |

Intersection Summary

Cycle Length: 94  
 Actuated Cycle Length: 94  
 Offset: 31 (33%), Referenced to phase 4:EBTL and 8:WBTL, Start of Green  
 Natural Cycle: 90  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 1.77  
 Intersection Signal Delay: 68.8  
 Intersection Capacity Utilization 107.8%  
 Intersection LOS: E  
 ICU Level of Service G  
 Analysis Period (min) 15

Splits and Phases: 6: Pinnacle Peak Rd & 19th Ave



Deer Valley 30  
6: Pinnacle Peak Rd & 19th Ave

2024 Total AM Scenario A Mitigated  
HCM 6th Signalized Intersection Summary

| Movement                     | EBL   | EBT  | EBR  | WBL   | WBT  | WBR  | NBL  | NBT   | NBR  | SBL  | SBT   | SBR  |
|------------------------------|-------|------|------|-------|------|------|------|-------|------|------|-------|------|
| Lane Configurations          | ↔     | ↕    | ↔    | ↔     | ↕    | ↔    | ↔    | ↕     | ↔    | ↔    | ↕     | ↔    |
| Traffic Volume (veh/h)       | 418   | 856  | 309  | 69    | 256  | 181  | 169  | 500   | 165  | 143  | 661   | 122  |
| Future Volume (veh/h)        | 418   | 856  | 309  | 69    | 256  | 181  | 169  | 500   | 165  | 143  | 661   | 122  |
| Initial Q (Ob), veh          | 0     | 0    | 0    | 0     | 0    | 0    | 0    | 0     | 0    | 0    | 0     | 0    |
| Ped-Bike Adj(A_pbT)          | 1.00  |      | 1.00 | 1.00  |      | 1.00 | 1.00 |       | 1.00 | 1.00 |       | 1.00 |
| Parking Bus, Adj             | 1.00  | 1.00 | 1.00 | 1.00  | 1.00 | 1.00 | 1.00 | 1.00  | 1.00 | 1.00 | 1.00  | 1.00 |
| Work Zone On Approach        | No    |      | No   |       | No   |      | No   |       | No   |      | No    |      |
| Adj Sat Flow, veh/h/ln       | 1781  | 1781 | 1781 | 1781  | 1781 | 1781 | 1781 | 1781  | 1781 | 1781 | 1781  | 1781 |
| Adj Flow Rate, veh/h         | 454   | 930  | 336  | 75    | 278  | 197  | 184  | 543   | 179  | 155  | 718   | 133  |
| Peak Hour Factor             | 0.92  | 0.92 | 0.92 | 0.92  | 0.92 | 0.92 | 0.92 | 0.92  | 0.92 | 0.92 | 0.92  | 0.92 |
| Percent Heavy Veh, %         | 8     | 8    | 8    | 8     | 8    | 8    | 8    | 8     | 8    | 8    | 8     | 8    |
| Cap, veh/h                   | 409   | 1152 | 414  | 137   | 906  | 622  | 261  | 1481  | 475  | 271  | 797   | 147  |
| Arrive On Green              | 0.47  | 0.47 | 0.47 | 0.47  | 0.47 | 0.47 | 0.10 | 0.41  | 0.41 | 0.28 | 0.28  | 0.28 |
| Sat Flow, veh/h              | 875   | 2440 | 876  | 417   | 1919 | 1318 | 1697 | 3644  | 1169 | 696  | 2851  | 528  |
| Grp Volume(v), veh/h         | 454   | 644  | 622  | 75    | 244  | 231  | 184  | 481   | 241  | 155  | 426   | 425  |
| Grp Sat Flow(s),veh/h/ln     | 875   | 1692 | 1624 | 417   | 1692 | 1544 | 1697 | 1621  | 1571 | 696  | 1692  | 1686 |
| Q Serve(g_s), s              | 35.7  | 30.4 | 30.8 | 13.6  | 8.4  | 8.7  | 6.9  | 9.7   | 10.1 | 19.4 | 22.8  | 22.8 |
| Cycle Q Clear(g_c), s        | 44.4  | 30.4 | 30.8 | 44.4  | 8.4  | 8.7  | 6.9  | 9.7   | 10.1 | 19.4 | 22.8  | 22.8 |
| Prop In Lane                 | 1.00  |      | 0.54 | 1.00  |      | 0.85 | 1.00 |       | 0.74 | 1.00 |       | 0.31 |
| Lane Grp Cap(c), veh/h       | 409   | 799  | 767  | 137   | 799  | 729  | 261  | 1318  | 638  | 271  | 473   | 471  |
| V/C Ratio(X)                 | 1.11  | 0.81 | 0.81 | 0.55  | 0.31 | 0.32 | 0.71 | 0.37  | 0.38 | 0.57 | 0.90  | 0.90 |
| Avail Cap(c_a), veh/h        | 409   | 799  | 767  | 137   | 799  | 729  | 298  | 1318  | 638  | 271  | 473   | 471  |
| HCM Platoon Ratio            | 1.00  | 1.00 | 1.00 | 1.00  | 1.00 | 1.00 | 1.00 | 1.00  | 1.00 | 1.00 | 1.00  | 1.00 |
| Upstream Filter(I)           | 1.00  | 1.00 | 1.00 | 0.57  | 0.57 | 0.57 | 1.00 | 1.00  | 1.00 | 1.00 | 1.00  | 1.00 |
| Uniform Delay (d), s/veh     | 32.5  | 21.1 | 21.2 | 41.6  | 15.3 | 15.4 | 23.3 | 19.5  | 19.6 | 31.4 | 32.6  | 32.6 |
| Incr Delay (d2), s/veh       | 77.9  | 8.5  | 9.1  | 8.7   | 0.6  | 0.6  | 6.4  | 0.8   | 1.7  | 8.5  | 22.9  | 23.1 |
| Initial Q Delay(d3),s/veh    | 0.0   | 0.0  | 0.0  | 0.0   | 0.0  | 0.0  | 0.0  | 0.0   | 0.0  | 0.0  | 0.0   | 0.0  |
| %ile BackOfQ(50%),veh/ln     | 18.3  | 13.2 | 12.9 | 2.1   | 3.2  | 3.1  | 3.1  | 3.7   | 3.9  | 3.8  | 12.1  | 12.1 |
| Unsig. Movement Delay, s/veh |       |      |      |       |      |      |      |       |      |      |       |      |
| LnGrp Delay(d),s/veh         | 110.4 | 29.6 | 30.3 | 50.3  | 15.9 | 16.0 | 29.6 | 20.2  | 21.3 | 39.9 | 55.5  | 55.7 |
| LnGrp LOS                    | F     | C    | C    | D     | B    | B    | C    | C     | C    | D    | E     | E    |
| Approach Vol, veh/h          |       | 1720 |      |       | 550  |      |      | 906   |      |      | 1006  |      |
| Approach Delay, s/veh        |       | 51.2 |      |       | 20.6 |      |      | 22.4  |      |      | 53.2  |      |
| Approach LOS                 |       | D    |      |       | C    |      |      | C     |      |      | D     |      |
| Timer - Assigned Phs         |       | 2    |      | 4     | 5    | 6    |      | 8     |      |      |       |      |
| Phs Duration (G+Y+Rc), s     |       | 44.0 |      | 50.0  | 11.9 | 32.1 |      | 50.0  |      |      | 40.0  |      |
| Change Period (Y+Rc), s      |       | 5.8  |      | * 5.6 | 3.0  | 5.8  |      | * 5.6 |      |      | * 5.6 |      |
| Max Green Setting (Gmax), s  |       | 38.2 |      | * 44  | 11.0 | 24.2 |      | * 44  |      |      | * 34  |      |
| Max Q Clear Time (g_c+I1), s |       | 12.1 |      | 46.4  | 8.9  | 24.8 |      | 46.4  |      |      | 24.1  |      |
| Green Ext Time (p_c), s      |       | 5.2  |      | 0.0   | 0.1  | 0.0  |      | 0.0   |      |      | 4.8   |      |

Intersection Summary

|                    |      |
|--------------------|------|
| HCM 6th Ctrl Delay | 41.4 |
| HCM 6th LOS        | D    |

Notes

User approved pedestrian interval to be less than phase max green.  
\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Deer Valley 30  
6: Pinnacle Peak Rd & 19th Ave

2024 Total PM Scenario A Mitigated  
HCM 6th Signalized Intersection Summary

| Movement                     | EBL   | EBT  | EBR  | WBL   | WBT  | WBR  | NBL   | NBT   | NBR  | SBL  | SBT   | SBR  |
|------------------------------|-------|------|------|-------|------|------|-------|-------|------|------|-------|------|
| Lane Configurations          | ↔     | ↕    | ↔    | ↔     | ↕    | ↔    | ↔     | ↕     | ↔    | ↔    | ↕     | ↔    |
| Traffic Volume (veh/h)       | 148   | 229  | 246  | 119   | 766  | 123  | 408   | 818   | 41   | 167  | 629   | 397  |
| Future Volume (veh/h)        | 148   | 229  | 246  | 119   | 766  | 123  | 408   | 818   | 41   | 167  | 629   | 397  |
| Initial Q (Ob), veh          | 0     | 0    | 0    | 0     | 0    | 0    | 0     | 0     | 0    | 0    | 0     | 0    |
| Ped-Bike Adj(A_pbT)          | 1.00  |      | 1.00 | 1.00  |      | 1.00 | 1.00  |       | 1.00 | 1.00 |       | 1.00 |
| Parking Bus, Adj             | 1.00  | 1.00 | 1.00 | 1.00  | 1.00 | 1.00 | 1.00  | 1.00  | 1.00 | 1.00 | 1.00  | 1.00 |
| Work Zone On Approach        | No    |      | No   |       | No   |      | No    |       | No   |      | No    |      |
| Adj Sat Flow, veh/h/ln       | 1781  | 1781 | 1781 | 1781  | 1781 | 1781 | 1781  | 1781  | 1781 | 1781 | 1781  | 1781 |
| Adj Flow Rate, veh/h         | 161   | 249  | 185  | 129   | 833  | 91   | 443   | 889   | 29   | 182  | 684   | 269  |
| Peak Hour Factor             | 0.92  | 0.92 | 0.92 | 0.92  | 0.92 | 0.92 | 0.92  | 0.92  | 0.92 | 0.92 | 0.92  | 0.92 |
| Percent Heavy Veh, %         | 8     | 8    | 8    | 8     | 8    | 8    | 8     | 8     | 8    | 8    | 8     | 8    |
| Cap, veh/h                   | 152   | 689  | 493  | 318   | 1126 | 123  | 373   | 2481  | 81   | 263  | 762   | 300  |
| Arrive On Green              | 0.37  | 0.37 | 0.37 | 0.37  | 0.37 | 0.37 | 0.16  | 0.51  | 0.51 | 0.32 | 0.32  | 0.32 |
| Sat Flow, veh/h              | 576   | 1884 | 1347 | 909   | 3077 | 336  | 1697  | 4838  | 158  | 580  | 2373  | 933  |
| Grp Volume(v), veh/h         | 161   | 223  | 211  | 129   | 458  | 466  | 443   | 595   | 323  | 182  | 488   | 465  |
| Grp Sat Flow(s),veh/h/ln     | 576   | 1692 | 1539 | 909   | 1692 | 1721 | 1697  | 1621  | 1753 | 580  | 1692  | 1613 |
| Q Serve(g_s), s              | 12.3  | 9.0  | 9.5  | 11.4  | 22.1 | 22.1 | 15.0  | 10.3  | 10.3 | 29.2 | 25.8  | 25.8 |
| Cycle Q Clear(g_c), s        | 34.4  | 9.0  | 9.5  | 20.9  | 22.1 | 22.1 | 15.0  | 10.3  | 10.3 | 29.2 | 25.8  | 25.8 |
| Prop In Lane                 | 1.00  |      | 0.88 | 1.00  |      | 0.20 | 1.00  |       | 0.09 | 1.00 |       | 0.58 |
| Lane Grp Cap(c), veh/h       | 152   | 619  | 563  | 318   | 619  | 630  | 373   | 1663  | 899  | 263  | 544   | 518  |
| V/C Ratio(X)                 | 1.06  | 0.36 | 0.38 | 0.41  | 0.74 | 0.74 | 1.19  | 0.36  | 0.36 | 0.69 | 0.90  | 0.90 |
| Avail Cap(c_a), veh/h        | 152   | 619  | 563  | 318   | 619  | 630  | 373   | 1663  | 899  | 263  | 544   | 518  |
| HCM Platoon Ratio            | 1.00  | 1.00 | 1.00 | 1.00  | 1.00 | 1.00 | 1.00  | 1.00  | 1.00 | 1.00 | 1.00  | 1.00 |
| Upstream Filter(I)           | 1.00  | 1.00 | 1.00 | 0.61  | 0.61 | 0.61 | 1.00  | 1.00  | 1.00 | 1.00 | 1.00  | 1.00 |
| Uniform Delay (d), s/veh     | 44.0  | 21.8 | 21.9 | 29.6  | 25.9 | 25.9 | 24.4  | 13.7  | 13.7 | 31.6 | 30.4  | 30.4 |
| Incr Delay (d2), s/veh       | 89.9  | 1.6  | 1.9  | 2.3   | 4.8  | 4.8  | 107.8 | 0.6   | 1.1  | 14.0 | 20.1  | 20.9 |
| Initial Q Delay(d3),s/veh    | 0.0   | 0.0  | 0.0  | 0.0   | 0.0  | 0.0  | 0.0   | 0.0   | 0.0  | 0.0  | 0.0   | 0.0  |
| %ile BackOfQ(50%),veh/ln     | 7.3   | 3.8  | 3.6  | 2.7   | 9.4  | 9.6  | 16.0  | 3.7   | 4.2  | 5.0  | 13.2  | 12.7 |
| Unsig. Movement Delay, s/veh |       |      |      |       |      |      |       |       |      |      |       |      |
| LnGrp Delay(d),s/veh         | 133.9 | 23.4 | 23.8 | 31.9  | 30.7 | 30.7 | 132.3 | 14.3  | 14.8 | 45.6 | 50.6  | 51.3 |
| LnGrp LOS                    | F     | C    | C    | C     | C    | C    | F     | B     | B    | D    | D     | D    |
| Approach Vol, veh/h          |       | 595  |      |       | 1053 |      |       | 1361  |      |      | 1135  |      |
| Approach Delay, s/veh        |       | 53.4 |      |       | 30.9 |      |       | 52.8  |      |      | 50.1  |      |
| Approach LOS                 |       | D    |      |       | C    |      |       | D     |      |      | D     |      |
| Timer - Assigned Phs         |       | 2    |      | 4     | 5    | 6    |       | 8     |      |      |       |      |
| Phs Duration (G+Y+Rc), s     |       | 54.0 |      | 40.0  | 18.0 | 36.0 |       | 40.0  |      |      | 40.0  |      |
| Change Period (Y+Rc), s      |       | 5.8  |      | * 5.6 | 3.0  | 5.8  |       | * 5.6 |      |      | * 5.6 |      |
| Max Green Setting (Gmax), s  |       | 48.2 |      | * 34  | 15.0 | 30.2 |       | * 34  |      |      | * 34  |      |
| Max Q Clear Time (g_c+I1), s |       | 12.3 |      | 36.4  | 17.0 | 31.2 |       | 24.1  |      |      | 24.1  |      |
| Green Ext Time (p_c), s      |       | 7.3  |      | 0.0   | 0.0  | 0.0  |       | 4.8   |      |      | 4.8   |      |

Intersection Summary

|                    |      |
|--------------------|------|
| HCM 6th Ctrl Delay | 46.6 |
| HCM 6th LOS        | D    |

Notes

User approved pedestrian interval to be less than phase max green.  
\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Deer Valley 30  
7: 15th Ave & Happy Valley Rd

2024 Total AM Scenario A Mitigated  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Int Delay, s/veh         | 1.1  |      |      |      |      |      |      |      |      |      |      |      |
| Movement                 | EBL  | EBT  | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
| Lane Configurations      | ↕    |      | ↕    |      | ↕    |      | ↕    |      | ↕    |      | ↕    |      |
| Traffic Vol, veh/h       | 6    | 676  | 23   | 14   | 376  | 0    | 19   | 0    | 10   | 2    | 0    | 6    |
| Future Vol, veh/h        | 6    | 676  | 23   | 14   | 376  | 0    | 19   | 0    | 10   | 2    | 0    | 6    |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Free | Free | Free | Free | Free | Free | Stop | Stop | Stop | Stop | Stop | Stop |
| RT Channelized           | -    | -    | None | -    | -    | None | -    | -    | None | -    | -    | None |
| Storage Length           | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    |
| Veh in Median Storage, # | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Grade, %                 | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Peak Hour Factor         | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   |
| Heavy Vehicles, %        | 8    | 8    | 8    | 8    | 8    | 8    | 8    | 8    | 8    | 8    | 8    | 8    |
| Mvmt Flow                | 7    | 735  | 25   | 15   | 409  | 0    | 21   | 0    | 11   | 2    | 0    | 7    |

| Major/Minor          | Major1 | Major2 | Minor1 | Minor2 |
|----------------------|--------|--------|--------|--------|
| Conflicting Flow All | 409    | 0      | 760    | 0      |
| Stage 1              | -      | -      | -      | -      |
| Stage 2              | -      | -      | -      | -      |
| Critical Hdwy        | 4.18   | -      | 4.18   | -      |
| Critical Hdwy Stg 1  | -      | -      | -      | -      |
| Critical Hdwy Stg 2  | -      | -      | -      | -      |
| Follow-up Hdwy       | 2.272  | -      | 2.272  | -      |
| Pot Cap-1 Maneuver   | 1150   | -      | 825    | -      |
| Stage 1              | -      | -      | -      | -      |
| Stage 2              | -      | -      | -      | -      |
| Platoon blocked, %   | 1      | -      | -      | -      |
| Mov Cap-1 Maneuver   | 1150   | -      | 825    | -      |
| Mov Cap-2 Maneuver   | -      | -      | -      | -      |
| Stage 1              | -      | -      | -      | -      |
| Stage 2              | -      | -      | -      | -      |

| Approach             | EB  | WB  | NB   | SB   |
|----------------------|-----|-----|------|------|
| HCM Control Delay, s | 0.1 | 0.3 | 30.8 | 15.8 |
| HCM LOS              |     |     | D    | C    |

| Minor Lane/Major Mvmt | NBLn1 | EBL   | EBT | EBR | WBL   | WBT | WBR | SBLn1 |
|-----------------------|-------|-------|-----|-----|-------|-----|-----|-------|
| Capacity (veh/h)      | 171   | 1150  | -   | -   | 825   | -   | -   | 342   |
| HCM Lane V/C Ratio    | 0.184 | 0.006 | -   | -   | 0.018 | -   | -   | 0.025 |
| HCM Control Delay (s) | 30.8  | 8.1   | 0   | -   | 9.4   | 0   | -   | 15.8  |
| HCM Lane LOS          | D     | A     | A   | -   | A     | A   | -   | C     |
| HCM 95th %tile Q(veh) | 0.7   | 0     | -   | -   | 0.1   | -   | -   | 0.1   |

Deer Valley 30  
7: 15th Ave & Happy Valley Rd

2024 Total PM Scenario A Mitigated  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Int Delay, s/veh         | 0.4  |      |      |      |      |      |      |      |      |      |      |      |
| Movement                 | EBL  | EBT  | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
| Lane Configurations      | ↕    |      | ↕    |      | ↕    |      | ↕    |      | ↕    |      | ↕    |      |
| Traffic Vol, veh/h       | 2    | 527  | 3    | 8    | 1109 | 0    | 20   | 0    | 17   | 0    | 0    | 1    |
| Future Vol, veh/h        | 2    | 527  | 3    | 8    | 1109 | 0    | 20   | 0    | 17   | 0    | 0    | 1    |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Free | Free | Free | Free | Free | Free | Stop | Stop | Stop | Stop | Stop | Stop |
| RT Channelized           | -    | -    | None | -    | -    | None | -    | -    | None | -    | -    | None |
| Storage Length           | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    |
| Veh in Median Storage, # | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Grade, %                 | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Peak Hour Factor         | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   |
| Heavy Vehicles, %        | 8    | 8    | 8    | 8    | 8    | 8    | 8    | 8    | 8    | 8    | 8    | 8    |
| Mvmt Flow                | 2    | 573  | 3    | 9    | 1205 | 0    | 22   | 0    | 18   | 0    | 0    | 1    |

| Major/Minor          | Major1 | Major2 | Minor1 | Minor2 |
|----------------------|--------|--------|--------|--------|
| Conflicting Flow All | 1205   | 0      | 576    | 0      |
| Stage 1              | -      | -      | -      | -      |
| Stage 2              | -      | -      | -      | -      |
| Critical Hdwy        | 4.18   | -      | 4.18   | -      |
| Critical Hdwy Stg 1  | -      | -      | -      | -      |
| Critical Hdwy Stg 2  | -      | -      | -      | -      |
| Follow-up Hdwy       | 2.272  | -      | 2.272  | -      |
| Pot Cap-1 Maneuver   | *199   | -      | 968    | -      |
| Stage 1              | -      | -      | -      | -      |
| Stage 2              | -      | -      | -      | -      |
| Platoon blocked, %   | 1      | -      | -      | -      |
| Mov Cap-1 Maneuver   | *199   | -      | 968    | -      |
| Mov Cap-2 Maneuver   | -      | -      | -      | -      |
| Stage 1              | -      | -      | -      | -      |
| Stage 2              | -      | -      | -      | -      |

| Approach             | EB  | WB  | NB   | SB   |
|----------------------|-----|-----|------|------|
| HCM Control Delay, s | 0.1 | 0.1 | 12.7 | 32.1 |
| HCM LOS              |     |     | B    | D    |

| Minor Lane/Major Mvmt | NBLn1 | EBL   | EBT | EBR | WBL   | WBT | WBR | SBLn1 |
|-----------------------|-------|-------|-----|-----|-------|-----|-----|-------|
| Capacity (veh/h)      | 506   | *199  | -   | -   | 968   | -   | -   | 134   |
| HCM Lane V/C Ratio    | 0.079 | 0.011 | -   | -   | 0.009 | -   | -   | 0.008 |
| HCM Control Delay (s) | 12.7  | 23.3  | 0   | -   | 8.8   | 0   | -   | 32.1  |
| HCM Lane LOS          | B     | C     | A   | -   | A     | A   | -   | D     |
| HCM 95th %tile Q(veh) | 0.3   | 0     | -   | -   | 0     | -   | -   | 0     |

Notes  
 -: Volume exceeds capacity    \$: Delay exceeds 300s    +: Computation Not Defined    \*: All major volume in platoon

Deer Valley 30  
8: 7th Ave & Happy Valley Rd

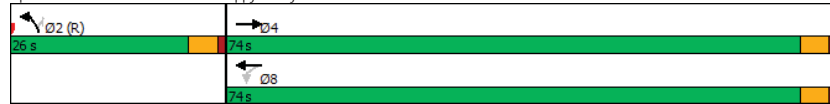
2024 Total AM Scenario A Mitigated  
Timings

| Lane Group           | EBT   | WBL   | WBT   | NBL   | NBR   |
|----------------------|-------|-------|-------|-------|-------|
| Lane Configurations  | ↔     | ↔     | ↔     | ↔     | ↔     |
| Traffic Volume (vph) | 508   | 9     | 282   | 54    | 10    |
| Future Volume (vph)  | 508   | 9     | 282   | 54    | 10    |
| Turn Type            | NA    | Perm  | NA    | Prot  | Perm  |
| Protected Phases     | 4     |       | 8     | 2     |       |
| Permitted Phases     |       | 8     |       |       | 2     |
| Detector Phase       | 4     | 8     | 8     | 2     | 2     |
| Switch Phase         |       |       |       |       |       |
| Minimum Initial (s)  | 5.0   | 5.0   | 5.0   | 5.0   | 5.0   |
| Minimum Split (s)    | 22.5  | 22.5  | 22.5  | 22.5  | 22.5  |
| Total Split (s)      | 74.0  | 74.0  | 74.0  | 26.0  | 26.0  |
| Total Split (%)      | 74.0% | 74.0% | 74.0% | 26.0% | 26.0% |
| Yellow Time (s)      | 3.5   | 3.5   | 3.5   | 3.5   | 3.5   |
| All-Red Time (s)     | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   |
| Lost Time Adjust (s) | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Lost Time (s)  | 4.5   | 4.5   | 4.5   | 4.5   | 4.5   |
| Lead/Lag             |       |       |       |       |       |
| Lead-Lag Optimize?   |       |       |       |       |       |
| Recall Mode          | None  | None  | None  | C-Max | C-Max |
| Act Effct Green (s)  | 60.3  | 60.3  | 60.3  | 30.7  | 30.7  |
| Actuated g/C Ratio   | 0.60  | 0.60  | 0.60  | 0.31  | 0.31  |
| v/c Ratio            | 0.76  | 0.05  | 0.29  | 0.12  | 0.02  |
| Control Delay        | 17.8  | 5.8   | 9.4   | 23.1  | 10.5  |
| Queue Delay          | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Delay          | 17.8  | 5.8   | 9.4   | 23.1  | 10.5  |
| LOS                  | B     | A     | A     | C     | B     |
| Approach Delay       | 17.8  |       | 9.3   | 21.1  |       |
| Approach LOS         | B     |       | A     | C     |       |

Intersection Summary

Cycle Length: 100  
 Actuated Cycle Length: 100  
 Offset: 0 (0%), Referenced to phase 2:NBL and 6.: Start of Green  
 Natural Cycle: 60  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.76  
 Intersection Signal Delay: 15.7  
 Intersection Capacity Utilization 51.4%  
 Analysis Period (min) 15  
 Intersection LOS: B  
 ICU Level of Service A

Splits and Phases: 8: 7th Ave & Happy Valley Rd



Deer Valley 30  
8: 7th Ave & Happy Valley Rd

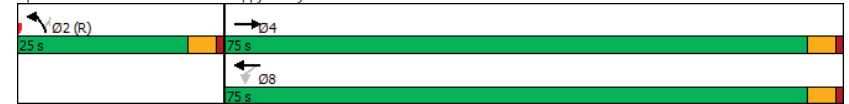
2024 Total PM Scenario A Mitigated  
Timings

| Lane Group           | EBT   | WBL   | WBT   | NBL   | NBR   |
|----------------------|-------|-------|-------|-------|-------|
| Lane Configurations  | ↔     | ↔     | ↔     | ↔     | ↔     |
| Traffic Volume (vph) | 479   | 19    | 854   | 223   | 11    |
| Future Volume (vph)  | 479   | 19    | 854   | 223   | 11    |
| Turn Type            | NA    | Perm  | NA    | Prot  | Perm  |
| Protected Phases     | 4     |       | 8     | 2     |       |
| Permitted Phases     |       | 8     |       |       | 2     |
| Detector Phase       | 4     | 8     | 8     | 2     | 2     |
| Switch Phase         |       |       |       |       |       |
| Minimum Initial (s)  | 5.0   | 5.0   | 5.0   | 5.0   | 5.0   |
| Minimum Split (s)    | 22.5  | 22.5  | 22.5  | 22.5  | 22.5  |
| Total Split (s)      | 75.0  | 75.0  | 75.0  | 25.0  | 25.0  |
| Total Split (%)      | 75.0% | 75.0% | 75.0% | 25.0% | 25.0% |
| Yellow Time (s)      | 3.5   | 3.5   | 3.5   | 3.5   | 3.5   |
| All-Red Time (s)     | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   |
| Lost Time Adjust (s) | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Lost Time (s)  | 4.5   | 4.5   | 4.5   | 4.5   | 4.5   |
| Lead/Lag             |       |       |       |       |       |
| Lead-Lag Optimize?   |       |       |       |       |       |
| Recall Mode          | None  | None  | None  | C-Max | C-Max |
| Act Effct Green (s)  | 66.9  | 66.9  | 66.9  | 24.1  | 24.1  |
| Actuated g/C Ratio   | 0.67  | 0.67  | 0.67  | 0.24  | 0.24  |
| v/c Ratio            | 0.52  | 0.05  | 0.79  | 0.60  | 0.03  |
| Control Delay        | 9.5   | 4.9   | 17.0  | 38.5  | 14.0  |
| Queue Delay          | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Delay          | 9.5   | 4.9   | 17.0  | 38.5  | 14.0  |
| LOS                  | A     | A     | B     | D     | B     |
| Approach Delay       | 9.5   |       | 16.7  | 37.3  |       |
| Approach LOS         | A     |       | B     | D     |       |

Intersection Summary

Cycle Length: 100  
 Actuated Cycle Length: 100  
 Offset: 0 (0%), Referenced to phase 2:NBL and 6.: Start of Green  
 Natural Cycle: 70  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.79  
 Intersection Signal Delay: 17.2  
 Intersection Capacity Utilization 64.8%  
 Analysis Period (min) 15  
 Intersection LOS: B  
 ICU Level of Service C

Splits and Phases: 8: 7th Ave & Happy Valley Rd



Deer Valley 30  
8: 7th Ave & Happy Valley Rd

2024 Total AM Scenario A Mitigated  
HCM 6th Signalized Intersection Summary

| Movement                     | EBT  | EBR  | WBL  | WBT  | NBL  | NBR  |
|------------------------------|------|------|------|------|------|------|
| Lane Configurations          |      |      |      |      |      |      |
| Traffic Volume (veh/h)       | 508  | 214  | 9    | 282  | 54   | 10   |
| Future Volume (veh/h)        | 508  | 214  | 9    | 282  | 54   | 10   |
| Initial Q (Qb), veh          | 0    | 0    | 0    | 0    | 0    | 0    |
| Ped-Bike Adj(A_pbT)          | 1.00 |      | 1.00 |      | 1.00 |      |
| Parking Bus, Adj             | 1.00 |      | 1.00 |      | 1.00 |      |
| Work Zone On Approach        | No   |      | No   |      | No   |      |
| Adj Sat Flow, veh/h/ln       | 1781 | 1781 | 1781 | 1781 | 1781 | 1781 |
| Adj Flow Rate, veh/h         | 552  | 233  | 10   | 307  | 59   | 11   |
| Peak Hour Factor             | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Percent Heavy Veh, %         | 8    | 8    | 8    | 8    | 8    | 8    |
| Cap, veh/h                   | 607  | 256  | 129  | 909  | 678  | 603  |
| Arrive On Green              | 0.51 | 0.51 | 0.51 | 0.51 | 0.40 | 0.40 |
| Sat Flow, veh/h              | 1189 | 502  | 657  | 1781 | 1697 | 1510 |
| Grp Volume(v), veh/h         | 0    | 785  | 10   | 307  | 59   | 11   |
| Grp Sat Flow(s),veh/h/ln     | 0    | 1691 | 657  | 1781 | 1697 | 1510 |
| Q Serve(g_s), s              | 0.0  | 42.4 | 1.4  | 10.2 | 2.2  | 0.4  |
| Cycle Q Clear(g_c), s        | 0.0  | 42.4 | 43.8 | 10.2 | 2.2  | 0.4  |
| Prop In Lane                 | 0.30 |      | 1.00 |      | 1.00 |      |
| Lane Grp Cap(c), veh/h       | 0    | 863  | 129  | 909  | 678  | 603  |
| V/C Ratio(X)                 | 0.00 | 0.91 | 0.08 | 0.34 | 0.09 | 0.02 |
| Avail Cap(c_a), veh/h        | 0    | 1175 | 250  | 1238 | 678  | 603  |
| HCM Platoon Ratio            | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(I)           | 0.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Uniform Delay (d), s/veh     | 0.0  | 22.4 | 42.4 | 14.5 | 18.7 | 18.2 |
| Incr Delay (d2), s/veh       | 0.0  | 8.3  | 0.3  | 0.2  | 0.3  | 0.1  |
| Initial Q Delay(d3),s/veh    | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| %ile BackOfQ(50%),veh/ln     | 0.0  | 17.7 | 0.2  | 4.0  | 0.9  | 0.2  |
| Unsig. Movement Delay, s/veh |      |      |      |      |      |      |
| LnGrp Delay(d),s/veh         | 0.0  | 30.7 | 42.6 | 14.7 | 18.9 | 18.2 |
| LnGrp LOS                    | A    | C    | D    | B    | B    | B    |
| Approach Vol, veh/h          | 785  |      | 317  |      | 70   |      |
| Approach Delay, s/veh        | 30.7 |      | 15.6 |      | 18.8 |      |
| Approach LOS                 | C    |      | B    |      | B    |      |
| Timer - Assigned Phs         | 2    |      | 4    |      | 8    |      |
| Phs Duration (G+Y+Rc), s     | 44.5 |      | 55.5 |      | 55.5 |      |
| Change Period (Y+Rc), s      | 4.5  |      | 4.5  |      | 4.5  |      |
| Max Green Setting (Gmax), s  | 21.5 |      | 69.5 |      | 69.5 |      |
| Max Q Clear Time (g_c+I1), s | 4.2  |      | 44.4 |      | 45.8 |      |
| Green Ext Time (p_c), s      | 0.1  |      | 6.6  |      | 1.9  |      |
| <b>Intersection Summary</b>  |      |      |      |      |      |      |
| HCM 6th Ctrl Delay           |      |      | 25.9 |      |      |      |
| HCM 6th LOS                  |      |      | C    |      |      |      |

Deer Valley 30  
8: 7th Ave & Happy Valley Rd

2024 Total PM Scenario A Mitigated  
HCM 6th Signalized Intersection Summary

| Movement                     | EBT  | EBR  | WBL  | WBT  | NBL  | NBR  |
|------------------------------|------|------|------|------|------|------|
| Lane Configurations          |      |      |      |      |      |      |
| Traffic Volume (veh/h)       | 479  | 77   | 19   | 854  | 223  | 11   |
| Future Volume (veh/h)        | 479  | 77   | 19   | 854  | 223  | 11   |
| Initial Q (Qb), veh          | 0    | 0    | 0    | 0    | 0    | 0    |
| Ped-Bike Adj(A_pbT)          | 1.00 |      | 1.00 |      | 1.00 |      |
| Parking Bus, Adj             | 1.00 |      | 1.00 |      | 1.00 |      |
| Work Zone On Approach        | No   |      | No   |      | No   |      |
| Adj Sat Flow, veh/h/ln       | 1781 | 1781 | 1781 | 1781 | 1781 | 1781 |
| Adj Flow Rate, veh/h         | 521  | 84   | 21   | 928  | 242  | 12   |
| Peak Hour Factor             | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Percent Heavy Veh, %         | 8    | 8    | 8    | 8    | 8    | 8    |
| Cap, veh/h                   | 851  | 137  | 335  | 1013 | 579  | 515  |
| Arrive On Green              | 0.57 | 0.57 | 0.57 | 0.57 | 0.34 | 0.34 |
| Sat Flow, veh/h              | 1497 | 241  | 776  | 1781 | 1697 | 1510 |
| Grp Volume(v), veh/h         | 0    | 605  | 21   | 928  | 242  | 12   |
| Grp Sat Flow(s),veh/h/ln     | 0    | 1738 | 776  | 1781 | 1697 | 1510 |
| Q Serve(g_s), s              | 0.0  | 23.0 | 1.8  | 46.9 | 11.0 | 0.5  |
| Cycle Q Clear(g_c), s        | 0.0  | 23.0 | 24.9 | 46.9 | 11.0 | 0.5  |
| Prop In Lane                 | 0.14 |      | 1.00 |      | 1.00 |      |
| Lane Grp Cap(c), veh/h       | 0    | 988  | 335  | 1013 | 579  | 515  |
| V/C Ratio(X)                 | 0.00 | 0.61 | 0.06 | 0.92 | 0.42 | 0.02 |
| Avail Cap(c_a), veh/h        | 0    | 1225 | 440  | 1256 | 579  | 515  |
| HCM Platoon Ratio            | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(I)           | 0.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Uniform Delay (d), s/veh     | 0.0  | 14.3 | 22.5 | 19.4 | 25.3 | 21.9 |
| Incr Delay (d2), s/veh       | 0.0  | 0.6  | 0.1  | 9.2  | 2.2  | 0.1  |
| Initial Q Delay(d3),s/veh    | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| %ile BackOfQ(50%),veh/ln     | 0.0  | 8.6  | 0.3  | 20.2 | 4.7  | 0.2  |
| Unsig. Movement Delay, s/veh |      |      |      |      |      |      |
| LnGrp Delay(d),s/veh         | 0.0  | 14.9 | 22.6 | 28.6 | 27.5 | 21.9 |
| LnGrp LOS                    | A    | B    | C    | C    | C    | C    |
| Approach Vol, veh/h          | 605  |      | 949  |      | 254  |      |
| Approach Delay, s/veh        | 14.9 |      | 28.5 |      | 27.3 |      |
| Approach LOS                 | B    |      | C    |      | C    |      |
| Timer - Assigned Phs         | 2    |      | 4    |      | 8    |      |
| Phs Duration (G+Y+Rc), s     | 38.6 |      | 61.4 |      | 61.4 |      |
| Change Period (Y+Rc), s      | 4.5  |      | 4.5  |      | 4.5  |      |
| Max Green Setting (Gmax), s  | 20.5 |      | 70.5 |      | 70.5 |      |
| Max Q Clear Time (g_c+I1), s | 13.0 |      | 25.0 |      | 48.9 |      |
| Green Ext Time (p_c), s      | 0.4  |      | 4.9  |      | 8.0  |      |
| <b>Intersection Summary</b>  |      |      |      |      |      |      |
| HCM 6th Ctrl Delay           |      |      | 23.8 |      |      |      |
| HCM 6th LOS                  |      |      | C    |      |      |      |

Deer Valley 30  
9: 7th Ave & Pinnacle Peak Rd

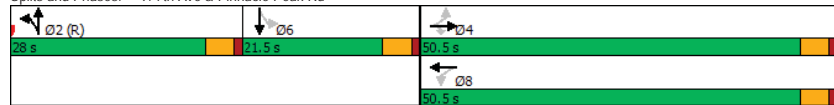
2024 Total AM Scenario A Mitigated  
Timings

| Lane Group           | EBL   | EBT   | EBR   | WBL   | WBT   | NBL   | NBT   | SBL   | SBT   |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations  | ↔     | ↔     | ↔     | ↔     | ↔     | ↔     | ↔     | ↔     | ↔     |
| Traffic Volume (vph) | 175   | 455   | 282   | 46    | 366   | 79    | 96    | 65    | 40    |
| Future Volume (vph)  | 175   | 455   | 282   | 46    | 366   | 79    | 96    | 65    | 40    |
| Turn Type            | Perm  | NA    | Perm  | Perm  | NA    | Split | NA    | Perm  | NA    |
| Protected Phases     |       | 4     |       |       |       | 2     | 2     |       | 6     |
| Permitted Phases     | 4     |       | 4     | 8     |       |       |       | 6     |       |
| Detector Phase       | 4     | 4     | 4     | 8     | 8     | 2     | 2     | 6     | 6     |
| Switch Phase         |       |       |       |       |       |       |       |       |       |
| Minimum Initial (s)  | 5.0   | 5.0   | 5.0   | 5.0   | 5.0   | 5.0   | 5.0   | 5.0   | 5.0   |
| Minimum Split (s)    | 22.5  | 22.5  | 22.5  | 22.5  | 22.5  | 22.5  | 22.5  | 22.5  | 22.5  |
| Total Split (s)      | 50.5  | 50.5  | 50.5  | 50.5  | 50.5  | 28.0  | 28.0  | 21.5  | 21.5  |
| Total Split (%)      | 50.5% | 50.5% | 50.5% | 50.5% | 50.5% | 28.0% | 28.0% | 21.5% | 21.5% |
| Yellow Time (s)      | 3.5   | 3.5   | 3.5   | 3.5   | 3.5   | 3.5   | 3.5   | 3.5   | 3.5   |
| All-Red Time (s)     | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   |
| Lost Time Adjust (s) | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Lost Time (s)  | 4.5   | 4.5   | 4.5   | 4.5   | 4.5   | 4.5   | 4.5   | 4.5   | 4.5   |
| Lead/Lag             |       |       |       |       |       |       |       |       |       |
| Lead-Lag Optimize?   |       |       |       |       |       |       |       |       |       |
| Recall Mode          | None  | None  | None  | None  | None  | C-Max | C-Max | Max   | Max   |
| Act Effct Green (s)  | 46.0  | 46.0  | 46.0  | 46.0  | 46.0  | 23.5  | 23.5  | 17.0  | 17.0  |
| Actuated g/C Ratio   | 0.46  | 0.46  | 0.46  | 0.46  | 0.46  | 0.24  | 0.24  | 0.17  | 0.17  |
| v/c Ratio            | 1.28  | 0.61  | 0.36  | 0.20  | 0.82  | 0.22  | 0.32  | 0.35  | 0.26  |
| Control Delay        | 193.7 | 24.3  | 3.2   | 18.7  | 32.5  | 32.7  | 31.0  | 56.6  | 37.5  |
| Queue Delay          | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Delay          | 193.7 | 24.3  | 3.2   | 18.7  | 32.5  | 32.7  | 31.0  | 56.6  | 37.5  |
| LOS                  | F     | C     | A     | B     | C     | C     | C     | E     | D     |
| Approach Delay       |       | 50.2  |       |       | 31.5  |       | 31.7  |       | 46.4  |
| Approach LOS         |       | D     |       |       | C     |       | C     |       | D     |

Intersection Summary

|  |                        |
|--|------------------------|
| Cycle Length: 100  |                        |
| Actuated Cycle Length: 100                                 |                        |
| Offset: 0 (0%), Referenced to phase 2:NBTL, Start of Green |                        |
| Natural Cycle: 90  |                        |
| Control Type: Actuated-Coordinated                         |                        |
| Maximum v/c Ratio: 1.28                                    |                        |
| Intersection Signal Delay: 41.7                            | Intersection LOS: D    |
| Intersection Capacity Utilization 68.7%                    | ICU Level of Service C |
| Analysis Period (min) 15                                   |                        |

Splits and Phases: 9: 7th Ave & Pinnacle Peak Rd



Deer Valley 30  
9: 7th Ave & Pinnacle Peak Rd

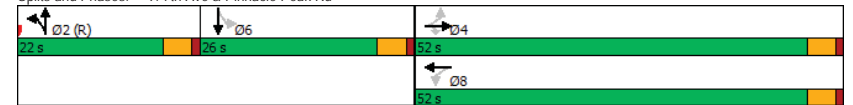
2024 Total PM Scenario A Mitigated  
Timings

| Lane Group           | EBL   | EBT   | EBR   | WBL   | WBT   | NBL   | NBT   | SBL   | SBT   |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations  | ↔     | ↔     | ↔     | ↔     | ↔     | ↔     | ↔     | ↔     | ↔     |
| Traffic Volume (vph) | 39    | 389   | 74    | 30    | 440   | 207   | 39    | 211   | 90    |
| Future Volume (vph)  | 39    | 389   | 74    | 30    | 440   | 207   | 39    | 211   | 90    |
| Turn Type            | Perm  | NA    | Perm  | Perm  | NA    | Split | NA    | Perm  | NA    |
| Protected Phases     |       | 4     |       |       |       | 8     | 2     | 2     | 6     |
| Permitted Phases     | 4     |       | 4     | 8     |       |       |       | 6     |       |
| Detector Phase       | 4     | 4     | 4     | 8     | 8     | 2     | 2     | 6     | 6     |
| Switch Phase         |       |       |       |       |       |       |       |       |       |
| Minimum Initial (s)  | 5.0   | 5.0   | 5.0   | 5.0   | 5.0   | 5.0   | 5.0   | 5.0   | 5.0   |
| Minimum Split (s)    | 22.5  | 22.5  | 22.5  | 22.5  | 22.5  | 22.5  | 22.5  | 22.5  | 22.5  |
| Total Split (s)      | 52.0  | 52.0  | 52.0  | 52.0  | 52.0  | 22.0  | 22.0  | 26.0  | 26.0  |
| Total Split (%)      | 52.0% | 52.0% | 52.0% | 52.0% | 52.0% | 22.0% | 22.0% | 26.0% | 26.0% |
| Yellow Time (s)      | 3.5   | 3.5   | 3.5   | 3.5   | 3.5   | 3.5   | 3.5   | 3.5   | 3.5   |
| All-Red Time (s)     | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   |
| Lost Time Adjust (s) | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Lost Time (s)  | 4.5   | 4.5   | 4.5   | 4.5   | 4.5   | 4.5   | 4.5   | 4.5   | 4.5   |
| Lead/Lag             |       |       |       |       |       |       |       |       |       |
| Lead-Lag Optimize?   |       |       |       |       |       |       |       |       |       |
| Recall Mode          | None  | None  | None  | None  | None  | C-Max | C-Max | Max   | Max   |
| Act Effct Green (s)  | 38.4  | 38.4  | 38.4  | 38.4  | 38.4  | 26.6  | 26.6  | 21.5  | 21.5  |
| Actuated g/C Ratio   | 0.38  | 0.38  | 0.38  | 0.38  | 0.38  | 0.27  | 0.27  | 0.22  | 0.22  |
| v/c Ratio            | 0.33  | 0.63  | 0.13  | 0.15  | 0.82  | 0.51  | 0.18  | 0.86  | 0.69  |
| Control Delay        | 26.8  | 28.5  | 4.1   | 19.1  | 37.6  | 38.8  | 19.5  | 72.2  | 38.2  |
| Queue Delay          | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Delay          | 26.8  | 28.5  | 4.1   | 19.1  | 37.6  | 38.8  | 19.5  | 72.2  | 38.2  |
| LOS                  | C     | C     | A     | B     | D     | D     | B     | E     | D     |
| Approach Delay       |       | 24.8  |       |       | 36.5  |       | 33.5  |       | 53.4  |
| Approach LOS         |       | C     |       |       | D     |       | C     |       | D     |

Intersection Summary

|  |                        |
|--|------------------------|
| Cycle Length: 100  |                        |
| Actuated Cycle Length: 100                                 |                        |
| Offset: 0 (0%), Referenced to phase 2:NBTL, Start of Green |                        |
| Natural Cycle: 80  |                        |
| Control Type: Actuated-Coordinated                         |                        |
| Maximum v/c Ratio: 0.86                                    |                        |
| Intersection Signal Delay: 37.2                            | Intersection LOS: D    |
| Intersection Capacity Utilization 70.3%                    | ICU Level of Service C |
| Analysis Period (min) 15                                   |                        |

Splits and Phases: 9: 7th Ave & Pinnacle Peak Rd



Deer Valley 30  
9: 7th Ave & Pinnacle Peak Rd

2024 Total AM Scenario A Mitigated  
HCM 6th Signalized Intersection Summary

| Movement                     | EBL   | EBT  | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
|------------------------------|-------|------|------|------|------|------|------|------|------|------|------|------|
| Lane Configurations          | ↔     | ↑    | ↘    | ↙    | ↖    | ↗    | ↔    | ↑    | ↘    | ↙    | ↖    | ↗    |
| Traffic Volume (veh/h)       | 175   | 455  | 282  | 46   | 366  | 228  | 79   | 96   | 26   | 65   | 40   | 35   |
| Future Volume (veh/h)        | 175   | 455  | 282  | 46   | 366  | 228  | 79   | 96   | 26   | 65   | 40   | 35   |
| Initial Q (Ob), veh          | 0     | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Ped-Bike Adj(A_pbT)          | 1.00  |      | 1.00 | 1.00 |      | 1.00 | 1.00 |      | 1.00 | 1.00 |      | 1.00 |
| Parking Bus, Adj             | 1.00  | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Work Zone On Approach        | No    |      | No   |      | No   |      | No   |      | No   |      | No   |      |
| Adj Sat Flow, veh/h/ln       | 1781  | 1781 | 1781 | 1781 | 1781 | 1781 | 1781 | 1781 | 1781 | 1781 | 1781 | 1781 |
| Adj Flow Rate, veh/h         | 190   | 495  | 307  | 50   | 398  | 248  | 86   | 104  | 28   | 71   | 43   | 38   |
| Peak Hour Factor             | 0.92  | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Percent Heavy Veh, %         | 8     | 8    | 8    | 8    | 8    | 8    | 8    | 8    | 8    | 8    | 8    | 8    |
| Cap, veh/h                   | 160   | 819  | 694  | 235  | 472  | 294  | 399  | 318  | 86   | 288  | 148  | 131  |
| Arrive On Green              | 0.46  | 0.46 | 0.46 | 0.46 | 0.46 | 0.46 | 0.23 | 0.23 | 0.23 | 0.17 | 0.17 | 0.17 |
| Sat Flow, veh/h              | 747   | 1781 | 1510 | 646  | 1027 | 640  | 1697 | 1352 | 364  | 1697 | 872  | 771  |
| Grp Volume(v), veh/h         | 190   | 495  | 307  | 50   | 0    | 646  | 86   | 0    | 132  | 71   | 0    | 81   |
| Grp Sat Flow(s), veh/h/ln    | 747   | 1781 | 1510 | 646  | 0    | 1666 | 1697 | 0    | 1716 | 1697 | 0    | 1643 |
| Q Serve(g_s), s              | 11.8  | 20.8 | 13.8 | 6.3  | 0.0  | 34.2 | 4.1  | 0.0  | 6.4  | 3.6  | 0.0  | 4.3  |
| Cycle Q Clear(g_c), s        | 46.0  | 20.8 | 13.8 | 27.0 | 0.0  | 34.2 | 4.1  | 0.0  | 6.4  | 3.6  | 0.0  | 4.3  |
| Prop In Lane                 | 1.00  |      | 1.00 | 1.00 |      | 0.38 | 1.00 |      | 0.21 | 1.00 |      | 0.47 |
| Lane Grp Cap(c), veh/h       | 160   | 819  | 694  | 235  | 0    | 766  | 399  | 0    | 403  | 288  | 0    | 279  |
| V/C Ratio(X)                 | 1.19  | 0.60 | 0.44 | 0.21 | 0.00 | 0.84 | 0.22 | 0.00 | 0.33 | 0.25 | 0.00 | 0.29 |
| Avail Cap(c_a), veh/h        | 160   | 819  | 694  | 235  | 0    | 766  | 399  | 0    | 403  | 288  | 0    | 279  |
| HCM Platoon Ratio            | 1.00  | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(I)           | 0.46  | 0.46 | 0.46 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 | 1.00 |
| Uniform Delay (d), s/veh     | 46.7  | 20.2 | 18.3 | 30.3 | 0.0  | 23.8 | 30.8 | 0.0  | 31.7 | 35.9 | 0.0  | 36.2 |
| Incr Delay (d2), s/veh       | 108.9 | 0.6  | 0.2  | 0.4  | 0.0  | 8.5  | 1.2  | 0.0  | 2.2  | 2.0  | 0.0  | 2.6  |
| Initial Q Delay(d3), s/veh   | 0.0   | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| %ile BackOfQ(50%), veh/ln    | 8.8   | 8.4  | 4.7  | 1.0  | 0.0  | 14.6 | 1.8  | 0.0  | 2.9  | 1.7  | 0.0  | 1.9  |
| Unsig. Movement Delay, s/veh |       |      |      |      |      |      |      |      |      |      |      |      |
| LnGrp Delay(d), s/veh        | 155.6 | 20.8 | 18.5 | 30.8 | 0.0  | 32.3 | 32.1 | 0.0  | 33.9 | 38.0 | 0.0  | 38.8 |
| LnGrp LOS                    | F     | C    | B    | C    | A    | C    | C    | A    | C    | D    | A    | D    |
| Approach Vol, veh/h          |       | 992  |      |      | 696  |      |      | 218  |      |      | 152  |      |
| Approach Delay, s/veh        |       | 45.9 |      |      | 32.2 |      |      | 33.1 |      |      | 38.4 |      |
| Approach LOS                 |       | D    |      |      | C    |      |      | C    |      |      | D    |      |
| Timer - Assigned Phs         |       | 2    |      | 4    |      | 6    |      | 8    |      |      |      |      |
| Phs Duration (G+Y+Rc), s     |       | 28.0 |      | 50.5 |      | 21.5 |      | 50.5 |      |      | 42.6 |      |
| Change Period (Y+Rc), s      |       | 4.5  |      | 4.5  |      | 4.5  |      | 4.5  |      |      | 4.5  |      |
| Max Green Setting (Gmax), s  |       | 23.5 |      | 46.0 |      | 17.0 |      | 46.0 |      |      | 47.5 |      |
| Max Q Clear Time (g_c+I1), s |       | 8.4  |      | 48.0 |      | 6.3  |      | 36.2 |      |      | 30.6 |      |
| Green Ext Time (p_c), s      |       | 0.8  |      | 0.0  |      | 0.4  |      | 3.5  |      |      | 1.2  |      |

| Intersection Summary |  |      |
|----------------------|--|------|
| HCM 6th Ctrl Delay   |  | 39.4 |
| HCM 6th LOS          |  | D    |

Notes  
User approved pedestrian interval to be less than phase max green.

Deer Valley 30  
9: 7th Ave & Pinnacle Peak Rd

2024 Total PM Scenario A Mitigated  
HCM 6th Signalized Intersection Summary

| Movement                     | EBL  | EBT  | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
|------------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Lane Configurations          | ↔    | ↑    | ↘    | ↙    | ↖    | ↗    | ↔    | ↑    | ↘    | ↙    | ↖    | ↗    |
| Traffic Volume (veh/h)       | 39   | 389  | 74   | 30   | 440  | 66   | 207  | 39   | 40   | 211  | 90   | 170  |
| Future Volume (veh/h)        | 39   | 389  | 74   | 30   | 440  | 66   | 207  | 39   | 40   | 211  | 90   | 170  |
| Initial Q (Ob), veh          | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Ped-Bike Adj(A_pbT)          | 1.00 |      | 1.00 | 1.00 |      | 1.00 | 1.00 |      | 1.00 | 1.00 |      | 1.00 |
| Parking Bus, Adj             | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Work Zone On Approach        | No   |      | No   |      | No   |      | No   |      | No   |      | No   |      |
| Adj Sat Flow, veh/h/ln       | 1781 | 1781 | 1781 | 1781 | 1781 | 1781 | 1781 | 1781 | 1781 | 1781 | 1781 | 1781 |
| Adj Flow Rate, veh/h         | 42   | 423  | 80   | 33   | 478  | 72   | 225  | 42   | 43   | 229  | 98   | 131  |
| Peak Hour Factor             | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Percent Heavy Veh, %         | 8    | 8    | 8    | 8    | 8    | 8    | 8    | 8    | 8    | 8    | 8    | 8    |
| Cap, veh/h                   | 149  | 678  | 575  | 232  | 576  | 87   | 457  | 217  | 222  | 365  | 149  | 199  |
| Arrive On Green              | 0.38 | 0.38 | 0.38 | 0.38 | 0.38 | 0.38 | 0.27 | 0.27 | 0.27 | 0.22 | 0.22 | 0.22 |
| Sat Flow, veh/h              | 817  | 1781 | 1510 | 853  | 1513 | 228  | 1697 | 807  | 826  | 1697 | 691  | 924  |
| Grp Volume(v), veh/h         | 42   | 423  | 80   | 33   | 0    | 550  | 225  | 0    | 85   | 229  | 0    | 229  |
| Grp Sat Flow(s), veh/h/ln    | 817  | 1781 | 1510 | 853  | 0    | 1740 | 1697 | 0    | 1633 | 1697 | 0    | 1615 |
| Q Serve(g_s), s              | 4.9  | 19.3 | 3.5  | 3.3  | 0.0  | 28.6 | 11.2 | 0.0  | 4.0  | 12.2 | 0.0  | 13.0 |
| Cycle Q Clear(g_c), s        | 33.5 | 19.3 | 3.5  | 22.6 | 0.0  | 28.6 | 11.2 | 0.0  | 4.0  | 12.2 | 0.0  | 13.0 |
| Prop In Lane                 | 1.00 |      | 1.00 | 1.00 |      | 0.13 | 1.00 |      | 0.51 | 1.00 |      | 0.57 |
| Lane Grp Cap(c), veh/h       | 149  | 678  | 575  | 232  | 0    | 662  | 457  | 0    | 440  | 365  | 0    | 347  |
| V/C Ratio(X)                 | 0.28 | 0.62 | 0.14 | 0.14 | 0.00 | 0.83 | 0.49 | 0.00 | 0.19 | 0.63 | 0.00 | 0.66 |
| Avail Cap(c_a), veh/h        | 226  | 846  | 717  | 313  | 0    | 827  | 457  | 0    | 440  | 365  | 0    | 347  |
| HCM Platoon Ratio            | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(I)           | 0.79 | 0.79 | 0.79 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 | 1.00 |
| Uniform Delay (d), s/veh     | 43.2 | 25.2 | 20.3 | 34.3 | 0.0  | 28.0 | 30.8 | 0.0  | 28.2 | 35.6 | 0.0  | 35.9 |
| Incr Delay (d2), s/veh       | 0.8  | 0.7  | 0.1  | 0.3  | 0.0  | 5.9  | 3.8  | 0.0  | 1.0  | 7.9  | 0.0  | 9.5  |
| Initial Q Delay(d3), s/veh   | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| %ile BackOfQ(50%), veh/ln    | 1.0  | 8.1  | 1.2  | 0.7  | 0.0  | 12.6 | 5.0  | 0.0  | 1.7  | 5.8  | 0.0  | 6.0  |
| Unsig. Movement Delay, s/veh |      |      |      |      |      |      |      |      |      |      |      |      |
| LnGrp Delay(d), s/veh        | 44.0 | 25.9 | 20.3 | 34.6 | 0.0  | 33.9 | 34.5 | 0.0  | 29.1 | 43.6 | 0.0  | 45.4 |
| LnGrp LOS                    | D    | C    | C    | C    | A    | C    | C    | A    | C    | D    | A    | D    |
| Approach Vol, veh/h          |      | 545  |      |      | 583  |      |      | 310  |      |      | 458  |      |
| Approach Delay, s/veh        |      | 26.5 |      |      | 33.9 |      |      | 33.1 |      |      | 44.5 |      |
| Approach LOS                 |      | C    |      |      | C    |      |      | C    |      |      | D    |      |
| Timer - Assigned Phs         |      | 2    |      | 4    |      | 6    |      | 8    |      |      |      |      |
| Phs Duration (G+Y+Rc), s     |      | 31.4 |      | 42.6 |      | 26.0 |      | 42.6 |      |      | 47.5 |      |
| Change Period (Y+Rc), s      |      | 4.5  |      | 4.5  |      | 4.5  |      | 4.5  |      |      | 4.5  |      |
| Max Green Setting (Gmax), s  |      | 17.5 |      | 47.5 |      | 21.5 |      | 47.5 |      |      | 30.6 |      |
| Max Q Clear Time (g_c+I1), s |      | 13.2 |      | 35.5 |      | 15.0 |      | 30.6 |      |      | 1.2  |      |
| Green Ext Time (p_c), s      |      | 0.5  |      | 2.5  |      | 1.2  |      | 3.6  |      |      | 1.2  |      |

| Intersection Summary |  |      |
|----------------------|--|------|
| HCM 6th Ctrl Delay   |  | 34.2 |
| HCM 6th LOS          |  | C    |

Notes  
User approved pedestrian interval to be less than phase max green.

Deer Valley 30  
10: 7th Ave & Alameda Rd

2024 Total AM Scenario A Mitigated  
HCM 6th TWSC

| Intersection             |        |        |        |      |      |      |
|--------------------------|--------|--------|--------|------|------|------|
| Int Delay, s/veh         | 5.1    |        |        |      |      |      |
| Movement                 | EBL    | EBR    | NBL    | NBT  | SBT  | SBR  |
| Lane Configurations      | ↔      |        | ↔      | ↔    | ↔    |      |
| Traffic Vol, veh/h       | 14     | 51     | 263    | 50   | 155  | 68   |
| Future Vol, veh/h        | 14     | 51     | 263    | 50   | 155  | 68   |
| Conflicting Peds, #/hr   | 0      | 0      | 0      | 0    | 0    | 0    |
| Sign Control             | Stop   | Stop   | Free   | Free | Free | Free |
| RT Channelized           | -      | None   | -      | None | -    | None |
| Storage Length           | 0      | -      | 150    | -    | -    | -    |
| Veh in Median Storage, # | 0      | -      | -      | 0    | 0    | -    |
| Grade, %                 | 0      | -      | -      | 0    | 0    | -    |
| Peak Hour Factor         | 92     | 92     | 92     | 92   | 92   | 92   |
| Heavy Vehicles, %        | 8      | 8      | 8      | 8    | 8    | 8    |
| Mvmt Flow                | 15     | 55     | 286    | 54   | 168  | 74   |
| Major/Minor              | Minor2 | Major1 | Major2 |      |      |      |
| Conflicting Flow All     | 831    | 205    | 242    | 0    | -    | 0    |
| Stage 1                  | 205    | -      | -      | -    | -    | -    |
| Stage 2                  | 626    | -      | -      | -    | -    | -    |
| Critical Hdwy            | 6.48   | 6.28   | 4.18   | -    | -    | -    |
| Critical Hdwy Stg 1      | 5.48   | -      | -      | -    | -    | -    |
| Critical Hdwy Stg 2      | 5.48   | -      | -      | -    | -    | -    |
| Follow-up Hdwy           | 3.572  | 3.372  | 2.272  | -    | -    | -    |
| Pot Cap-1 Maneuver       | 332    | 821    | 1290   | -    | -    | -    |
| Stage 1                  | 815    | -      | -      | -    | -    | -    |
| Stage 2                  | 522    | -      | -      | -    | -    | -    |
| Platoon blocked, %       | -      | -      | -      | -    | -    | -    |
| Mov Cap-1 Maneuver       | 258    | 821    | 1290   | -    | -    | -    |
| Mov Cap-2 Maneuver       | 258    | -      | -      | -    | -    | -    |
| Stage 1                  | 634    | -      | -      | -    | -    | -    |
| Stage 2                  | 522    | -      | -      | -    | -    | -    |
| Approach                 | EB     | NB     | SB     |      |      |      |
| HCM Control Delay, s     | 12.4   | 7.2    | 0      |      |      |      |
| HCM LOS                  | B      |        |        |      |      |      |
| Minor Lane/Major Mvmt    | NBL    | NBT    | EBLn1  | SBT  | SBR  |      |
| Capacity (veh/h)         | 1290   | -      | 559    | -    | -    |      |
| HCM Lane V/C Ratio       | 0.222  | -      | 0.126  | -    | -    |      |
| HCM Control Delay (s)    | 8.6    | -      | 12.4   | -    | -    |      |
| HCM Lane LOS             | A      | -      | B      | -    | -    |      |
| HCM 95th %tile Q(veh)    | 0.8    | -      | 0.4    | -    | -    |      |

Deer Valley 30  
10: 7th Ave & Alameda Rd

2024 Total PM Scenario A Mitigated  
HCM 6th TWSC

| Intersection             |        |        |        |      |      |      |
|--------------------------|--------|--------|--------|------|------|------|
| Int Delay, s/veh         | 6.7    |        |        |      |      |      |
| Movement                 | EBL    | EBR    | NBL    | NBT  | SBT  | SBR  |
| Lane Configurations      | ↔      |        | ↔      | ↔    | ↔    |      |
| Traffic Vol, veh/h       | 67     | 241    | 53     | 168  | 81   | 15   |
| Future Vol, veh/h        | 67     | 241    | 53     | 168  | 81   | 15   |
| Conflicting Peds, #/hr   | 0      | 0      | 0      | 0    | 0    | 0    |
| Sign Control             | Stop   | Stop   | Free   | Free | Free | Free |
| RT Channelized           | -      | None   | -      | None | -    | None |
| Storage Length           | 0      | -      | 150    | -    | -    | -    |
| Veh in Median Storage, # | 0      | -      | -      | 0    | 0    | -    |
| Grade, %                 | 0      | -      | -      | 0    | 0    | -    |
| Peak Hour Factor         | 92     | 92     | 92     | 92   | 92   | 92   |
| Heavy Vehicles, %        | 8      | 8      | 8      | 8    | 8    | 8    |
| Mvmt Flow                | 73     | 262    | 58     | 183  | 88   | 16   |
| Major/Minor              | Minor2 | Major1 | Major2 |      |      |      |
| Conflicting Flow All     | 395    | 96     | 104    | 0    | -    | 0    |
| Stage 1                  | 96     | -      | -      | -    | -    | -    |
| Stage 2                  | 299    | -      | -      | -    | -    | -    |
| Critical Hdwy            | 6.48   | 6.28   | 4.18   | -    | -    | -    |
| Critical Hdwy Stg 1      | 5.48   | -      | -      | -    | -    | -    |
| Critical Hdwy Stg 2      | 5.48   | -      | -      | -    | -    | -    |
| Follow-up Hdwy           | 3.572  | 3.372  | 2.272  | -    | -    | -    |
| Pot Cap-1 Maneuver       | 598    | 944    | 1451   | -    | -    | -    |
| Stage 1                  | 913    | -      | -      | -    | -    | -    |
| Stage 2                  | 739    | -      | -      | -    | -    | -    |
| Platoon blocked, %       | -      | -      | -      | -    | -    | -    |
| Mov Cap-1 Maneuver       | 574    | 944    | 1451   | -    | -    | -    |
| Mov Cap-2 Maneuver       | 574    | -      | -      | -    | -    | -    |
| Stage 1                  | 876    | -      | -      | -    | -    | -    |
| Stage 2                  | 739    | -      | -      | -    | -    | -    |
| Approach                 | EB     | NB     | SB     |      |      |      |
| HCM Control Delay, s     | 12.3   | 1.8    | 0      |      |      |      |
| HCM LOS                  | B      |        |        |      |      |      |
| Minor Lane/Major Mvmt    | NBL    | NBT    | EBLn1  | SBT  | SBR  |      |
| Capacity (veh/h)         | 1451   | -      | 828    | -    | -    |      |
| HCM Lane V/C Ratio       | 0.04   | -      | 0.404  | -    | -    |      |
| HCM Control Delay (s)    | 7.6    | -      | 12.3   | -    | -    |      |
| HCM Lane LOS             | A      | -      | B      | -    | -    |      |
| HCM 95th %tile Q(veh)    | 0.1    | -      | 2      | -    | -    |      |



Deer Valley 30  
11: 15th Ave & Parkview Ln

2024 Total AM Scenario A Mitigated  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh         | 0    |      |      |      |      |      |
| Movement                 | EBT  | EBR  | WBL  | WBT  | NBL  | NBR  |
| Lane Configurations      | ↻    |      |      | ↻    | ↻    |      |
| Traffic Vol, veh/h       | 0    | 0    | 0    | 0    | 0    | 0    |
| Future Vol, veh/h        | 0    | 0    | 0    | 0    | 0    | 0    |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Free | Free | Free | Free | Stop | Stop |
| RT Channelized           | -    | None | -    | None | -    | None |
| Storage Length           | -    | -    | -    | -    | 0    | -    |
| Veh in Median Storage, # | 0    | -    | -    | 0    | 0    | -    |
| Grade, %                 | 0    | -    | -    | 0    | 0    | -    |
| Peak Hour Factor         | 92   | 92   | 92   | 92   | 92   | 92   |
| Heavy Vehicles, %        | 8    | 8    | 8    | 8    | 8    | 8    |
| Mvmt Flow                | 0    | 0    | 0    | 0    | 0    | 0    |

| Major/Minor          | Major1 | Major2 | Minor1 |   |       |
|----------------------|--------|--------|--------|---|-------|
| Conflicting Flow All | 0      | 0      | 1      | 0 | 2     |
| Stage 1              | -      | -      | -      | - | 1     |
| Stage 2              | -      | -      | -      | - | 1     |
| Critical Hdwy        | -      | -      | 4.18   | - | 6.48  |
| Critical Hdwy Stg 1  | -      | -      | -      | - | 5.48  |
| Critical Hdwy Stg 2  | -      | -      | -      | - | 5.48  |
| Follow-up Hdwy       | -      | -      | 2.272  | - | 3.572 |
| Pot Cap-1 Maneuver   | -      | -      | 1583   | - | 1005  |
| Stage 1              | -      | -      | -      | - | 1007  |
| Stage 2              | -      | -      | -      | - | 1007  |
| Platoon blocked, %   | -      | -      | -      | - | -     |
| Mov Cap-1 Maneuver   | -      | -      | 1583   | - | 1005  |
| Mov Cap-2 Maneuver   | -      | -      | -      | - | 1005  |
| Stage 1              | -      | -      | -      | - | 1007  |
| Stage 2              | -      | -      | -      | - | 1007  |

| Approach             | EB | WB | NB |
|----------------------|----|----|----|
| HCM Control Delay, s | 0  | 0  | 0  |
| HCM LOS              |    |    | A  |

| Minor Lane/Major Mvmt | NBLn1 | EBT | EBR | WBL  | WBT |
|-----------------------|-------|-----|-----|------|-----|
| Capacity (veh/h)      | -     | -   | -   | 1583 | -   |
| HCM Lane V/C Ratio    | -     | -   | -   | -    | -   |
| HCM Control Delay (s) | 0     | -   | -   | 0    | -   |
| HCM Lane LOS          | A     | -   | -   | A    | -   |
| HCM 95th %tile Q(veh) | -     | -   | -   | 0    | -   |

Deer Valley 30  
11: 15th Ave & Parkview Ln

2024 Total PM Scenario A Mitigated  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh         | 0    |      |      |      |      |      |
| Movement                 | EBT  | EBR  | WBL  | WBT  | NBL  | NBR  |
| Lane Configurations      | ↻    |      |      | ↻    | ↻    |      |
| Traffic Vol, veh/h       | 0    | 0    | 0    | 0    | 0    | 0    |
| Future Vol, veh/h        | 0    | 0    | 0    | 0    | 0    | 0    |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Free | Free | Free | Free | Stop | Stop |
| RT Channelized           | -    | None | -    | None | -    | None |
| Storage Length           | -    | -    | -    | -    | 0    | -    |
| Veh in Median Storage, # | 0    | -    | -    | 0    | 0    | -    |
| Grade, %                 | 0    | -    | -    | 0    | 0    | -    |
| Peak Hour Factor         | 92   | 92   | 92   | 92   | 92   | 92   |
| Heavy Vehicles, %        | 8    | 8    | 8    | 8    | 8    | 8    |
| Mvmt Flow                | 0    | 0    | 0    | 0    | 0    | 0    |

| Major/Minor          | Major1 | Major2 | Minor1 |   |       |
|----------------------|--------|--------|--------|---|-------|
| Conflicting Flow All | 0      | 0      | 1      | 0 | 2     |
| Stage 1              | -      | -      | -      | - | 1     |
| Stage 2              | -      | -      | -      | - | 1     |
| Critical Hdwy        | -      | -      | 4.18   | - | 6.48  |
| Critical Hdwy Stg 1  | -      | -      | -      | - | 5.48  |
| Critical Hdwy Stg 2  | -      | -      | -      | - | 5.48  |
| Follow-up Hdwy       | -      | -      | 2.272  | - | 3.572 |
| Pot Cap-1 Maneuver   | -      | -      | 1583   | - | 1005  |
| Stage 1              | -      | -      | -      | - | 1007  |
| Stage 2              | -      | -      | -      | - | 1007  |
| Platoon blocked, %   | -      | -      | -      | - | -     |
| Mov Cap-1 Maneuver   | -      | -      | 1583   | - | 1005  |
| Mov Cap-2 Maneuver   | -      | -      | -      | - | 1005  |
| Stage 1              | -      | -      | -      | - | 1007  |
| Stage 2              | -      | -      | -      | - | 1007  |

| Approach             | EB | WB | NB |
|----------------------|----|----|----|
| HCM Control Delay, s | 0  | 0  | 0  |
| HCM LOS              |    |    | A  |

| Minor Lane/Major Mvmt | NBLn1 | EBT | EBR | WBL  | WBT |
|-----------------------|-------|-----|-----|------|-----|
| Capacity (veh/h)      | -     | -   | -   | 1583 | -   |
| HCM Lane V/C Ratio    | -     | -   | -   | -    | -   |
| HCM Control Delay (s) | 0     | -   | -   | 0    | -   |
| HCM Lane LOS          | A     | -   | -   | A    | -   |
| HCM 95th %tile Q(veh) | -     | -   | -   | 0    | -   |

Deer Valley 30  
12: Alameda Rd & Access A

2024 Total AM Scenario A Mitigated  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh         | 0.4  |      |      |      |      |      |
| Movement                 | EBL  | EBT  | WBT  | WBR  | SBL  | SBR  |
| Lane Configurations      |      | ↕    | ↕    |      | ↕    |      |
| Traffic Vol, veh/h       | 23   | 388  | 73   | 6    | 1    | 4    |
| Future Vol, veh/h        | 23   | 388  | 73   | 6    | 1    | 4    |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Free | Free | Free | Free | Stop | Stop |
| RT Channelized           | -    | None | -    | None | -    | None |
| Storage Length           | -    | -    | -    | -    | 0    | -    |
| Veh in Median Storage, # | -    | 0    | 0    | -    | 0    | -    |
| Grade, %                 | -    | 0    | 0    | -    | 0    | -    |
| Peak Hour Factor         | 92   | 92   | 92   | 92   | 92   | 92   |
| Heavy Vehicles, %        | 8    | 8    | 8    | 8    | 8    | 8    |
| Mvmt Flow                | 25   | 422  | 79   | 7    | 1    | 4    |

| Major/Minor          | Major1 | Major2 | Minor2 |       |       |
|----------------------|--------|--------|--------|-------|-------|
| Conflicting Flow All | 86     | 0      | 0      | 555   | 83    |
| Stage 1              | -      | -      | -      | 83    | -     |
| Stage 2              | -      | -      | -      | 472   | -     |
| Critical Hdwy        | 4.18   | -      | -      | 6.48  | 6.28  |
| Critical Hdwy Stg 1  | -      | -      | -      | 5.48  | -     |
| Critical Hdwy Stg 2  | -      | -      | -      | 5.48  | -     |
| Follow-up Hdwy       | 2.272  | -      | -      | 3.572 | 3.372 |
| Pot Cap-1 Maneuver   | 1473   | -      | -      | 483   | 960   |
| Stage 1              | -      | -      | -      | 925   | -     |
| Stage 2              | -      | -      | -      | 615   | -     |
| Platoon blocked, %   | -      | -      | -      | -     | -     |
| Mov Cap-1 Maneuver   | 1473   | -      | -      | 472   | 960   |
| Mov Cap-2 Maneuver   | -      | -      | -      | 472   | -     |
| Stage 1              | -      | -      | -      | 905   | -     |
| Stage 2              | -      | -      | -      | 615   | -     |

| Approach             | EB  | WB | SB  |
|----------------------|-----|----|-----|
| HCM Control Delay, s | 0.4 | 0  | 9.6 |
| HCM LOS              |     |    | A   |

| Minor Lane/Major Mvmt | EBL   | EBT | WBT | WBR | SBLn1 |
|-----------------------|-------|-----|-----|-----|-------|
| Capacity (veh/h)      | 1473  | -   | -   | -   | 796   |
| HCM Lane V/C Ratio    | 0.017 | -   | -   | -   | 0.007 |
| HCM Control Delay (s) | 7.5   | 0   | -   | -   | 9.6   |
| HCM Lane LOS          | A     | A   | -   | -   | A     |
| HCM 95th %tile Q(veh) | 0.1   | -   | -   | -   | 0     |

Deer Valley 30  
12: Alameda Rd & Access A

2024 Total PM Scenario A Mitigated  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh         | 0.4  |      |      |      |      |      |
| Movement                 | EBL  | EBT  | WBT  | WBR  | SBL  | SBR  |
| Lane Configurations      |      | ↕    | ↕    |      | ↕    |      |
| Traffic Vol, veh/h       | 2    | 76   | 346  | 1    | 3    | 13   |
| Future Vol, veh/h        | 2    | 76   | 346  | 1    | 3    | 13   |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Free | Free | Free | Free | Stop | Stop |
| RT Channelized           | -    | None | -    | None | -    | None |
| Storage Length           | -    | -    | -    | -    | 0    | -    |
| Veh in Median Storage, # | -    | 0    | 0    | -    | 0    | -    |
| Grade, %                 | -    | 0    | 0    | -    | 0    | -    |
| Peak Hour Factor         | 92   | 92   | 92   | 92   | 92   | 92   |
| Heavy Vehicles, %        | 8    | 8    | 8    | 8    | 8    | 8    |
| Mvmt Flow                | 2    | 83   | 376  | 1    | 3    | 14   |

| Major/Minor          | Major1 | Major2 | Minor2 |       |       |
|----------------------|--------|--------|--------|-------|-------|
| Conflicting Flow All | 377    | 0      | 0      | 464   | 377   |
| Stage 1              | -      | -      | -      | 377   | -     |
| Stage 2              | -      | -      | -      | 87    | -     |
| Critical Hdwy        | 4.18   | -      | -      | 6.48  | 6.28  |
| Critical Hdwy Stg 1  | -      | -      | -      | 5.48  | -     |
| Critical Hdwy Stg 2  | -      | -      | -      | 5.48  | -     |
| Follow-up Hdwy       | 2.272  | -      | -      | 3.572 | 3.372 |
| Pot Cap-1 Maneuver   | 1149   | -      | -      | 546   | 656   |
| Stage 1              | -      | -      | -      | 681   | -     |
| Stage 2              | -      | -      | -      | 921   | -     |
| Platoon blocked, %   | -      | -      | -      | -     | -     |
| Mov Cap-1 Maneuver   | 1149   | -      | -      | 545   | 656   |
| Mov Cap-2 Maneuver   | -      | -      | -      | 545   | -     |
| Stage 1              | -      | -      | -      | 680   | -     |
| Stage 2              | -      | -      | -      | 921   | -     |

| Approach             | EB  | WB | SB   |
|----------------------|-----|----|------|
| HCM Control Delay, s | 0.2 | 0  | 10.9 |
| HCM LOS              |     |    | B    |

| Minor Lane/Major Mvmt | EBL   | EBT | WBT | WBR | SBLn1 |
|-----------------------|-------|-----|-----|-----|-------|
| Capacity (veh/h)      | 1149  | -   | -   | -   | 632   |
| HCM Lane V/C Ratio    | 0.002 | -   | -   | -   | 0.028 |
| HCM Control Delay (s) | 8.1   | 0   | -   | -   | 10.9  |
| HCM Lane LOS          | A     | A   | -   | -   | B     |
| HCM 95th %tile Q(veh) | 0     | -   | -   | -   | 0.1   |

Deer Valley 30  
13: Alameda Rd & Access B

2024 Total AM Scenario A Mitigated  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh         | 0.4  |      |      |      |      |      |
| Movement                 | EBL  | EBT  | WBT  | WBR  | SBL  | SBR  |
| Lane Configurations      |      | ↕    | ↕    |      | ↕    | ↕    |
| Traffic Vol, veh/h       | 18   | 371  | 76   | 9    | 2    | 3    |
| Future Vol, veh/h        | 18   | 371  | 76   | 9    | 2    | 3    |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Free | Free | Free | Free | Stop | Stop |
| RT Channelized           | -    | None | -    | None | -    | None |
| Storage Length           | -    | -    | -    | -    | 0    | -    |
| Veh in Median Storage, # | -    | 0    | 0    | -    | 0    | -    |
| Grade, %                 | -    | 0    | 0    | -    | 0    | -    |
| Peak Hour Factor         | 92   | 92   | 92   | 92   | 92   | 92   |
| Heavy Vehicles, %        | 8    | 8    | 8    | 8    | 8    | 8    |
| Mvmt Flow                | 20   | 403  | 83   | 10   | 2    | 3    |

| Major/Minor          | Major1 | Major2 | Minor2 |       |       |
|----------------------|--------|--------|--------|-------|-------|
| Conflicting Flow All | 93     | 0      | 0      | 531   | 88    |
| Stage 1              | -      | -      | -      | 88    | -     |
| Stage 2              | -      | -      | -      | 443   | -     |
| Critical Hdwy        | 4.18   | -      | -      | 6.48  | 6.28  |
| Critical Hdwy Stg 1  | -      | -      | -      | 5.48  | -     |
| Critical Hdwy Stg 2  | -      | -      | -      | 5.48  | -     |
| Follow-up Hdwy       | 2.272  | -      | -      | 3.572 | 3.372 |
| Pot Cap-1 Maneuver   | 1464   | -      | -      | 499   | 954   |
| Stage 1              | -      | -      | -      | 921   | -     |
| Stage 2              | -      | -      | -      | 635   | -     |
| Platoon blocked, %   | -      | -      | -      | -     | -     |
| Mov Cap-1 Maneuver   | 1464   | -      | -      | 490   | 954   |
| Mov Cap-2 Maneuver   | -      | -      | -      | 490   | -     |
| Stage 1              | -      | -      | -      | 904   | -     |
| Stage 2              | -      | -      | -      | 635   | -     |

| Approach             | EB  | WB | SB   |
|----------------------|-----|----|------|
| HCM Control Delay, s | 0.3 | 0  | 10.2 |
| HCM LOS              |     |    | B    |

| Minor Lane/Major Mvmt | EBL   | EBT | WBT | WBR | SBLn1 |
|-----------------------|-------|-----|-----|-----|-------|
| Capacity (veh/h)      | 1464  | -   | -   | -   | 692   |
| HCM Lane V/C Ratio    | 0.013 | -   | -   | -   | 0.008 |
| HCM Control Delay (s) | 7.5   | 0   | -   | -   | 10.2  |
| HCM Lane LOS          | A     | A   | -   | -   | B     |
| HCM 95th %tile Q(veh) | 0     | -   | -   | -   | 0     |

Deer Valley 30  
13: Alameda Rd & Access B

2024 Total PM Scenario A Mitigated  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh         | 0.4  |      |      |      |      |      |
| Movement                 | EBL  | EBT  | WBT  | WBR  | SBL  | SBR  |
| Lane Configurations      |      | ↕    | ↕    |      | ↕    | ↕    |
| Traffic Vol, veh/h       | 2    | 77   | 337  | 1    | 5    | 10   |
| Future Vol, veh/h        | 2    | 77   | 337  | 1    | 5    | 10   |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Free | Free | Free | Free | Stop | Stop |
| RT Channelized           | -    | None | -    | None | -    | None |
| Storage Length           | -    | -    | -    | -    | 0    | -    |
| Veh in Median Storage, # | -    | 0    | 0    | -    | 0    | -    |
| Grade, %                 | -    | 0    | 0    | -    | 0    | -    |
| Peak Hour Factor         | 92   | 92   | 92   | 92   | 92   | 92   |
| Heavy Vehicles, %        | 8    | 8    | 8    | 8    | 8    | 8    |
| Mvmt Flow                | 2    | 84   | 366  | 1    | 5    | 11   |

| Major/Minor          | Major1 | Major2 | Minor2 |       |       |
|----------------------|--------|--------|--------|-------|-------|
| Conflicting Flow All | 367    | 0      | 0      | 455   | 367   |
| Stage 1              | -      | -      | -      | 367   | -     |
| Stage 2              | -      | -      | -      | 88    | -     |
| Critical Hdwy        | 4.18   | -      | -      | 6.48  | 6.28  |
| Critical Hdwy Stg 1  | -      | -      | -      | 5.48  | -     |
| Critical Hdwy Stg 2  | -      | -      | -      | 5.48  | -     |
| Follow-up Hdwy       | 2.272  | -      | -      | 3.572 | 3.372 |
| Pot Cap-1 Maneuver   | 1159   | -      | -      | 552   | 665   |
| Stage 1              | -      | -      | -      | 688   | -     |
| Stage 2              | -      | -      | -      | 921   | -     |
| Platoon blocked, %   | -      | -      | -      | -     | -     |
| Mov Cap-1 Maneuver   | 1159   | -      | -      | 551   | 665   |
| Mov Cap-2 Maneuver   | -      | -      | -      | 551   | -     |
| Stage 1              | -      | -      | -      | 687   | -     |
| Stage 2              | -      | -      | -      | 921   | -     |

| Approach             | EB  | WB | SB   |
|----------------------|-----|----|------|
| HCM Control Delay, s | 0.2 | 0  | 10.9 |
| HCM LOS              |     |    | B    |

| Minor Lane/Major Mvmt | EBL   | EBT | WBT | WBR | SBLn1 |
|-----------------------|-------|-----|-----|-----|-------|
| Capacity (veh/h)      | 1159  | -   | -   | -   | 622   |
| HCM Lane V/C Ratio    | 0.002 | -   | -   | -   | 0.026 |
| HCM Control Delay (s) | 8.1   | 0   | -   | -   | 10.9  |
| HCM Lane LOS          | A     | A   | -   | -   | B     |
| HCM 95th %tile Q(veh) | 0     | -   | -   | -   | 0.1   |

Deer Valley 30  
14: Alameda Rd & Access C

2024 Total AM Scenario A Mitigated  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh         | 0.5  |      |      |      |      |      |
| Movement                 | EBL  | EBT  | WBT  | WBR  | SBL  | SBR  |
| Lane Configurations      |      | ↕    | ↕    |      | ↕    | ↕    |
| Traffic Vol, veh/h       | 24   | 348  | 81   | 7    | 1    | 4    |
| Future Vol, veh/h        | 24   | 348  | 81   | 7    | 1    | 4    |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Free | Free | Free | Free | Stop | Stop |
| RT Channelized           | -    | None | -    | None | -    | None |
| Storage Length           | -    | -    | -    | -    | 0    | -    |
| Veh in Median Storage, # | -    | 0    | 0    | -    | 0    | -    |
| Grade, %                 | -    | 0    | 0    | -    | 0    | -    |
| Peak Hour Factor         | 92   | 92   | 92   | 92   | 92   | 92   |
| Heavy Vehicles, %        | 8    | 8    | 8    | 8    | 8    | 8    |
| Mvmt Flow                | 26   | 378  | 88   | 8    | 1    | 4    |

| Major/Minor          | Major1 | Major2 | Minor2 |       |       |
|----------------------|--------|--------|--------|-------|-------|
| Conflicting Flow All | 96     | 0      | 0      | 522   | 92    |
| Stage 1              | -      | -      | -      | 92    | -     |
| Stage 2              | -      | -      | -      | 430   | -     |
| Critical Hdwy        | 4.18   | -      | -      | 6.48  | 6.28  |
| Critical Hdwy Stg 1  | -      | -      | -      | 5.48  | -     |
| Critical Hdwy Stg 2  | -      | -      | -      | 5.48  | -     |
| Follow-up Hdwy       | 2.272  | -      | -      | 3.572 | 3.372 |
| Pot Cap-1 Maneuver   | 1461   | -      | -      | 505   | 949   |
| Stage 1              | -      | -      | -      | 917   | -     |
| Stage 2              | -      | -      | -      | 643   | -     |
| Platoon blocked, %   | -      | -      | -      | -     | -     |
| Mov Cap-1 Maneuver   | 1461   | -      | -      | 493   | 949   |
| Mov Cap-2 Maneuver   | -      | -      | -      | 493   | -     |
| Stage 1              | -      | -      | -      | 896   | -     |
| Stage 2              | -      | -      | -      | 643   | -     |

| Approach             | EB  | WB | SB  |
|----------------------|-----|----|-----|
| HCM Control Delay, s | 0.5 | 0  | 9.5 |
| HCM LOS              |     |    | A   |

| Minor Lane/Major Mvmt | EBL   | EBT | WBT | WBR | SBLn1 |
|-----------------------|-------|-----|-----|-----|-------|
| Capacity (veh/h)      | 1461  | -   | -   | -   | 801   |
| HCM Lane V/C Ratio    | 0.018 | -   | -   | -   | 0.007 |
| HCM Control Delay (s) | 7.5   | 0   | -   | -   | 9.5   |
| HCM Lane LOS          | A     | A   | -   | -   | A     |
| HCM 95th %tile Q(veh) | 0.1   | -   | -   | -   | 0     |

Deer Valley 30  
14: Alameda Rd & Access C

2024 Total PM Scenario A Mitigated  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh         | 0.6  |      |      |      |      |      |
| Movement                 | EBL  | EBT  | WBT  | WBR  | SBL  | SBR  |
| Lane Configurations      |      | ↕    | ↕    |      | ↕    | ↕    |
| Traffic Vol, veh/h       | 3    | 80   | 320  | 1    | 5    | 18   |
| Future Vol, veh/h        | 3    | 80   | 320  | 1    | 5    | 18   |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Free | Free | Free | Free | Stop | Stop |
| RT Channelized           | -    | None | -    | None | -    | None |
| Storage Length           | -    | -    | -    | -    | 0    | -    |
| Veh in Median Storage, # | -    | 0    | 0    | -    | 0    | -    |
| Grade, %                 | -    | 0    | 0    | -    | 0    | -    |
| Peak Hour Factor         | 92   | 92   | 92   | 92   | 92   | 92   |
| Heavy Vehicles, %        | 8    | 8    | 8    | 8    | 8    | 8    |
| Mvmt Flow                | 3    | 87   | 348  | 1    | 5    | 20   |

| Major/Minor          | Major1 | Major2 | Minor2 |       |       |
|----------------------|--------|--------|--------|-------|-------|
| Conflicting Flow All | 349    | 0      | 0      | 442   | 349   |
| Stage 1              | -      | -      | -      | 349   | -     |
| Stage 2              | -      | -      | -      | 93    | -     |
| Critical Hdwy        | 4.18   | -      | -      | 6.48  | 6.28  |
| Critical Hdwy Stg 1  | -      | -      | -      | 5.48  | -     |
| Critical Hdwy Stg 2  | -      | -      | -      | 5.48  | -     |
| Follow-up Hdwy       | 2.272  | -      | -      | 3.572 | 3.372 |
| Pot Cap-1 Maneuver   | 1177   | -      | -      | 562   | 681   |
| Stage 1              | -      | -      | -      | 701   | -     |
| Stage 2              | -      | -      | -      | 916   | -     |
| Platoon blocked, %   | -      | -      | -      | -     | -     |
| Mov Cap-1 Maneuver   | 1177   | -      | -      | 560   | 681   |
| Mov Cap-2 Maneuver   | -      | -      | -      | 560   | -     |
| Stage 1              | -      | -      | -      | 699   | -     |
| Stage 2              | -      | -      | -      | 916   | -     |

| Approach             | EB  | WB | SB   |
|----------------------|-----|----|------|
| HCM Control Delay, s | 0.3 | 0  | 10.8 |
| HCM LOS              |     |    | B    |

| Minor Lane/Major Mvmt | EBL   | EBT | WBT | WBR | SBLn1 |
|-----------------------|-------|-----|-----|-----|-------|
| Capacity (veh/h)      | 1177  | -   | -   | -   | 650   |
| HCM Lane V/C Ratio    | 0.003 | -   | -   | -   | 0.038 |
| HCM Control Delay (s) | 8.1   | 0   | -   | -   | 10.8  |
| HCM Lane LOS          | A     | A   | -   | -   | B     |
| HCM 95th %tile Q(veh) | 0     | -   | -   | -   | 0.1   |

Deer Valley 30  
15: Alameda Rd & 15th Ave

2024 Total AM Scenario A Mitigated  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh         | 0.8  |      |      |      |      |      |
| Movement                 | EBL  | EBT  | WBT  | WBR  | SBL  | SBR  |
| Lane Configurations      |      | ↕    | ↕    |      | ↕    | ↕    |
| Traffic Vol, veh/h       | 38   | 311  | 82   | 10   | 2    | 6    |
| Future Vol, veh/h        | 38   | 311  | 82   | 10   | 2    | 6    |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Free | Free | Free | Free | Stop | Stop |
| RT Channelized           | -    | None | -    | None | -    | None |
| Storage Length           | -    | -    | -    | -    | 0    | -    |
| Veh in Median Storage, # | -    | 0    | 0    | -    | 0    | -    |
| Grade, %                 | -    | 0    | 0    | -    | 0    | -    |
| Peak Hour Factor         | 92   | 92   | 92   | 92   | 92   | 92   |
| Heavy Vehicles, %        | 8    | 8    | 8    | 8    | 8    | 8    |
| Mvmt Flow                | 41   | 338  | 89   | 11   | 2    | 7    |

| Major/Minor          | Major1 | Major2 | Minor2 |       |       |
|----------------------|--------|--------|--------|-------|-------|
| Conflicting Flow All | 100    | 0      | 0      | 515   | 95    |
| Stage 1              | -      | -      | -      | 95    | -     |
| Stage 2              | -      | -      | -      | 420   | -     |
| Critical Hdwy        | 4.18   | -      | -      | 6.48  | 6.28  |
| Critical Hdwy Stg 1  | -      | -      | -      | 5.48  | -     |
| Critical Hdwy Stg 2  | -      | -      | -      | 5.48  | -     |
| Follow-up Hdwy       | 2.272  | -      | -      | 3.572 | 3.372 |
| Pot Cap-1 Maneuver   | 1456   | -      | -      | 509   | 945   |
| Stage 1              | -      | -      | -      | 914   | -     |
| Stage 2              | -      | -      | -      | 650   | -     |
| Platoon blocked, %   | -      | -      | -      | -     | -     |
| Mov Cap-1 Maneuver   | 1456   | -      | -      | 491   | 945   |
| Mov Cap-2 Maneuver   | -      | -      | -      | 491   | -     |
| Stage 1              | -      | -      | -      | 882   | -     |
| Stage 2              | -      | -      | -      | 650   | -     |

| Approach             | EB  | WB | SB  |
|----------------------|-----|----|-----|
| HCM Control Delay, s | 0.8 | 0  | 9.7 |
| HCM LOS              |     |    | A   |

| Minor Lane/Major Mvmt | EBL   | EBT | WBT | WBR | SBLn1 |
|-----------------------|-------|-----|-----|-----|-------|
| Capacity (veh/h)      | 1456  | -   | -   | -   | 768   |
| HCM Lane V/C Ratio    | 0.028 | -   | -   | -   | 0.011 |
| HCM Control Delay (s) | 7.5   | 0   | -   | -   | 9.7   |
| HCM Lane LOS          | A     | A   | -   | -   | A     |
| HCM 95th %tile Q(veh) | 0.1   | -   | -   | -   | 0     |

Deer Valley 30  
15: Alameda Rd & 15th Ave

2024 Total PM Scenario A Mitigated  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh         | 1    |      |      |      |      |      |
| Movement                 | EBL  | EBT  | WBT  | WBR  | SBL  | SBR  |
| Lane Configurations      |      | ↕    | ↕    |      | ↕    | ↕    |
| Traffic Vol, veh/h       | 5    | 80   | 293  | 1    | 7    | 28   |
| Future Vol, veh/h        | 5    | 80   | 293  | 1    | 7    | 28   |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Free | Free | Free | Free | Stop | Stop |
| RT Channelized           | -    | None | -    | None | -    | None |
| Storage Length           | -    | -    | -    | -    | 0    | -    |
| Veh in Median Storage, # | -    | 0    | 0    | -    | 0    | -    |
| Grade, %                 | -    | 0    | 0    | -    | 0    | -    |
| Peak Hour Factor         | 92   | 92   | 92   | 92   | 92   | 92   |
| Heavy Vehicles, %        | 8    | 8    | 8    | 8    | 8    | 8    |
| Mvmt Flow                | 5    | 87   | 318  | 1    | 8    | 30   |

| Major/Minor          | Major1 | Major2 | Minor2 |       |       |
|----------------------|--------|--------|--------|-------|-------|
| Conflicting Flow All | 319    | 0      | 0      | 416   | 319   |
| Stage 1              | -      | -      | -      | 319   | -     |
| Stage 2              | -      | -      | -      | 97    | -     |
| Critical Hdwy        | 4.18   | -      | -      | 6.48  | 6.28  |
| Critical Hdwy Stg 1  | -      | -      | -      | 5.48  | -     |
| Critical Hdwy Stg 2  | -      | -      | -      | 5.48  | -     |
| Follow-up Hdwy       | 2.272  | -      | -      | 3.572 | 3.372 |
| Pot Cap-1 Maneuver   | 1208   | -      | -      | 582   | 708   |
| Stage 1              | -      | -      | -      | 723   | -     |
| Stage 2              | -      | -      | -      | 912   | -     |
| Platoon blocked, %   | -      | -      | -      | -     | -     |
| Mov Cap-1 Maneuver   | 1208   | -      | -      | 580   | 708   |
| Mov Cap-2 Maneuver   | -      | -      | -      | 580   | -     |
| Stage 1              | -      | -      | -      | 720   | -     |
| Stage 2              | -      | -      | -      | 912   | -     |

| Approach             | EB  | WB | SB   |
|----------------------|-----|----|------|
| HCM Control Delay, s | 0.5 | 0  | 10.6 |
| HCM LOS              |     |    | B    |

| Minor Lane/Major Mvmt | EBL   | EBT | WBT | WBR | SBLn1 |
|-----------------------|-------|-----|-----|-----|-------|
| Capacity (veh/h)      | 1208  | -   | -   | -   | 678   |
| HCM Lane V/C Ratio    | 0.004 | -   | -   | -   | 0.056 |
| HCM Control Delay (s) | 8     | 0   | -   | -   | 10.6  |
| HCM Lane LOS          | A     | A   | -   | -   | B     |
| HCM 95th %tile Q(veh) | 0     | -   | -   | -   | 0.2   |

Deer Valley 30  
16: Alameda Rd & Access D

2024 Total AM Scenario A Mitigated  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh         | 0.7  |      |      |      |      |      |
| Movement                 | EBL  | EBT  | WBT  | WBR  | SBL  | SBR  |
| Lane Configurations      |      | ↕    | ↕    |      | ↕    | ↕    |
| Traffic Vol, veh/h       | 30   | 283  | 88   | 17   | 2    | 4    |
| Future Vol, veh/h        | 30   | 283  | 88   | 17   | 2    | 4    |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Free | Free | Free | Free | Stop | Stop |
| RT Channelized           | -    | None | -    | None | -    | None |
| Storage Length           | -    | -    | -    | -    | 0    | -    |
| Veh in Median Storage, # | -    | 0    | 0    | -    | 0    | -    |
| Grade, %                 | -    | 0    | 0    | -    | 0    | -    |
| Peak Hour Factor         | 92   | 92   | 92   | 92   | 92   | 92   |
| Heavy Vehicles, %        | 8    | 8    | 8    | 8    | 8    | 8    |
| Mvmt Flow                | 33   | 308  | 96   | 18   | 2    | 4    |

| Major/Minor          | Major1 | Major2 | Minor2 |       |       |
|----------------------|--------|--------|--------|-------|-------|
| Conflicting Flow All | 114    | 0      | 0      | 479   | 105   |
| Stage 1              | -      | -      | -      | 105   | -     |
| Stage 2              | -      | -      | -      | 374   | -     |
| Critical Hdwy        | 4.18   | -      | -      | 6.48  | 6.28  |
| Critical Hdwy Stg 1  | -      | -      | -      | 5.48  | -     |
| Critical Hdwy Stg 2  | -      | -      | -      | 5.48  | -     |
| Follow-up Hdwy       | 2.272  | -      | -      | 3.572 | 3.372 |
| Pot Cap-1 Maneuver   | 1439   | -      | -      | 535   | 933   |
| Stage 1              | -      | -      | -      | 904   | -     |
| Stage 2              | -      | -      | -      | 683   | -     |
| Platoon blocked, %   | -      | -      | -      | -     | -     |
| Mov Cap-1 Maneuver   | 1439   | -      | -      | 520   | 933   |
| Mov Cap-2 Maneuver   | -      | -      | -      | 520   | -     |
| Stage 1              | -      | -      | -      | 879   | -     |
| Stage 2              | -      | -      | -      | 683   | -     |

| Approach             | EB  | WB | SB  |
|----------------------|-----|----|-----|
| HCM Control Delay, s | 0.7 | 0  | 9.9 |
| HCM LOS              |     |    | A   |

| Minor Lane/Major Mvmt | EBL   | EBT | WBT | WBR | SBLn1 |
|-----------------------|-------|-----|-----|-----|-------|
| Capacity (veh/h)      | 1439  | -   | -   | -   | 738   |
| HCM Lane V/C Ratio    | 0.023 | -   | -   | -   | 0.009 |
| HCM Control Delay (s) | 7.6   | 0   | -   | -   | 9.9   |
| HCM Lane LOS          | A     | A   | -   | -   | A     |
| HCM 95th %tile Q(veh) | 0.1   | -   | -   | -   | 0     |

Deer Valley 30  
16: Alameda Rd & Access D

2024 Total PM Scenario A Mitigated  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh         | 1    |      |      |      |      |      |
| Movement                 | EBL  | EBT  | WBT  | WBR  | SBL  | SBR  |
| Lane Configurations      |      | ↕    | ↕    |      | ↕    | ↕    |
| Traffic Vol, veh/h       | 4    | 84   | 272  | 2    | 12   | 22   |
| Future Vol, veh/h        | 4    | 84   | 272  | 2    | 12   | 22   |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Free | Free | Free | Free | Stop | Stop |
| RT Channelized           | -    | None | -    | None | -    | None |
| Storage Length           | -    | -    | -    | -    | 0    | -    |
| Veh in Median Storage, # | -    | 0    | 0    | -    | 0    | -    |
| Grade, %                 | -    | 0    | 0    | -    | 0    | -    |
| Peak Hour Factor         | 92   | 92   | 92   | 92   | 92   | 92   |
| Heavy Vehicles, %        | 8    | 8    | 8    | 8    | 8    | 8    |
| Mvmt Flow                | 4    | 91   | 296  | 2    | 13   | 24   |

| Major/Minor          | Major1 | Major2 | Minor2 |       |       |
|----------------------|--------|--------|--------|-------|-------|
| Conflicting Flow All | 298    | 0      | 0      | 396   | 297   |
| Stage 1              | -      | -      | -      | 297   | -     |
| Stage 2              | -      | -      | -      | 99    | -     |
| Critical Hdwy        | 4.18   | -      | -      | 6.48  | 6.28  |
| Critical Hdwy Stg 1  | -      | -      | -      | 5.48  | -     |
| Critical Hdwy Stg 2  | -      | -      | -      | 5.48  | -     |
| Follow-up Hdwy       | 2.272  | -      | -      | 3.572 | 3.372 |
| Pot Cap-1 Maneuver   | 1230   | -      | -      | 598   | 728   |
| Stage 1              | -      | -      | -      | 740   | -     |
| Stage 2              | -      | -      | -      | 910   | -     |
| Platoon blocked, %   | -      | -      | -      | -     | -     |
| Mov Cap-1 Maneuver   | 1230   | -      | -      | 596   | 728   |
| Mov Cap-2 Maneuver   | -      | -      | -      | 596   | -     |
| Stage 1              | -      | -      | -      | 738   | -     |
| Stage 2              | -      | -      | -      | 910   | -     |

| Approach             | EB  | WB | SB   |
|----------------------|-----|----|------|
| HCM Control Delay, s | 0.4 | 0  | 10.6 |
| HCM LOS              |     |    | B    |

| Minor Lane/Major Mvmt | EBL   | EBT | WBT | WBR | SBLn1 |
|-----------------------|-------|-----|-----|-----|-------|
| Capacity (veh/h)      | 1230  | -   | -   | -   | 675   |
| HCM Lane V/C Ratio    | 0.004 | -   | -   | -   | 0.055 |
| HCM Control Delay (s) | 7.9   | 0   | -   | -   | 10.6  |
| HCM Lane LOS          | A     | A   | -   | -   | B     |
| HCM 95th %tile Q(veh) | 0     | -   | -   | -   | 0.2   |

Deer Valley 30  
1: 19th Ave & Happy Valley Rd

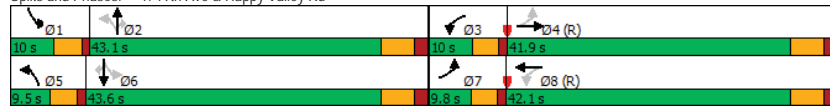
2024 Total AM Scenario B  
Timings

| Lane Group           | EBL   | EBT   | WBL   | WBT   | NBL   | NBT   | NBR   | SBL   | SBT   | SBR   |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations  | ↔     | ↔↔    | ↔     | ↔↔    | ↔     | ↔↔    | ↔     | ↔↔    | ↔↔    | ↔     |
| Traffic Volume (vph) | 87    | 348   | 181   | 295   | 162   | 258   | 107   | 267   | 415   | 96    |
| Future Volume (vph)  | 87    | 348   | 181   | 295   | 162   | 258   | 107   | 267   | 415   | 96    |
| Turn Type            | pm+pt | NA    | pm+pt | NA    | pm+pt | NA    | Perm  | pm+pt | NA    | Perm  |
| Protected Phases     | 7     | 4     | 3     | 8     | 5     | 2     |       | 1     | 6     |       |
| Permitted Phases     | 4     |       | 8     |       | 2     |       | 2     | 6     |       | 6     |
| Detector Phase       | 7     | 4     | 3     | 8     | 5     | 2     | 2     | 1     | 6     | 6     |
| Switch Phase         |       |       |       |       |       |       |       |       |       |       |
| Minimum Initial (s)  | 5.0   | 15.0  | 5.0   | 15.0  | 5.0   | 5.0   | 5.0   | 5.0   | 5.0   | 5.0   |
| Minimum Split (s)    | 9.5   | 41.0  | 9.5   | 41.0  | 9.5   | 43.1  | 43.1  | 9.5   | 43.1  | 43.1  |
| Total Split (s)      | 9.8   | 41.9  | 10.0  | 42.1  | 9.5   | 43.1  | 43.1  | 10.0  | 43.6  | 43.6  |
| Total Split (%)      | 9.3%  | 39.9% | 9.5%  | 40.1% | 9.0%  | 41.0% | 41.0% | 9.5%  | 41.5% | 41.5% |
| Yellow Time (s)      | 3.5   | 4.3   | 3.5   | 4.3   | 3.5   | 4.3   | 4.3   | 3.5   | 4.3   | 4.3   |
| All-Red Time (s)     | 1.0   | 1.7   | 1.0   | 1.7   | 1.0   | 1.8   | 1.8   | 1.0   | 1.8   | 1.8   |
| Lost Time Adjust (s) | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Lost Time (s)  | 4.5   | 6.0   | 4.5   | 6.0   | 4.5   | 6.1   | 6.1   | 4.5   | 6.1   | 6.1   |
| Lead/Lag             | Lead  | Lag   | Lead  | Lag   | Lead  | Lag   | Lead  | Lag   | Lag   | Lag   |
| Lead-Lag Optimize?   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   |
| Recall Mode          | None  | C-Max | None  | C-Max | None  | Max   | Max   | None  | Max   | Max   |
| Act Effct Green (s)  | 42.7  | 35.9  | 44.0  | 38.1  | 43.6  | 37.0  | 37.0  | 44.6  | 37.5  | 37.5  |
| Actuated g/C Ratio   | 0.41  | 0.34  | 0.42  | 0.36  | 0.42  | 0.35  | 0.35  | 0.42  | 0.36  | 0.36  |
| v/c Ratio            | 0.24  | 0.38  | 0.64  | 0.25  | 0.45  | 0.24  | 0.19  | 0.63  | 0.26  | 0.17  |
| Control Delay        | 18.9  | 19.3  | 31.2  | 19.0  | 23.0  | 24.7  | 4.5   | 28.4  | 24.5  | 3.4   |
| Queue Delay          | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Delay          | 18.9  | 19.3  | 31.2  | 19.0  | 23.0  | 24.7  | 4.5   | 28.4  | 24.5  | 3.4   |
| LOS                  | B     | B     | C     | B     | C     | C     | A     | C     | C     | A     |
| Approach Delay       |       | 19.2  |       | 22.8  |       | 20.1  |       | 23.2  |       |       |
| Approach LOS         |       | B     |       | C     |       | C     |       | C     |       |       |

Intersection Summary

|   |                        |
|---|------------------------|
| Cycle Length: 105   |                        |
| Actuated Cycle Length: 105  |                        |
| Offset: 0 (0%), Referenced to phase 4:EBTL and 8:WBTL, Start of Green |                        |
| Natural Cycle: 105  |                        |
| Control Type: Actuated-Coordinated                                    |                        |
| Maximum v/c Ratio: 0.64   |                        |
| Intersection Signal Delay: 21.4                                       | Intersection LOS: C    |
| Intersection Capacity Utilization 62.0%                               | ICU Level of Service B |
| Analysis Period (min) 15  |                        |

Splits and Phases: 1: 19th Ave & Happy Valley Rd



Deer Valley 30  
1: 19th Ave & Happy Valley Rd

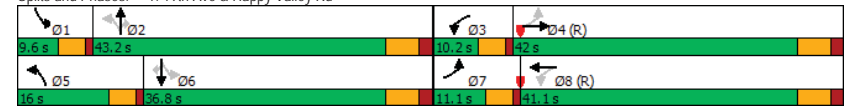
2024 Total PM Scenario B  
Timings

| Lane Group           | EBL   | EBT   | WBL   | WBT   | NBL   | NBT   | NBR   | SBL   | SBT   | SBR   |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations  | ↔     | ↔↔    | ↔     | ↔↔    | ↔     | ↔↔    | ↔     | ↔↔    | ↔↔    | ↔     |
| Traffic Volume (vph) | 167   | 383   | 168   | 747   | 342   | 486   | 145   | 177   | 229   | 122   |
| Future Volume (vph)  | 167   | 383   | 168   | 747   | 342   | 486   | 145   | 177   | 229   | 122   |
| Turn Type            | pm+pt | NA    | pm+pt | NA    | pm+pt | NA    | Perm  | pm+pt | NA    | Perm  |
| Protected Phases     | 7     | 4     | 3     | 8     | 5     | 2     |       | 1     | 6     |       |
| Permitted Phases     | 4     |       | 8     |       | 2     |       | 2     | 6     |       | 6     |
| Detector Phase       | 7     | 4     | 3     | 8     | 5     | 2     | 2     | 1     | 6     | 6     |
| Switch Phase         |       |       |       |       |       |       |       |       |       |       |
| Minimum Initial (s)  | 5.0   | 15.0  | 5.0   | 15.0  | 5.0   | 5.0   | 5.0   | 5.0   | 5.0   | 5.0   |
| Minimum Split (s)    | 9.5   | 41.0  | 9.5   | 41.0  | 9.5   | 43.1  | 43.1  | 9.5   | 43.1  | 43.1  |
| Total Split (s)      | 11.1  | 42.0  | 10.2  | 41.1  | 16.0  | 43.2  | 43.2  | 9.6   | 36.8  | 36.8  |
| Total Split (%)      | 10.6% | 40.0% | 9.7%  | 39.1% | 15.2% | 41.1% | 41.1% | 9.1%  | 35.0% | 35.0% |
| Yellow Time (s)      | 3.5   | 4.3   | 3.5   | 4.3   | 3.5   | 4.3   | 4.3   | 3.5   | 4.3   | 4.3   |
| All-Red Time (s)     | 1.0   | 1.7   | 1.0   | 1.7   | 1.0   | 1.8   | 1.8   | 1.0   | 1.8   | 1.8   |
| Lost Time Adjust (s) | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Lost Time (s)  | 4.5   | 6.0   | 4.5   | 6.0   | 4.5   | 6.1   | 6.1   | 4.5   | 6.1   | 6.1   |
| Lead/Lag             | Lead  | Lag   | Lead  | Lag   | Lead  | Lag   | Lead  | Lag   | Lag   | Lag   |
| Lead-Lag Optimize?   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   |
| Recall Mode          | None  | C-Max | None  | C-Max | None  | Max   | Max   | None  | Max   | Max   |
| Act Effct Green (s)  | 44.1  | 36.0  | 42.3  | 35.1  | 48.3  | 37.1  | 37.1  | 37.4  | 30.7  | 30.7  |
| Actuated g/C Ratio   | 0.42  | 0.34  | 0.40  | 0.33  | 0.46  | 0.35  | 0.35  | 0.36  | 0.29  | 0.29  |
| v/c Ratio            | 1.02  | 0.41  | 0.61  | 0.74  | 0.74  | 0.45  | 0.25  | 0.59  | 0.18  | 0.24  |
| Control Delay        | 98.1  | 20.4  | 29.9  | 30.9  | 31.4  | 27.6  | 4.9   | 29.9  | 28.2  | 3.0   |
| Queue Delay          | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Delay          | 98.1  | 20.4  | 29.9  | 30.9  | 31.4  | 27.6  | 4.9   | 29.9  | 28.2  | 3.0   |
| LOS                  | F     | C     | C     | C     | C     | C     | A     | C     | C     | A     |
| Approach Delay       |       | 36.9  |       | 30.8  |       | 25.5  |       | 22.9  |       |       |
| Approach LOS         |       | D     |       | C     |       | C     |       | C     |       |       |

Intersection Summary

|   |                        |
|---|------------------------|
| Cycle Length: 105   |                        |
| Actuated Cycle Length: 105  |                        |
| Offset: 0 (0%), Referenced to phase 4:EBTL and 8:WBTL, Start of Green |                        |
| Natural Cycle: 105  |                        |
| Control Type: Actuated-Coordinated                                    |                        |
| Maximum v/c Ratio: 1.02   |                        |
| Intersection Signal Delay: 29.5                                       | Intersection LOS: C    |
| Intersection Capacity Utilization 72.4%                               | ICU Level of Service C |
| Analysis Period (min) 15  |                        |

Splits and Phases: 1: 19th Ave & Happy Valley Rd







Deer Valley 30  
2: 19th Ave & Optum Drwy

2024 Total AM Scenario B  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh         | 0.1  |      |      |      |      |      |
| Movement                 | EBL  | EBR  | NBL  | NBT  | SBT  | SBR  |
| Lane Configurations      | W    |      | W    | W    | W    | W    |
| Traffic Vol, veh/h       | 0    | 4    | 7    | 528  | 823  | 2    |
| Future Vol, veh/h        | 0    | 4    | 7    | 528  | 823  | 2    |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Stop | Stop | Free | Free | Free | Free |
| RT Channelized           | -    | None | -    | None | -    | None |
| Storage Length           | 0    | -    | 50   | -    | -    | -    |
| Veh in Median Storage, # | 0    | -    | -    | 0    | 0    | -    |
| Grade, %                 | 0    | -    | -    | 0    | 0    | -    |
| Peak Hour Factor         | 92   | 92   | 92   | 92   | 92   | 92   |
| Heavy Vehicles, %        | 8    | 8    | 8    | 8    | 8    | 8    |
| Mvmt Flow                | 0    | 4    | 8    | 574  | 895  | 2    |

| Major/Minor          | Minor2 | Major1 | Major2 |
|----------------------|--------|--------|--------|
| Conflicting Flow All | 1142   | 449    | 897    |
| Stage 1              | 896    | -      | -      |
| Stage 2              | 246    | -      | -      |
| Critical Hdwy        | 6.41   | 7.06   | 4.26   |
| Critical Hdwy Stg 1  | 5.96   | -      | -      |
| Critical Hdwy Stg 2  | 6.16   | -      | -      |
| Follow-up Hdwy       | 3.73   | 3.38   | 2.28   |
| Pot Cap-1 Maneuver   | 215    | 541    | 716    |
| Stage 1              | 336    | -      | -      |
| Stage 2              | 718    | -      | -      |
| Platoon blocked, %   | -      | -      | -      |
| Mov Cap-1 Maneuver   | 213    | 541    | 716    |
| Mov Cap-2 Maneuver   | 282    | -      | -      |
| Stage 1              | 332    | -      | -      |
| Stage 2              | 718    | -      | -      |

| Approach             | EB   | NB  | SB |
|----------------------|------|-----|----|
| HCM Control Delay, s | 11.7 | 0.1 | 0  |
| HCM LOS              | B    |     |    |

| Minor Lane/Major Mvmt | NBL   | NBT | EBLn1 | SBT | SBR |
|-----------------------|-------|-----|-------|-----|-----|
| Capacity (veh/h)      | 716   | -   | 541   | -   | -   |
| HCM Lane V/C Ratio    | 0.011 | -   | 0.008 | -   | -   |
| HCM Control Delay (s) | 10.1  | -   | 11.7  | -   | -   |
| HCM Lane LOS          | B     | -   | B     | -   | -   |
| HCM 95th %tile Q(veh) | 0     | -   | 0     | -   | -   |

Deer Valley 30  
2: 19th Ave & Optum Drwy

2024 Total PM Scenario B  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh         | 0.1  |      |      |      |      |      |
| Movement                 | EBL  | EBR  | NBL  | NBT  | SBT  | SBR  |
| Lane Configurations      | W    |      | W    | W    | W    | W    |
| Traffic Vol, veh/h       | 0    | 4    | 7    | 974  | 633  | 2    |
| Future Vol, veh/h        | 0    | 4    | 7    | 974  | 633  | 2    |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Stop | Stop | Free | Free | Free | Free |
| RT Channelized           | -    | None | -    | None | -    | None |
| Storage Length           | 0    | -    | 50   | -    | -    | -    |
| Veh in Median Storage, # | 0    | -    | -    | 0    | 0    | -    |
| Grade, %                 | 0    | -    | -    | 0    | 0    | -    |
| Peak Hour Factor         | 92   | 92   | 92   | 92   | 92   | 92   |
| Heavy Vehicles, %        | 8    | 8    | 8    | 8    | 8    | 8    |
| Mvmt Flow                | 0    | 4    | 8    | 1059 | 688  | 2    |

| Major/Minor          | Minor2 | Major1 | Major2 |
|----------------------|--------|--------|--------|
| Conflicting Flow All | 1129   | 345    | 690    |
| Stage 1              | 689    | -      | -      |
| Stage 2              | 440    | -      | -      |
| Critical Hdwy        | 6.41   | 7.06   | 4.26   |
| Critical Hdwy Stg 1  | 5.96   | -      | -      |
| Critical Hdwy Stg 2  | 6.16   | -      | -      |
| Follow-up Hdwy       | 3.73   | 3.38   | 2.28   |
| Pot Cap-1 Maneuver   | 219    | 634    | 861    |
| Stage 1              | 432    | -      | -      |
| Stage 2              | 566    | -      | -      |
| Platoon blocked, %   | -      | -      | -      |
| Mov Cap-1 Maneuver   | 217    | 634    | 861    |
| Mov Cap-2 Maneuver   | 318    | -      | -      |
| Stage 1              | 428    | -      | -      |
| Stage 2              | 566    | -      | -      |

| Approach             | EB   | NB  | SB |
|----------------------|------|-----|----|
| HCM Control Delay, s | 10.7 | 0.1 | 0  |
| HCM LOS              | B    |     |    |

| Minor Lane/Major Mvmt | NBL   | NBT | EBLn1 | SBT | SBR |
|-----------------------|-------|-----|-------|-----|-----|
| Capacity (veh/h)      | 861   | -   | 634   | -   | -   |
| HCM Lane V/C Ratio    | 0.009 | -   | 0.007 | -   | -   |
| HCM Control Delay (s) | 9.2   | -   | 10.7  | -   | -   |
| HCM Lane LOS          | A     | -   | B     | -   | -   |
| HCM 95th %tile Q(veh) | 0     | -   | 0     | -   | -   |

Deer Valley 30  
3: 19th Ave & Patio Drwy/Parkview Ln

2024 Total AM Scenario B  
HCM 6th TWSC

| Intersection             |        |        |        |        |        |       |      |      |      |      |      |      |
|--------------------------|--------|--------|--------|--------|--------|-------|------|------|------|------|------|------|
| Int Delay, s/veh         | 0.9    |        |        |        |        |       |      |      |      |      |      |      |
| Movement                 | EBL    | EBT    | EBR    | WBL    | WBT    | WBR   | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
| Lane Configurations      |        |        | ↗      |        | ↔      |       |      | ↖↗   |      | ↘    | ↖    |      |
| Traffic Vol, veh/h       | 0      | 0      | 6      | 26     | 0      | 13    | 1    | 521  | 41   | 26   | 802  | 0    |
| Future Vol, veh/h        | 0      | 0      | 6      | 26     | 0      | 13    | 1    | 521  | 41   | 26   | 802  | 0    |
| Conflicting Peds, #/hr   | 0      | 0      | 0      | 0      | 0      | 0     | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Stop   | Stop   | Stop   | Stop   | Stop   | Stop  | Free | Free | Free | Free | Free | Free |
| RT Channelized           | -      | -      | None   | -      | -      | None  | -    | -    | None | -    | -    | None |
| Storage Length           | -      | -      | 0      | -      | -      | -     | -    | -    | -    | 50   | -    | -    |
| Veh in Median Storage, # | -      | 0      | -      | -      | 0      | -     | -    | 0    | -    | -    | 0    | -    |
| Grade, %                 | -      | 0      | -      | -      | 0      | -     | -    | 0    | -    | -    | 0    | -    |
| Peak Hour Factor         | 92     | 92     | 92     | 92     | 92     | 92    | 92   | 92   | 92   | 92   | 92   | 92   |
| Heavy Vehicles, %        | 8      | 8      | 8      | 8      | 8      | 8     | 8    | 8    | 8    | 8    | 8    | 8    |
| Mvmt Flow                | 0      | 0      | 7      | 28     | 0      | 14    | 1    | 566  | 45   | 28   | 872  | 0    |
| Major/Minor              | Minor2 | Minor1 | Major1 | Major2 |        |       |      |      |      |      |      |      |
| Conflicting Flow All     | -      | -      | 436    | 1083   | 1519   | 306   | 872  | 0    | 0    | 611  | 0    | 0    |
| Stage 1                  | -      | -      | -      | 591    | 591    | -     | -    | -    | -    | -    | -    | -    |
| Stage 2                  | -      | -      | -      | 492    | 928    | -     | -    | -    | -    | -    | -    | -    |
| Critical Hdwy            | -      | -      | 7.06   | 7.11   | 6.66   | 7.26  | 4.26 | -    | -    | 5.46 | -    | -    |
| Critical Hdwy Stg 1      | -      | -      | -      | 7.46   | 5.66   | -     | -    | -    | -    | -    | -    | -    |
| Critical Hdwy Stg 2      | -      | -      | -      | 6.66   | 5.66   | -     | -    | -    | -    | -    | -    | -    |
| Follow-up Hdwy           | -      | -      | 3.38   | 3.73   | 4.08   | 3.98  | 2.28 | -    | -    | 3.18 | -    | -    |
| Pot Cap-1 Maneuver       | 0      | 0      | 552    | 189    | 111    | 575   | 732  | -    | -    | 580  | -    | 0    |
| Stage 1                  | 0      | 0      | -      | 379    | 478    | -     | -    | -    | -    | -    | -    | 0    |
| Stage 2                  | 0      | 0      | -      | 496    | 332    | -     | -    | -    | -    | -    | -    | 0    |
| Platoon blocked, %       | -      | -      | -      | -      | -      | -     | -    | -    | -    | -    | -    | -    |
| Mov Cap-1 Maneuver       | -      | -      | 552    | 180    | 105    | 575   | 732  | -    | -    | 580  | -    | -    |
| Mov Cap-2 Maneuver       | -      | -      | -      | 180    | 105    | -     | -    | -    | -    | -    | -    | -    |
| Stage 1                  | -      | -      | -      | 378    | 477    | -     | -    | -    | -    | -    | -    | -    |
| Stage 2                  | -      | -      | -      | 466    | 316    | -     | -    | -    | -    | -    | -    | -    |
| Approach                 | EB     | WB     | NB     | SB     |        |       |      |      |      |      |      |      |
| HCM Control Delay, s     | 11.6   | 23.9   | 0      | 0.4    |        |       |      |      |      |      |      |      |
| HCM LOS                  | B      | C      |        |        |        |       |      |      |      |      |      |      |
| Minor Lane/Major Mvmt    | NBL    | NBT    | NBR    | EBLn1  | WB Ln1 | SBL   | SBT  |      |      |      |      |      |
| Capacity (veh/h)         | 732    | -      | -      | 552    | 233    | 580   | -    |      |      |      |      |      |
| HCM Lane V/C Ratio       | 0.001  | -      | -      | 0.012  | 0.182  | 0.049 | -    |      |      |      |      |      |
| HCM Control Delay (s)    | 9.9    | -      | -      | 11.6   | 23.9   | 11.5  | -    |      |      |      |      |      |
| HCM Lane LOS             | A      | -      | -      | B      | C      | B     | -    |      |      |      |      |      |
| HCM 95th %tile Q(veh)    | 0      | -      | -      | 0      | 0.6    | 0.2   | -    |      |      |      |      |      |

Deer Valley 30  
3: 19th Ave & Patio Drwy/Parkview Ln

2024 Total PM Scenario B  
HCM 6th TWSC

| Intersection             |        |        |        |        |        |       |      |      |      |      |      |      |
|--------------------------|--------|--------|--------|--------|--------|-------|------|------|------|------|------|------|
| Int Delay, s/veh         | 1      |        |        |        |        |       |      |      |      |      |      |      |
| Movement                 | EBL    | EBT    | EBR    | WBL    | WBT    | WBR   | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
| Lane Configurations      |        |        | ↗      |        | ↔      |       |      | ↖↗   |      | ↘    | ↖    |      |
| Traffic Vol, veh/h       | 0      | 0      | 6      | 26     | 0      | 13    | 1    | 621  | 41   | 26   | 612  | 0    |
| Future Vol, veh/h        | 0      | 0      | 6      | 26     | 0      | 13    | 1    | 621  | 41   | 26   | 612  | 0    |
| Conflicting Peds, #/hr   | 0      | 0      | 0      | 0      | 0      | 0     | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Stop   | Stop   | Stop   | Stop   | Stop   | Stop  | Free | Free | Free | Free | Free | Free |
| RT Channelized           | -      | -      | None   | -      | -      | None  | -    | -    | None | -    | -    | None |
| Storage Length           | -      | -      | 0      | -      | -      | -     | -    | -    | -    | 50   | -    | -    |
| Veh in Median Storage, # | -      | 0      | -      | -      | 0      | -     | -    | 0    | -    | -    | 0    | -    |
| Grade, %                 | -      | 0      | -      | -      | 0      | -     | -    | 0    | -    | -    | 0    | -    |
| Peak Hour Factor         | 92     | 92     | 92     | 92     | 92     | 92    | 92   | 92   | 92   | 92   | 92   | 92   |
| Heavy Vehicles, %        | 8      | 8      | 8      | 8      | 8      | 8     | 8    | 8    | 8    | 8    | 8    | 8    |
| Mvmt Flow                | 0      | 0      | 7      | 28     | 0      | 14    | 1    | 675  | 45   | 28   | 665  | 0    |
| Major/Minor              | Minor2 | Minor1 | Major1 | Major2 |        |       |      |      |      |      |      |      |
| Conflicting Flow All     | -      | -      | 333    | 1089   | 1421   | 360   | 665  | 0    | 0    | 720  | 0    | 0    |
| Stage 1                  | -      | -      | -      | 700    | 700    | -     | -    | -    | -    | -    | -    | -    |
| Stage 2                  | -      | -      | -      | 389    | 721    | -     | -    | -    | -    | -    | -    | -    |
| Critical Hdwy            | -      | -      | 7.06   | 7.11   | 6.66   | 7.26  | 4.26 | -    | -    | 5.46 | -    | -    |
| Critical Hdwy Stg 1      | -      | -      | -      | 7.46   | 5.66   | -     | -    | -    | -    | -    | -    | -    |
| Critical Hdwy Stg 2      | -      | -      | -      | 6.66   | 5.66   | -     | -    | -    | -    | -    | -    | -    |
| Follow-up Hdwy           | -      | -      | 3.38   | 3.73   | 4.08   | 3.98  | 2.28 | -    | -    | 3.18 | -    | -    |
| Pot Cap-1 Maneuver       | 0      | 0      | 645    | 187    | 128    | 530   | 881  | -    | -    | 513  | -    | 0    |
| Stage 1                  | 0      | 0      | -      | 318    | 425    | -     | -    | -    | -    | -    | -    | 0    |
| Stage 2                  | 0      | 0      | -      | 571    | 416    | -     | -    | -    | -    | -    | -    | 0    |
| Platoon blocked, %       | -      | -      | -      | -      | -      | -     | -    | -    | -    | -    | -    | -    |
| Mov Cap-1 Maneuver       | -      | -      | 645    | 177    | 121    | 530   | 881  | -    | -    | 513  | -    | -    |
| Mov Cap-2 Maneuver       | -      | -      | -      | 177    | 121    | -     | -    | -    | -    | -    | -    | -    |
| Stage 1                  | -      | -      | -      | 317    | 424    | -     | -    | -    | -    | -    | -    | -    |
| Stage 2                  | -      | -      | -      | 534    | 393    | -     | -    | -    | -    | -    | -    | -    |
| Approach                 | EB     | WB     | NB     | SB     |        |       |      |      |      |      |      |      |
| HCM Control Delay, s     | 10.6   | 24.4   | 0      | 0.5    |        |       |      |      |      |      |      |      |
| HCM LOS                  | B      | C      |        |        |        |       |      |      |      |      |      |      |
| Minor Lane/Major Mvmt    | NBL    | NBT    | NBR    | EBLn1  | WB Ln1 | SBL   | SBT  |      |      |      |      |      |
| Capacity (veh/h)         | 881    | -      | -      | 645    | 228    | 513   | -    |      |      |      |      |      |
| HCM Lane V/C Ratio       | 0.001  | -      | -      | 0.01   | 0.186  | 0.055 | -    |      |      |      |      |      |
| HCM Control Delay (s)    | 9.1    | -      | -      | 10.6   | 24.4   | 12.4  | -    |      |      |      |      |      |
| HCM Lane LOS             | A      | -      | -      | B      | C      | B     | -    |      |      |      |      |      |
| HCM 95th %tile Q(veh)    | 0      | -      | -      | 0      | 0.7    | 0.2   | -    |      |      |      |      |      |

Deer Valley 30  
4: Alameda Rd & 19th Ave

2024 Total AM Scenario B  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Int Delay, s/veh         | 1.5  |      |      |      |      |      |      |      |      |      |      |      |
| Movement                 | EBL  | EBT  | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
| Lane Configurations      | ↔    |      | ↔    |      | ↔    |      | ↔    |      | ↔    |      | ↔    |      |
| Traffic Vol, veh/h       | 9    | 0    | 54   | 13   | 0    | 15   | 18   | 548  | 87   | 95   | 724  | 14   |
| Future Vol, veh/h        | 9    | 0    | 54   | 13   | 0    | 15   | 18   | 548  | 87   | 95   | 724  | 14   |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Stop | Stop | Stop | Stop | Stop | Stop | Free | Free | Free | Free | Free | Free |
| RT Channelized           | -    | -    | None | -    | -    | None | -    | -    | None | -    | -    | None |
| Storage Length           | 0    | -    | -    | 150  | -    | -    | 150  | -    | -    | 0    | -    | -    |
| Veh in Median Storage, # | -    | 1    | -    | -    | 1    | -    | -    | 0    | -    | -    | 0    | -    |
| Grade, %                 | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Peak Hour Factor         | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   |
| Heavy Vehicles, %        | 8    | 8    | 8    | 8    | 8    | 8    | 8    | 8    | 8    | 8    | 8    | 8    |
| Mvmt Flow                | 10   | 0    | 59   | 14   | 0    | 16   | 20   | 596  | 95   | 103  | 787  | 15   |

| Major/Minor          | Minor2 | Minor1 | Major1 | Major2 |
|----------------------|--------|--------|--------|--------|
| Conflicting Flow All | 1279   | 1732   | 401    | 1284   |
| Stage 1              | 1001   | 1001   | -      | 684    |
| Stage 2              | 278    | 731    | -      | 600    |
| Critical Hdwy        | 7.11   | 6.66   | 7.06   | 7.11   |
| Critical Hdwy Stg 1  | 6.66   | 5.66   | -      | 7.46   |
| Critical Hdwy Stg 2  | 6.86   | 5.66   | -      | 6.66   |
| Follow-up Hdwy       | 3.73   | 4.08   | 3.38   | 3.73   |
| Pot Cap-1 Maneuver   | *258   | 130    | 582    | 255    |
| Stage 1              | *243   | 306    | -      | 711    |
| Stage 2              | *837   | 652    | -      | 427    |
| Platoon blocked, %   | 1      | 1      | 1      | 1      |
| Mov Cap-1 Maneuver   | *225   | 112    | 582    | 205    |
| Mov Cap-2 Maneuver   | *216   | 207    | -      | 271    |
| Stage 1              | *237   | 270    | -      | 693    |
| Stage 2              | *799   | 635    | -      | 338    |

| Approach             | EB   | WB | NB  | SB  |
|----------------------|------|----|-----|-----|
| HCM Control Delay, s | 13.4 | 14 | 0.3 | 1.1 |
| HCM LOS              | B    | B  |     |     |

| Minor Lane/Major Mvmt | NBL   | NBT | NBR | EBLn1 | EBLn2 | WBLn1 | WBLn2 | SBL   | SBT | SBR |
|-----------------------|-------|-----|-----|-------|-------|-------|-------|-------|-----|-----|
| Capacity (veh/h)      | 780   | -   | -   | 216   | 582   | 271   | 784   | 870   | -   | -   |
| HCM Lane V/C Ratio    | 0.025 | -   | -   | 0.045 | 0.101 | 0.052 | 0.021 | 0.119 | -   | -   |
| HCM Control Delay (s) | 9.7   | -   | -   | 22.5  | 11.9  | 19    | 9.7   | 9.7   | -   | -   |
| HCM Lane LOS          | A     | -   | -   | C     | B     | C     | A     | A     | -   | -   |
| HCM 95th %tile Q(veh) | 0.1   | -   | -   | 0.1   | 0.3   | 0.2   | 0.1   | 0.4   | -   | -   |

Notes  
 -: Volume exceeds capacity    \$: Delay exceeds 300s    +: Computation Not Defined    \*: All major volume in platoon

Deer Valley 30  
4: Alameda Rd & 19th Ave

2024 Total PM Scenario B  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Int Delay, s/veh         | 2    |      |      |      |      |      |      |      |      |      |      |      |
| Movement                 | EBL  | EBT  | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
| Lane Configurations      | ↔    |      | ↔    |      | ↔    |      | ↔    |      | ↔    |      | ↔    |      |
| Traffic Vol, veh/h       | 14   | 0    | 62   | 59   | 0    | 64   | 83   | 886  | 10   | 10   | 617  | 16   |
| Future Vol, veh/h        | 14   | 0    | 62   | 59   | 0    | 64   | 83   | 886  | 10   | 10   | 617  | 16   |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Stop | Stop | Stop | Stop | Stop | Stop | Free | Free | Free | Free | Free | Free |
| RT Channelized           | -    | -    | None | -    | -    | None | -    | -    | None | -    | -    | None |
| Storage Length           | 0    | -    | -    | 150  | -    | -    | 150  | -    | -    | 0    | -    | -    |
| Veh in Median Storage, # | -    | 1    | -    | -    | 1    | -    | -    | 0    | -    | -    | 0    | -    |
| Grade, %                 | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Peak Hour Factor         | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   |
| Heavy Vehicles, %        | 8    | 8    | 8    | 8    | 8    | 8    | 8    | 8    | 8    | 8    | 8    | 8    |
| Mvmt Flow                | 15   | 0    | 67   | 64   | 0    | 70   | 90   | 963  | 11   | 11   | 671  | 17   |

| Major/Minor          | Minor2 | Minor1 | Major1 | Major2 |
|----------------------|--------|--------|--------|--------|
| Conflicting Flow All | 1267   | 1856   | 344    | 1507   |
| Stage 1              | 702    | 702    | -      | 1149   |
| Stage 2              | 565    | 1154   | -      | 358    |
| Critical Hdwy        | 7.11   | 6.66   | 7.06   | 7.11   |
| Critical Hdwy Stg 1  | 6.66   | 5.66   | -      | 7.46   |
| Critical Hdwy Stg 2  | 6.86   | 5.66   | -      | 6.66   |
| Follow-up Hdwy       | 3.73   | 4.08   | 3.38   | 3.73   |
| Pot Cap-1 Maneuver   | *458   | 158    | 635    | 288    |
| Stage 1              | *371   | 424    | -      | 563    |
| Stage 2              | *748   | 565    | -      | 596    |
| Platoon blocked, %   | 1      | 1      | 1      | 1      |
| Mov Cap-1 Maneuver   | *376   | 140    | 635    | 235    |
| Mov Cap-2 Maneuver   | *293   | 270    | -      | 320    |
| Stage 1              | *332   | 418    | -      | 505    |
| Stage 2              | *604   | 506    | -      | 526    |

| Approach             | EB   | WB   | NB  | SB  |
|----------------------|------|------|-----|-----|
| HCM Control Delay, s | 12.5 | 14.7 | 0.8 | 0.1 |
| HCM LOS              | B    | B    |     |     |

| Minor Lane/Major Mvmt | NBL   | NBT | NBR | EBLn1 | EBLn2 | WBLn1 | WBLn2 | SBL   | SBT | SBR |
|-----------------------|-------|-----|-----|-------|-------|-------|-------|-------|-----|-----|
| Capacity (veh/h)      | 863   | -   | -   | 293   | 635   | 320   | 701   | *878  | -   | -   |
| HCM Lane V/C Ratio    | 0.105 | -   | -   | 0.052 | 0.106 | 0.2   | 0.099 | 0.012 | -   | -   |
| HCM Control Delay (s) | 9.7   | -   | -   | 18    | 11.3  | 19    | 10.7  | 9.2   | -   | -   |
| HCM Lane LOS          | A     | -   | -   | C     | B     | C     | B     | A     | -   | -   |
| HCM 95th %tile Q(veh) | 0.3   | -   | -   | 0.2   | 0.4   | 0.7   | 0.3   | 0     | -   | -   |

Notes  
 -: Volume exceeds capacity    \$: Delay exceeds 300s    +: Computation Not Defined    \*: All major volume in platoon

Deer Valley 30  
5: 19th Ave & Sarah Bass PI

2024 Total AM Scenario B  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh         | 0.6  |      |      |      |      |      |
| Movement                 | EBL  | EBR  | NBL  | NBT  | SBT  | SBR  |
| Lane Configurations      | ↔    | ↔    | ↔    | ↔    | ↔    | ↔    |
| Traffic Vol, veh/h       | 13   | 36   | 27   | 640  | 783  | 9    |
| Future Vol, veh/h        | 13   | 36   | 27   | 640  | 783  | 9    |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Stop | Stop | Free | Free | Free | Free |
| RT Channelized           | -    | None | -    | None | -    | None |
| Storage Length           | 0    | 0    | 150  | -    | -    | -    |
| Veh in Median Storage, # | 0    | -    | -    | 0    | 0    | -    |
| Grade, %                 | 0    | -    | -    | 0    | 0    | -    |
| Peak Hour Factor         | 92   | 92   | 92   | 92   | 92   | 92   |
| Heavy Vehicles, %        | 8    | 8    | 8    | 8    | 8    | 8    |
| Mvmt Flow                | 14   | 39   | 29   | 696  | 851  | 10   |

| Major/Minor          | Minor2 | Major1 | Major2 |   |     |
|----------------------|--------|--------|--------|---|-----|
| Conflicting Flow All | 1192   | 431    | 861    | 0 | - 0 |
| Stage 1              | 856    | -      | -      | - | -   |
| Stage 2              | 336    | -      | -      | - | -   |
| Critical Hdwy        | 6.41   | 7.06   | 4.26   | - | - - |
| Critical Hdwy Stg 1  | 5.96   | -      | -      | - | -   |
| Critical Hdwy Stg 2  | 6.16   | -      | -      | - | -   |
| Follow-up Hdwy       | 3.73   | 3.38   | 2.28   | - | - - |
| Pot Cap-1 Maneuver   | 201    | 556    | 739    | - | - - |
| Stage 1              | 353    | -      | -      | - | -   |
| Stage 2              | 643    | -      | -      | - | -   |
| Platoon blocked, %   | -      | -      | -      | - | -   |
| Mov Cap-1 Maneuver   | 193    | 556    | 739    | - | - - |
| Mov Cap-2 Maneuver   | 277    | -      | -      | - | -   |
| Stage 1              | 339    | -      | -      | - | -   |
| Stage 2              | 643    | -      | -      | - | -   |

| Approach             | EB   | NB  | SB |
|----------------------|------|-----|----|
| HCM Control Delay, s | 13.8 | 0.4 | 0  |
| HCM LOS              | B    |     |    |

| Minor Lane/Major Mvmt | NBL  | NBT | EBLn1 | EBLn2 | SBT | SBR |
|-----------------------|------|-----|-------|-------|-----|-----|
| Capacity (veh/h)      | 739  | -   | 277   | 556   | -   | -   |
| HCM Lane V/C Ratio    | 0.04 | -   | 0.051 | 0.07  | -   | -   |
| HCM Control Delay (s) | 10.1 | -   | 18.7  | 12    | -   | -   |
| HCM Lane LOS          | B    | -   | C     | B     | -   | -   |
| HCM 95th %tile Q(veh) | 0.1  | -   | 0.2   | 0.2   | -   | -   |

Deer Valley 30  
5: 19th Ave & Sarah Bass PI

2024 Total PM Scenario B  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh         | 0.5  |      |      |      |      |      |
| Movement                 | EBL  | EBR  | NBL  | NBT  | SBT  | SBR  |
| Lane Configurations      | ↔    | ↔    | ↔    | ↔    | ↔    | ↔    |
| Traffic Vol, veh/h       | 16   | 37   | 10   | 964  | 733  | 6    |
| Future Vol, veh/h        | 16   | 37   | 10   | 964  | 733  | 6    |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Stop | Stop | Free | Free | Free | Free |
| RT Channelized           | -    | None | -    | None | -    | None |
| Storage Length           | 0    | 0    | 150  | -    | -    | -    |
| Veh in Median Storage, # | 0    | -    | -    | 0    | 0    | -    |
| Grade, %                 | 0    | -    | -    | 0    | 0    | -    |
| Peak Hour Factor         | 92   | 92   | 92   | 92   | 92   | 92   |
| Heavy Vehicles, %        | 8    | 8    | 8    | 8    | 8    | 8    |
| Mvmt Flow                | 17   | 40   | 11   | 1048 | 797  | 7    |

| Major/Minor          | Minor2 | Major1 | Major2 |   |     |
|----------------------|--------|--------|--------|---|-----|
| Conflicting Flow All | 1242   | 402    | 804    | 0 | - 0 |
| Stage 1              | 801    | -      | -      | - | -   |
| Stage 2              | 441    | -      | -      | - | -   |
| Critical Hdwy        | 6.41   | 7.06   | 4.26   | - | - - |
| Critical Hdwy Stg 1  | 5.96   | -      | -      | - | -   |
| Critical Hdwy Stg 2  | 6.16   | -      | -      | - | -   |
| Follow-up Hdwy       | 3.73   | 3.38   | 2.28   | - | - - |
| Pot Cap-1 Maneuver   | 188    | 581    | 778    | - | - - |
| Stage 1              | 377    | -      | -      | - | -   |
| Stage 2              | 565    | -      | -      | - | -   |
| Platoon blocked, %   | -      | -      | -      | - | -   |
| Mov Cap-1 Maneuver   | 185    | 581    | 778    | - | - - |
| Mov Cap-2 Maneuver   | 283    | -      | -      | - | -   |
| Stage 1              | 372    | -      | -      | - | -   |
| Stage 2              | 565    | -      | -      | - | -   |

| Approach             | EB   | NB  | SB |
|----------------------|------|-----|----|
| HCM Control Delay, s | 13.8 | 0.1 | 0  |
| HCM LOS              | B    |     |    |

| Minor Lane/Major Mvmt | NBL   | NBT | EBLn1 | EBLn2 | SBT | SBR |
|-----------------------|-------|-----|-------|-------|-----|-----|
| Capacity (veh/h)      | 778   | -   | 283   | 581   | -   | -   |
| HCM Lane V/C Ratio    | 0.014 | -   | 0.061 | 0.069 | -   | -   |
| HCM Control Delay (s) | 9.7   | -   | 18.6  | 11.7  | -   | -   |
| HCM Lane LOS          | A     | -   | C     | B     | -   | -   |
| HCM 95th %tile Q(veh) | 0     | -   | 0.2   | 0.2   | -   | -   |

Deer Valley 30  
6: Pinnacle Peak Rd & 19th Ave

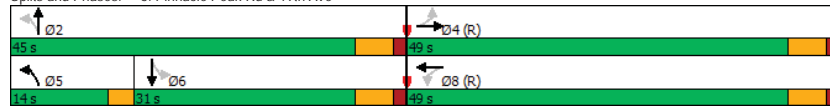
2024 Total AM Scenario B  
Timings

| Lane Group           | EBL   | EBT   | WBL   | WBT   | NBL   | NBT   | SBL   | SBT   |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations  | ↖     | ↗     | ↖     | ↗     | ↖     | ↗     | ↖     | ↗     |
| Traffic Volume (vph) | 141   | 387   | 57    | 176   | 169   | 447   | 102   | 650   |
| Future Volume (vph)  | 141   | 387   | 57    | 176   | 169   | 447   | 102   | 650   |
| Turn Type            | Perm  | NA    | Perm  | NA    | pm+pt | NA    | Perm  | NA    |
| Protected Phases     |       | 4     |       | 8     | 5     | 2     |       | 6     |
| Permitted Phases     | 4     |       | 8     |       | 2     |       | 6     |       |
| Detector Phase       | 4     | 4     | 8     | 8     | 5     | 2     | 6     | 6     |
| Switch Phase         |       |       |       |       |       |       |       |       |
| Minimum Initial (s)  | 15.0  | 15.0  | 15.0  | 15.0  | 5.0   | 15.0  | 15.0  | 15.0  |
| Minimum Split (s)    | 34.6  | 34.6  | 34.6  | 34.6  | 9.5   | 30.8  | 30.8  | 30.8  |
| Total Split (s)      | 49.0  | 49.0  | 49.0  | 49.0  | 14.0  | 45.0  | 31.0  | 31.0  |
| Total Split (%)      | 52.1% | 52.1% | 52.1% | 52.1% | 14.9% | 47.9% | 33.0% | 33.0% |
| Yellow Time (s)      | 4.3   | 4.3   | 4.3   | 4.3   | 3.0   | 4.3   | 4.3   | 4.3   |
| All-Red Time (s)     | 1.3   | 1.3   | 1.3   | 1.3   | 0.0   | 1.5   | 1.5   | 1.5   |
| Lost Time Adjust (s) | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Lost Time (s)  | 5.6   | 5.6   | 5.6   | 5.6   | 3.0   | 5.8   | 5.8   | 5.8   |
| Lead/Lag             |       |       |       |       | Lead  |       | Lag   | Lag   |
| Lead-Lag Optimize?   |       |       |       |       | Yes   |       | Yes   | Yes   |
| Recall Mode          | C-Max | C-Max | C-Max | C-Max | None  | Max   | Max   | Max   |
| Act Effct Green (s)  | 43.4  | 43.4  | 43.4  | 43.4  | 42.0  | 39.2  | 25.9  | 25.9  |
| Actuated g/C Ratio   | 0.46  | 0.46  | 0.46  | 0.46  | 0.45  | 0.42  | 0.28  | 0.28  |
| v/c Ratio            | 0.32  | 0.48  | 0.26  | 0.18  | 0.69  | 0.30  | 0.55  | 0.85  |
| Control Delay        | 18.5  | 11.4  | 19.3  | 10.4  | 31.4  | 16.6  | 41.6  | 42.5  |
| Queue Delay          | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Delay          | 18.5  | 11.4  | 19.3  | 10.4  | 31.4  | 16.6  | 41.6  | 42.5  |
| LOS                  | B     | B     | B     | B     | C     | B     | D     | D     |
| Approach Delay       |       | 12.6  |       | 12.0  |       | 20.1  |       | 42.4  |
| Approach LOS         |       | B     |       | B     |       | C     |       | D     |

Intersection Summary

Cycle Length: 94  
 Actuated Cycle Length: 94  
 Offset: 31 (33%), Referenced to phase 4:EBTL and 8:WBTL, Start of Green  
 Natural Cycle: 75  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.85  
 Intersection Signal Delay: 23.6  
 Intersection Capacity Utilization 80.0%  
 Analysis Period (min) 15  
 Intersection LOS: C  
 ICU Level of Service D

Splits and Phases: 6: Pinnacle Peak Rd & 19th Ave



Deer Valley 30  
6: Pinnacle Peak Rd & 19th Ave

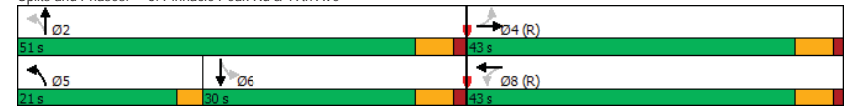
2024 Total PM Scenario B  
Timings

| Lane Group           | EBL   | EBT   | WBL   | WBT   | NBL   | NBT   | SBL   | SBT   |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations  | ↖     | ↗     | ↖     | ↗     | ↖     | ↗     | ↖     | ↗     |
| Traffic Volume (vph) | 86    | 145   | 57    | 327   | 408   | 806   | 65    | 577   |
| Future Volume (vph)  | 86    | 145   | 57    | 327   | 408   | 806   | 65    | 577   |
| Turn Type            | Perm  | NA    | Perm  | NA    | pm+pt | NA    | Perm  | NA    |
| Protected Phases     |       | 4     |       | 8     | 5     | 2     |       | 6     |
| Permitted Phases     | 4     |       | 8     |       | 2     |       | 6     |       |
| Detector Phase       | 4     | 4     | 8     | 8     | 5     | 2     | 6     | 6     |
| Switch Phase         |       |       |       |       |       |       |       |       |
| Minimum Initial (s)  | 15.0  | 15.0  | 15.0  | 15.0  | 5.0   | 15.0  | 15.0  | 15.0  |
| Minimum Split (s)    | 34.6  | 34.6  | 34.6  | 34.6  | 9.5   | 30.8  | 30.8  | 30.8  |
| Total Split (s)      | 43.0  | 43.0  | 43.0  | 43.0  | 21.0  | 51.0  | 30.0  | 30.0  |
| Total Split (%)      | 45.7% | 45.7% | 45.7% | 45.7% | 22.3% | 54.3% | 31.9% | 31.9% |
| Yellow Time (s)      | 4.3   | 4.3   | 4.3   | 4.3   | 3.0   | 4.3   | 4.3   | 4.3   |
| All-Red Time (s)     | 1.3   | 1.3   | 1.3   | 1.3   | 0.0   | 1.5   | 1.5   | 1.5   |
| Lost Time Adjust (s) | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Lost Time (s)  | 5.6   | 5.6   | 5.6   | 5.6   | 3.0   | 5.8   | 5.8   | 5.8   |
| Lead/Lag             |       |       |       |       | Lead  |       | Lag   | Lag   |
| Lead-Lag Optimize?   |       |       |       |       | Yes   |       | Yes   | Yes   |
| Recall Mode          | C-Max | C-Max | C-Max | C-Max | None  | Max   | Max   | Max   |
| Act Effct Green (s)  | 37.4  | 37.4  | 37.4  | 37.4  | 48.0  | 45.2  | 24.2  | 24.2  |
| Actuated g/C Ratio   | 0.40  | 0.40  | 0.40  | 0.40  | 0.51  | 0.48  | 0.26  | 0.26  |
| v/c Ratio            | 0.29  | 0.31  | 0.19  | 0.34  | 1.10  | 0.39  | 0.52  | 0.89  |
| Control Delay        | 22.5  | 7.6   | 20.4  | 18.7  | 100.9 | 16.1  | 45.8  | 46.9  |
| Queue Delay          | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Delay          | 22.5  | 7.6   | 20.4  | 18.7  | 100.9 | 16.1  | 45.8  | 46.9  |
| LOS                  | C     | A     | C     | B     | F     | B     | D     | D     |
| Approach Delay       |       | 10.2  |       | 18.9  |       | 43.9  |       | 46.8  |
| Approach LOS         |       | B     |       | B     |       | D     |       | D     |

Intersection Summary

Cycle Length: 94  
 Actuated Cycle Length: 94  
 Offset: 31 (33%), Referenced to phase 4:EBTL and 8:WBTL, Start of Green  
 Natural Cycle: 90  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 1.10  
 Intersection Signal Delay: 35.3  
 Intersection Capacity Utilization 85.1%  
 Analysis Period (min) 15  
 Intersection LOS: D  
 ICU Level of Service E

Splits and Phases: 6: Pinnacle Peak Rd & 19th Ave





Deer Valley 30  
7: 15th Ave & Happy Valley Rd

2024 Total AM Scenario B  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Int Delay, s/veh         | 0.9  |      |      |      |      |      |      |      |      |      |      |      |
| Movement                 | EBL  | EBT  | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
| Lane Configurations      | ↕    |      |      | ↕    |      |      | ↕    |      |      | ↕    |      |      |
| Traffic Vol, veh/h       | 6    | 491  | 23   | 14   | 370  | 0    | 19   | 0    | 10   | 2    | 0    | 6    |
| Future Vol, veh/h        | 6    | 491  | 23   | 14   | 370  | 0    | 19   | 0    | 10   | 2    | 0    | 6    |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Free | Free | Free | Free | Free | Free | Stop | Stop | Stop | Stop | Stop | Stop |
| RT Channelized           | -    | -    | None | -    | -    | None | -    | -    | None | -    | -    | None |
| Storage Length           | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    |
| Veh in Median Storage, # | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Grade, %                 | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Peak Hour Factor         | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   |
| Heavy Vehicles, %        | 8    | 8    | 8    | 8    | 8    | 8    | 8    | 8    | 8    | 8    | 8    | 8    |
| Mvmt Flow                | 7    | 534  | 25   | 15   | 402  | 0    | 21   | 0    | 11   | 2    | 0    | 7    |

| Major/Minor          | Major1 | Major2 | Minor1 | Minor2 |
|----------------------|--------|--------|--------|--------|
| Conflicting Flow All | 402    | 0      | 559    | 0      |
| Stage 1              | -      | -      | -      | -      |
| Stage 2              | -      | -      | -      | -      |
| Critical Hdwy        | 4.18   | -      | 4.18   | -      |
| Critical Hdwy Stg 1  | -      | -      | -      | -      |
| Critical Hdwy Stg 2  | -      | -      | -      | -      |
| Follow-up Hdwy       | 2.272  | -      | 2.272  | -      |
| Pot Cap-1 Maneuver   | 1125   | -      | 983    | -      |
| Stage 1              | -      | -      | -      | -      |
| Stage 2              | -      | -      | -      | -      |
| Platoon blocked, %   | -      | -      | -      | -      |
| Mov Cap-1 Maneuver   | 1125   | -      | 983    | -      |
| Mov Cap-2 Maneuver   | -      | -      | -      | -      |
| Stage 1              | -      | -      | -      | -      |
| Stage 2              | -      | -      | -      | -      |

| Approach             | EB  | WB  | NB   | SB   |
|----------------------|-----|-----|------|------|
| HCM Control Delay, s | 0.1 | 0.3 | 20.4 | 13.8 |
| HCM LOS              |     |     | C    | B    |

| Minor Lane/Major Mvmt | NBLn1 | EBL   | EBT | EBR | WBL   | WBT | WBR | SBLn1 |
|-----------------------|-------|-------|-----|-----|-------|-----|-----|-------|
| Capacity (veh/h)      | 265   | 1125  | -   | -   | 983   | -   | -   | 420   |
| HCM Lane V/C Ratio    | 0.119 | 0.006 | -   | -   | 0.015 | -   | -   | 0.021 |
| HCM Control Delay (s) | 20.4  | 8.2   | 0   | -   | 8.7   | 0   | -   | 13.8  |
| HCM Lane LOS          | C     | A     | A   | -   | A     | A   | -   | B     |
| HCM 95th %tile Q(veh) | 0.4   | 0     | -   | -   | 0     | -   | -   | 0.1   |

Deer Valley 30  
7: 15th Ave & Happy Valley Rd

2024 Total PM Scenario B  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Int Delay, s/veh         | 1.1  |      |      |      |      |      |      |      |      |      |      |      |
| Movement                 | EBL  | EBT  | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
| Lane Configurations      | ↕    |      |      | ↕    |      |      | ↕    |      |      | ↕    |      |      |
| Traffic Vol, veh/h       | 2    | 507  | 3    | 8    | 930  | 0    | 20   | 0    | 17   | 0    | 0    | 1    |
| Future Vol, veh/h        | 2    | 507  | 3    | 8    | 930  | 0    | 20   | 0    | 17   | 0    | 0    | 1    |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Free | Free | Free | Free | Free | Free | Stop | Stop | Stop | Stop | Stop | Stop |
| RT Channelized           | -    | -    | None | -    | -    | None | -    | -    | None | -    | -    | None |
| Storage Length           | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    |
| Veh in Median Storage, # | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Grade, %                 | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Peak Hour Factor         | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   |
| Heavy Vehicles, %        | 8    | 8    | 8    | 8    | 8    | 8    | 8    | 8    | 8    | 8    | 8    | 8    |
| Mvmt Flow                | 2    | 551  | 3    | 9    | 1011 | 0    | 22   | 0    | 18   | 0    | 0    | 1    |

| Major/Minor          | Major1 | Major2 | Minor1 | Minor2 |
|----------------------|--------|--------|--------|--------|
| Conflicting Flow All | 1011   | 0      | 554    | 0      |
| Stage 1              | -      | -      | -      | -      |
| Stage 2              | -      | -      | -      | -      |
| Critical Hdwy        | 4.18   | -      | 4.18   | -      |
| Critical Hdwy Stg 1  | -      | -      | -      | -      |
| Critical Hdwy Stg 2  | -      | -      | -      | -      |
| Follow-up Hdwy       | 2.272  | -      | 2.272  | -      |
| Pot Cap-1 Maneuver   | 663    | -      | 987    | -      |
| Stage 1              | -      | -      | -      | -      |
| Stage 2              | -      | -      | -      | -      |
| Platoon blocked, %   | -      | -      | -      | -      |
| Mov Cap-1 Maneuver   | 663    | -      | 987    | -      |
| Mov Cap-2 Maneuver   | -      | -      | -      | -      |
| Stage 1              | -      | -      | -      | -      |
| Stage 2              | -      | -      | -      | -      |

| Approach             | EB | WB  | NB | SB   |
|----------------------|----|-----|----|------|
| HCM Control Delay, s | 0  | 0.1 | 43 | 17.8 |
| HCM LOS              |    |     | E  | C    |

| Minor Lane/Major Mvmt | NBLn1 | EBL   | EBT | EBR | WBL   | WBT | WBR | SBLn1 |
|-----------------------|-------|-------|-----|-----|-------|-----|-----|-------|
| Capacity (veh/h)      | 134   | 663   | -   | -   | 987   | -   | -   | 283   |
| HCM Lane V/C Ratio    | 0.3   | 0.003 | -   | -   | 0.009 | -   | -   | 0.004 |
| HCM Control Delay (s) | 43    | 10.4  | 0   | -   | 8.7   | 0   | -   | 17.8  |
| HCM Lane LOS          | E     | B     | A   | -   | A     | A   | -   | C     |
| HCM 95th %tile Q(veh) | 1.2   | 0     | -   | -   | 0     | -   | -   | 0     |

Deer Valley 30  
8: 7th Ave & Happy Valley Rd

2024 Total AM Scenario B  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh         | 0.6  |      |      |      |      |      |
| Movement                 | EBT  | EBR  | WBL  | WBT  | NBL  | NBR  |
| Lane Configurations      | ↻    |      |      | ↻    | ↻    | ↻    |
| Traffic Vol, veh/h       | 513  | 24   | 9    | 313  | 17   | 10   |
| Future Vol, veh/h        | 513  | 24   | 9    | 313  | 17   | 10   |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Free | Free | Free | Free | Stop | Stop |
| RT Channelized           | -    | None | -    | None | -    | None |
| Storage Length           | -    | -    | -    | -    | -    | -    |
| Veh in Median Storage, # | 0    | -    | -    | 0    | 0    | -    |
| Grade, %                 | 0    | -    | -    | 0    | 0    | -    |
| Peak Hour Factor         | 92   | 92   | 92   | 92   | 92   | 92   |
| Heavy Vehicles, %        | 8    | 8    | 8    | 8    | 8    | 8    |
| Mvmt Flow                | 558  | 26   | 10   | 340  | 18   | 11   |

| Major/Minor          | Major1 | Major2 | Minor1 |   |       |
|----------------------|--------|--------|--------|---|-------|
| Conflicting Flow All | 0      | 0      | 584    | 0 | 931   |
| Stage 1              | -      | -      | -      | - | 571   |
| Stage 2              | -      | -      | -      | - | 360   |
| Critical Hdwy        | -      | -      | 4.18   | - | 6.48  |
| Critical Hdwy Stg 1  | -      | -      | -      | - | 5.48  |
| Critical Hdwy Stg 2  | -      | -      | -      | - | 5.48  |
| Follow-up Hdwy       | -      | -      | 2.272  | - | 3.372 |
| Pot Cap-1 Maneuver   | -      | -      | 962    | - | 289   |
| Stage 1              | -      | -      | -      | - | 554   |
| Stage 2              | -      | -      | -      | - | 693   |
| Platoon blocked, %   | -      | -      | -      | - | -     |
| Mov Cap-1 Maneuver   | -      | -      | 962    | - | 285   |
| Mov Cap-2 Maneuver   | -      | -      | -      | - | 285   |
| Stage 1              | -      | -      | -      | - | 554   |
| Stage 2              | -      | -      | -      | - | 684   |

| Approach             | EB | WB  | NB   |
|----------------------|----|-----|------|
| HCM Control Delay, s | 0  | 0.2 | 16.6 |
| HCM LOS              |    |     | C    |

| Minor Lane/Major Mvmt | NBLn1 | EBT | EBR | WBL  | WBT |
|-----------------------|-------|-----|-----|------|-----|
| Capacity (veh/h)      | 340   | -   | -   | 962  | -   |
| HCM Lane V/C Ratio    | 0.086 | -   | -   | 0.01 | -   |
| HCM Control Delay (s) | 16.6  | -   | -   | 8.8  | 0   |
| HCM Lane LOS          | C     | -   | -   | A    | A   |
| HCM 95th %tile Q(veh) | 0.3   | -   | -   | 0    | -   |

Deer Valley 30  
8: 7th Ave & Happy Valley Rd

2024 Total PM Scenario B  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh         | 1.8  |      |      |      |      |      |
| Movement                 | EBT  | EBR  | WBL  | WBT  | NBL  | NBR  |
| Lane Configurations      | ↻    |      |      | ↻    | ↻    | ↻    |
| Traffic Vol, veh/h       | 499  | 37   | 19   | 857  | 41   | 11   |
| Future Vol, veh/h        | 499  | 37   | 19   | 857  | 41   | 11   |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Free | Free | Free | Free | Stop | Stop |
| RT Channelized           | -    | None | -    | None | -    | None |
| Storage Length           | -    | -    | -    | -    | -    | -    |
| Veh in Median Storage, # | 0    | -    | -    | 0    | 0    | -    |
| Grade, %                 | 0    | -    | -    | 0    | 0    | -    |
| Peak Hour Factor         | 92   | 92   | 92   | 92   | 92   | 92   |
| Heavy Vehicles, %        | 8    | 8    | 8    | 8    | 8    | 8    |
| Mvmt Flow                | 542  | 40   | 21   | 932  | 45   | 12   |

| Major/Minor          | Major1 | Major2 | Minor1 |   |       |
|----------------------|--------|--------|--------|---|-------|
| Conflicting Flow All | 0      | 0      | 582    | 0 | 1536  |
| Stage 1              | -      | -      | -      | - | 562   |
| Stage 2              | -      | -      | -      | - | 974   |
| Critical Hdwy        | -      | -      | 4.18   | - | 6.48  |
| Critical Hdwy Stg 1  | -      | -      | -      | - | 5.48  |
| Critical Hdwy Stg 2  | -      | -      | -      | - | 5.48  |
| Follow-up Hdwy       | -      | -      | 2.272  | - | 3.372 |
| Pot Cap-1 Maneuver   | -      | -      | 963    | - | 124   |
| Stage 1              | -      | -      | -      | - | 559   |
| Stage 2              | -      | -      | -      | - | 357   |
| Platoon blocked, %   | -      | -      | -      | - | -     |
| Mov Cap-1 Maneuver   | -      | -      | 963    | - | 118   |
| Mov Cap-2 Maneuver   | -      | -      | -      | - | 118   |
| Stage 1              | -      | -      | -      | - | 559   |
| Stage 2              | -      | -      | -      | - | 341   |

| Approach             | EB | WB  | NB   |
|----------------------|----|-----|------|
| HCM Control Delay, s | 0  | 0.2 | 46.7 |
| HCM LOS              |    |     | E    |

| Minor Lane/Major Mvmt | NBLn1 | EBT | EBR | WBL   | WBT |
|-----------------------|-------|-----|-----|-------|-----|
| Capacity (veh/h)      | 141   | -   | -   | 963   | -   |
| HCM Lane V/C Ratio    | 0.401 | -   | -   | 0.021 | -   |
| HCM Control Delay (s) | 46.7  | -   | -   | 8.8   | 0   |
| HCM Lane LOS          | E     | -   | -   | A     | A   |
| HCM 95th %tile Q(veh) | 1.7   | -   | -   | 0.1   | -   |



Deer Valley 30  
9: 7th Ave & Pinnacle Peak Rd

2024 Total AM Scenario B  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Int Delay, s/veh         | 2.1  |      |      |      |      |      |      |      |      |      |      |      |
| Movement                 | EBL  | EBT  | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
| Lane Configurations      | ↔    | ↑    | ↔    | ↔    | ↔    |      | ↔    | ↔    |      | ↔    | ↔    |      |
| Traffic Vol, veh/h       | 0    | 194  | 120  | 34   | 239  | 0    | 60   | 0    | 29   | 0    | 0    | 0    |
| Future Vol, veh/h        | 0    | 194  | 120  | 34   | 239  | 0    | 60   | 0    | 29   | 0    | 0    | 0    |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Free | Free | Free | Free | Free | Free | Stop | Stop | Stop | Stop | Stop | Stop |
| RT Channelized           | -    | -    | None | -    | -    | None | -    | -    | None | -    | -    | None |
| Storage Length           | 150  | -    | 170  | 150  | -    | -    | 150  | -    | -    | 150  | -    | -    |
| Veh in Median Storage, # | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Grade, %                 | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Peak Hour Factor         | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   |
| Heavy Vehicles, %        | 8    | 8    | 8    | 8    | 8    | 8    | 8    | 8    | 8    | 8    | 8    | 8    |
| Mvmt Flow                | 0    | 211  | 130  | 37   | 260  | 0    | 65   | 0    | 32   | 0    | 0    | 0    |

| Major/Minor          | Major1 | Major2 | Minor1 | Minor2 |
|----------------------|--------|--------|--------|--------|
| Conflicting Flow All | 260    | 0      | 0      | 341    |
| Stage 1              | -      | -      | -      | -      |
| Stage 2              | -      | -      | -      | -      |
| Critical Hdwy        | 4.18   | -      | -      | 4.18   |
| Critical Hdwy Stg 1  | -      | -      | -      | -      |
| Critical Hdwy Stg 2  | -      | -      | -      | -      |
| Follow-up Hdwy       | 2.272  | -      | -      | 2.272  |
| Pot Cap-1 Maneuver   | 1270   | -      | -      | 1185   |
| Stage 1              | -      | -      | -      | -      |
| Stage 2              | -      | -      | -      | -      |
| Platoon blocked, %   | -      | -      | -      | -      |
| Mov Cap-1 Maneuver   | 1270   | -      | -      | 1185   |
| Mov Cap-2 Maneuver   | -      | -      | -      | -      |
| Stage 1              | -      | -      | -      | -      |
| Stage 2              | -      | -      | -      | -      |

| Approach             | EB | WB | NB   | SB |
|----------------------|----|----|------|----|
| HCM Control Delay, s | 0  | 1  | 13.2 | 0  |
| HCM LOS              |    |    | B    | A  |

| Minor Lane/Major Mvmt | NBLn1 | NBLn2 | EBL  | EBT | EBR | WBL   | WBT | WBR | SBLn1 | SBLn2 |
|-----------------------|-------|-------|------|-----|-----|-------|-----|-----|-------|-------|
| Capacity (veh/h)      | 429   | 814   | 1270 | -   | -   | 1185  | -   | -   | -     | -     |
| HCM Lane V/C Ratio    | 0.152 | 0.039 | -    | -   | -   | 0.031 | -   | -   | -     | -     |
| HCM Control Delay (s) | 14.9  | 9.6   | 0    | -   | -   | 8.1   | -   | -   | 0     | 0     |
| HCM Lane LOS          | B     | A     | A    | -   | -   | A     | -   | -   | A     | A     |
| HCM 95th %tile Q(veh) | 0.5   | 0.1   | 0    | -   | -   | 0.1   | -   | -   | -     | -     |

Deer Valley 30  
9: 7th Ave & Pinnacle Peak Rd

2024 Total PM Scenario B  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Int Delay, s/veh         | 2.3  |      |      |      |      |      |      |      |      |      |      |      |
| Movement                 | EBL  | EBT  | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
| Lane Configurations      | ↔    | ↑    | ↔    | ↔    | ↔    |      | ↔    | ↔    |      | ↔    | ↔    |      |
| Traffic Vol, veh/h       | 0    | 261  | 52   | 31   | 196  | 0    | 59   | 0    | 29   | 0    | 0    | 0    |
| Future Vol, veh/h        | 0    | 261  | 52   | 31   | 196  | 0    | 59   | 0    | 29   | 0    | 0    | 0    |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Free | Free | Free | Free | Free | Free | Stop | Stop | Stop | Stop | Stop | Stop |
| RT Channelized           | -    | -    | None | -    | -    | None | -    | -    | None | -    | -    | None |
| Storage Length           | 150  | -    | 170  | 150  | -    | -    | 150  | -    | -    | 150  | -    | -    |
| Veh in Median Storage, # | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Grade, %                 | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Peak Hour Factor         | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   |
| Heavy Vehicles, %        | 8    | 8    | 8    | 8    | 8    | 8    | 8    | 8    | 8    | 8    | 8    | 8    |
| Mvmt Flow                | 0    | 284  | 57   | 34   | 213  | 0    | 64   | 0    | 32   | 0    | 0    | 0    |

| Major/Minor          | Major1 | Major2 | Minor1 | Minor2 |
|----------------------|--------|--------|--------|--------|
| Conflicting Flow All | 213    | 0      | 0      | 341    |
| Stage 1              | -      | -      | -      | -      |
| Stage 2              | -      | -      | -      | -      |
| Critical Hdwy        | 4.18   | -      | -      | 4.18   |
| Critical Hdwy Stg 1  | -      | -      | -      | -      |
| Critical Hdwy Stg 2  | -      | -      | -      | -      |
| Follow-up Hdwy       | 2.272  | -      | -      | 2.272  |
| Pot Cap-1 Maneuver   | 1322   | -      | -      | 1185   |
| Stage 1              | -      | -      | -      | -      |
| Stage 2              | -      | -      | -      | -      |
| Platoon blocked, %   | -      | -      | -      | -      |
| Mov Cap-1 Maneuver   | 1322   | -      | -      | 1185   |
| Mov Cap-2 Maneuver   | -      | -      | -      | -      |
| Stage 1              | -      | -      | -      | -      |
| Stage 2              | -      | -      | -      | -      |

| Approach             | EB | WB  | NB   | SB |
|----------------------|----|-----|------|----|
| HCM Control Delay, s | 0  | 1.1 | 13.5 | 0  |
| HCM LOS              |    |     | B    | A  |

| Minor Lane/Major Mvmt | NBLn1 | NBLn2 | EBL  | EBT | EBR | WBL   | WBT | WBR | SBLn1 | SBLn2 |
|-----------------------|-------|-------|------|-----|-----|-------|-----|-----|-------|-------|
| Capacity (veh/h)      | 418   | 741   | 1322 | -   | -   | 1185  | -   | -   | -     | -     |
| HCM Lane V/C Ratio    | 0.153 | 0.043 | -    | -   | -   | 0.028 | -   | -   | -     | -     |
| HCM Control Delay (s) | 15.2  | 10.1  | 0    | -   | -   | 8.1   | -   | -   | 0     | 0     |
| HCM Lane LOS          | C     | B     | A    | -   | -   | A     | -   | -   | A     | A     |
| HCM 95th %tile Q(veh) | 0.5   | 0.1   | 0    | -   | -   | 0.1   | -   | -   | -     | -     |

Deer Valley 30  
11: 15th Ave & Parkview Ln

2024 Total AM Scenario B  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh         | 0    |      |      |      |      |      |
| Movement                 | EBT  | EBR  | WBL  | WBT  | NBL  | NBR  |
| Lane Configurations      | ↻    |      |      | ↻    | ↻    |      |
| Traffic Vol, veh/h       | 0    | 0    | 0    | 0    | 0    | 0    |
| Future Vol, veh/h        | 0    | 0    | 0    | 0    | 0    | 0    |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Free | Free | Free | Free | Stop | Stop |
| RT Channelized           | -    | None | -    | None | -    | None |
| Storage Length           | -    | -    | -    | -    | 0    | -    |
| Veh in Median Storage, # | 0    | -    | -    | 0    | 0    | -    |
| Grade, %                 | 0    | -    | -    | 0    | 0    | -    |
| Peak Hour Factor         | 92   | 92   | 92   | 92   | 92   | 92   |
| Heavy Vehicles, %        | 8    | 8    | 8    | 8    | 8    | 8    |
| Mvmt Flow                | 0    | 0    | 0    | 0    | 0    | 0    |

| Major/Minor          | Major1 | Major2 | Minor1 |   |       |
|----------------------|--------|--------|--------|---|-------|
| Conflicting Flow All | 0      | 0      | 1      | 0 | 2     |
| Stage 1              | -      | -      | -      | - | 1     |
| Stage 2              | -      | -      | -      | - | 1     |
| Critical Hdwy        | -      | -      | 4.18   | - | 6.48  |
| Critical Hdwy Stg 1  | -      | -      | -      | - | 5.48  |
| Critical Hdwy Stg 2  | -      | -      | -      | - | 5.48  |
| Follow-up Hdwy       | -      | -      | 2.272  | - | 3.572 |
| Pot Cap-1 Maneuver   | -      | -      | 1583   | - | 1005  |
| Stage 1              | -      | -      | -      | - | 1007  |
| Stage 2              | -      | -      | -      | - | 1007  |
| Platoon blocked, %   | -      | -      | -      | - | -     |
| Mov Cap-1 Maneuver   | -      | -      | 1583   | - | 1005  |
| Mov Cap-2 Maneuver   | -      | -      | -      | - | 1005  |
| Stage 1              | -      | -      | -      | - | 1007  |
| Stage 2              | -      | -      | -      | - | 1007  |

| Approach             | EB | WB | NB |
|----------------------|----|----|----|
| HCM Control Delay, s | 0  | 0  | 0  |
| HCM LOS              |    |    | A  |

| Minor Lane/Major Mvmt | NBLn1 | EBT | EBR | WBL  | WBT |
|-----------------------|-------|-----|-----|------|-----|
| Capacity (veh/h)      | -     | -   | -   | 1583 | -   |
| HCM Lane V/C Ratio    | -     | -   | -   | -    | -   |
| HCM Control Delay (s) | 0     | -   | -   | 0    | -   |
| HCM Lane LOS          | A     | -   | -   | A    | -   |
| HCM 95th %tile Q(veh) | -     | -   | -   | 0    | -   |

Deer Valley 30  
11: 15th Ave & Parkview Ln

2024 Total PM Scenario B  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh         | 0    |      |      |      |      |      |
| Movement                 | EBT  | EBR  | WBL  | WBT  | NBL  | NBR  |
| Lane Configurations      | ↻    |      |      | ↻    | ↻    |      |
| Traffic Vol, veh/h       | 0    | 0    | 0    | 0    | 0    | 0    |
| Future Vol, veh/h        | 0    | 0    | 0    | 0    | 0    | 0    |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Free | Free | Free | Free | Stop | Stop |
| RT Channelized           | -    | None | -    | None | -    | None |
| Storage Length           | -    | -    | -    | -    | 0    | -    |
| Veh in Median Storage, # | 0    | -    | -    | 0    | 0    | -    |
| Grade, %                 | 0    | -    | -    | 0    | 0    | -    |
| Peak Hour Factor         | 92   | 92   | 92   | 92   | 92   | 92   |
| Heavy Vehicles, %        | 8    | 8    | 8    | 8    | 8    | 8    |
| Mvmt Flow                | 0    | 0    | 0    | 0    | 0    | 0    |

| Major/Minor          | Major1 | Major2 | Minor1 |   |       |
|----------------------|--------|--------|--------|---|-------|
| Conflicting Flow All | 0      | 0      | 1      | 0 | 2     |
| Stage 1              | -      | -      | -      | - | 1     |
| Stage 2              | -      | -      | -      | - | 1     |
| Critical Hdwy        | -      | -      | 4.18   | - | 6.48  |
| Critical Hdwy Stg 1  | -      | -      | -      | - | 5.48  |
| Critical Hdwy Stg 2  | -      | -      | -      | - | 5.48  |
| Follow-up Hdwy       | -      | -      | 2.272  | - | 3.572 |
| Pot Cap-1 Maneuver   | -      | -      | 1583   | - | 1005  |
| Stage 1              | -      | -      | -      | - | 1007  |
| Stage 2              | -      | -      | -      | - | 1007  |
| Platoon blocked, %   | -      | -      | -      | - | -     |
| Mov Cap-1 Maneuver   | -      | -      | 1583   | - | 1005  |
| Mov Cap-2 Maneuver   | -      | -      | -      | - | 1005  |
| Stage 1              | -      | -      | -      | - | 1007  |
| Stage 2              | -      | -      | -      | - | 1007  |

| Approach             | EB | WB | NB |
|----------------------|----|----|----|
| HCM Control Delay, s | 0  | 0  | 0  |
| HCM LOS              |    |    | A  |

| Minor Lane/Major Mvmt | NBLn1 | EBT | EBR | WBL  | WBT |
|-----------------------|-------|-----|-----|------|-----|
| Capacity (veh/h)      | -     | -   | -   | 1583 | -   |
| HCM Lane V/C Ratio    | -     | -   | -   | -    | -   |
| HCM Control Delay (s) | 0     | -   | -   | 0    | -   |
| HCM Lane LOS          | A     | -   | -   | A    | -   |
| HCM 95th %tile Q(veh) | -     | -   | -   | 0    | -   |

Deer Valley 30  
12: Alameda Rd & Access A

2024 Total AM Scenario B  
HCM 6th TWSC

| Intersection             |        |        |        |       |       |      |
|--------------------------|--------|--------|--------|-------|-------|------|
| Int Delay, s/veh         | 1.2    |        |        |       |       |      |
| Movement                 | EBL    | EBT    | WBT    | WBR   | SBL   | SBR  |
| Lane Configurations      |        | ↕      | ↕      |       | ↕     |      |
| Traffic Vol, veh/h       | 30     | 152    | 23     | 0     | 0     | 5    |
| Future Vol, veh/h        | 30     | 152    | 23     | 0     | 0     | 5    |
| Conflicting Peds, #/hr   | 0      | 0      | 0      | 0     | 0     | 0    |
| Sign Control             | Free   | Free   | Free   | Free  | Stop  | Stop |
| RT Channelized           | -      | None   | -      | None  | -     | None |
| Storage Length           | -      | -      | -      | -     | 0     | -    |
| Veh in Median Storage, # | -      | 0      | 0      | -     | 0     | -    |
| Grade, %                 | -      | 0      | 0      | -     | 0     | -    |
| Peak Hour Factor         | 92     | 92     | 92     | 92    | 92    | 92   |
| Heavy Vehicles, %        | 8      | 8      | 8      | 8     | 8     | 8    |
| Mvmt Flow                | 33     | 165    | 25     | 0     | 0     | 5    |
| Major/Minor              | Major1 | Major2 | Minor2 |       |       |      |
| Conflicting Flow All     | 25     | 0      | 0      | 256   | 25    |      |
| Stage 1                  | -      | -      | -      | 25    | -     |      |
| Stage 2                  | -      | -      | -      | 231   | -     |      |
| Critical Hdwy            | 4.18   | -      | -      | 6.48  | 6.28  |      |
| Critical Hdwy Stg 1      | -      | -      | -      | 5.48  | -     |      |
| Critical Hdwy Stg 2      | -      | -      | -      | 5.48  | -     |      |
| Follow-up Hdwy           | 2.272  | -      | -      | 3.572 | 3.372 |      |
| Pot Cap-1 Maneuver       | 1551   | -      | -      | 720   | 1034  |      |
| Stage 1                  | -      | -      | -      | 982   | -     |      |
| Stage 2                  | -      | -      | -      | 793   | -     |      |
| Platoon blocked, %       | -      | -      | -      | -     | -     |      |
| Mov Cap-1 Maneuver       | 1551   | -      | -      | 703   | 1034  |      |
| Mov Cap-2 Maneuver       | -      | -      | -      | 703   | -     |      |
| Stage 1                  | -      | -      | -      | 959   | -     |      |
| Stage 2                  | -      | -      | -      | 793   | -     |      |
| Approach                 | EB     | WB     | SB     |       |       |      |
| HCM Control Delay, s     | 1.2    | 0      | 8.5    |       |       |      |
| HCM LOS                  |        |        |        | A     |       |      |
| Minor Lane/Major Mvmt    | EBL    | EBT    | WBT    | WBR   | SBLn1 | SBR  |
| Capacity (veh/h)         | 1551   | -      | -      | -     | 1034  |      |
| HCM Lane V/C Ratio       | 0.021  | -      | -      | -     | 0.005 |      |
| HCM Control Delay (s)    | 7.4    | 0      | -      | -     | 8.5   |      |
| HCM Lane LOS             | A      | A      | -      | -     | A     |      |
| HCM 95th %tile Q(veh)    | 0.1    | -      | -      | -     | 0     |      |

Deer Valley 30  
12: Alameda Rd & Access A

2024 Total PM Scenario B  
HCM 6th TWSC

| Intersection             |        |        |        |       |       |      |
|--------------------------|--------|--------|--------|-------|-------|------|
| Int Delay, s/veh         | 1.2    |        |        |       |       |      |
| Movement                 | EBL    | EBT    | WBT    | WBR   | SBL   | SBR  |
| Lane Configurations      |        | ↕      | ↕      |       | ↕     |      |
| Traffic Vol, veh/h       | 3      | 17     | 106    | 0     | 0     | 17   |
| Future Vol, veh/h        | 3      | 17     | 106    | 0     | 0     | 17   |
| Conflicting Peds, #/hr   | 0      | 0      | 0      | 0     | 0     | 0    |
| Sign Control             | Free   | Free   | Free   | Free  | Stop  | Stop |
| RT Channelized           | -      | None   | -      | None  | -     | None |
| Storage Length           | -      | -      | -      | -     | 0     | -    |
| Veh in Median Storage, # | -      | 0      | 0      | -     | 0     | -    |
| Grade, %                 | -      | 0      | 0      | -     | 0     | -    |
| Peak Hour Factor         | 92     | 92     | 92     | 92    | 92    | 92   |
| Heavy Vehicles, %        | 8      | 8      | 8      | 8     | 8     | 8    |
| Mvmt Flow                | 3      | 18     | 115    | 0     | 0     | 18   |
| Major/Minor              | Major1 | Major2 | Minor2 |       |       |      |
| Conflicting Flow All     | 115    | 0      | 0      | 139   | 115   |      |
| Stage 1                  | -      | -      | -      | 115   | -     |      |
| Stage 2                  | -      | -      | -      | 24    | -     |      |
| Critical Hdwy            | 4.18   | -      | -      | 6.48  | 6.28  |      |
| Critical Hdwy Stg 1      | -      | -      | -      | 5.48  | -     |      |
| Critical Hdwy Stg 2      | -      | -      | -      | 5.48  | -     |      |
| Follow-up Hdwy           | 2.272  | -      | -      | 3.572 | 3.372 |      |
| Pot Cap-1 Maneuver       | 1437   | -      | -      | 840   | 921   |      |
| Stage 1                  | -      | -      | -      | 895   | -     |      |
| Stage 2                  | -      | -      | -      | 983   | -     |      |
| Platoon blocked, %       | -      | -      | -      | -     | -     |      |
| Mov Cap-1 Maneuver       | 1437   | -      | -      | 838   | 921   |      |
| Mov Cap-2 Maneuver       | -      | -      | -      | 838   | -     |      |
| Stage 1                  | -      | -      | -      | 893   | -     |      |
| Stage 2                  | -      | -      | -      | 983   | -     |      |
| Approach                 | EB     | WB     | SB     |       |       |      |
| HCM Control Delay, s     | 1.1    | 0      | 9      |       |       |      |
| HCM LOS                  |        |        |        | A     |       |      |
| Minor Lane/Major Mvmt    | EBL    | EBT    | WBT    | WBR   | SBLn1 | SBR  |
| Capacity (veh/h)         | 1437   | -      | -      | -     | 921   |      |
| HCM Lane V/C Ratio       | 0.002  | -      | -      | -     | 0.02  |      |
| HCM Control Delay (s)    | 7.5    | 0      | -      | -     | 9     |      |
| HCM Lane LOS             | A      | A      | -      | -     | A     |      |
| HCM 95th %tile Q(veh)    | 0      | -      | -      | -     | 0.1   |      |

Deer Valley 30  
13: Alameda Rd & Access B

2024 Total AM Scenario B  
HCM 6th TWSC

| Intersection             |        |        |        |      |       |       |
|--------------------------|--------|--------|--------|------|-------|-------|
| Int Delay, s/veh         | 1.3    |        |        |      |       |       |
| Movement                 | EBL    | EBT    | WBT    | WBR  | SBL   | SBR   |
| Lane Configurations      |        | ↕      | ↕      |      | ↕     |       |
| Traffic Vol, veh/h       | 26     | 126    | 19     | 0    | 0     | 4     |
| Future Vol, veh/h        | 26     | 126    | 19     | 0    | 0     | 4     |
| Conflicting Peds, #/hr   | 0      | 0      | 0      | 0    | 0     | 0     |
| Sign Control             | Free   | Free   | Free   | Free | Stop  | Stop  |
| RT Channelized           | -      | None   | -      | None | -     | None  |
| Storage Length           | -      | -      | -      | -    | 0     | -     |
| Veh in Median Storage, # | -      | 0      | 0      | -    | 0     | -     |
| Grade, %                 | -      | 0      | 0      | -    | 0     | -     |
| Peak Hour Factor         | 92     | 92     | 92     | 92   | 92    | 92    |
| Heavy Vehicles, %        | 8      | 8      | 8      | 8    | 8     | 8     |
| Mvmt Flow                | 28     | 137    | 21     | 0    | 0     | 4     |
| Major/Minor              | Major1 | Major2 | Minor2 |      |       |       |
| Conflicting Flow All     | 21     | 0      | -      | 0    | 214   | 21    |
| Stage 1                  | -      | -      | -      | -    | 21    | -     |
| Stage 2                  | -      | -      | -      | -    | 193   | -     |
| Critical Hdwy            | 4.18   | -      | -      | -    | 6.48  | 6.28  |
| Critical Hdwy Stg 1      | -      | -      | -      | -    | 5.48  | -     |
| Critical Hdwy Stg 2      | -      | -      | -      | -    | 5.48  | -     |
| Follow-up Hdwy           | 2.272  | -      | -      | -    | 3.572 | 3.372 |
| Pot Cap-1 Maneuver       | 1557   | -      | -      | -    | 761   | 1039  |
| Stage 1                  | -      | -      | -      | -    | 986   | -     |
| Stage 2                  | -      | -      | -      | -    | 826   | -     |
| Platoon blocked, %       | -      | -      | -      | -    | -     | -     |
| Mov Cap-1 Maneuver       | 1557   | -      | -      | -    | 747   | 1039  |
| Mov Cap-2 Maneuver       | -      | -      | -      | -    | 747   | -     |
| Stage 1                  | -      | -      | -      | -    | 967   | -     |
| Stage 2                  | -      | -      | -      | -    | 826   | -     |
| Approach                 | EB     | WB     | SB     |      |       |       |
| HCM Control Delay, s     | 1.3    | 0      | 8.5    |      |       |       |
| HCM LOS                  |        |        | A      |      |       |       |
| Minor Lane/Major Mvmt    | EBL    | EBT    | WBT    | WBR  | SBLn1 | SBRn1 |
| Capacity (veh/h)         | 1557   | -      | -      | -    | 1039  | -     |
| HCM Lane V/C Ratio       | 0.018  | -      | -      | -    | 0.004 | -     |
| HCM Control Delay (s)    | 7.4    | 0      | -      | -    | 8.5   | -     |
| HCM Lane LOS             | A      | A      | -      | -    | A     | -     |
| HCM 95th %tile Q(veh)    | 0.1    | -      | -      | -    | 0     | -     |

Deer Valley 30  
13: Alameda Rd & Access B

2024 Total PM Scenario B  
HCM 6th TWSC

| Intersection             |        |        |        |      |       |       |
|--------------------------|--------|--------|--------|------|-------|-------|
| Int Delay, s/veh         | 1.1    |        |        |      |       |       |
| Movement                 | EBL    | EBT    | WBT    | WBR  | SBL   | SBR   |
| Lane Configurations      |        | ↕      | ↕      |      | ↕     |       |
| Traffic Vol, veh/h       | 2      | 15     | 92     | 0    | 0     | 14    |
| Future Vol, veh/h        | 2      | 15     | 92     | 0    | 0     | 14    |
| Conflicting Peds, #/hr   | 0      | 0      | 0      | 0    | 0     | 0     |
| Sign Control             | Free   | Free   | Free   | Free | Stop  | Stop  |
| RT Channelized           | -      | None   | -      | None | -     | None  |
| Storage Length           | -      | -      | -      | -    | 0     | -     |
| Veh in Median Storage, # | -      | 0      | 0      | -    | 0     | -     |
| Grade, %                 | -      | 0      | 0      | -    | 0     | -     |
| Peak Hour Factor         | 92     | 92     | 92     | 92   | 92    | 92    |
| Heavy Vehicles, %        | 8      | 8      | 8      | 8    | 8     | 8     |
| Mvmt Flow                | 2      | 16     | 100    | 0    | 0     | 15    |
| Major/Minor              | Major1 | Major2 | Minor2 |      |       |       |
| Conflicting Flow All     | 100    | 0      | -      | 0    | 120   | 100   |
| Stage 1                  | -      | -      | -      | -    | 100   | -     |
| Stage 2                  | -      | -      | -      | -    | 20    | -     |
| Critical Hdwy            | 4.18   | -      | -      | -    | 6.48  | 6.28  |
| Critical Hdwy Stg 1      | -      | -      | -      | -    | 5.48  | -     |
| Critical Hdwy Stg 2      | -      | -      | -      | -    | 5.48  | -     |
| Follow-up Hdwy           | 2.272  | -      | -      | -    | 3.572 | 3.372 |
| Pot Cap-1 Maneuver       | 1456   | -      | -      | -    | 861   | 939   |
| Stage 1                  | -      | -      | -      | -    | 909   | -     |
| Stage 2                  | -      | -      | -      | -    | 987   | -     |
| Platoon blocked, %       | -      | -      | -      | -    | -     | -     |
| Mov Cap-1 Maneuver       | 1456   | -      | -      | -    | 860   | 939   |
| Mov Cap-2 Maneuver       | -      | -      | -      | -    | 860   | -     |
| Stage 1                  | -      | -      | -      | -    | 908   | -     |
| Stage 2                  | -      | -      | -      | -    | 987   | -     |
| Approach                 | EB     | WB     | SB     |      |       |       |
| HCM Control Delay, s     | 0.9    | 0      | 8.9    |      |       |       |
| HCM LOS                  |        |        | A      |      |       |       |
| Minor Lane/Major Mvmt    | EBL    | EBT    | WBT    | WBR  | SBLn1 | SBRn1 |
| Capacity (veh/h)         | 1456   | -      | -      | -    | 939   | -     |
| HCM Lane V/C Ratio       | 0.001  | -      | -      | -    | 0.016 | -     |
| HCM Control Delay (s)    | 7.5    | 0      | -      | -    | 8.9   | -     |
| HCM Lane LOS             | A      | A      | -      | -    | A     | -     |
| HCM 95th %tile Q(veh)    | 0      | -      | -      | -    | 0     | -     |

Deer Valley 30  
14: Alameda Rd & Access C

2024 Total AM Scenario B  
HCM 6th TWSC

| Intersection             |        |        |        |       |       |       |
|--------------------------|--------|--------|--------|-------|-------|-------|
| Int Delay, s/veh         | 1.9    |        |        |       |       |       |
| Movement                 | EBL    | EBT    | WBT    | WBR   | SBL   | SBR   |
| Lane Configurations      |        | ↕      | ↕      |       | ↕     |       |
| Traffic Vol, veh/h       | 33     | 93     | 14     | 0     | 0     | 5     |
| Future Vol, veh/h        | 33     | 93     | 14     | 0     | 0     | 5     |
| Conflicting Peds, #/hr   | 0      | 0      | 0      | 0     | 0     | 0     |
| Sign Control             | Free   | Free   | Free   | Free  | Stop  | Stop  |
| RT Channelized           | -      | None   | -      | None  | -     | None  |
| Storage Length           | -      | -      | -      | -     | 0     | -     |
| Veh in Median Storage, # | -      | 0      | 0      | -     | 0     | -     |
| Grade, %                 | -      | 0      | 0      | -     | 0     | -     |
| Peak Hour Factor         | 92     | 92     | 92     | 92    | 92    | 92    |
| Heavy Vehicles, %        | 8      | 8      | 8      | 8     | 8     | 8     |
| Mvmt Flow                | 36     | 101    | 15     | 0     | 0     | 5     |
| Major/Minor              | Major1 | Major2 | Minor2 |       |       |       |
| Conflicting Flow All     | 15     | 0      | 0      | 188   | 15    |       |
| Stage 1                  | -      | -      | -      | 15    | -     |       |
| Stage 2                  | -      | -      | -      | 173   | -     |       |
| Critical Hdwy            | 4.18   | -      | -      | 6.48  | 6.28  |       |
| Critical Hdwy Stg 1      | -      | -      | -      | 5.48  | -     |       |
| Critical Hdwy Stg 2      | -      | -      | -      | 5.48  | -     |       |
| Follow-up Hdwy           | 2.272  | -      | -      | 3.572 | 3.372 |       |
| Pot Cap-1 Maneuver       | 1565   | -      | -      | 788   | 1047  |       |
| Stage 1                  | -      | -      | -      | 992   | -     |       |
| Stage 2                  | -      | -      | -      | 843   | -     |       |
| Platoon blocked, %       | -      | -      | -      | -     | -     |       |
| Mov Cap-1 Maneuver       | 1565   | -      | -      | 769   | 1047  |       |
| Mov Cap-2 Maneuver       | -      | -      | -      | 769   | -     |       |
| Stage 1                  | -      | -      | -      | 968   | -     |       |
| Stage 2                  | -      | -      | -      | 843   | -     |       |
| Approach                 | EB     | WB     | SB     |       |       |       |
| HCM Control Delay, s     | 1.9    | 0      | 8.5    |       |       |       |
| HCM LOS                  |        |        |        | A     |       |       |
| Minor Lane/Major Mvmt    | EBL    | EBT    | WBT    | WBR   | SBLn1 | SBRn1 |
| Capacity (veh/h)         | 1565   | -      | -      | -     | 1047  |       |
| HCM Lane V/C Ratio       | 0.023  | -      | -      | -     | 0.005 |       |
| HCM Control Delay (s)    | 7.4    | 0      | -      | -     | 8.5   |       |
| HCM Lane LOS             | A      | A      | -      | -     | A     |       |
| HCM 95th %tile Q(veh)    | 0.1    | -      | -      | -     | 0     |       |

Deer Valley 30  
14: Alameda Rd & Access C

2024 Total PM Scenario B  
HCM 6th TWSC

| Intersection             |        |        |        |       |       |       |
|--------------------------|--------|--------|--------|-------|-------|-------|
| Int Delay, s/veh         | 2.3    |        |        |       |       |       |
| Movement                 | EBL    | EBT    | WBT    | WBR   | SBL   | SBR   |
| Lane Configurations      |        | ↕      | ↕      |       | ↕     |       |
| Traffic Vol, veh/h       | 4      | 11     | 68     | 0     | 0     | 24    |
| Future Vol, veh/h        | 4      | 11     | 68     | 0     | 0     | 24    |
| Conflicting Peds, #/hr   | 0      | 0      | 0      | 0     | 0     | 0     |
| Sign Control             | Free   | Free   | Free   | Free  | Stop  | Stop  |
| RT Channelized           | -      | None   | -      | None  | -     | None  |
| Storage Length           | -      | -      | -      | -     | 0     | -     |
| Veh in Median Storage, # | -      | 0      | 0      | -     | 0     | -     |
| Grade, %                 | -      | 0      | 0      | -     | 0     | -     |
| Peak Hour Factor         | 92     | 92     | 92     | 92    | 92    | 92    |
| Heavy Vehicles, %        | 8      | 8      | 8      | 8     | 8     | 8     |
| Mvmt Flow                | 4      | 12     | 74     | 0     | 0     | 26    |
| Major/Minor              | Major1 | Major2 | Minor2 |       |       |       |
| Conflicting Flow All     | 74     | 0      | 0      | 94    | 74    |       |
| Stage 1                  | -      | -      | -      | 74    | -     |       |
| Stage 2                  | -      | -      | -      | 20    | -     |       |
| Critical Hdwy            | 4.18   | -      | -      | 6.48  | 6.28  |       |
| Critical Hdwy Stg 1      | -      | -      | -      | 5.48  | -     |       |
| Critical Hdwy Stg 2      | -      | -      | -      | 5.48  | -     |       |
| Follow-up Hdwy           | 2.272  | -      | -      | 3.572 | 3.372 |       |
| Pot Cap-1 Maneuver       | 1488   | -      | -      | 891   | 971   |       |
| Stage 1                  | -      | -      | -      | 934   | -     |       |
| Stage 2                  | -      | -      | -      | 987   | -     |       |
| Platoon blocked, %       | -      | -      | -      | -     | -     |       |
| Mov Cap-1 Maneuver       | 1488   | -      | -      | 888   | 971   |       |
| Mov Cap-2 Maneuver       | -      | -      | -      | 888   | -     |       |
| Stage 1                  | -      | -      | -      | 931   | -     |       |
| Stage 2                  | -      | -      | -      | 987   | -     |       |
| Approach                 | EB     | WB     | SB     |       |       |       |
| HCM Control Delay, s     | 2      | 0      | 8.8    |       |       |       |
| HCM LOS                  |        |        |        | A     |       |       |
| Minor Lane/Major Mvmt    | EBL    | EBT    | WBT    | WBR   | SBLn1 | SBRn1 |
| Capacity (veh/h)         | 1488   | -      | -      | -     | 971   |       |
| HCM Lane V/C Ratio       | 0.003  | -      | -      | -     | 0.027 |       |
| HCM Control Delay (s)    | 7.4    | 0      | -      | -     | 8.8   |       |
| HCM Lane LOS             | A      | A      | -      | -     | A     |       |
| HCM 95th %tile Q(veh)    | 0      | -      | -      | -     | 0.1   |       |

Deer Valley 30  
15: Alameda Rd & 15th Ave

2024 Total AM Scenario B  
HCM 6th TWSC

| Intersection             |        |        |        |       |       |      |
|--------------------------|--------|--------|--------|-------|-------|------|
| Int Delay, s/veh         | 4.1    |        |        |       |       |      |
| Movement                 | EBL    | EBT    | WBT    | WBR   | SBL   | SBR  |
| Lane Configurations      |        | ↕      | ↕      |       | ↕     |      |
| Traffic Vol, veh/h       | 51     | 42     | 6      | 0     | 0     | 8    |
| Future Vol, veh/h        | 51     | 42     | 6      | 0     | 0     | 8    |
| Conflicting Peds, #/hr   | 0      | 0      | 0      | 0     | 0     | 0    |
| Sign Control             | Free   | Free   | Free   | Free  | Stop  | Stop |
| RT Channelized           | -      | None   | -      | None  | -     | None |
| Storage Length           | -      | -      | -      | -     | 0     | -    |
| Veh in Median Storage, # | -      | 0      | 0      | -     | 0     | -    |
| Grade, %                 | -      | 0      | 0      | -     | 0     | -    |
| Peak Hour Factor         | 92     | 92     | 92     | 92    | 92    | 92   |
| Heavy Vehicles, %        | 8      | 8      | 8      | 8     | 8     | 8    |
| Mvmt Flow                | 55     | 46     | 7      | 0     | 0     | 9    |
| Major/Minor              | Major1 | Major2 | Minor2 |       |       |      |
| Conflicting Flow All     | 7      | 0      | 0      | 163   | 7     |      |
| Stage 1                  | -      | -      | -      | 7     | -     |      |
| Stage 2                  | -      | -      | -      | 156   | -     |      |
| Critical Hdwy            | 4.18   | -      | -      | 6.48  | 6.28  |      |
| Critical Hdwy Stg 1      | -      | -      | -      | 5.48  | -     |      |
| Critical Hdwy Stg 2      | -      | -      | -      | 5.48  | -     |      |
| Follow-up Hdwy           | 2.272  | -      | -      | 3.572 | 3.372 |      |
| Pot Cap-1 Maneuver       | 1575   | -      | -      | 814   | 1058  |      |
| Stage 1                  | -      | -      | -      | 1001  | -     |      |
| Stage 2                  | -      | -      | -      | 858   | -     |      |
| Platoon blocked, %       | -      | -      | -      | -     | -     |      |
| Mov Cap-1 Maneuver       | 1575   | -      | -      | 785   | 1058  |      |
| Mov Cap-2 Maneuver       | -      | -      | -      | 785   | -     |      |
| Stage 1                  | -      | -      | -      | 965   | -     |      |
| Stage 2                  | -      | -      | -      | 858   | -     |      |
| Approach                 | EB     | WB     | SB     |       |       |      |
| HCM Control Delay, s     | 4      | 0      | 8.4    |       |       |      |
| HCM LOS                  | A      |        |        |       |       |      |
| Minor Lane/Major Mvmt    | EBL    | EBT    | WBT    | WBR   | SBLn1 | SBR  |
| Capacity (veh/h)         | 1575   | -      | -      | -     | 1058  |      |
| HCM Lane V/C Ratio       | 0.035  | -      | -      | -     | 0.008 |      |
| HCM Control Delay (s)    | 7.4    | 0      | -      | -     | 8.4   |      |
| HCM Lane LOS             | A      | A      | -      | -     | A     |      |
| HCM 95th %tile Q(veh)    | 0.1    | -      | -      | -     | 0     |      |

Deer Valley 30  
15: Alameda Rd & 15th Ave

2024 Total PM Scenario B  
HCM 6th TWSC

| Intersection             |        |        |        |       |       |      |
|--------------------------|--------|--------|--------|-------|-------|------|
| Int Delay, s/veh         | 4.6    |        |        |       |       |      |
| Movement                 | EBL    | EBT    | WBT    | WBR   | SBL   | SBR  |
| Lane Configurations      |        | ↕      | ↕      |       | ↕     |      |
| Traffic Vol, veh/h       | 6      | 5      | 31     | 0     | 0     | 37   |
| Future Vol, veh/h        | 6      | 5      | 31     | 0     | 0     | 37   |
| Conflicting Peds, #/hr   | 0      | 0      | 0      | 0     | 0     | 0    |
| Sign Control             | Free   | Free   | Free   | Free  | Stop  | Stop |
| RT Channelized           | -      | None   | -      | None  | -     | None |
| Storage Length           | -      | -      | -      | -     | 0     | -    |
| Veh in Median Storage, # | -      | 0      | 0      | -     | 0     | -    |
| Grade, %                 | -      | 0      | 0      | -     | 0     | -    |
| Peak Hour Factor         | 92     | 92     | 92     | 92    | 92    | 92   |
| Heavy Vehicles, %        | 8      | 8      | 8      | 8     | 8     | 8    |
| Mvmt Flow                | 7      | 5      | 34     | 0     | 0     | 40   |
| Major/Minor              | Major1 | Major2 | Minor2 |       |       |      |
| Conflicting Flow All     | 34     | 0      | 0      | 53    | 34    |      |
| Stage 1                  | -      | -      | -      | 34    | -     |      |
| Stage 2                  | -      | -      | -      | 19    | -     |      |
| Critical Hdwy            | 4.18   | -      | -      | 6.48  | 6.28  |      |
| Critical Hdwy Stg 1      | -      | -      | -      | 5.48  | -     |      |
| Critical Hdwy Stg 2      | -      | -      | -      | 5.48  | -     |      |
| Follow-up Hdwy           | 2.272  | -      | -      | 3.572 | 3.372 |      |
| Pot Cap-1 Maneuver       | 1540   | -      | -      | 940   | 1022  |      |
| Stage 1                  | -      | -      | -      | 973   | -     |      |
| Stage 2                  | -      | -      | -      | 988   | -     |      |
| Platoon blocked, %       | -      | -      | -      | -     | -     |      |
| Mov Cap-1 Maneuver       | 1540   | -      | -      | 935   | 1022  |      |
| Mov Cap-2 Maneuver       | -      | -      | -      | 935   | -     |      |
| Stage 1                  | -      | -      | -      | 968   | -     |      |
| Stage 2                  | -      | -      | -      | 988   | -     |      |
| Approach                 | EB     | WB     | SB     |       |       |      |
| HCM Control Delay, s     | 4      | 0      | 8.7    |       |       |      |
| HCM LOS                  | A      |        |        |       |       |      |
| Minor Lane/Major Mvmt    | EBL    | EBT    | WBT    | WBR   | SBLn1 | SBR  |
| Capacity (veh/h)         | 1540   | -      | -      | -     | 1022  |      |
| HCM Lane V/C Ratio       | 0.004  | -      | -      | -     | 0.039 |      |
| HCM Control Delay (s)    | 7.3    | 0      | -      | -     | 8.7   |      |
| HCM Lane LOS             | A      | A      | -      | -     | A     |      |
| HCM 95th %tile Q(veh)    | 0      | -      | -      | -     | 0.1   |      |

Deer Valley 30  
16: Access D

2024 Total AM Scenario B  
HCM 6th TWSC

| Intersection             |        |        |        |       |      |       |
|--------------------------|--------|--------|--------|-------|------|-------|
| Int Delay, s/veh         | 7.3    |        |        |       |      |       |
| Movement                 | EBL    | EBT    | WBT    | WBR   | SBL  | SBR   |
| Lane Configurations      |        | ↕      | ↑      |       |      | ↕     |
| Traffic Vol, veh/h       | 42     | 0      | 0      | 0     | 0    | 6     |
| Future Vol, veh/h        | 42     | 0      | 0      | 0     | 0    | 6     |
| Conflicting Peds, #/hr   | 0      | 0      | 0      | 0     | 0    | 0     |
| Sign Control             | Free   | Free   | Free   | Free  | Stop | Stop  |
| RT Channelized           | -      | None   | -      | None  | -    | None  |
| Storage Length           | -      | -      | -      | -     | -    | 0     |
| Veh in Median Storage, # | -      | 0      | 0      | -     | 0    | -     |
| Grade, %                 | -      | 0      | 0      | -     | 0    | -     |
| Peak Hour Factor         | 92     | 92     | 92     | 92    | 92   | 92    |
| Heavy Vehicles, %        | 8      | 8      | 8      | 8     | 8    | 8     |
| Mvmt Flow                | 46     | 0      | 0      | 0     | 0    | 7     |
| Major/Minor              | Major1 | Major2 | Minor2 |       |      |       |
| Conflicting Flow All     | 1      | 0      | -      | 0     | -    | 1     |
| Stage 1                  | -      | -      | -      | -     | -    | -     |
| Stage 2                  | -      | -      | -      | -     | -    | -     |
| Critical Hdwy            | 4.18   | -      | -      | -     | -    | 6.28  |
| Critical Hdwy Stg 1      | -      | -      | -      | -     | -    | -     |
| Critical Hdwy Stg 2      | -      | -      | -      | -     | -    | -     |
| Follow-up Hdwy           | 2.272  | -      | -      | -     | -    | 3.372 |
| Pot Cap-1 Maneuver       | 1583   | -      | -      | 0     | 0    | 1066  |
| Stage 1                  | -      | -      | -      | 0     | 0    | -     |
| Stage 2                  | -      | -      | -      | 0     | 0    | -     |
| Platoon blocked, %       | -      | -      | -      | -     | -    | -     |
| Mov Cap-1 Maneuver       | 1583   | -      | -      | -     | -    | 1066  |
| Mov Cap-2 Maneuver       | -      | -      | -      | -     | -    | -     |
| Stage 1                  | -      | -      | -      | -     | -    | -     |
| Stage 2                  | -      | -      | -      | -     | -    | -     |
| Approach                 | EB     | WB     | SB     |       |      |       |
| HCM Control Delay, s     | 7.3    | 0      | 8.4    |       |      |       |
| HCM LOS                  |        |        | A      |       |      |       |
| Minor Lane/Major Mvmt    | EBL    | EBT    | WBT    | SBLn1 |      |       |
| Capacity (veh/h)         | 1583   | -      | -      | 1066  |      |       |
| HCM Lane V/C Ratio       | 0.029  | -      | -      | 0.006 |      |       |
| HCM Control Delay (s)    | 7.3    | 0      | -      | 8.4   |      |       |
| HCM Lane LOS             | A      | A      | -      | A     |      |       |
| HCM 95th %tile Q(veh)    | 0.1    | -      | -      | 0     |      |       |

Deer Valley 30  
16: Access D

2024 Total PM Scenario B  
HCM 6th TWSC

| Intersection             |        |        |        |       |      |       |
|--------------------------|--------|--------|--------|-------|------|-------|
| Int Delay, s/veh         | 8.1    |        |        |       |      |       |
| Movement                 | EBL    | EBT    | WBT    | WBR   | SBL  | SBR   |
| Lane Configurations      |        | ↕      | ↑      |       |      | ↕     |
| Traffic Vol, veh/h       | 5      | 0      | 0      | 0     | 0    | 31    |
| Future Vol, veh/h        | 5      | 0      | 0      | 0     | 0    | 31    |
| Conflicting Peds, #/hr   | 0      | 0      | 0      | 0     | 0    | 0     |
| Sign Control             | Free   | Free   | Free   | Free  | Stop | Stop  |
| RT Channelized           | -      | None   | -      | None  | -    | None  |
| Storage Length           | -      | -      | -      | -     | -    | 0     |
| Veh in Median Storage, # | -      | 0      | 0      | -     | 0    | -     |
| Grade, %                 | -      | 0      | 0      | -     | 0    | -     |
| Peak Hour Factor         | 92     | 92     | 92     | 92    | 92   | 92    |
| Heavy Vehicles, %        | 8      | 8      | 8      | 8     | 8    | 8     |
| Mvmt Flow                | 5      | 0      | 0      | 0     | 0    | 34    |
| Major/Minor              | Major1 | Major2 | Minor2 |       |      |       |
| Conflicting Flow All     | 1      | 0      | -      | 0     | -    | 1     |
| Stage 1                  | -      | -      | -      | -     | -    | -     |
| Stage 2                  | -      | -      | -      | -     | -    | -     |
| Critical Hdwy            | 4.18   | -      | -      | -     | -    | 6.28  |
| Critical Hdwy Stg 1      | -      | -      | -      | -     | -    | -     |
| Critical Hdwy Stg 2      | -      | -      | -      | -     | -    | -     |
| Follow-up Hdwy           | 2.272  | -      | -      | -     | -    | 3.372 |
| Pot Cap-1 Maneuver       | 1583   | -      | -      | 0     | 0    | 1066  |
| Stage 1                  | -      | -      | -      | 0     | 0    | -     |
| Stage 2                  | -      | -      | -      | 0     | 0    | -     |
| Platoon blocked, %       | -      | -      | -      | -     | -    | -     |
| Mov Cap-1 Maneuver       | 1583   | -      | -      | -     | -    | 1066  |
| Mov Cap-2 Maneuver       | -      | -      | -      | -     | -    | -     |
| Stage 1                  | -      | -      | -      | -     | -    | -     |
| Stage 2                  | -      | -      | -      | -     | -    | -     |
| Approach                 | EB     | WB     | SB     |       |      |       |
| HCM Control Delay, s     | 7.3    | 0      | 8.5    |       |      |       |
| HCM LOS                  |        |        | A      |       |      |       |
| Minor Lane/Major Mvmt    | EBL    | EBT    | WBT    | SBLn1 |      |       |
| Capacity (veh/h)         | 1583   | -      | -      | 1066  |      |       |
| HCM Lane V/C Ratio       | 0.003  | -      | -      | 0.032 |      |       |
| HCM Control Delay (s)    | 7.3    | 0      | -      | 8.5   |      |       |
| HCM Lane LOS             | A      | A      | -      | A     |      |       |
| HCM 95th %tile Q(veh)    | 0      | -      | -      | 0.1   |      |       |

## **APPENDIX I**

### **TRAFFIC SIGNAL WARRANT ANALYSIS**



**Deer Valley 30 - Scenario A**  
**Warrants 1, 2 & 3**  
 7th Ave & Alameda

**Signal Warrant Analysis**

ADOT Traffic Engineering Guidelines and Policies section 611 includes methodology to consider signal warrants for future intersections using projected ADT. The methodology includes multiplying factors to the projected ADT to provide high hour, 4th high hour and 8th high hour volumes to compare with threshold volumes of the peak hour warrant, the 4-hour warrant and the 8-hour warrants. The factors are as follows:

| High Hour | Hourly Adjustment Factor |
|-----------|--------------------------|
| 1         | 0.0771                   |
| 4         | 0.0656                   |
| 8         | 0.0572                   |

| Right-turn factor applied | NB | SB | EB | WB |
|---------------------------|----|----|----|----|
| Background AM             | 0% | 0% | 0% | 0% |
| Background PM             | 0% | 0% | 0% | 0% |
| Total AM                  | 0% | 0% | 0% | 0% |
| Total PM                  | 0% | 0% | 0% | 0% |

| Determine approach PM peak hour volumes | NB  | SB  | EB  | WB |
|---|-----|-----|-----|----|
| Background AM                           | 264 | 223 | 57  | 0  |
| Background PM                           | 216 | 96  | 275 | 0  |
| Total AM                                | 313 | 223 | 65  | 0  |
| Total PM                                | 221 | 96  | 308 | 0  |

Approximate approach ADT volumes by dividing by the high hour adjustment factor (0.0771)

|               | NB    | SB    | EB    | WB | NB+SB | EB+WB |
|---------------|-------|-------|-------|----|-------|-------|
| Background AM | 3,424 | 2,892 | 739   | -  | 6,316 | 739   |
| Background PM | 2,802 | 1,245 | 3,567 | -  | 4,047 | 3,567 |
| Total AM      | 4,060 | 2,892 | 843   | -  | 6,952 | 843   |
| Total PM      | 2,866 | 1,245 | 3,995 | -  | 4,112 | 3,995 |

Apply adjustment factors

|               | 8th high hour          |                        | 4th high hour          |                        | High hour              |                        |
|---------------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|
|               | Major, both approaches | Minor, larger approach | Major, both approaches | Minor, larger approach | Major, both approaches | Minor, larger approach |
| Background AM | 361                    | 42                     | 414                    | 48                     | 487                    | 57                     |
| Background PM | 231                    | 204                    | 265                    | 234                    | 312                    | 275                    |
| Total AM      | 398                    | 48                     | 456                    | 55                     | 536                    | 65                     |
| Total PM      | 235                    | 229                    | 270                    | 262                    | 317                    | 308                    |



**Deer Valley 30 - Scenario A**  
**Warrants 1, 2 & 3**  
 7th Ave & Alameda

**Signal Warrant Analysis**

Thresholds are dependent on the number of lanes on each street approaching the intersection (prior to auxiliary lanes) and the speed limit on the major roadway.

Number of lanes moving traffic on major street? **1**  
 Number of lanes moving traffic on major approach of minor street? **1**  
 Posted or 85 percentile speed over 40 mph? **no**

Now compare to applicable signal warrant criteria of MUTCD

**Warrant 1 (Eight-Hour Vehicular Volume)**

| Thresholds to pass | 500 Minor | 750 Minor | 1200 Minor |
|--------------------|-----------|-----------|------------|
| Condition A        | Major     | Major     | Major      |
| Condition B        | Major     | Major     | Major      |
| Combo (A)          | Major     | Major     | Major      |
| Combo (B)          | Major     | Major     | Major      |

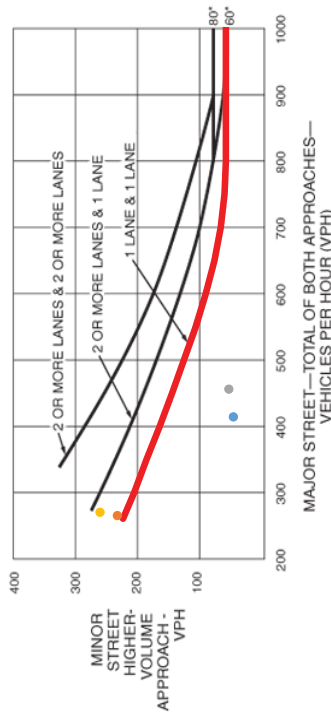
| Volumes to compare | Major, both approaches | Minor, larger approach |
|--------------------|------------------------|------------------------|
| Background AM      | 361                    | 42                     |
| Background PM      | 231                    | 204                    |
| Total AM           | 398                    | 48                     |
| Total PM           | 235                    | 229                    |

| Compare criteria for each scenario | Condition A | Condition B | Combination | Signal Warrant met |
|------------------------------------|-------------|-------------|-------------|--------------------|
| Background AM                      | No          | No          | No          | No                 |
| Background PM                      | No          | No          | No          | No                 |
| Total AM                           | No          | No          | No          | No                 |
| Total PM                           | No          | No          | No          | No                 |



Signal Warrant 2 (Four-Hour Vehicular Volume)

Figure 4C-2. Warrant 2, Four-Hour Vehicular Volume (70% Factor)  
 (COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 40 MPH ON MAJOR STREET)



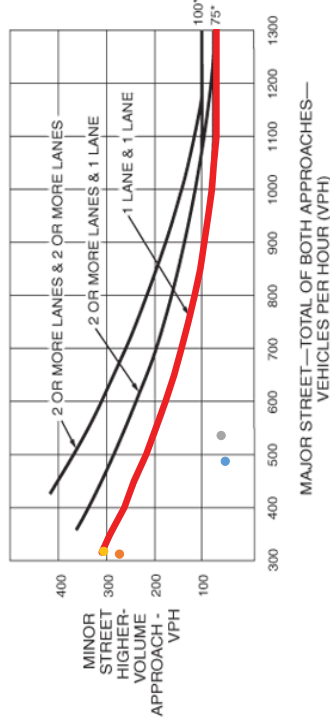
\*Note: 80 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 60 vph applies as the lower threshold volume for a minor-street approach with one lane.

| Legend        | Major, both approaches | Minor, larger approach | Approximate Threshold for Minor |
|---------------|------------------------|------------------------|---------------------------------|
| Background AM | 414                    | 48                     | 303                             |
| Background PM | 265                    | 234                    |                                 |
| Total AM      | 456                    | 55                     | 282                             |
| Total PM      | 270                    | 262                    |                                 |

Signal Warrant 2 is met?  
 Background AM No  
 Background PM No  
 Total AM No  
 Total PM No

Signal Warrant 3 (Peak Hour)

Figure 4C-4. Warrant 3, Peak Hour (70% Factor)  
 (COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 40 MPH ON MAJOR STREET)



\*Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor-street approach with one lane.

| Legend        | Major, both approaches | Minor, larger approach | Approximate Threshold for Minor |
|---------------|------------------------|------------------------|---------------------------------|
| Background AM | 487                    | 57                     | 423                             |
| Background PM | 312                    | 275                    |                                 |
| Total AM      | 536                    | 65                     | 400                             |
| Total PM      | 317                    | 308                    |                                 |

Signal Warrant 3 is met?  
 Background AM No  
 Background PM No  
 Total AM No  
 Total PM No

**Deer Valley 30**

**Warrants 1, 2 & 3**

19th Ave & Alameda

**Signal Warrant Analysis**

ADOT Traffic Engineering Guidelines and Policies section 611 includes methodology to consider signal warrants for future intersections using projected ADT. The methodology includes multiplying factors to the projected ADT to provide high hour, 4th high hour and 8th high hour volumes to compare with threshold volumes of the peak hour warrant, the 4-hour warrant and the 8-hour warrants. The factors are as follows:

| High Hour | Hourly Adjustment Factor |
|-----------|--------------------------|
| 1         | 0.0771                   |
| 4         | 0.0656                   |
| 8         | 0.0572                   |

| Right-turn factor applied | NB | SB | EB | WB |
|---------------------------|----|----|----|----|
| Background AM             | 0% | 0% | 0% | 0% |
| Background PM             | 0% | 0% | 0% | 0% |
| Total AM                  | 0% | 0% | 0% | 0% |
| Total PM                  | 0% | 0% | 0% | 0% |

| Determine approach PM peak hour volumes | NB   | SB   | EB | WB  |
|---|------|------|----|-----|
| Background AM                           | 766  | 1088 | 65 | 56  |
| Background PM                           | 1226 | 711  | 76 | 269 |
| Total AM                                | 835  | 1152 | 65 | 77  |
| Total PM                                | 1234 | 718  | 76 | 359 |

Approximate approach ADT volumes by dividing by the high hour adjustment factor (0.0771)

|               | NB     | SB     | EB  | WB    | NB+SB  | EB+WB |
|---------------|--------|--------|-----|-------|--------|-------|
| Background AM | 9,935  | 14,112 | 843 | 726   | 24,047 | 1,569 |
| Background PM | 15,901 | 9,222  | 986 | 3,489 | 25,123 | 4,475 |
| Total AM      | 10,830 | 14,942 | 843 | 999   | 25,772 | 1,842 |
| Total PM      | 16,005 | 9,313  | 986 | 4,656 | 25,318 | 5,642 |

Apply adjustment factors

|               | 8th high hour          |     |                        |     | 4th high hour          |     |                        |     | High hour              |     |                        |     |
|---------------|------------------------|-----|------------------------|-----|------------------------|-----|------------------------|-----|------------------------|-----|------------------------|-----|
|               | Major, both approaches |     | Minor, larger approach |     | Major, both approaches |     | Minor, larger approach |     | Major, both approaches |     | Minor, larger approach |     |
| Background AM | 1,375                  | 48  | 1,577                  | 55  | 1,854                  | 65  | 1,937                  | 269 | 1,648                  | 229 | 1,937                  | 269 |
| Background PM | 1,437                  | 200 | 1,648                  | 66  | 1,987                  | 77  | 2,064                  | 359 | 1,691                  | 66  | 1,987                  | 77  |
| Total AM      | 1,474                  | 57  | 1,691                  | 305 | 1,952                  | 359 | 2,003                  | 628 | 1,839                  | 295 | 2,003                  | 628 |
| Total PM      | 1,448                  | 266 | 1,661                  | 305 | 1,952                  | 359 | 2,064                  | 359 | 1,691                  | 66  | 1,987                  | 77  |



**Deer Valley 30**

**Warrants 1, 2 & 3**

19th Ave & Alameda

**Signal Warrant Analysis**

Thresholds are dependent on the number of lanes on each street approaching the intersection (prior to auxiliary lanes) and the speed limit on the major roadway.

Number of lanes moving traffic on major street? **2**  
 Number of lanes moving traffic on major approach of minor street? **1**  
 Posted or 85 percentile speed over 40 mph? **yes**

Now compare to applicable signal warrant criteria of MUTCD

**Warrant 1 (Eight-Hour Vehicular Volume)**

| Thresholds to pass | Major | Minor | Combo |
|--------------------|-------|-------|-------|
| Condition A        | 420   | 630   | 105   |
| Condition B        | 630   | 336   | 53    |
| Combo (A)          | 336   | 504   | 84    |
| Combo (B)          | 504   | 336   | 42    |

| Volumes to compare | Major, both approaches | Minor, larger approach |
|--------------------|------------------------|------------------------|
| Background AM      | 1,375                  | 48                     |
| Background PM      | 1,437                  | 200                    |
| Total AM           | 1,474                  | 57                     |
| Total PM           | 1,448                  | 266                    |

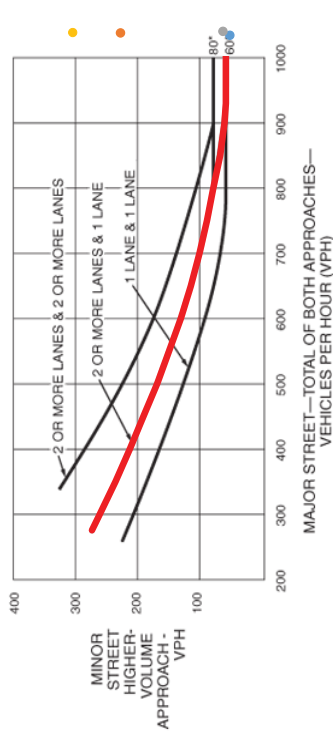
Compare criteria for each scenario

|               | Condition A | Condition B | Combination | Signal Warrant met? |
|---------------|-------------|-------------|-------------|---------------------|
| Background AM | No          | No          | No          | No                  |
| Background PM | Yes         | Yes         | Yes         | Yes                 |
| Total AM      | No          | Yes         | No          | Yes                 |
| Total PM      | Yes         | Yes         | Yes         | Yes                 |



Signal Warrant 2 (Four-Hour Vehicular Volume)

Figure 4C-2. Warrant 2, Four-Hour Vehicular Volume (70% Factor)  
(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 40 MPH ON MAJOR STREET)



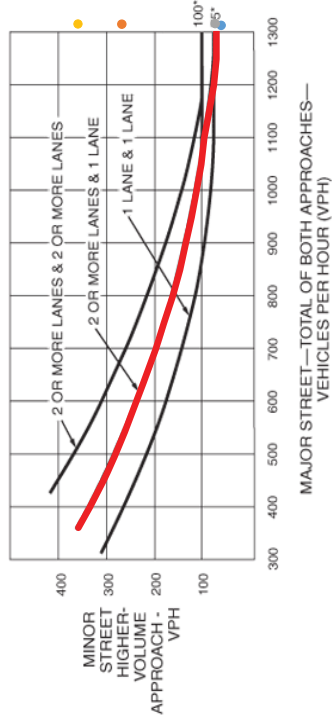
\*Note: 80 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 60 vph applies as the lower threshold volume for a minor-street approach with one lane.

| Legend        | Major, both approaches | Minor, larger approach | Approximate Threshold for Minor |
|---------------|------------------------|------------------------|---------------------------------|
| Background AM | 1,577                  | 55                     | 60                              |
| Background PM | 1,648                  | 229                    | 60                              |
| Total AM      | 1,691                  | 66                     | 60                              |
| Total PM      | 1,661                  | 305                    | 60                              |

Signal Warrant 2 is met?  
Background AM No  
Background PM Yes  
Total AM Yes  
Total PM Yes

Signal Warrant 3 (Peak Hour)

Figure 4C-4. Warrant 3, Peak Hour (70% Factor)  
(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 40 MPH ON MAJOR STREET)



\*Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor-street approach with one lane.

| Legend        | Major, both approaches | Minor, larger approach | Approximate Threshold for Minor |
|---------------|------------------------|------------------------|---------------------------------|
| Background AM | 1,854                  | 65                     | 75                              |
| Background PM | 1,937                  | 289                    | 75                              |
| Total AM      | 1,987                  | 77                     | 75                              |
| Total PM      | 1,952                  | 359                    | 75                              |

Signal Warrant 3 is met?  
Background AM No  
Background PM Yes  
Total AM Yes  
Total PM Yes

**Deer Valley 30**  
**Warrants 1, 2 & 3**  
 7th Ave & Happy Valley

**Deer Valley 30**  
**Warrants 1, 2 & 3**  
 7th Ave & Happy Valley

ADOT Traffic Engineering Guidelines and Policies section 611 includes methodology to consider signal warrants for future intersections using projected ADT. The methodology includes multiplying factors to the projected ADT to provide high hour, 4th high hour and 8th high hour volumes to compare with threshold volumes of the peak hour warrant, the 4-hour warrant and the 8-hour warrants. The factors are as follows:

| High Hour | Hourly Adjustment Factor |
|-----------|--------------------------|
| 1         | 0.0771                   |
| 4         | 0.0656                   |
| 8         | 0.0572                   |

| Right-turn factor applied | NB | SB | EB | WB |
|---------------------------|----|----|----|----|
| Background AM             | 0% | 0% | 0% | 0% |
| Background PM             | 0% | 0% | 0% | 0% |
| Total AM                  | 0% | 0% | 0% | 0% |
| Total PM                  | 0% | 0% | 0% | 0% |

| Determine approach PM peak hour volumes | NB  | SB | EB  | WB  |
|---|-----|----|-----|-----|
| Background AM                           | 64  | 0  | 722 | 291 |
| Background PM                           | 234 | 0  | 556 | 873 |
| Total AM                                | 64  | 0  | 722 | 291 |
| Total PM                                | 234 | 0  | 556 | 873 |

Approximate approach ADT volumes by dividing by the high hour adjustment factor (0.0771)

|               | NB    | SB | EB    | WB     | NB+SB | EB+WB  |
|---------------|-------|----|-------|--------|-------|--------|
| Background AM | 830   | -  | 9,364 | 3,774  | 830   | 13,139 |
| Background PM | 3,035 | -  | 7,211 | 11,323 | 3,035 | 18,534 |
| Total AM      | 830   | -  | 9,364 | 3,774  | 830   | 13,139 |
| Total PM      | 3,035 | -  | 7,211 | 11,323 | 3,035 | 18,534 |

| Apply adjustment factors | 8th high hour          |                        | 4th high hour          |                        | High hour              |                        |
|--------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|
|                          | Major, both approaches | Minor, larger approach | Major, both approaches | Minor, larger approach | Major, both approaches | Minor, larger approach |
| Background AM            | 752                    | 47                     | 862                    | 54                     | 1,013                  | 64                     |
| Background PM            | 1,060                  | 174                    | 1,216                  | 199                    | 1,429                  | 234                    |
| Total AM                 | 752                    | 47                     | 862                    | 54                     | 1,013                  | 64                     |
| Total PM                 | 1,060                  | 174                    | 1,216                  | 199                    | 1,429                  | 234                    |

Thresholds are dependent on the number of lanes on each street approaching the intersection (prior to auxiliary lanes) and the speed limit on the major roadway.

Number of lanes moving traffic on major street? **1**  
 Number of lanes moving traffic on major approach of minor street? **1**  
 Posted or 85 percentile speed over 40 mph? **yes**

Now compare to applicable signal warrant criteria of MUTCD

**Warrant 1 (Eight-Hour Vehicular Volume)**

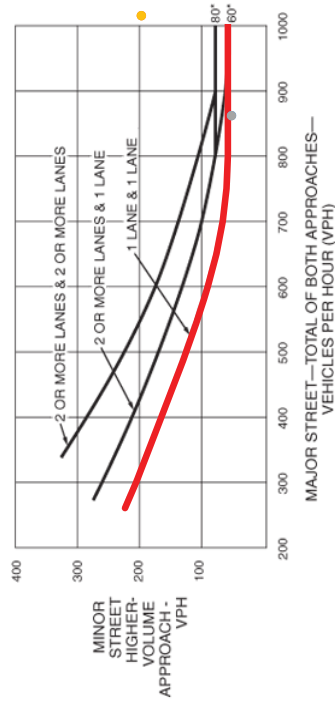
| Thresholds to pass | Major | Minor |
|--------------------|-------|-------|
| Condition A        | 350   | 105   |
| Condition B        | 525   | 53    |
| Combo (A)          | 280   | 84    |
| Combo (B)          | 420   | 42    |

| Volumes to compare | Major, both approaches | Minor, larger approach |
|--------------------|------------------------|------------------------|
| Background AM      | 752                    | 47                     |
| Background PM      | 1,060                  | 174                    |
| Total AM           | 752                    | 47                     |
| Total PM           | 1,060                  | 174                    |

| Compare criteria for each scenario | Condition A | Condition B | Combination | Signal Warrant met? |
|------------------------------------|-------------|-------------|-------------|---------------------|
| Background AM                      | No          | No          | No          | No                  |
| Background PM                      | Yes         | Yes         | Yes         | Yes                 |
| Total AM                           | No          | No          | No          | No                  |
| Total PM                           | Yes         | Yes         | Yes         | Yes                 |

Signal Warrant 2 (Four-Hour Vehicular Volume)

Figure 4C-2. Warrant 2, Four-Hour Vehicular Volume (70% Factor)  
(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 40 MPH ON MAJOR STREET)



\*Note: 80 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 60 vph applies as the lower threshold volume for a minor-street approach with one lane.

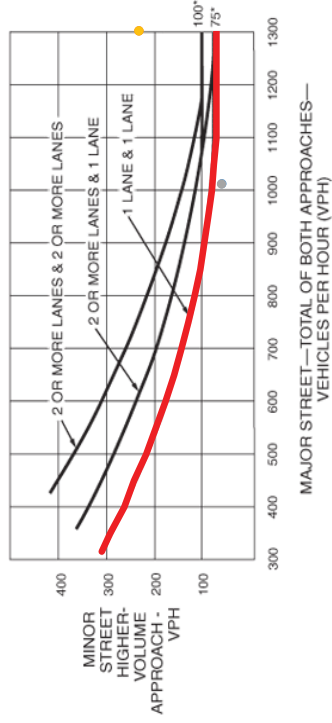
| Legend          | Major, both approaches | Minor, larger approach | Approximate Threshold for Minor |
|-----------------|------------------------|------------------------|---------------------------------|
| ● Background AM | 862                    | 54                     | 60                              |
| ● Background PM | 1,216                  | 199                    | 60                              |
| ● Total AM      | 862                    | 54                     | 60                              |
| ● Total PM      | 1,216                  | 199                    | 60                              |

Signal Warrant 2 is met?

Background AM No  
Background PM Yes  
Total AM No  
Total PM Yes

Signal Warrant 3 (Peak Hour)

Figure 4C-4. Warrant 3, Peak Hour (70% Factor)  
(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 40 MPH ON MAJOR STREET)



\*Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor-street approach with one lane.

| Legend          | Major, both approaches | Minor, larger approach | Approximate Threshold for Minor |
|-----------------|------------------------|------------------------|---------------------------------|
| ● Background AM | 1,013                  | 64                     | 83                              |
| ● Background PM | 1,429                  | 234                    | 75                              |
| ● Total AM      | 1,013                  | 64                     | 83                              |
| ● Total PM      | 1,429                  | 234                    | 75                              |

Signal Warrant 3 is met?

Background AM No  
Background PM Yes  
Total AM No  
Total PM Yes

**Deer Valley 30**  
**Warrants 1, 2 & 3**  
7th Ave & Pinnacle Peak

**Signal Warrant Analysis**

ADOT Traffic Engineering Guidelines and Policies section 611 includes methodology to consider signal warrants for future intersections using projected ADT. The methodology includes multiplying factors to the projected ADT to provide high hour, 4th high hour and 8th high hour volumes to compare with threshold volumes of the peak hour warrant, the 4-hour warrant and the 8-hour warrants. The factors are as follows:

| High Hour | Hourly Adjustment Factor |
|-----------|--------------------------|
| 1         | 0.0771                   |
| 4         | 0.0656                   |
| 8         | 0.0572                   |

| Right-turn factor applied | NB | SB | EB | WB |
|---------------------------|----|----|----|----|
| Background AM             | 0% | 0% | 0% | 0% |
| Background PM             | 0% | 0% | 0% | 0% |
| Total AM                  | 0% | 0% | 0% | 0% |
| Total PM                  | 0% | 0% | 0% | 0% |

| Determine approach PM peak hour volumes | NB  | SB  | EB  | WB  |
|---|-----|-----|-----|-----|
| Background AM                           | 190 | 132 | 912 | 602 |
| Background PM                           | 285 | 438 | 502 | 532 |
| Total AM                                | 201 | 140 | 912 | 640 |
| Total PM                                | 286 | 471 | 502 | 536 |

Approximate approach ADT volumes by dividing by the high hour adjustment factor (0.0771)

|               | NB    | SB    | EB     | WB    | NB+SB | EB+WB  |
|---------------|-------|-------|--------|-------|-------|--------|
| Background AM | 2,464 | 1,712 | 11,829 | 7,808 | 4,176 | 19,637 |
| Background PM | 3,696 | 5,681 | 6,511  | 6,900 | 9,377 | 13,411 |
| Total AM      | 2,607 | 1,816 | 11,829 | 8,301 | 4,423 | 20,130 |
| Total PM      | 3,709 | 6,109 | 6,511  | 6,952 | 9,818 | 13,463 |

Apply adjustment factors

|               | 8th high hour          |                        | 4th high hour          |                        | High hour              |                        |
|---------------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|
|               | Major, both approaches | Minor, larger approach | Major, both approaches | Minor, larger approach | Major, both approaches | Minor, larger approach |
| Background AM | 1,123                  | 141                    | 1,288                  | 162                    | 1,514                  | 190                    |
| Background PM | 767                    | 325                    | 880                    | 373                    | 1,034                  | 438                    |
| Total AM      | 1,151                  | 149                    | 1,321                  | 171                    | 1,552                  | 201                    |
| Total PM      | 770                    | 349                    | 883                    | 401                    | 1,038                  | 471                    |



**Deer Valley 30**  
**Warrants 1, 2 & 3**  
7th Ave & Pinnacle Peak

**Signal Warrant Analysis**

Thresholds are dependent on the number of lanes on each street approaching the intersection (prior to auxiliary lanes) and the speed limit on the major roadway.

Number of lanes moving traffic on major street? **1**  
 Number of lanes moving traffic on major approach of minor street? **1**  
 Posted or 85 percentile speed over 40 mph? **yes**

Now compare to applicable signal warrant criteria of MUTCD

**Warrant 1 (Eight-Hour Vehicular Volume)**

| Thresholds to pass | Major | Minor | Combo |
|--------------------|-------|-------|-------|
| Condition A        | 350   | 105   |       |
| Condition B        | 525   | 53    |       |
| Combo (A)          | 280   | 84    |       |
| Combo (B)          | 420   | 42    |       |

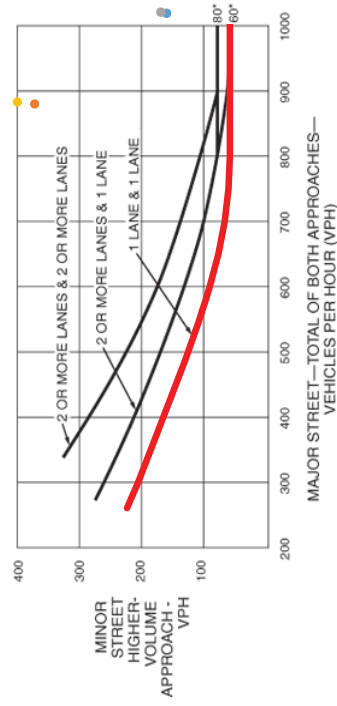
| Volumes to compare | Major, both approaches | Minor, larger approach |
|--------------------|------------------------|------------------------|
| Background AM      | 1,123                  | 141                    |
| Background PM      | 767                    | 325                    |
| Total AM           | 1,151                  | 149                    |
| Total PM           | 770                    | 349                    |

| Compare criteria for each scenario | Condition A | Condition B | Combination | Signal Warrant met? |
|------------------------------------|-------------|-------------|-------------|---------------------|
| Background AM                      | Yes         | Yes         | Yes         | Yes                 |
| Background PM                      | Yes         | Yes         | Yes         | Yes                 |
| Total AM                           | Yes         | Yes         | Yes         | Yes                 |
| Total PM                           | Yes         | Yes         | Yes         | Yes                 |



Signal Warrant 2 (Four-Hour Vehicular Volume)

Figure 4C-2. Warrant 2, Four-Hour Vehicular Volume (70% Factor)  
(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 40 MPH ON MAJOR STREET)



\*Note: 80 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 60 vph applies as the lower threshold volume for a minor-street approach with one lane.

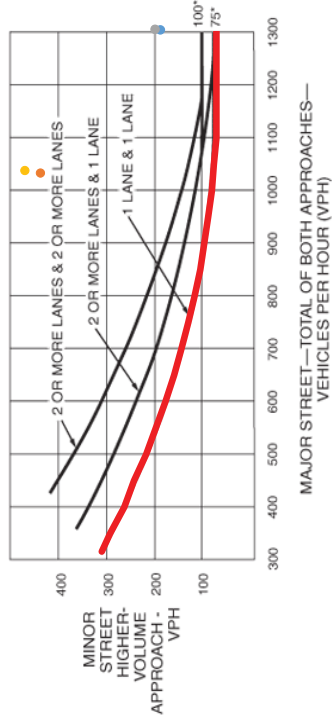
| Legend        | Major, both approaches | Minor, larger approach | Approximate Threshold for Minor |
|---------------|------------------------|------------------------|---------------------------------|
| Background AM | 1,288                  | 162                    | 60                              |
| Background PM | 880                    | 373                    | 60                              |
| Total AM      | 1,321                  | 171                    | 60                              |
| Total PM      | 883                    | 401                    | 60                              |

Signal Warrant 2 is met?

Background AM Yes  
Background PM Yes  
Total AM Yes  
Total PM Yes

Signal Warrant 3 (Peak Hour)

Figure 4C-4. Warrant 3, Peak Hour (70% Factor)  
(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 40 MPH ON MAJOR STREET)



\*Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor-street approach with one lane.

| Legend        | Major, both approaches | Minor, larger approach | Approximate Threshold for Minor |
|---------------|------------------------|------------------------|---------------------------------|
| Background AM | 1,514                  | 190                    | 75                              |
| Background PM | 1,034                  | 438                    | 81                              |
| Total AM      | 1,552                  | 201                    | 75                              |
| Total PM      | 1,038                  | 471                    | 81                              |

Signal Warrant 3 is met?

Background AM Yes  
Background PM Yes  
Total AM Yes  
Total PM Yes



**Deer Valley 30 - Scenario B** **Signal Warrant Analysis**

**Warrants 1, 2 & 3**  
19th Ave & Alameda

Thresholds are dependent on the number of lanes on each street approaching the intersection (prior to auxiliary lanes) and the speed limit on the major roadway.

Number of lanes moving traffic on major street? **2**  
 Number of lanes moving traffic on major approach of minor street? **1**  
 Posted or 85 percentile speed over 40 mph? **yes**

Now compare to applicable signal warrant criteria of MUTCD

**Warrant 1 (Eight-Hour Vehicular Volume)**

| Thresholds to pass | Major | 420 Minor | 105 |
|--------------------|-------|-----------|-----|
| Condition A        | Major | 630 Minor | 53  |
| Condition B        | Major | 336 Minor | 84  |
| Combo (A)          | Major | 504 Minor | 42  |
| Combo (B)          | Major |           |     |

| Volumes to compare | Major, both approaches | Minor, larger approach |
|--------------------|------------------------|------------------------|
| 2024 Total AM      | <b>1,102</b>           | <b>10</b>              |
| 2024 Total PM      | <b>1,203</b>           | <b>44</b>              |

| Compare criteria for each scenario | Condition A | Condition B | Combination | Signal Warrant met? |
|------------------------------------|-------------|-------------|-------------|---------------------|
| 2024 Total AM                      | No          | No          | No          | <b>No</b>           |
| 2024 Total PM                      | No          | No          | No          | <b>No</b>           |



**Deer Valley 30 - Scenario B** **Signal Warrant Analysis**

**Warrants 1, 2 & 3**  
19th Ave & Alameda

ADOT Traffic Engineering Guidelines and Policies section 611 includes methodology to consider signal warrants for future intersections using projected ADT. The methodology includes multiplying factors to the projected ADT to provide high hour, 4th high hour and 8th high hour volumes to compare with threshold volumes of the peak hour warrant, the 4-hour warrant and the 8-hour warrants. The factors are as follows:

| High Hour | Hourly Adjustment Factor |
|-----------|--------------------------|
| 1         | 0.0771                   |
| 4         | 0.0656                   |
| 8         | 0.0572                   |

| Right-turn factor applied | NB | SB | EB | WB |
|---------------------------|----|----|----|----|
| 2024 Total AM             | 0% | 0% | 0% | 0% |
| 2024 Total PM             | 0% | 0% | 0% | 0% |

| Determine approach PM peak hour volumes | NB  | SB  | EB | WB |
|---|-----|-----|----|----|
| 2024 Total AM                           | 653 | 833 | 9  | 13 |
| 2024 Total PM                           | 979 | 643 | 14 | 59 |

Approximate approach ADT volumes by dividing by the high hour adjustment factor (0.0771)

|               | NB     | SB     | EB  | WB  | NB+SB         | EB+WB      |
|---------------|--------|--------|-----|-----|---------------|------------|
| 2024 Total AM | 8,470  | 10,804 | 117 | 169 | <b>19,274</b> | <b>285</b> |
| 2024 Total PM | 12,698 | 8,340  | 182 | 765 | <b>21,038</b> | <b>947</b> |

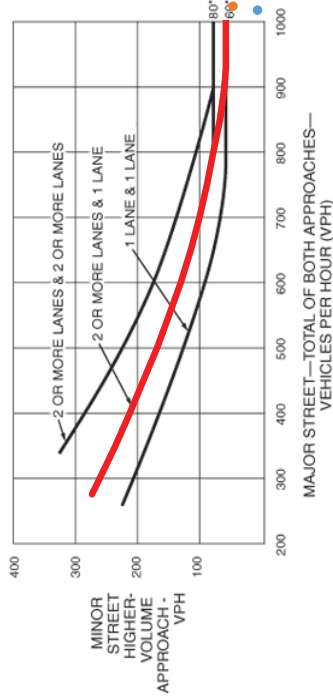
Apply adjustment factors

|               | 8th high hour          |                        | 4th high hour          |                        | High hour              |                        |
|---------------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|
|               | Major, both approaches | Minor, larger approach | Major, both approaches | Minor, larger approach | Major, both approaches | Minor, larger approach |
| 2024 Total AM | <b>1,102</b>           | <b>44</b>              | <b>1,264</b>           | <b>11</b>              | <b>1,486</b>           | <b>13</b>              |
| 2024 Total PM | <b>1,203</b>           | <b>44</b>              | <b>1,380</b>           | <b>50</b>              | <b>1,622</b>           | <b>59</b>              |



Signal Warrant 2 (Four-Hour Vehicular Volume)

Figure 4C-2. Warrant 2, Four-Hour Vehicular Volume (70% Factor)  
(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 40 MPH ON MAJOR STREET)



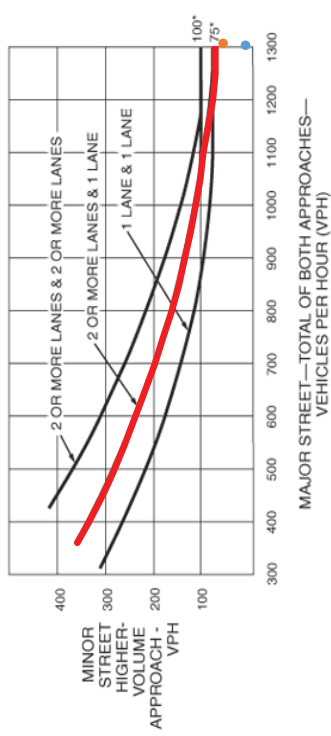
\*Note: 80 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 60 vph applies as the lower threshold volume for a minor-street approach with one lane.

| Legend          | Major, both approaches | Minor, larger approach | Approximate Threshold for Minor |
|-----------------|------------------------|------------------------|---------------------------------|
| ● 2024 Total AM | 1,264                  | 11                     | 60                              |
| ● 2024 Total PM | 1,380                  | 50                     | 60                              |
| ● not used      |                        |                        |                                 |
| ● not used      |                        |                        |                                 |

Signal Warrant 2 is met?  
2024 Total AM No  
2024 Total PM No

Signal Warrant 3 (Peak Hour)

Figure 4C-4. Warrant 3, Peak Hour (70% Factor)  
(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 40 MPH ON MAJOR STREET)



\*Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor-street approach with one lane.

| Legend          | Major, both approaches | Minor, larger approach | Approximate Threshold for Minor |
|-----------------|------------------------|------------------------|---------------------------------|
| ● 2024 Total AM | 1,486                  | 13                     | 75                              |
| ● 2024 Total PM | 1,622                  | 59                     | 75                              |
| ● not used      |                        |                        |                                 |
| ● not used      |                        |                        |                                 |

Signal Warrant 3 is met?  
2024 Total AM No  
2024 Total PM No

**Deer Valley 30 - Scenario B** **Signal Warrant Analysis**

**Warrants 1, 2 & 3**  
7th Ave & Happy Valley

Thresholds are dependent on the number of lanes on each street approaching the intersection (prior to auxiliary lanes) and the speed limit on the major roadway.

Number of lanes moving traffic on major street? 1  
 Number of lanes moving traffic on major approach of minor street? 1  
 Posted or 85 percentile speed over 40 mph? yes

Now compare to applicable signal warrant criteria of MUTCD

**Warrant 1 (Eight-Hour Vehicular Volume)**

| Thresholds to pass |                     |
|--------------------|---------------------|
| Condition A        | Major 350 Minor 105 |
| Condition B        | Major 525 Minor 53  |
| Combo (A)          | Major 280 Minor 84  |
| Combo (B)          | Major 420 Minor 42  |

| Volumes to compare | Minor, larger approach | Major, both approaches | Minor, larger approach |
|--------------------|------------------------|------------------------|------------------------|
| 2024 Total AM      | 20                     | 611                    | 20                     |
| 2024 Total PM      | 39                     | 1,030                  | 39                     |

| Compare criteria for each scenario | Condition A | Condition B | Combination | Signal Warrant met? |
|------------------------------------|-------------|-------------|-------------|---------------------|
| 2024 Total AM                      | No          | No          | No          | No                  |
| 2024 Total PM                      | No          | No          | No          | No                  |



**Deer Valley 30 - Scenario B** **Signal Warrant Analysis**

**Warrants 1, 2 & 3**  
7th Ave & Happy Valley

ADOT Traffic Engineering Guidelines and Policies section 611 includes methodology to consider signal warrants for future intersections using projected ADT. The methodology includes multiplying factors to the projected ADT to provide high hour, 4th high hour and 8th high hour volumes to compare with threshold volumes of the peak hour warrant, the 4-hour warrant and the 8-hour warrants. The factors are as follows:

| High Hour | Hourly Adjustment Factor |
|-----------|--------------------------|
| 1         | 0.0771                   |
| 4         | 0.0656                   |
| 8         | 0.0572                   |

| Right-turn factor applied | NB | SB | EB | WB |
|---------------------------|----|----|----|----|
| 2024 Total AM             | 0% | 0% | 0% | 0% |
| 2024 Total PM             | 0% | 0% | 0% | 0% |

| Determine approach PM peak hour volumes | NB | SB | EB  | WB  |
|---|----|----|-----|-----|
| 2024 Total AM                           | 27 | 0  | 532 | 291 |
| 2024 Total PM                           | 52 | 0  | 516 | 873 |

| Approximate approach ADT volumes by dividing by the high hour adjustment factor (0.0771) | NB  | SB | EB    | WB     | NB+SB | EB+WB  |
|--|-----|----|-------|--------|-------|--------|
| 2024 Total AM  | 350 | -  | 6,900 | 3,774  | 350   | 10,674 |
| 2024 Total PM  | 674 | -  | 6,693 | 11,323 | 674   | 18,016 |

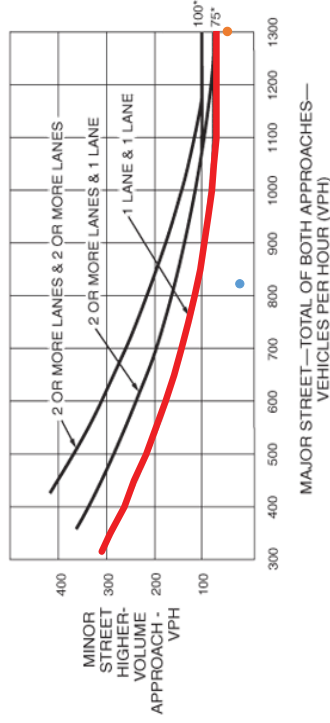
| Apply adjustment factors | 8th high hour          |    |                        |    | 4th high hour          |    |                        |    | High hour              |    |                        |    |
|--------------------------|------------------------|----|------------------------|----|------------------------|----|------------------------|----|------------------------|----|------------------------|----|
|                          | Minor, larger approach |    | Major, both approaches |    | Minor, larger approach |    | Major, both approaches |    | Minor, larger approach |    | Major, both approaches |    |
| 2024 Total AM            | 611                    | 20 | 700                    | 23 | 823                    | 27 | 823                    | 44 | 1,389                  | 52 | 1,389                  | 52 |
| 2024 Total PM            | 1,030                  | 39 | 1,182                  | 44 | 1,389                  | 52 | 1,389                  | 44 | 1,389                  | 52 | 1,389                  | 52 |



Warrants 1, 2 & 3  
7th Ave & Happy Valley

Signal Warrant 3 (Peak Hour)

Figure 4C-4. Warrant 3, Peak Hour (70% Factor)  
(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 40 MPH ON MAJOR STREET)



\*Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor-street approach with one lane.

| Legend          | Major, both approaches | Minor, larger approach | Approximate Threshold for Minor |
|-----------------|------------------------|------------------------|---------------------------------|
| ● 2024 Total AM | 823                    | 27                     | 114                             |
| ● 2024 Total PM | 1,389                  | 52                     | 75                              |
| ● not used      |                        |                        |                                 |
| ● not used      |                        |                        |                                 |

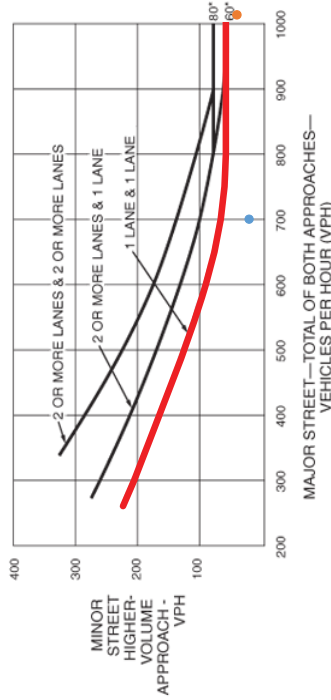
Signal Warrant 3 is met?  
2024 Total AM No  
2024 Total PM No



Warrants 1, 2 & 3  
7th Ave & Happy Valley

Signal Warrant 2 (Four-Hour Vehicular Volume)

Figure 4C-2. Warrant 2, Four-Hour Vehicular Volume (70% Factor)  
(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 40 MPH ON MAJOR STREET)



\*Note: 80 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 60 vph applies as the lower threshold volume for a minor-street approach with one lane.

| Legend          | Major, both approaches | Minor, larger approach | Approximate Threshold for Minor |
|-----------------|------------------------|------------------------|---------------------------------|
| ● 2024 Total AM | 700                    | 23                     | 68                              |
| ● 2024 Total PM | 1,182                  | 44                     | 60                              |
| ● not used      |                        |                        |                                 |
| ● not used      |                        |                        |                                 |

Signal Warrant 2 is met?  
2024 Total AM No  
2024 Total PM No



## **APPENDIX J**

### **QUEUE STORAGE ANALYSIS**

Deer Valley 30  
1: 19th Ave & Happy Valley Rd

2024 Total AM Scenario A Mitigated  
Queues

| Lane Group              | EBL  | EBT  | WBL  | WBT  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
|-------------------------|------|------|------|------|------|------|------|------|------|------|
| Lane Group Flow (vph)   | 95   | 1126 | 163  | 479  | 241  | 291  | 111  | 320  | 509  | 104  |
| v/c Ratio               | 0.37 | 0.65 | 0.63 | 0.27 | 0.76 | 0.33 | 0.23 | 0.99 | 0.40 | 0.21 |
| Control Delay           | 49.6 | 23.1 | 58.2 | 19.5 | 62.1 | 32.3 | 5.5  | 95.2 | 32.7 | 4.7  |
| Queue Delay             | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| Total Delay             | 49.6 | 23.1 | 58.2 | 19.5 | 62.1 | 32.3 | 5.5  | 95.2 | 32.7 | 4.7  |
| Queue Length 50th (ft)  | 31   | 175  | 55   | 66   | 82   | 82   | 0    | 112  | 102  | 0    |
| Queue Length 95th (ft)  | 57   | 224  | 90   | 97   | #137 | 121  | 34   | #203 | 136  | 29   |
| Internal Link Dist (ft) |      | 1252 |      | 283  |      | 663  |      |      | 841  |      |
| Turn Bay Length (ft)    | 345  |      | 255  |      | 265  |      | 265  |      | 260  | 260  |
| Base Capacity (vph)     | 311  | 1744 | 265  | 1785 | 324  | 888  | 489  | 324  | 1284 | 491  |
| Starvation Cap Reductn  | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Spillback Cap Reductn   | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Storage Cap Reductn     | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Reduced v/c Ratio       | 0.31 | 0.65 | 0.62 | 0.27 | 0.74 | 0.33 | 0.23 | 0.99 | 0.40 | 0.21 |

Intersection Summary

# 95th percentile volume exceeds capacity, queue may be longer.  
Queue shown is maximum after two cycles.

Deer Valley 30  
1: 19th Ave & Happy Valley Rd

2024 Total PM Scenario A Mitigated  
Queues

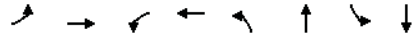
| Lane Group              | EBL  | EBT  | WBL  | WBT  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
|-------------------------|------|------|------|------|------|------|------|------|------|------|
| Lane Group Flow (vph)   | 182  | 785  | 179  | 1390 | 686  | 583  | 136  | 199  | 260  | 133  |
| v/c Ratio               | 0.91 | 0.61 | 0.56 | 0.97 | 0.80 | 0.48 | 0.21 | 0.76 | 0.30 | 0.30 |
| Control Delay           | 93.8 | 29.2 | 51.8 | 53.0 | 43.5 | 27.6 | 2.5  | 66.5 | 40.0 | 1.8  |
| Queue Delay             | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| Total Delay             | 93.8 | 29.2 | 51.8 | 53.0 | 43.5 | 27.6 | 2.5  | 66.5 | 40.0 | 1.8  |
| Queue Length 50th (ft)  | 63   | 134  | 59   | 317  | 222  | 157  | 0    | 68   | 56   | 0    |
| Queue Length 95th (ft)  | #130 | 181  | 94   | #424 | 265  | 210  | 23   | #123 | 89   | 1    |
| Internal Link Dist (ft) |      | 1252 |      | 283  |      | 663  |      |      | 841  |      |
| Turn Bay Length (ft)    | 345  |      | 255  |      | 265  |      | 265  |      | 260  | 260  |
| Base Capacity (vph)     | 200  | 1286 | 358  | 1426 | 1065 | 1206 | 648  | 262  | 854  | 445  |
| Starvation Cap Reductn  | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Spillback Cap Reductn   | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Storage Cap Reductn     | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Reduced v/c Ratio       | 0.91 | 0.61 | 0.50 | 0.97 | 0.64 | 0.48 | 0.21 | 0.76 | 0.30 | 0.30 |

Intersection Summary

# 95th percentile volume exceeds capacity, queue may be longer.  
Queue shown is maximum after two cycles.

Deer Valley 30  
4: Alameda Rd & 19th Ave

2024 Total AM Scenario A Mitigated  
Queues



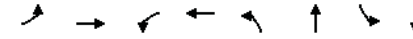
| Lane Group              | EBL  | EBT  | WBL  | WBT  | NBL  | NBT  | SBL  | SBT  |
|-------------------------|------|------|------|------|------|------|------|------|
| Lane Group Flow (vph)   | 10   | 61   | 46   | 38   | 20   | 888  | 203  | 1049 |
| v/c Ratio               | 0.07 | 0.11 | 0.31 | 0.06 | 0.06 | 0.26 | 0.51 | 0.42 |
| Control Delay           | 28.8 | 0.4  | 31.8 | 0.2  | 7.8  | 5.0  | 17.0 | 7.5  |
| Queue Delay             | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| Total Delay             | 28.8 | 0.4  | 31.8 | 0.2  | 7.8  | 5.0  | 17.0 | 7.5  |
| Queue Length 50th (ft)  | 4    | 0    | 18   | 0    | 3    | 48   | 48   | 117  |
| Queue Length 95th (ft)  | 17   | 0    | 44   | 0    | 14   | 82   | #172 | 197  |
| Internal Link Dist (ft) | 1252 |      | 620  |      | 1220 |      | 620  |      |
| Turn Bay Length (ft)    | 150  |      |      | 150  |      |      |      |      |
| Base Capacity (vph)     | 445  | 721  | 336  | 795  | 310  | 3444 | 396  | 2469 |
| Starvation Cap Reductn  | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Spillback Cap Reductn   | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Storage Cap Reductn     | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Reduced v/c Ratio       | 0.02 | 0.08 | 0.14 | 0.05 | 0.06 | 0.26 | 0.51 | 0.42 |

Intersection Summary

# 95th percentile volume exceeds capacity, queue may be longer.  
Queue shown is maximum after two cycles.

Deer Valley 30  
4: Alameda Rd & 19th Ave

2024 Total PM Scenario A Mitigated  
Queues



| Lane Group              | EBL  | EBT  | WBL  | WBT  | NBL  | NBT  | SBL  | SBT  |
|-------------------------|------|------|------|------|------|------|------|------|
| Lane Group Flow (vph)   | 15   | 67   | 214  | 176  | 92   | 1249 | 38   | 742  |
| v/c Ratio               | 0.08 | 0.13 | 0.85 | 0.45 | 0.21 | 0.37 | 0.16 | 0.31 |
| Control Delay           | 32.1 | 0.5  | 66.5 | 18.1 | 7.0  | 6.3  | 7.4  | 6.2  |
| Queue Delay             | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| Total Delay             | 32.1 | 0.5  | 66.5 | 18.1 | 7.0  | 6.3  | 7.4  | 6.2  |
| Queue Length 50th (ft)  | 8    | 0    | 128  | 36   | 19   | 108  | 8    | 88   |
| Queue Length 95th (ft)  | 25   | 0    | #241 | 98   | 41   | 132  | 21   | 115  |
| Internal Link Dist (ft) | 1252 |      | 620  |      | 1220 |      | 620  |      |
| Turn Bay Length (ft)    | 150  |      |      | 150  |      |      |      |      |
| Base Capacity (vph)     | 203  | 550  | 282  | 419  | 437  | 3382 | 242  | 2360 |
| Starvation Cap Reductn  | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Spillback Cap Reductn   | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Storage Cap Reductn     | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Reduced v/c Ratio       | 0.07 | 0.12 | 0.76 | 0.42 | 0.21 | 0.37 | 0.16 | 0.31 |

Intersection Summary

# 95th percentile volume exceeds capacity, queue may be longer.  
Queue shown is maximum after two cycles.

Deer Valley 30  
6: Pinnacle Peak Rd & 19th Ave

2024 Total AM Scenario A Mitigated  
Queues

| Lane Group              | EBL   | EBT  | WBL  | WBT  | NBL  | NBT  | SBL  | SBT  |
|-------------------------|-------|------|------|------|------|------|------|------|
| Lane Group Flow (vph)   | 454   | 1266 | 75   | 475  | 184  | 722  | 155  | 851  |
| v/c Ratio               | 1.20  | 0.81 | 0.88 | 0.30 | 0.69 | 0.37 | 0.91 | 0.97 |
| Control Delay           | 140.8 | 25.2 | 99.4 | 9.4  | 32.5 | 17.9 | 86.8 | 58.1 |
| Queue Delay             | 0.0   | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| Total Delay             | 140.8 | 25.2 | 99.4 | 9.4  | 32.5 | 17.9 | 86.8 | 58.1 |
| Queue Length 50th (ft)  | -332  | 311  | 39   | 50   | 68   | 95   | 91   | 261  |
| Queue Length 95th (ft)  | #519  | 405  | #130 | 82   | #138 | 127  | #214 | #394 |
| Internal Link Dist (ft) |       | 315  |      | 5253 |      | 273  |      | 1292 |
| Turn Bay Length (ft)    | 265   |      | 160  |      | 215  |      | 185  |      |
| Base Capacity (vph)     | 377   | 1554 | 85   | 1580 | 275  | 1926 | 170  | 880  |
| Starvation Cap Reductn  | 0     | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Spillback Cap Reductn   | 0     | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Storage Cap Reductn     | 0     | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Reduced v/c Ratio       | 1.20  | 0.81 | 0.88 | 0.30 | 0.67 | 0.37 | 0.91 | 0.97 |

Intersection Summary

- Volume exceeds capacity, queue is theoretically infinite.  
Queue shown is maximum after two cycles.
- # 95th percentile volume exceeds capacity, queue may be longer.  
Queue shown is maximum after two cycles.

Deer Valley 30  
6: Pinnacle Peak Rd & 19th Ave

2024 Total PM Scenario A Mitigated  
Queues

| Lane Group              | EBL   | EBT  | WBL  | WBT  | NBL   | NBT  | SBL   | SBT  |
|-------------------------|-------|------|------|------|-------|------|-------|------|
| Lane Group Flow (vph)   | 161   | 516  | 129  | 967  | 443   | 934  | 182   | 1116 |
| v/c Ratio               | 1.77  | 0.40 | 0.51 | 0.80 | 1.28  | 0.38 | 1.10  | 1.06 |
| Control Delay           | 411.5 | 11.2 | 31.9 | 32.1 | 170.0 | 14.2 | 131.8 | 77.2 |
| Queue Delay             | 0.0   | 0.0  | 0.0  | 0.0  | 0.0   | 0.0  | 0.0   | 0.0  |
| Total Delay             | 411.5 | 11.2 | 31.9 | 32.1 | 170.0 | 14.2 | 131.8 | 77.2 |
| Queue Length 50th (ft)  | -144  | 53   | 59   | 262  | -287  | 116  | -124  | -377 |
| Queue Length 95th (ft)  | #221  | 94   | 121  | 343  | #476  | 146  | #255  | #507 |
| Internal Link Dist (ft) |       | 315  |      | 5253 |       | 273  |       | 1292 |
| Turn Bay Length (ft)    | 265   |      | 160  |      | 215   |      | 185   |      |
| Base Capacity (vph)     | 91    | 1297 | 253  | 1211 | 347   | 2451 | 166   | 1049 |
| Starvation Cap Reductn  | 0     | 0    | 0    | 0    | 0     | 0    | 0     | 0    |
| Spillback Cap Reductn   | 0     | 0    | 0    | 0    | 0     | 0    | 0     | 0    |
| Storage Cap Reductn     | 0     | 0    | 0    | 0    | 0     | 0    | 0     | 0    |
| Reduced v/c Ratio       | 1.77  | 0.40 | 0.51 | 0.80 | 1.28  | 0.38 | 1.10  | 1.06 |

Intersection Summary

- Volume exceeds capacity, queue is theoretically infinite.  
Queue shown is maximum after two cycles.
- # 95th percentile volume exceeds capacity, queue may be longer.  
Queue shown is maximum after two cycles.



Deer Valley 30  
8: 7th Ave & Happy Valley Rd

2024 Total AM Scenario A Mitigated  
Queues

|                         | →    | ↙    | ←    | ↘    | ↗    |
|-------------------------|------|------|------|------|------|
| Lane Group              | EBT  | WBL  | WBT  | NBL  | NBR  |
| Lane Group Flow (vph)   | 785  | 10   | 307  | 59   | 11   |
| v/c Ratio               | 0.76 | 0.05 | 0.29 | 0.12 | 0.02 |
| Control Delay           | 17.8 | 5.8  | 9.4  | 23.1 | 10.5 |
| Queue Delay             | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| Total Delay             | 17.8 | 5.8  | 9.4  | 23.1 | 10.5 |
| Queue Length 50th (ft)  | 291  | 2    | 80   | 24   | 1    |
| Queue Length 95th (ft)  | 351  | 7    | 98   | m40  | m4   |
| Internal Link Dist (ft) | 2603 |      | 561  | 2558 |      |
| Turn Bay Length (ft)    |      | 150  |      | 150  |      |
| Base Capacity (vph)     | 1189 | 254  | 1222 | 513  | 467  |
| Starvation Cap Reductn  | 0    | 0    | 0    | 0    | 0    |
| Spillback Cap Reductn   | 0    | 0    | 0    | 0    | 0    |
| Storage Cap Reductn     | 0    | 0    | 0    | 0    | 0    |
| Reduced v/c Ratio       | 0.66 | 0.04 | 0.25 | 0.12 | 0.02 |

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

Deer Valley 30  
8: 7th Ave & Happy Valley Rd

2024 Total PM Scenario A Mitigated  
Queues

|                         | →    | ↙    | ←    | ↘    | ↗    |
|-------------------------|------|------|------|------|------|
| Lane Group              | EBT  | WBL  | WBT  | NBL  | NBR  |
| Lane Group Flow (vph)   | 605  | 21   | 928  | 242  | 12   |
| v/c Ratio               | 0.52 | 0.05 | 0.79 | 0.60 | 0.03 |
| Control Delay           | 9.5  | 4.9  | 17.0 | 38.5 | 14.0 |
| Queue Delay             | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| Total Delay             | 9.5  | 4.9  | 17.0 | 38.5 | 14.0 |
| Queue Length 50th (ft)  | 146  | 4    | 321  | 145  | 2    |
| Queue Length 95th (ft)  | 216  | 11   | 487  | #251 | m12  |
| Internal Link Dist (ft) | 2603 |      | 561  | 2558 |      |
| Turn Bay Length (ft)    |      | 150  |      | 150  |      |
| Base Capacity (vph)     | 1222 | 441  | 1240 | 403  | 370  |
| Starvation Cap Reductn  | 0    | 0    | 0    | 0    | 0    |
| Spillback Cap Reductn   | 0    | 0    | 0    | 0    | 0    |
| Storage Cap Reductn     | 0    | 0    | 0    | 0    | 0    |
| Reduced v/c Ratio       | 0.50 | 0.05 | 0.75 | 0.60 | 0.03 |

Intersection Summary

# 95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Deer Valley 30  
9: 7th Ave & Pinnacle Peak Rd

2024 Total AM Scenario A Mitigated  
Queues

| Lane Group              | EBL   | EBT  | EBR  | WBL  | WBT  | NBL  | NBT  | SBL  | SBT  |
|-------------------------|-------|------|------|------|------|------|------|------|------|
| Lane Group Flow (vph)   | 190   | 495  | 307  | 50   | 646  | 86   | 132  | 71   | 81   |
| v/c Ratio               | 1.28  | 0.61 | 0.36 | 0.20 | 0.82 | 0.22 | 0.32 | 0.35 | 0.26 |
| Control Delay           | 193.7 | 24.3 | 3.2  | 18.7 | 32.5 | 32.7 | 31.0 | 56.6 | 37.5 |
| Queue Delay             | 0.0   | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| Total Delay             | 193.7 | 24.3 | 3.2  | 18.7 | 32.5 | 32.7 | 31.0 | 56.6 | 37.5 |
| Queue Length 50th (ft)  | -154  | 230  | 0    | 18   | 327  | 44   | 63   | 47   | 33   |
| Queue Length 95th (ft)  | #291  | 339  | 46   | 45   | #538 | 87   | 116  | m78  | m66  |
| Internal Link Dist (ft) |       | 5253 |      |      | 950  |      | 780  |      | 2592 |
| Turn Bay Length (ft)    | 150   |      | 170  | 150  |      | 150  |      | 150  |      |
| Base Capacity (vph)     | 149   | 809  | 853  | 254  | 784  | 392  | 410  | 201  | 309  |
| Starvation Cap Reductn  | 0     | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Spillback Cap Reductn   | 0     | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Storage Cap Reductn     | 0     | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Reduced v/c Ratio       | 1.28  | 0.61 | 0.36 | 0.20 | 0.82 | 0.22 | 0.32 | 0.35 | 0.26 |

Intersection Summary

- Volume exceeds capacity, queue is theoretically infinite.  
Queue shown is maximum after two cycles.
- # 95th percentile volume exceeds capacity, queue may be longer.  
Queue shown is maximum after two cycles.
- m Volume for 95th percentile queue is metered by upstream signal.

Deer Valley 30  
9: 7th Ave & Pinnacle Peak Rd

2024 Total PM Scenario A Mitigated  
Queues

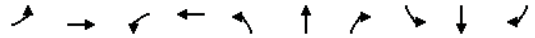
| Lane Group              | EBL  | EBT  | EBR  | WBL  | WBT  | NBL  | NBT  | SBL  | SBT  |
|-------------------------|------|------|------|------|------|------|------|------|------|
| Lane Group Flow (vph)   | 42   | 423  | 80   | 33   | 550  | 225  | 85   | 229  | 283  |
| v/c Ratio               | 0.33 | 0.63 | 0.13 | 0.15 | 0.82 | 0.51 | 0.18 | 0.86 | 0.69 |
| Control Delay           | 26.8 | 28.5 | 4.1  | 19.1 | 37.6 | 38.8 | 19.5 | 72.2 | 38.2 |
| Queue Delay             | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| Total Delay             | 26.8 | 28.5 | 4.1  | 19.1 | 37.6 | 38.8 | 19.5 | 72.2 | 38.2 |
| Queue Length 50th (ft)  | 18   | 213  | 0    | 13   | 302  | 123  | 20   | 146  | 122  |
| Queue Length 95th (ft)  | 43   | 268  | 24   | 31   | 377  | #253 | 66   | #281 | 215  |
| Internal Link Dist (ft) |      | 5253 |      |      | 950  |      | 780  |      | 2592 |
| Turn Bay Length (ft)    | 150  |      | 170  | 150  |      | 150  |      | 150  |      |
| Base Capacity (vph)     | 158  | 835  | 752  | 268  | 824  | 445  | 464  | 265  | 409  |
| Starvation Cap Reductn  | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Spillback Cap Reductn   | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Storage Cap Reductn     | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Reduced v/c Ratio       | 0.27 | 0.51 | 0.11 | 0.12 | 0.67 | 0.51 | 0.18 | 0.86 | 0.69 |

Intersection Summary

- # 95th percentile volume exceeds capacity, queue may be longer.  
Queue shown is maximum after two cycles.

Deer Valley 30  
1: 19th Ave & Happy Valley Rd

2024 Total AM Scenario B  
Queues




| Lane Group              | EBL  | EBT  | WBL  | WBT  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
|-------------------------|------|------|------|------|------|------|------|------|------|------|
| Lane Group Flow (vph)   | 95   | 626  | 197  | 441  | 176  | 280  | 116  | 290  | 451  | 104  |
| v/c Ratio               | 0.24 | 0.38 | 0.64 | 0.25 | 0.45 | 0.24 | 0.19 | 0.63 | 0.26 | 0.17 |
| Control Delay           | 18.9 | 19.3 | 31.2 | 19.0 | 23.0 | 24.7 | 4.5  | 28.4 | 24.5 | 3.4  |
| Queue Delay             | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| Total Delay             | 18.9 | 19.3 | 31.2 | 19.0 | 23.0 | 24.7 | 4.5  | 28.4 | 24.5 | 3.4  |
| Queue Length 50th (ft)  | 36   | 81   | 80   | 59   | 69   | 69   | 0    | 123  | 78   | 0    |
| Queue Length 95th (ft)  | 68   | 115  | 131  | 86   | 115  | 102  | 33   | 190  | 105  | 25   |
| Internal Link Dist (ft) |      | 1252 |      | 283  |      | 663  |      |      | 841  |      |
| Turn Bay Length (ft)    | 345  |      | 255  |      | 265  |      | 265  | 260  |      | 260  |
| Base Capacity (vph)     | 389  | 1658 | 309  | 1731 | 389  | 1178 | 607  | 462  | 1715 | 614  |
| Starvation Cap Reductn  | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Spillback Cap Reductn   | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Storage Cap Reductn     | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Reduced v/c Ratio       | 0.24 | 0.38 | 0.64 | 0.25 | 0.45 | 0.24 | 0.19 | 0.63 | 0.26 | 0.17 |

Intersection Summary

Deer Valley 30  
1: 19th Ave & Happy Valley Rd

2024 Total PM Scenario B  
Queues



| Lane Group              | EBL  | EBT  | WBL  | WBT  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
|-------------------------|------|------|------|------|------|------|------|------|------|------|
| Lane Group Flow (vph)   | 182  | 675  | 183  | 1190 | 372  | 528  | 158  | 192  | 249  | 133  |
| v/c Ratio               | 1.02 | 0.41 | 0.61 | 0.74 | 0.74 | 0.45 | 0.25 | 0.59 | 0.18 | 0.24 |
| Control Delay           | 98.1 | 20.4 | 29.9 | 30.9 | 31.4 | 27.6 | 4.9  | 29.9 | 28.2 | 3.0  |
| Queue Delay             | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| Total Delay             | 98.1 | 20.4 | 29.9 | 30.9 | 31.4 | 27.6 | 4.9  | 29.9 | 28.2 | 3.0  |
| Queue Length 50th (ft)  | -74  | 93   | 73   | 232  | 169  | 142  | 0    | 77   | 45   | 0    |
| Queue Length 95th (ft)  | #218 | 128  | 121  | 287  | #253 | 191  | 43   | 125  | 67   | 24   |
| Internal Link Dist (ft) |      | 1252 |      | 283  |      | 663  |      |      | 841  |      |
| Turn Bay Length (ft)    | 345  |      | 255  |      | 265  |      | 265  | 260  |      | 260  |
| Base Capacity (vph)     | 178  | 1658 | 298  | 1608 | 501  | 1181 | 630  | 327  | 1404 | 558  |
| Starvation Cap Reductn  | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Spillback Cap Reductn   | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Storage Cap Reductn     | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Reduced v/c Ratio       | 1.02 | 0.41 | 0.61 | 0.74 | 0.74 | 0.45 | 0.25 | 0.59 | 0.18 | 0.24 |

Intersection Summary

- Volume exceeds capacity, queue is theoretically infinite.  
Queue shown is maximum after two cycles.
- # 95th percentile volume exceeds capacity, queue may be longer.  
Queue shown is maximum after two cycles.

Deer Valley 30  
6: Pinnacle Peak Rd & 19th Ave

2024 Total AM Scenario B  
Queues

| Lane Group              | EBL  | EBT  | WBL  | WBT  | NBL  | NBT  | SBL  | SBT  |
|-------------------------|------|------|------|------|------|------|------|------|
| Lane Group Flow (vph)   | 153  | 757  | 62   | 278  | 184  | 594  | 111  | 779  |
| v/c Ratio               | 0.32 | 0.48 | 0.26 | 0.18 | 0.69 | 0.30 | 0.55 | 0.85 |
| Control Delay           | 18.5 | 11.4 | 19.3 | 10.4 | 31.4 | 16.6 | 41.6 | 42.5 |
| Queue Delay             | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| Total Delay             | 18.5 | 11.4 | 19.3 | 10.4 | 31.4 | 16.6 | 41.6 | 42.5 |
| Queue Length 50th (ft)  | 56   | 93   | 22   | 33   | 66   | 74   | 57   | 230  |
| Queue Length 95th (ft)  | 103  | 142  | 53   | 57   | #135 | 101  | 117  | #334 |
| Internal Link Dist (ft) |      | 315  |      | 5253 |      | 273  |      | 1292 |
| Turn Bay Length (ft)    | 265  |      | 160  |      | 215  |      | 185  |      |
| Base Capacity (vph)     | 471  | 1593 | 236  | 1517 | 278  | 1986 | 202  | 916  |
| Starvation Cap Reductn  | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Spillback Cap Reductn   | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Storage Cap Reductn     | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Reduced v/c Ratio       | 0.32 | 0.48 | 0.26 | 0.18 | 0.66 | 0.30 | 0.55 | 0.85 |

Intersection Summary

# 95th percentile volume exceeds capacity, queue may be longer.  
Queue shown is maximum after two cycles.

Deer Valley 30  
6: Pinnacle Peak Rd & 19th Ave

2024 Total PM Scenario B  
Queues

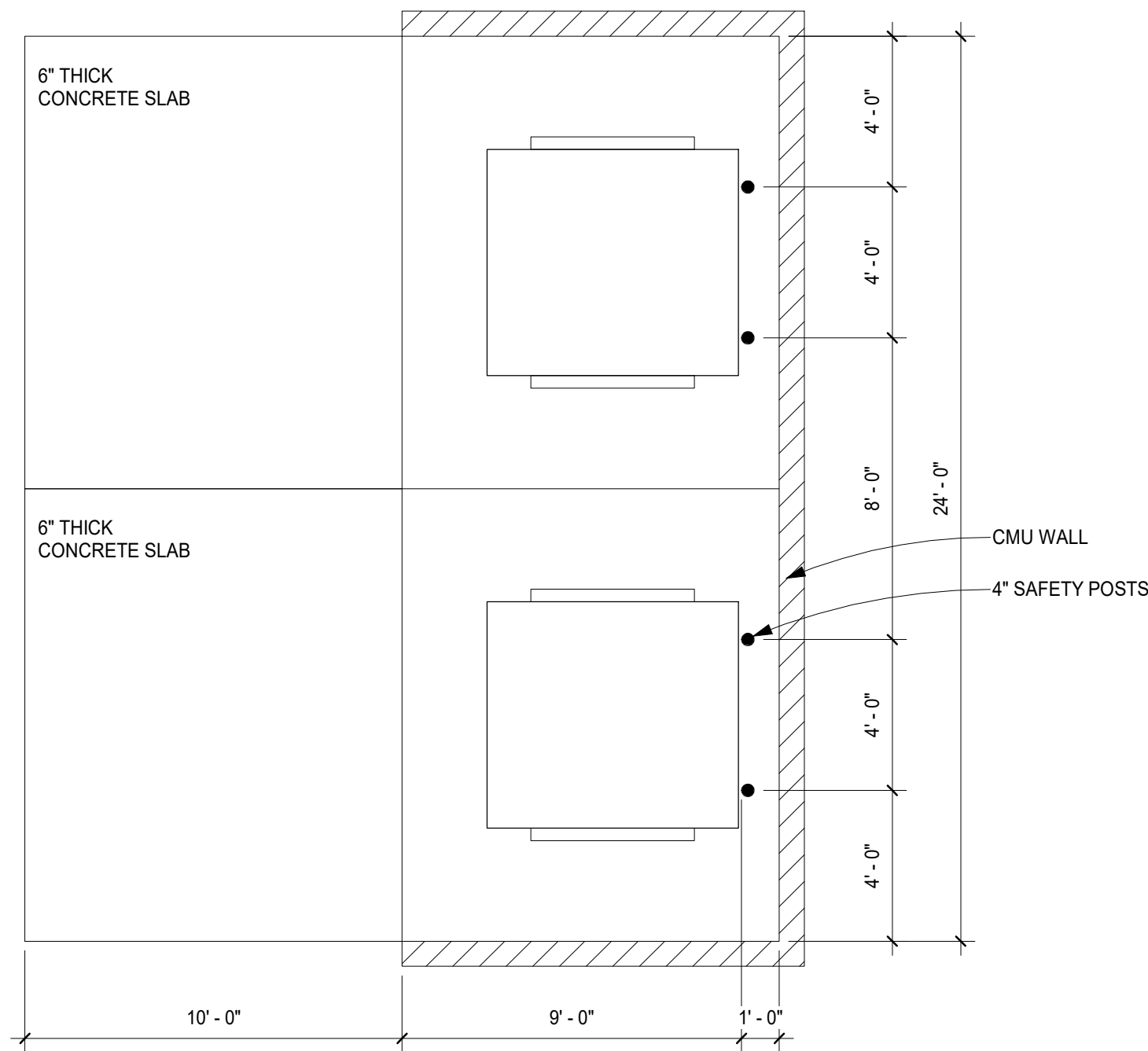
| Lane Group              | EBL  | EBT  | WBL  | WBT  | NBL   | NBT  | SBL  | SBT  |
|-------------------------|------|------|------|------|-------|------|------|------|
| Lane Group Flow (vph)   | 93   | 425  | 62   | 443  | 443   | 908  | 71   | 765  |
| v/c Ratio               | 0.29 | 0.31 | 0.19 | 0.34 | 1.10  | 0.39 | 0.52 | 0.89 |
| Control Delay           | 22.5 | 7.6  | 20.4 | 18.7 | 100.9 | 16.1 | 45.8 | 46.9 |
| Queue Delay             | 0.0  | 0.0  | 0.0  | 0.0  | 0.0   | 0.0  | 0.0  | 0.0  |
| Total Delay             | 22.5 | 7.6  | 20.4 | 18.7 | 100.9 | 16.1 | 45.8 | 46.9 |
| Queue Length 50th (ft)  | 37   | 31   | 24   | 85   | -249  | 120  | 36   | 224  |
| Queue Length 95th (ft)  | 77   | 62   | 53   | 123  | #439  | 153  | #91  | #332 |
| Internal Link Dist (ft) |      | 315  |      | 5253 |       | 273  |      | 1292 |
| Turn Bay Length (ft)    | 265  |      | 160  |      | 215   |      | 185  |      |
| Base Capacity (vph)     | 320  | 1365 | 329  | 1313 | 402   | 2302 | 136  | 857  |
| Starvation Cap Reductn  | 0    | 0    | 0    | 0    | 0     | 0    | 0    | 0    |
| Spillback Cap Reductn   | 0    | 0    | 0    | 0    | 0     | 0    | 0    | 0    |
| Storage Cap Reductn     | 0    | 0    | 0    | 0    | 0     | 0    | 0    | 0    |
| Reduced v/c Ratio       | 0.29 | 0.31 | 0.19 | 0.34 | 1.10  | 0.39 | 0.52 | 0.89 |

Intersection Summary

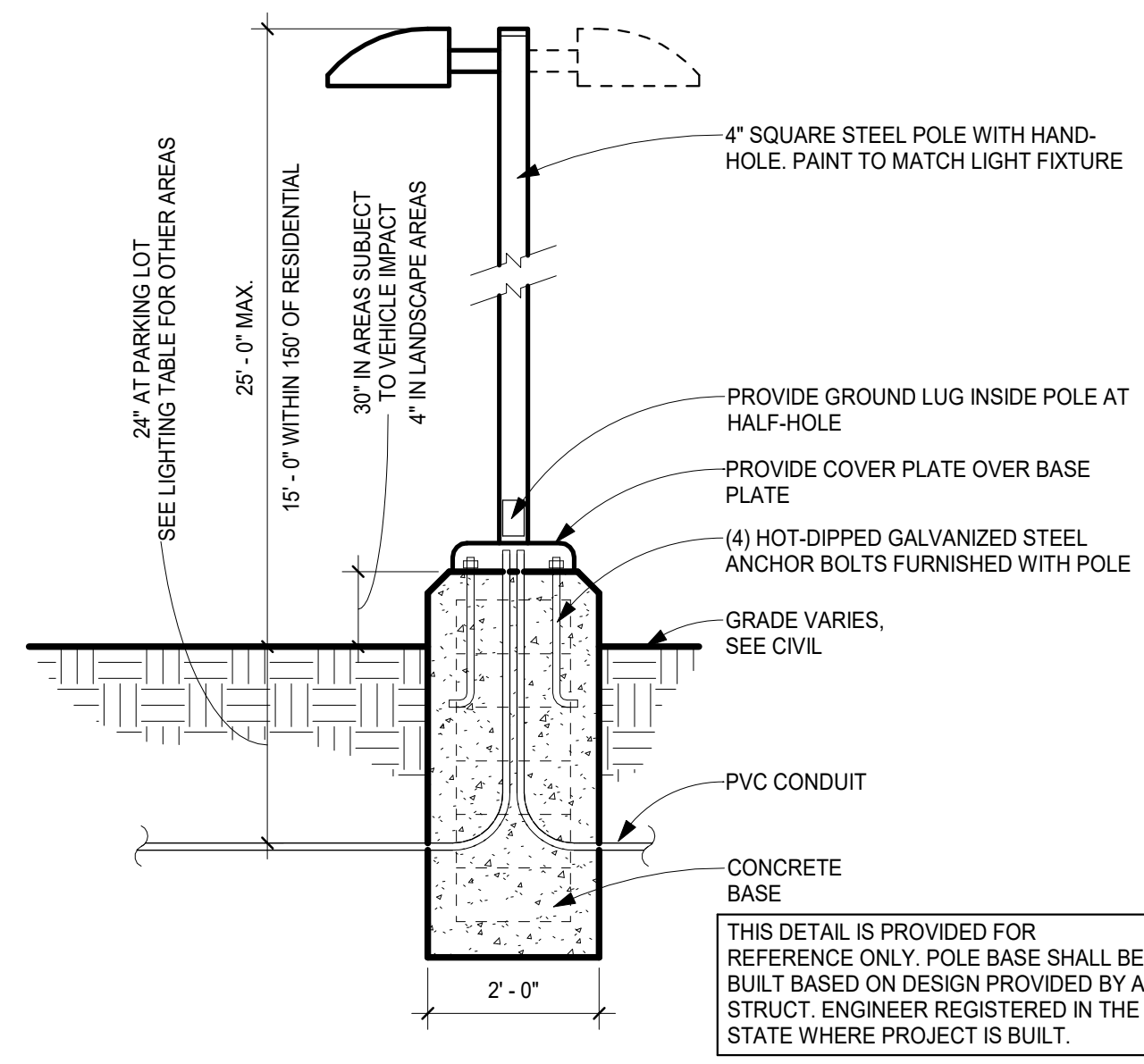
- Volume exceeds capacity, queue is theoretically infinite.  
Queue shown is maximum after two cycles.

# 95th percentile volume exceeds capacity, queue may be longer.  
Queue shown is maximum after two cycles.

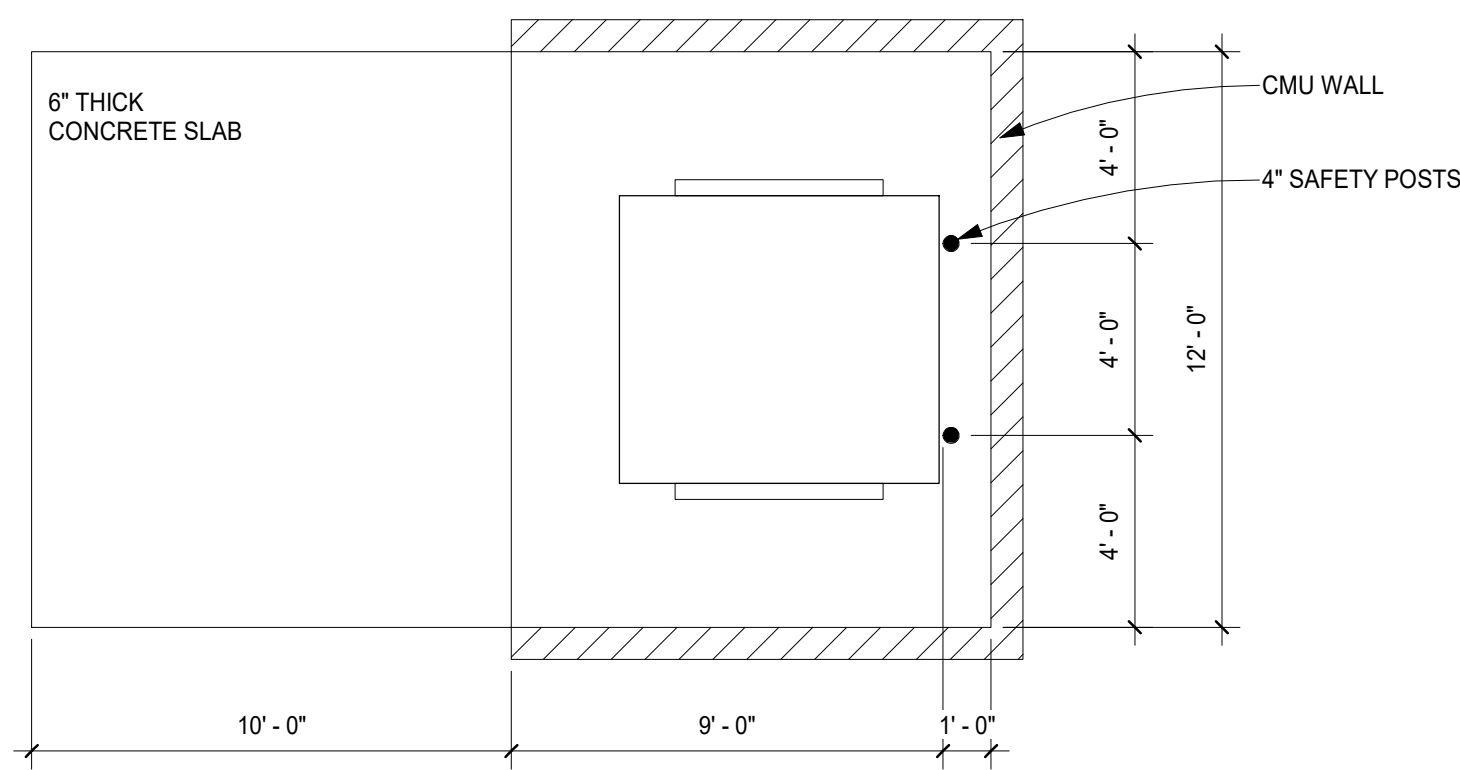
# Exhibit D



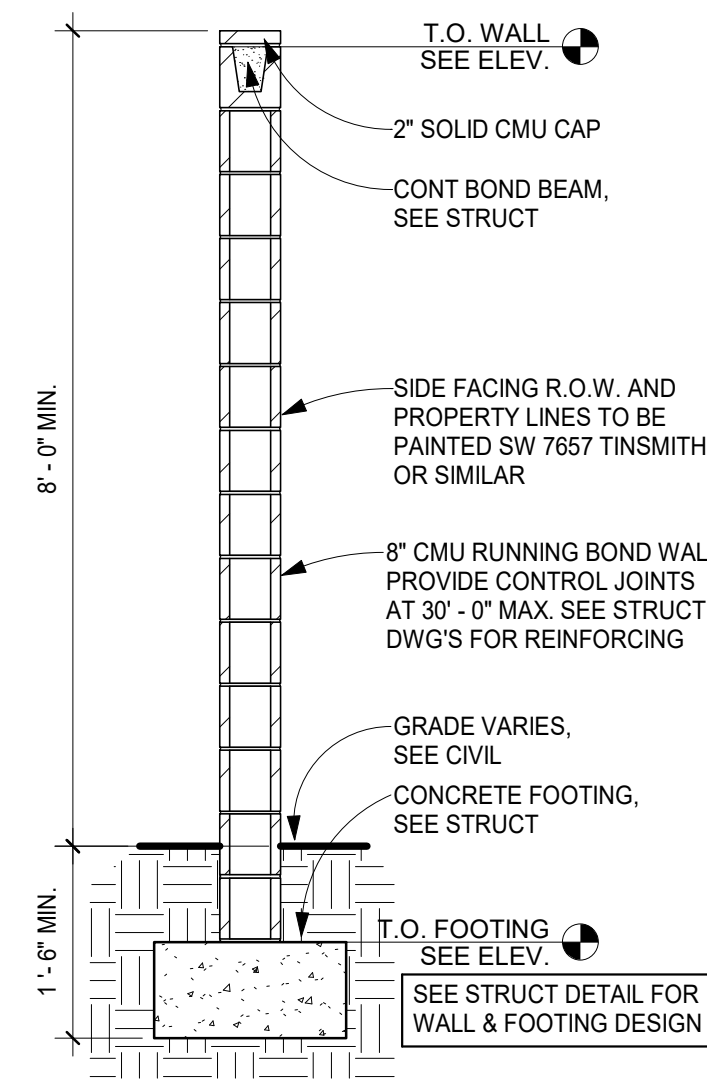
1 TRASH AND RECYCLING BIN - BLDG A  
1/4" = 1'-0"



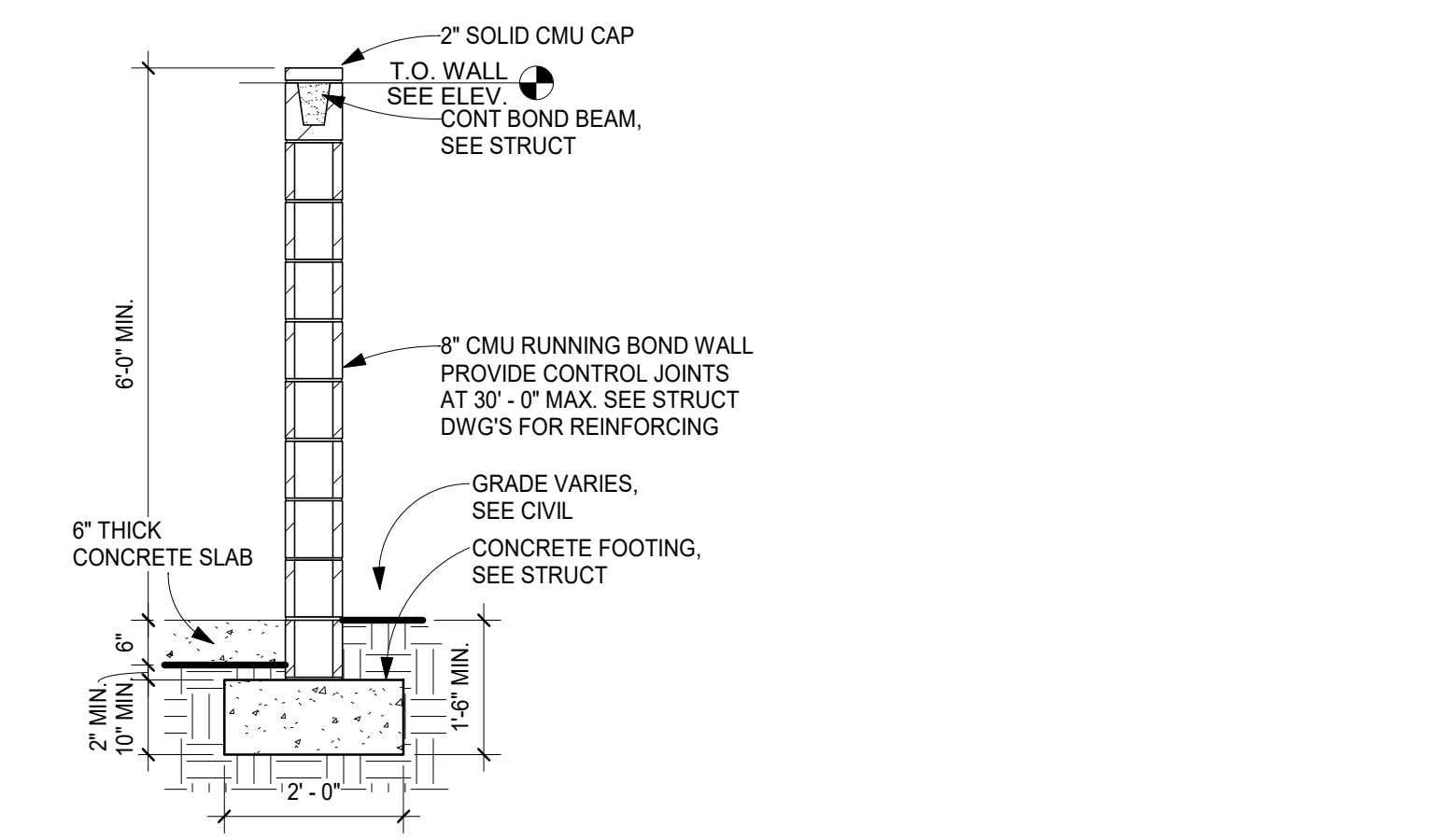
4 LIGHT FIXTURE DETAIL  
NOT TO SCALE



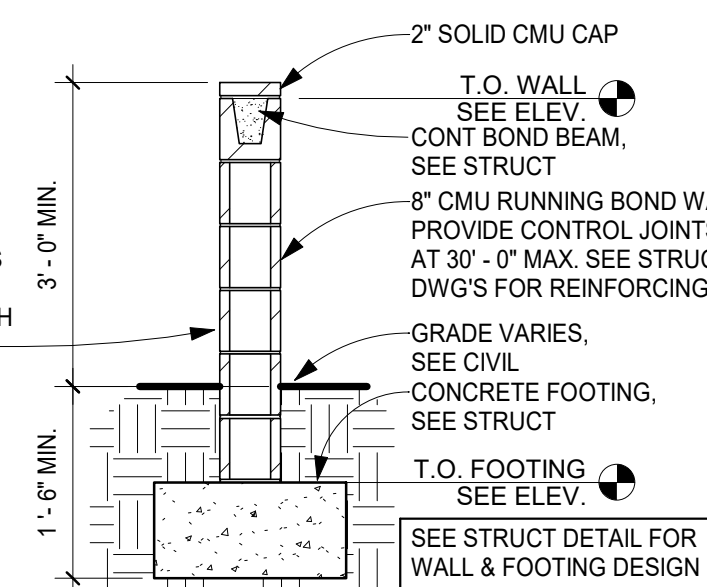
2 TRASH AND RECYCLING BIN - BLDG B  
1/4" = 1'-0"



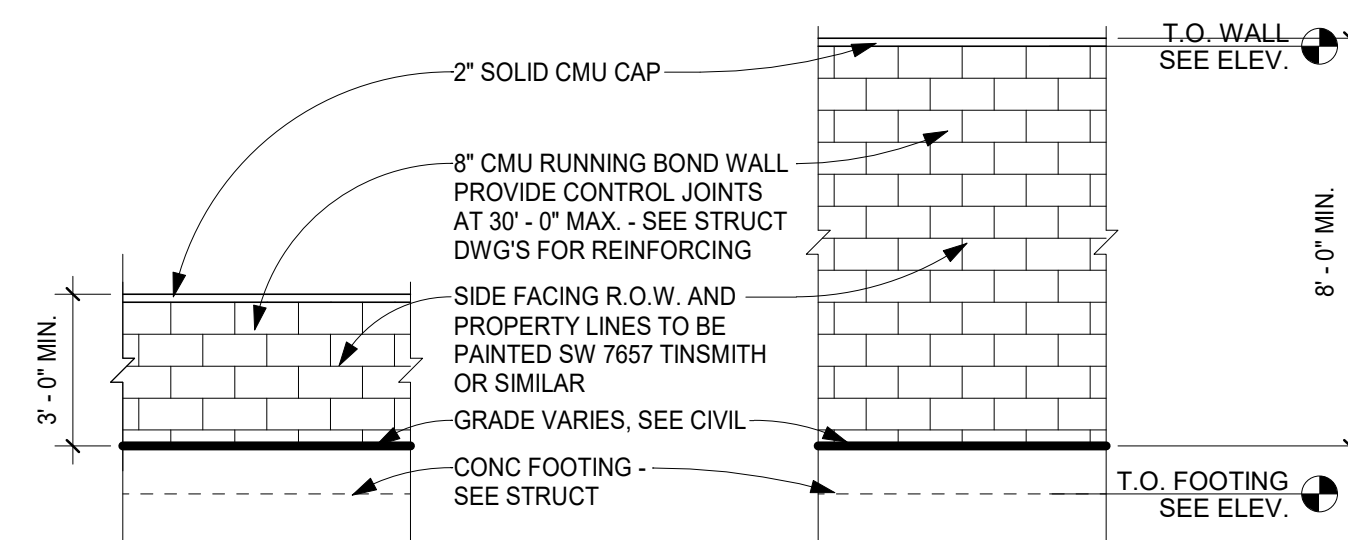
5 8' TALL SITE WALL SECTION  
1/2" = 1'-0"



3 6' TALL TRASH WALL SECTION  
1/2" = 1'-0"



6 3' TALL SITE WALL SECTION  
1/2" = 1'-0"



7 PARTIAL SITE WALL ELEVATIONS

**SITE STIPULATIONS**

**FOR PHO-1-21-Z-129-07-1**

1. The development shall be in general conformance with the site plan and elevations date stamped October 22, 2021, as modified by the following stipulations and approved by the Planning and Development Department.

2. The developer shall construct all streets within and adjacent to the development (except the frontage road) with paving, curb, gutter, sidewalk, curb ramps, streetlights, median islands, landscaping, and other incidentals as per plans approved by the Planning and Development Department. All improvements shall comply with all ADA accessibility standards.

3. The developer shall provide proof of existence of federal patented right-of-way 33-feet in width along the following streets as approved by the Street Transportation and Planning and Development Departments to include:

- a. North side of the east west midsection line Alameda Road alignment.
- b. Both sides of the north south midsection line for 15th Avenue located between Parkview Lane and Alameda Road.
- c. East side of the north south midsection line for 15th Avenue located north of Parkview Lane.
- d. South side of the Parkview Lane alignment.

4. The developer shall comply with requirements of the Finance Department's Real Estate Division for City's adoption of said patented right-of-way as public streets.

5. The developer shall dedicate right of ways for properties as approved by the Street Transportation and Planning and Development Departments to include:

- a. Minimum 40 feet for the north half of Alameda Road.
- b. Minimum 30 feet for the south half of Parkview Lane.
- c. Minimum 60 feet full width for 15th Avenue.

**FOR PHO-1-21-Z-18-10-1**

1. The development shall be in general conformance with the site plan and elevations date stamped October 22, 2021, as modified by the following stipulations and approved by the Planning and Development Department.

2. The developer shall dedicate minimum 40 feet of right-of-way and construct the north side of Alameda Road, as approved by the Planning and Development and Street Transportation Departments.

3. The developer shall dedicate minimum 30 feet of right-of-way and construct the south side of Parkview Lane, as approved by the Planning and Development and Street Transportation Departments.

4. The developer shall construct all streets within and adjacent to the development with paving, curb, gutter, sidewalk, curb ramps, streetlights, landscaping, and other incidentals as per plans approved by the Planning and Development Department. All improvements shall comply with all ADA accessibility standards.

5. The property owner shall record a Notice of Prospective Purchasers of Proximity to Airport in order to disclose the existence, and operational characteristics of Deer Valley Airport to future owners or tenants of the property. The form and content of such documents shall be according to the templates and instructions provided which have been reviewed and approved by the City Attorney.

**LEGAL DESCRIPTION**

**FOR PHO-1-21-Z-129-07-1**

The West Half of the Southwest Quarter of the Southeast Quarter of the Northwest Quarter of Section 7, Township 4 North, Range 3 East of the Gila and Salt River Base and Meridian, Maricopa County, Arizona; Excepting Therefrom All Coal, Oil, Gas and Other Minerals Deposits As Reserved In The Patent.

The Southeast Quarter of the Southeast Quarter of the Southeast Quarter of the Northwest Quarter of Section 7, Township 4 North, range 3 East of the Gila and Salt River Base and Meridian, Maricopa County, Arizona. Excepting Therefrom All Coal, Oil, Gas and Other Minerals Deposits As Reserved In The Patent.

The North Half of the East Half of the Southeast Quarter of the Southeast Quarter of the Northwest Quarter of Section 7, Township 4 North, Range 3 East of the Gila and Salt River base and Meridian, Maricopa County, Arizona. Excepting Therefrom All Coal, Oil, Gas and Other Minerals Deposits As Reserved In The Patent of Said Land.

The East Half of the Southwest Quarter of the Southwest Quarter of the Northeast Quarter of Section 7, Township 4 North, Range 3 East of the Gila and Salt River Base and Meridian, Maricopa County, Arizona. Except All Coal, Oil, Gas and Other Mineral Deposits, All Uranium, Thorium, or Any Other Material Which is or May be Determined to be Peculiarly Essential to the Production of Fissionable Materials, Whether or not of Commercial Value as Reserved to the United States of America in the Patent to Said Land.

The West Half of the Southwest Quarter of the Southwest Quarter of the Northeast Quarter of Section 7, Township 4 North, Range 3 east of the Gila and Salt River Base and Meridian, Maricopa County, Arizona; Except All Coal, Oil, Gas and Other Mineral Deposits as Reserved in Patent from the United States of America Recorded as Docket 1741, Page 324.

**FOR PHO-1-21-Z-18-10-1**

The West Half of the Southeast Quarter of the Southwest Quarter of the Northeast Quarter of Section 7, Township 4 North, Range 3 East of the Gila and Salt river base and Meridian, Maricopa County, Arizona; Except All Coal, Oil, Gas and Other Mineral Deposits as Reserved in Patent from the United States of America Recorded as Docket 2230, Page 42.

**CONSULTANT**

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PH: (952) 656-4666  
PH: (952) 656-4663  
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Email: TJD@studiodpa.com

**PROJECT**

**Deer Valley 30**

PROJECT ADDRESS  
**Phoenix, AZ**

PROJECT NUMBER  
**32013000**

**ISSUE RECORD**

01/04/22 Preliminary Review Submittal  
03/28/22 2nd Preliminary Review Submittal  
09/09/22 Final Site Plan Submittal  
12/01/22 2nd Final Site Plan Submittal  
02/16/23 Plan Revision Acknowledgement  
02/23/23 PHO Submittal

The West Half of the Southwest Quarter of the Southwest Quarter of the Northeast Quarter of Section 7, Township 4 North, Range 3 east of the Gila and Salt River Base and Meridian, Maricopa County, Arizona; Except All Coal, Oil, Gas and Other Mineral Deposits as Reserved in Patent from the United States of America Recorded as Docket 1741, Page 324.

The West Half of the Southeast Quarter of the Southwest Quarter of the Northeast Quarter of Section 7, Township 4 North, Range 3 East of the Gila and Salt river base and Meridian, Maricopa County, Arizona; Except All Coal, Oil, Gas and Other Mineral Deposits as Reserved in Patent from the United States of America Recorded as Docket 2230, Page 42.

DATE  
**02/23/23**  
PROJECT MANAGER  
**CL**  
DRAWN BY  
**S. OLSON**  
CHECKED BY  
**J. WADE**

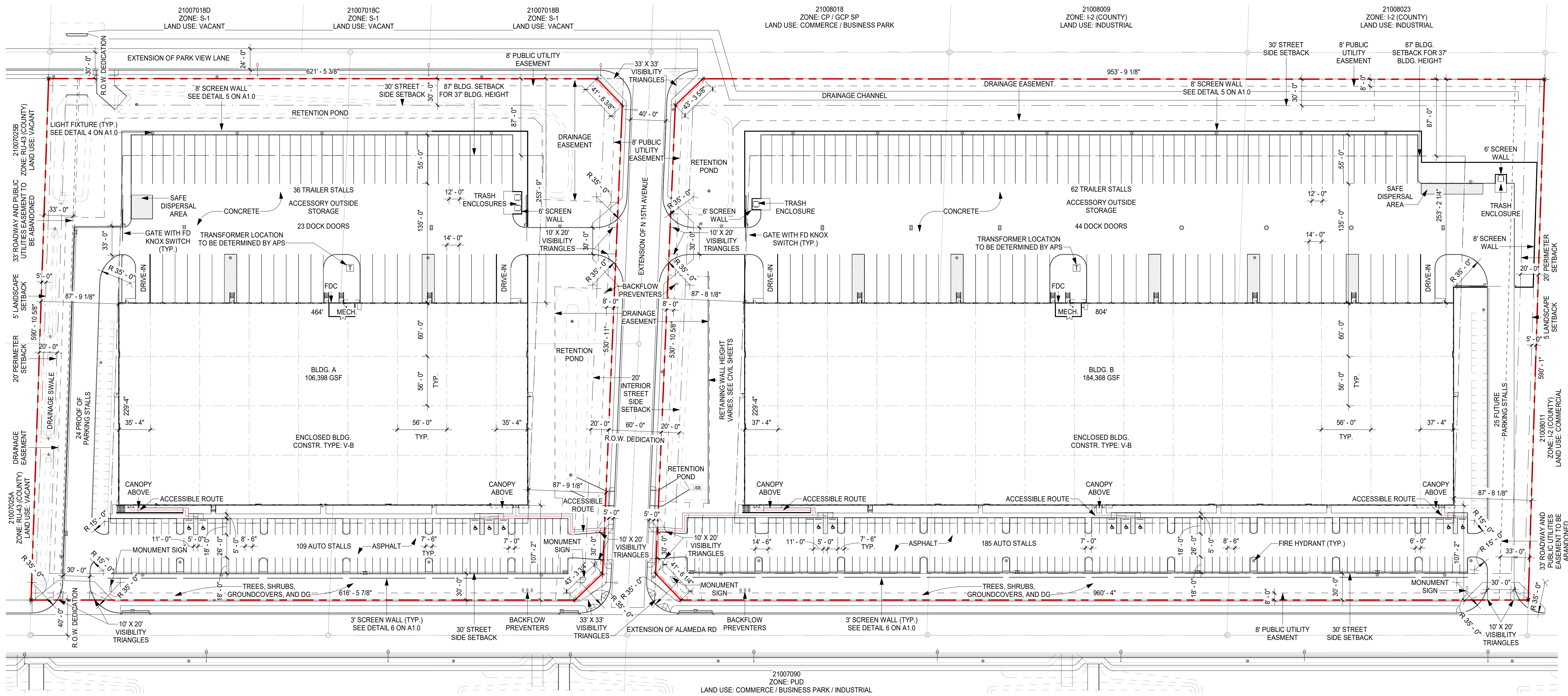
**REGISTRATION**

KIVA 21-3801  
SDEV 2100388  
PAPP 2106374  
QS 46-25, 46-26  
PRLM 2200359  
ABND 210068

SHEET TITLE  
**25-Acres Site  
Details**

**SHEET NUMBER**

**A1.0**



**CONSULTANT**

Civil Engineer  
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Email: John.Wade@opus-group.com

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PH: (480) 577-5818  
Contact: Tim Daugherty  
Email: T.J.D@studiodpa.com

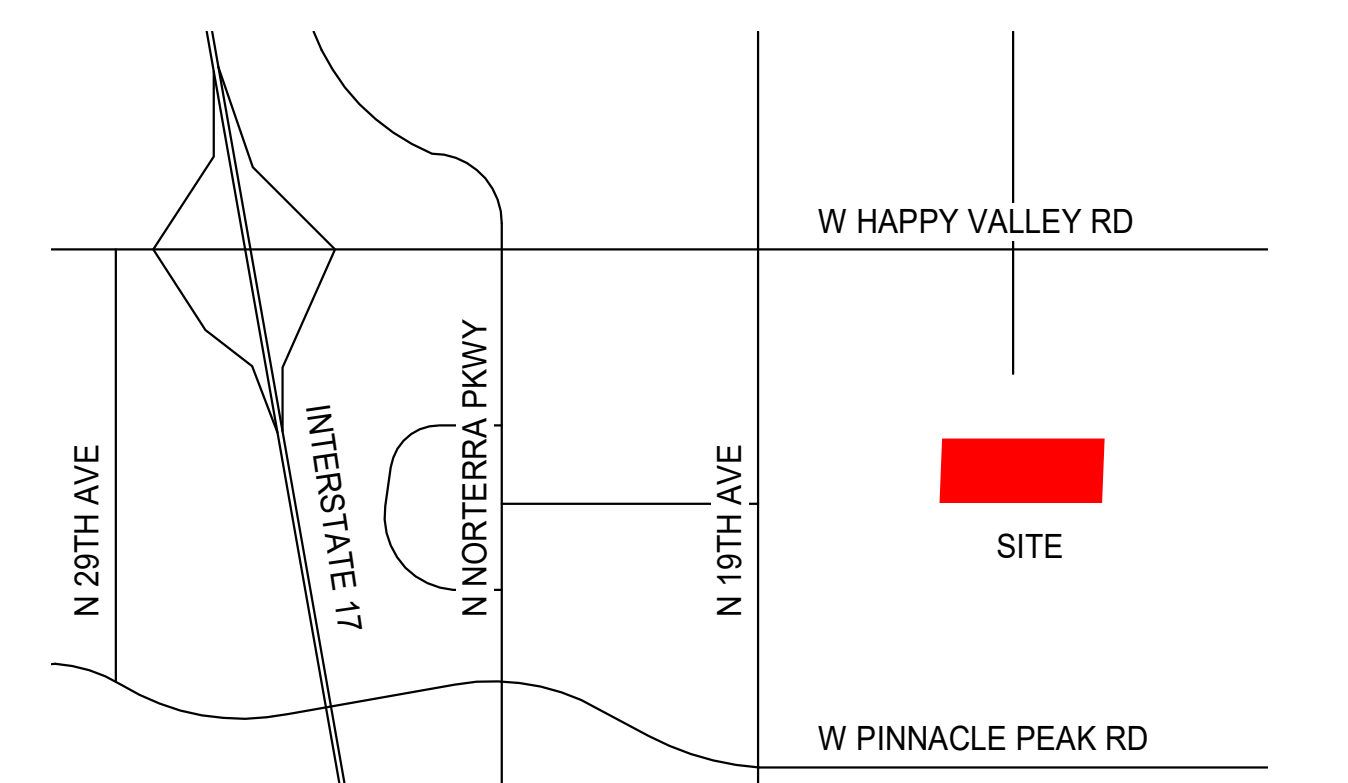
**PROJECT**  
**Deer Valley 30**

**PROJECT ADDRESS**  
Phoenix, AZ

**PROJECT NUMBER**  
32013000

01/04/22 Preliminary Review Submittal  
03/28/22 2nd Preliminary Review Submittal  
09/09/22 Final Site Plan Submittal  
12/01/22 2nd Final Site Plan Submittal  
02/16/23 Plan Revision Acknowledgement  
02/23/23 PHO Submittal

**1 25-Acres Site - Concept Site Plan**  
1" = 60'-0"



**2 Vicinity Map 25-Acres Site**  
NOT TO SCALE

| PARKING  | REQUIRED          | PROPOSED          |
|--|-------------------|-------------------|
| <b>BLDG A</b>  |                   |                   |
| 10% OFFICE USE BLDG. AREA                              | 10,640 SF         | 10,640 SF         |
| 90% UNSPECIFIED INDUSTRIAL USE BLDG. AREA              | 95,758 SF         | 95,758 SF         |
| <b>TOTAL BLDG. AREA</b>                                | <b>106,398 SF</b> | <b>106,398 SF</b> |
| 1 STALL/300 SF OFFICE                                  | 35 STALLS         | 35 STALLS         |
| 1 STALL/1,000 SF FOR 1-150,000 SF INDUSTRIAL USE       | 96 STALLS         | 98 STALLS         |
| <b>TOTAL STALLS REQUIRED</b>                           | <b>131 STALLS</b> | <b>133 STALLS</b> |
| ACCESSIBLE STALLS REQUIRED IF 101-150 STALLS IN LOT    | 5 STALLS          | 5 STALLS          |
| <b>TOTAL ACCESSIBLE STALLS REQUIRED</b>                | <b>5 STALLS</b>   | <b>5 STALLS</b>   |
| <b>BLDG B</b>  |                   |                   |
| 10% OFFICE USE BLDG. AREA                              | 18,437 SF         | 18,437 SF         |
| 90% UNSPECIFIED INDUSTRIAL USE BLDG. AREA              | 165,931 SF        | 165,931 SF        |
| <b>TOTAL BLDG. AREA</b>                                | <b>184,368 SF</b> | <b>184,368 SF</b> |
| 1 STALL/300 SF OFFICE                                  | 61 STALLS         | 61 STALLS         |
| 1 STALL/2,000 SF FOR 150,000-500,000 SF INDUSTRIAL USE | 83 STALLS         | 149 STALLS        |
| <b>TOTAL STALLS REQUIRED</b>                           | <b>144 STALLS</b> | <b>210 STALLS</b> |
| ACCESSIBLE STALLS REQUIRED IF 101-150 STALLS IN LOT    | 5 STALLS          | -                 |
| ACCESSIBLE STALLS REQUIRED IF 200-300 STALLS IN LOT    | 7 STALLS          | 7 STALLS          |
| <b>TOTAL ACCESSIBLE STALLS REQUIRED</b>                | <b>5 STALLS</b>   | <b>7 STALLS</b>   |

**PROJECT DESCRIPTION**

Deer Valley 25 Acres Industrial consists of approximately 22 acres of undeveloped land in the Deer Valley region, located north of Phoenix Deer Valley Airport and east of Interstate 17. The site is north of Alameda Road and divided down the middle by North Fifteenth Avenue. As planned, there are two buildings totaling approximately 290,766 gross square feet. Building A is approximately 106,398 gross square feet and Building B is approximately 184,368 gross square feet. Both buildings are fully enclosed.

This is a speculative industrial project without known tenants at the time of this submittal. The project will attract a wide variety of industrial, manufacturing, warehousing, and/or office uses.

Building A has two primary entrances and Building B has three primary entrances, all facing Alameda Road. The primary architectural features provide visual interest through the application of canopies over entrances, three different and complimentary paint colors, horizontal reveals, a textural formliner, and vertical plane breaks.

Access to each site is from Alameda and North 15th Avenue. Auto parking is located in front of the buildings. Proof of parking provides flexibility for future tenants' needs and is located west of Building A and east of Building B. Each building has a secured 185-foot truck court on the north side of the buildings. The courts are secured by eight-foot screen walls. The truck staging area is to be considered accessory outside storage with storage length likely greater than 48 hours. From the street view, thoughtful groupings of landscaping provides visual relief in companionship with the screen walls.

**PROJECT INFORMATION**

| <b>Building A</b>  |                   |
|--------------------|-------------------|
| Gross Area         | +/- 10.29 Acres   |
| Net Area           | +/- 448,430 SF    |
| Building Area      | +/- 8.78 Acres    |
| Lot Coverage       | +/- 382,295 SF    |
| Auto Parking       | +/- 106,398 GSF   |
| Proof of Parking   | +/- 37' / 1 Story |
| Total Parking      | 27.8 %            |
| Accessible Parking | 109 Stalls        |
| Dock Doors         | 24 Stalls         |
| Drive-In Doors     | 133 Stalls        |
| Trailer Stalls     | 5 Stalls          |
| Construction Type  | 23 Doors          |
|                    | 2 Doors           |
|                    | 36 Stalls         |
|                    | V-B (Enclosed)    |

| <b>Building B</b>  |                   |
|--------------------|-------------------|
| Gross Area         | +/- 15.41 Acres   |
| Net Area           | +/- 671,398 SF    |
| Building Area      | +/- 13.35 Acres   |
| Lot Coverage       | +/- 581,540 SF    |
| Auto Parking       | +/- 184,368 GSF   |
| Proof of Parking   | +/- 37' / 1 Story |
| Total Parking      | 31.7 %            |
| Accessible Parking | 185 Stalls        |
| Dock Doors         | 25 Stalls         |
| Drive-In Doors     | 210 Stalls        |
| Trailer Stalls     | 7 Stalls          |
| Construction Type  | 44 Doors          |
|                    | 2 Doors           |
|                    | 62 Stalls         |
|                    | V-B (Enclosed)    |

**ZONING**

**Zone District:** CP/GCP Commerce Park / General Commerce Park

**Overlay District:** Deer Valley Airport Overlay (DVAO Area 1)

**Zoning Cases:** Z-129-07 and Z-18-10. Stipulations on Sheet A1.0.

**ZONING PARKING REQUIREMENTS**

**Unspecified Industrial Use (Shell Building):**  
for 1-150,000 SF 1 stall per 1,000 SF;  
for 150,001-500,000 SF 1 stall per 2,000 SF;  
for 500,001 SF plus 1 stall per 2,500 SF

**Office:** 1 per 300 SF

**Industrial Plants, Manufacturing, Wholesale (including Warehouses):**  
1 stall per 1.5 warehouse or production workers and 1 space per 300 SF of administrative office. If the facility runs more than one shift a day, employee count will be based on the 2 largest shifts

**Accessible Parking Required:**  
for 1-25 total stalls in parking lot: 1 required accessible space; for 26-50: 2; for 51-75: 3; for 76-100: 4; for 101-150: 5; for 151-200: 6; for 201-300: 7; for 301-400: 8; for 401-500: 9; for 1,001 and over: 20 plus 1 for each 100 spaces, or fraction thereof over 1,000.

**Proposed Parking Mix:** 10% Office, 90% Industrial

**Building A:** 131 Stalls Required, 5 to be accessible (96 Industrial + 35 Office)

**Building B:** 144 Stalls Required, 5 to be accessible (83 Industrial + 61 Office)

**SITE PLAN NOTES**

- Development and use of this site will conform with all applicable codes and ordinances.
- This project is located in the City of Phoenix water service area and has been designated as having an assured water supply.
- All new or relocated utilities will be placed underground.
- All signage requires separate approvals and permits.
- Any lighting will be placed so as to direct light away from the adjacent residential districts and will not exceed one-foot candle at the property line. No noise, odor, or vibration will be emitted so that it exceeds the general level of noise, odor, or vibration emitted by uses outside of the site.
- Owners of property adjacent to public right-of-way will have the responsibility for maintaining all landscaping within the rights-of-way in accordance with approved plans.

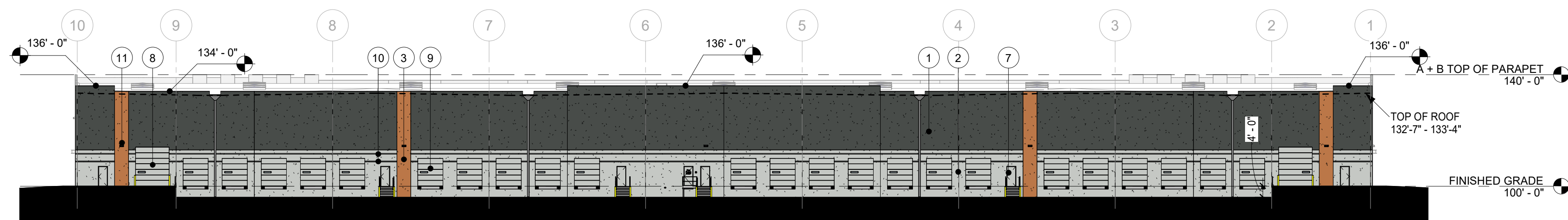
**SITE PLAN NOTES ADDITIONAL**

- Smoke, gas and odor emissions shall comply with Regulation III of the Maricopa County Air Pollution Control Rules and Regulations.
- The disposal of all waste materials shall comply with title 9, chapter 8, articles 18 and 4 of the Hazardous Waste Regulations as adopted by the Arizona Health Department.
- The average noise level, measured at the property line, shall not exceed fifty-five dB (l dn) when measured on an "A weighted" sound level meter and according to the procedures of the Environmental Protection Agency.

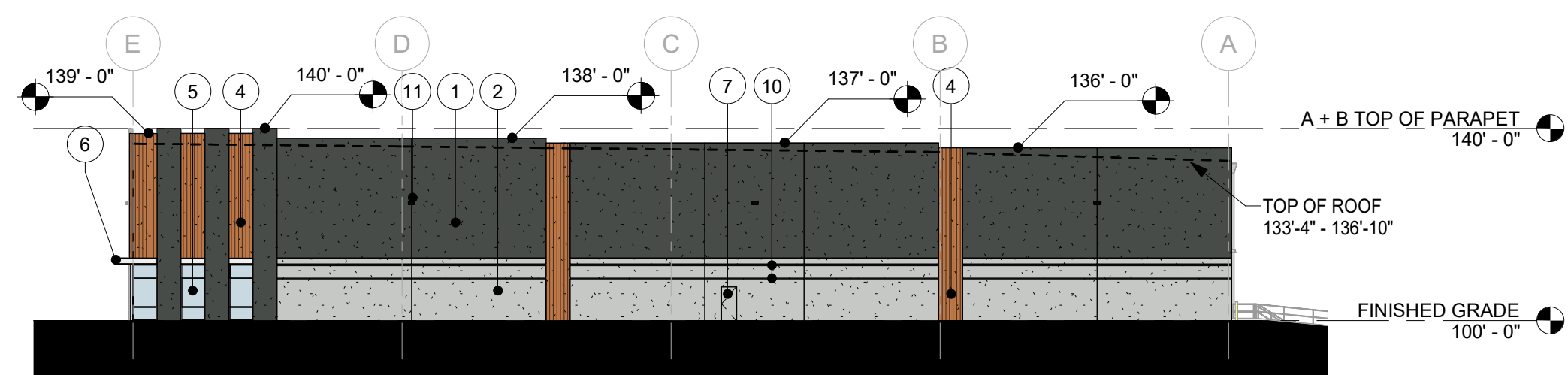
|      |              |
|------|--------------|
| KIVA | 21-3801      |
| SDEV | 2100388      |
| PAPP | 2106374      |
| QS   | 46-25, 46-26 |
| PRLM | 2200359      |
| ABND | 210068       |

**SHEET TITLE**  
**25-Acres Site - Concept Site Plan**

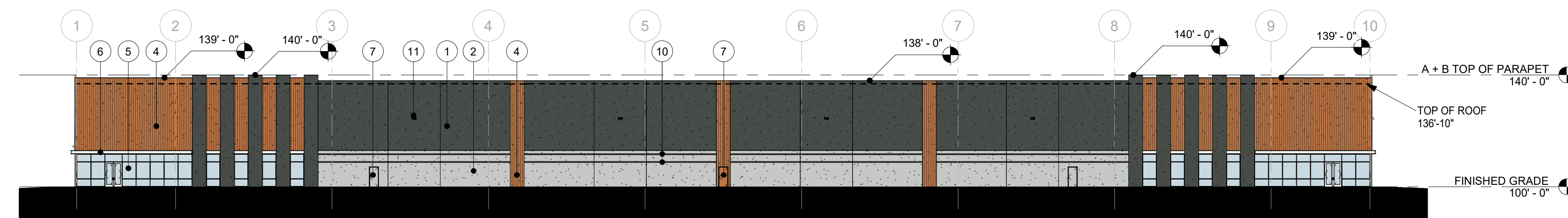
SHEET NUMBER



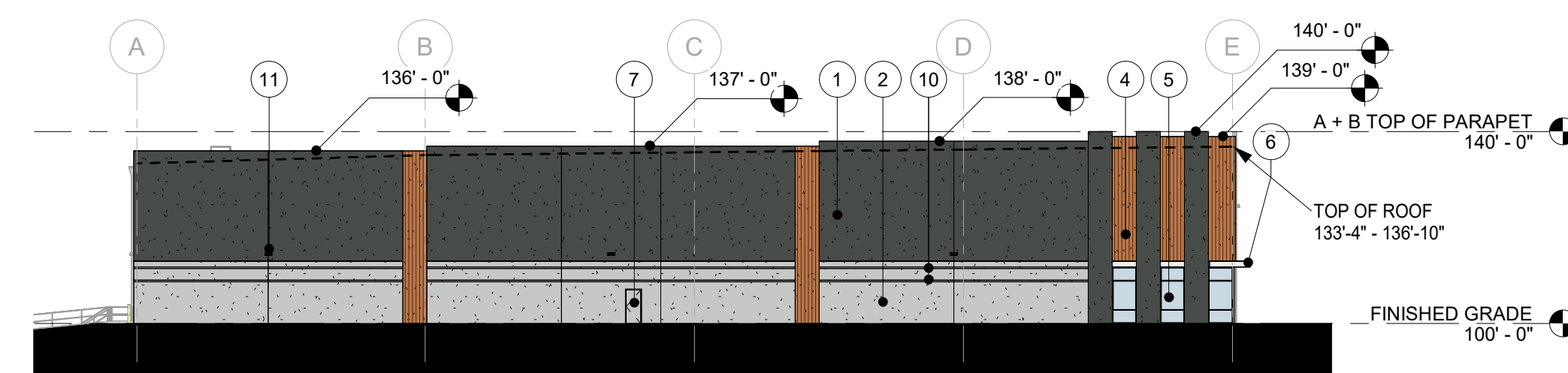
**1 NORTH ELEVATION @ BLD A**  
1" = 30'-0"



**2 EAST ELEVATION @ BLD A**  
1" = 30'-0"



**3 SOUTH ELEVATION @ BLD A**  
1" = 30'-0"



**4 WEST ELEVATION @ BLD A**  
1" = 30'-0"

| KEYNOTE LEGEND |   |
|----------------|---|
| 1              | CONCRETE PAINTED COLOR #1 - SW 7062 ROCK BOTTOM OR SIMILAR                      |
| 2              | CONCRETE PAINTED COLOR #2 - SW 7657 TINSMITH OR SIMILAR                         |
| 3              | CONCRETE PAINTED COLOR #3 - SW 6362 TIGEREYE OR SIMILAR                         |
| 4              | CONCRETE W/ FORMLINER PAINTED COLOR #3 - SW 6362 TIGEREYE OR SIMILAR            |
| 5              | STOREFRONT VISION GLASS W/ ALUMINUM FRAME                                       |
| 6              | METAL CANOPY PAINTED COLOR #4 - SW 7006 EXTRA WHITE OR SIMILAR                  |
| 7              | HOLLOW METAL DOOR - PAINTED TO MATCH COLOR OF SURROUNDING PANEL                 |
| 8              | DRIVE-IN DOOR - COLOR TO MATCH PAINT COLOR #2 SW 7657 TINSMITH OR SIMILAR       |
| 9              | OVERHEAD DOCK DOORS - COLOR TO MATCH PAINT COLOR #2 SW 7657 TINSMITH OR SIMILAR |
| 10             | HORIZONTAL REVEALS  |
| 11             | WALL-MOUNTED LIGHT  |

NOTE: ROOFTOP EQUIPMENT NOT PLANNED TO BE INSTALLED WITH CORE AND SHELL BUILDING.

|      |              |
|------|--------------|
| KIVA | 21-3801      |
| SDEV | 2100388      |
| PAPP | 2106374      |
| QS   | 46-25, 46-26 |
|      | PRLM 2200359 |

| CONSULTANT   |   |
|--|---|
| Civil Engineer<br>Kinley-Horn and Associates, INC.<br>7740 N. 16th Street, Suite 300<br>Phoenix, AZ 85021<br>PH: (602) 215-1211<br>Contact: Chuck Ward, P.E.<br>Email: Chuck.Ward@kinley-horn.com  | Architect<br>Opus AE Group, LLC<br>10350 Bren Road West<br>Minnetonka, MN 55343<br>Fax: (952) 656-4666<br>PH: (952) 656-4663<br>Contact: John Wade<br>Email: John.Wade@opus-group.com |
| Developer / Owner<br>Opus Development Company, LLC<br>2505 E Camelback Rd, Suite 100<br>Phoenix, AZ 85016<br>PH: (602) 648-5077<br>Contact: Matthew Vranas<br>Email: Matthew.Vranas@opus-group.com | Landscape Architect<br>Studio DPA<br>PO Box 3489<br>Gilbert, AZ 85299<br>PH: (480) 577-5818<br>Contact: Tim Dougherty<br>Email: TJD@studiodpa.com                                     |

PROJECT  
**Deer Valley 30**

PROJECT ADDRESS  
Phoenix, AZ

PROJECT NUMBER  
32013000

01/04/22 Preliminary Review Submittal  
03/28/22 2nd Preliminary Review Submittal

DATE  
03/28/22  
PROJECT MANAGER  
CL  
DRAWN BY  
S. OLSON  
CHECKED BY  
J. WADE

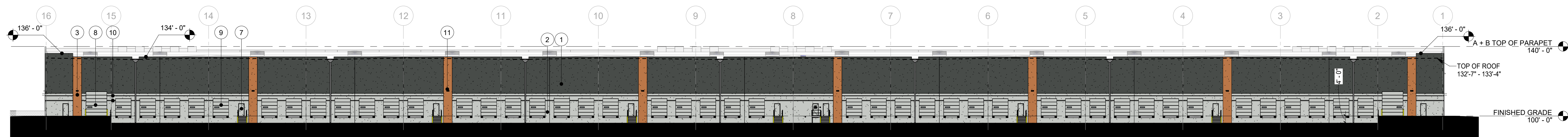
REGISTRATION

SHEET TITLE  
**BUILDING A  
ELEVATIONS**

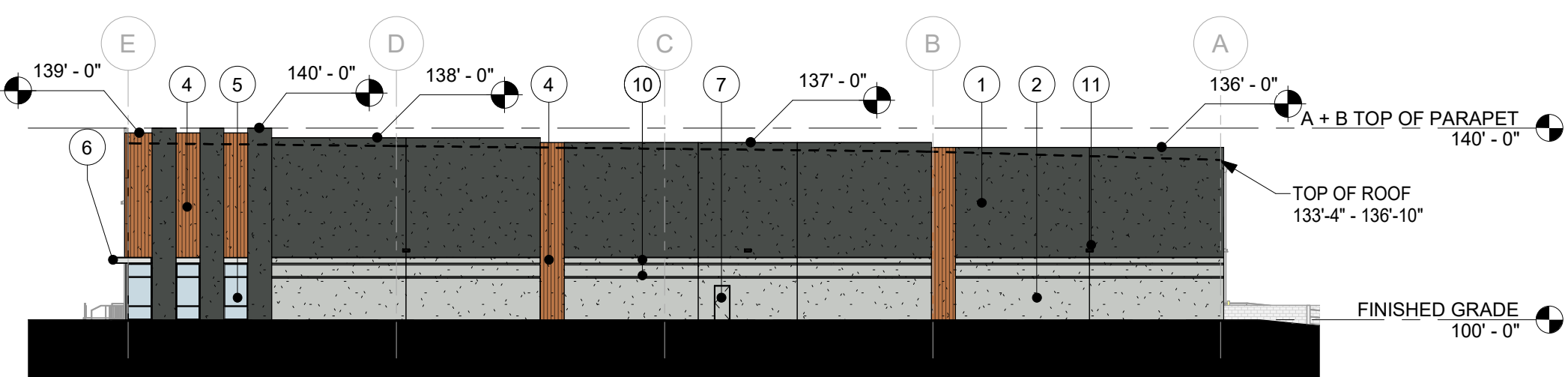
SHEET NUMBER

**A5**

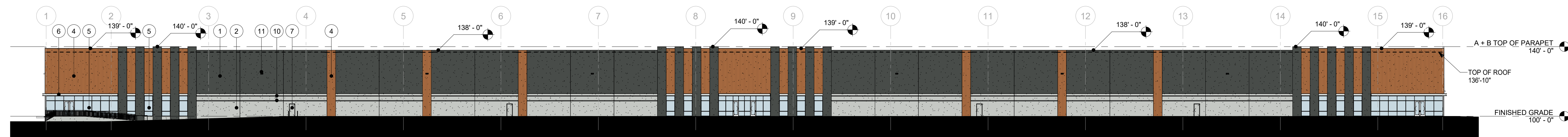




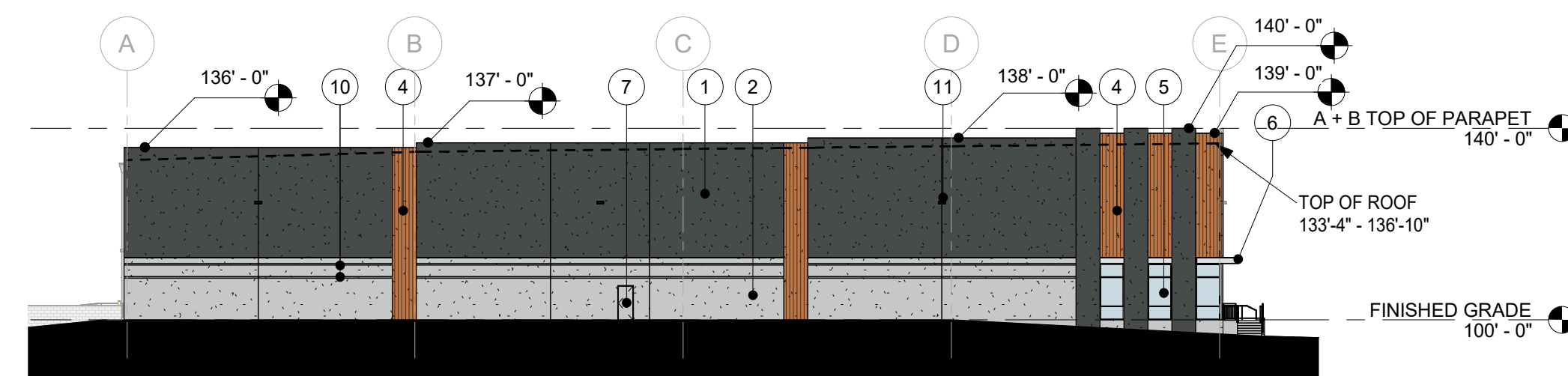
1 NORTH ELEVATION @ BLD B  
1" = 30'-0"



2 EAST ELEVATION @ BLD B  
1" = 30'-0"



3 SOUTH ELEVATION @ BLD B  
1" = 30'-0"



4 WEST ELEVATION @ BLD B  
1" = 30'-0"

**KEYNOTE LEGEND**

- 1 CONCRETE PAINTED COLOR #1 - SW 7062 ROCK BOTTOM OR SIMILAR
- 2 CONCRETE PAINTED COLOR #2 - SW 7657 TINSMITH OR SIMILAR
- 3 CONCRETE PAINTED COLOR #3 - SW 6362 TIGEREYE OR SIMILAR
- 4 CONCRETE W/ FORMLINER PAINTED COLOR #3 - SW 6362 TIGEREYE OR SIMILAR
- 5 STOREFRONT VISION GLASS W/ ALUMINUM FRAME
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- 10 HORIZONTAL REVEALS
- 11 WALL-MOUNTED LIGHT

NOTE: ROOFTOP EQUIPMENT NOT PLANNED TO BE INSTALLED WITH CORE AND SHELL BUILDING.

**CONSULTANT**

|  |   |
|--|---|
| Civil Engineer<br>Kinley-Horn and Associates, INC<br>7740 N. 16th Street, Suite 300<br>Phoenix, AZ 85021<br>PH: (602) 215-1221<br>Contact: Chuck Watt, P.E.<br>Email: Chuck.Watt@kinley-horn.com       | Architect<br>Opus AE Group, LLC<br>10350 Bren Road West<br>Minnetonka, MN 55343<br>Fax: (952) 656-4666<br>PH: (952) 656-4663<br>Contact: John Wade<br>Email: John.Wade@opus-group.com |
| Developer / Owner<br>Opus Development Company, LLC<br>2505 E Camelback Rd, Suite 100<br>Phoenix, AZ 85016<br>PH: (602) 648-5077<br>Contact: Matthew Vranesky<br>Email: Matthew.Vranesky@opus-group.com | Landscape Architect<br>Studio DPA<br>PO Box 3489<br>Gilbert, AZ 85299<br>PH: (480) 577-5818<br>Contact: Tim Dougherty<br>Email: TJD@studiodpa.com                                     |

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**Deer Valley 30**

**PROJECT ADDRESS**  
**Phoenix, AZ**

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CL  
**DRAWN BY**  
S. OLSON  
**CHECKED BY**  
J. WADE

REGISTRATION

KIVA 21-3801  
SDEV 2100388  
PAPP 2106374  
QS 46-25, 46-26  
PRLM 2200359

**SHEET TITLE**  
**BUILDING B  
ELEVATIONS**

SHEET NUMBER

**A6**

ORDINANCE G-6948

AN ORDINANCE AMENDING THE STIPULATIONS APPLICABLE  
TO REZONING APPLICATION Z-18-10-1 PREVIOUSLY  
APPROVED BY ORDINANCE G-5574.

BE IT ORDAINED BY THE COUNCIL OF THE CITY OF PHOENIX, as  
follows:

SECTION 1. The zoning stipulations applicable to the property located at  
the southeast corner of 13th Avenue and Parkview Lane alignments in a portion of  
Section 7, Township 4 North, Range 3 East, as described more specifically in  
Attachment "A," are hereby modified to read as set forth below.

STIPULATIONS:

Mod

1. ~~That conceptual site plan(s) and elevations shall be approved by the Planning Hearing Officer through the public hearing process prior to the Planning and Development Services Department preliminary site plan approval. This review is for conceptual purposes only. Specific development standards and requirements will be determined through the site plan approval process with the Planning and Development Services Department.~~

THE DEVELOPMENT SHALL BE IN GENERAL CONFORMANCE WITH THE  
SITE PLAN AND ELEVATIONS DATE STAMPED OCTOBER 22, 2021, AS  
MODIFIED BY THE FOLLOWING STIPULATIONS AND APPROVED BY THE  
PLANNING AND DEVELOPMENT DEPARTMENT.

2. ~~That~~ The developer shall dedicate MINIMUM right-of-way totaling 40 feet OF  
RIGHT-OF-WAY AND CONSTRUCT for the north half SIDE of Alameda  
Road, and that right-of-way totaling 30 feet shall be dedicated for the south

Mod

~~half of Parkview Road as approved by the Street Transportation Department and the Planning and Development Services AND STREET TRANSPORTATION Departments.~~

3. THE DEVELOPER SHALL DEDICATE MINIMUM 30 FEET OF RIGHT-OF-WAY AND CONSTRUCT THE SOUTH SIDE OF PARKVIEW LANE, AS APPROVED BY THE PLANNING AND DEVELOPMENT AND STREET TRANSPORTATION DEPARTMENTS.
4. ~~That~~ The developer shall construct all streets within and adjacent to the development with paving, curb, gutter, sidewalk, curb ramps, streetlights, landscaping, and other incidentals as per plans approved by the Planning and Development ~~Services~~ Department. All improvements shall comply with all ADA accessibility standards.
5. ~~That~~ The property owner shall record a Notice of Prospective Purchasers of Proximity to Airport in order to disclose the existence, and operational characteristics of Deer Valley Airport to future owners or tenants of the property. The form and content of such documents shall be according to the templates and instructions provided which have been reviewed and approved by the City Attorney.

SECTION 2. Due to the site's specific physical conditions and the use district granted pursuant to Ordinance G-5574 this portion of the rezoning is now subject to the stipulations approved pursuant to Ordinance G-5574 and as modified in Section 1 of this Ordinance. Any violation of the stipulation is a violation of the City of Phoenix Zoning Ordinance. Building permits shall not be issued for the subject site until all the stipulations have been met.

SECTION 3. If any section, subsection, sentence, clause, phrase or portion of this ordinance is for any reason held to be invalid or unconstitutional by the decision of any court of competent jurisdiction, such decision shall not affect the validity of the remaining portions hereof.

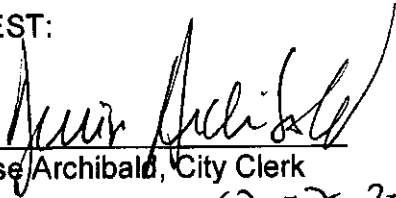
PASSED by the Council of the City of Phoenix this 26th day of January,

2022.



MAYOR

ATTEST:



Denise Archibald, City Clerk

02-07-2022

APPROVED AS TO FORM:  
Cris Meyer, City Attorney

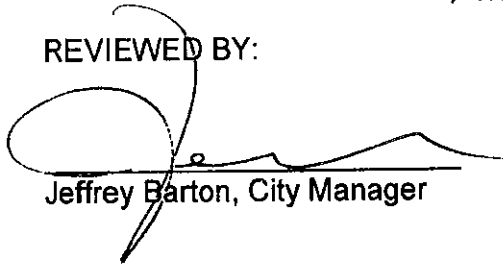
By:



Acting Chief Counsel

Pml

REVIEWED BY:

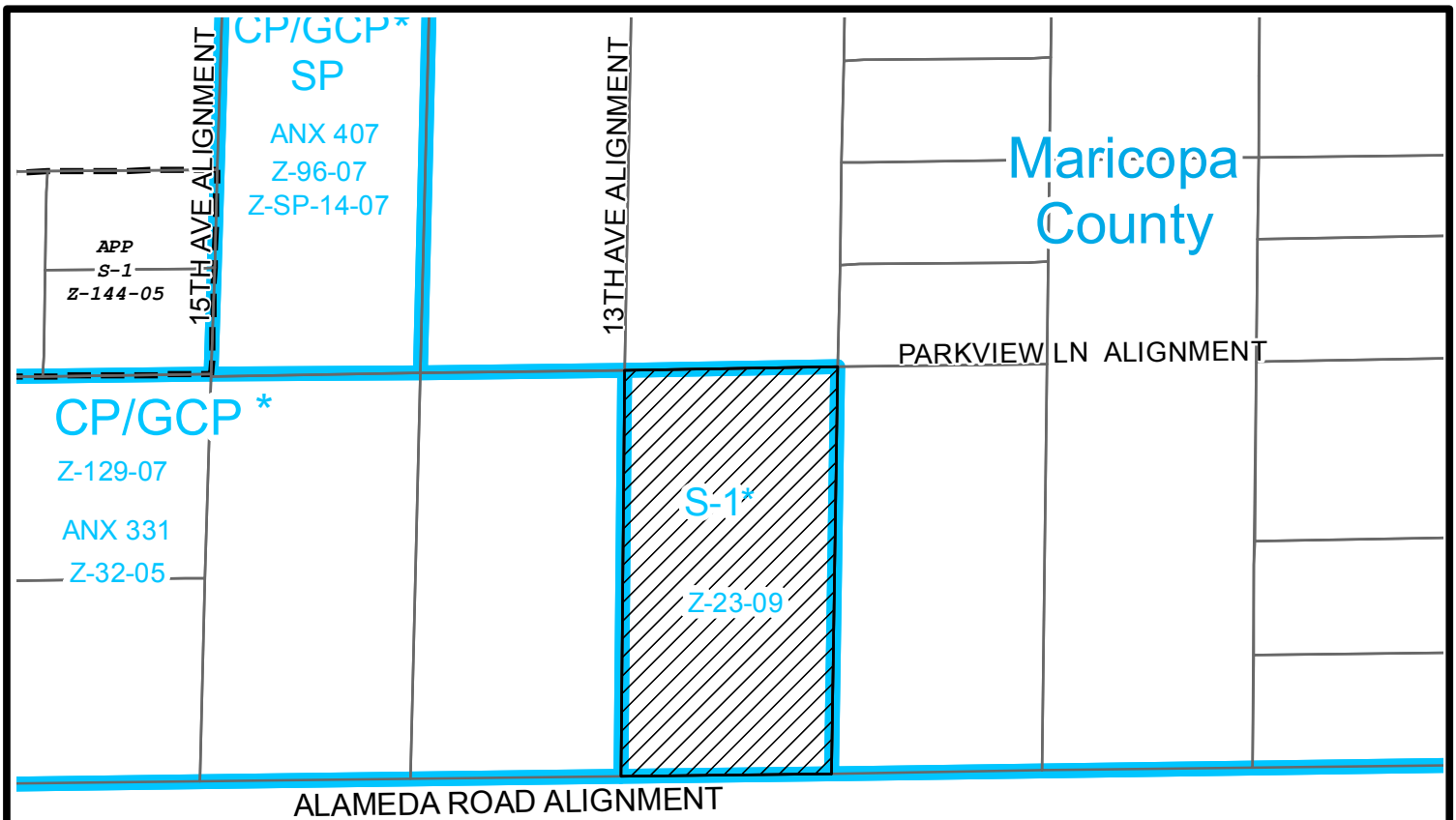


Jeffrey Barton, City Manager

Exhibits:

- A - Legal Description (1 Page)
- B - Ordinance Location Map (1 Page)

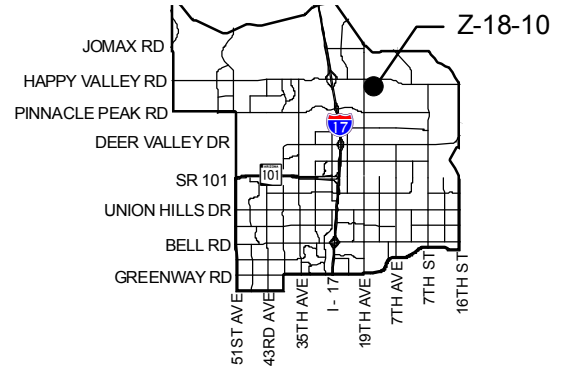
PL:tml:LF21-3338:1-26-2022:2296917v1



S-1\*



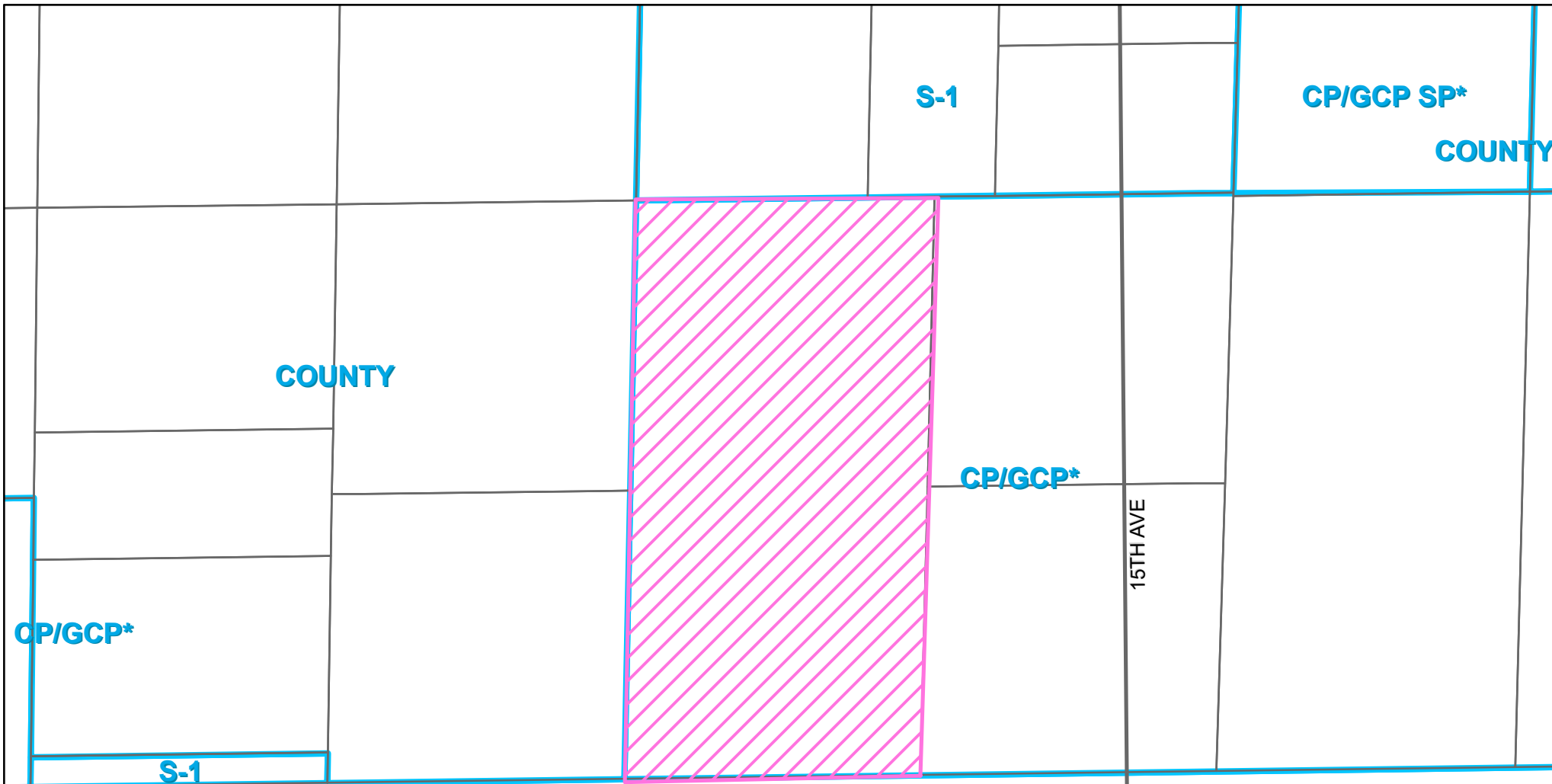
300 150 0 300 Feet



CITY OF PHOENIX PLANNING DEPARTMENT  
**DEER VALLEY VILLAGE**  
 CITY COUNCIL DISTRICT: 1

|  |  |   |  |
|--|--|---|--|
| <b>APPLICANT'S NAME:</b><br>Francis J. Slavin, P.C.  |  | <b>REQUESTED CHANGE:</b><br>FROM: S-1, (5.16 a. c.)<br>TO: CP/GCP, (5.16 a. c.) |  |
| <b>APPLICATION NO.</b><br>Z-18-10  | <b>DATE:</b><br>7/15/10                                      | <b>REVISION DATES:</b>  |  |
| <small>GROSS AREA INCLUDING 1/2 STREET AND ALLEY DEDICATION IS APPROX.</small><br>5.16 Acres | <small>AERIAL PHOTO &amp; QUARTER SEC. NO.</small><br>Q46-26 | <small>ZONING MAP</small><br>O-8  |  |
| <b>MULTIPLES PERMITTED</b><br>S-1<br>CP/GCP  | <b>CONVENTIONAL OPTION</b><br>5<br>N/A                       | <b>* UNITS P.R.D. OPTION</b><br>5<br>N/A  |  |

\* Maximum Units Allowed with P.R.D. Bonus



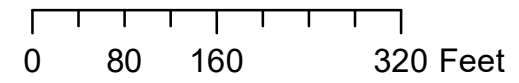
Maricopa County Assessor's Office

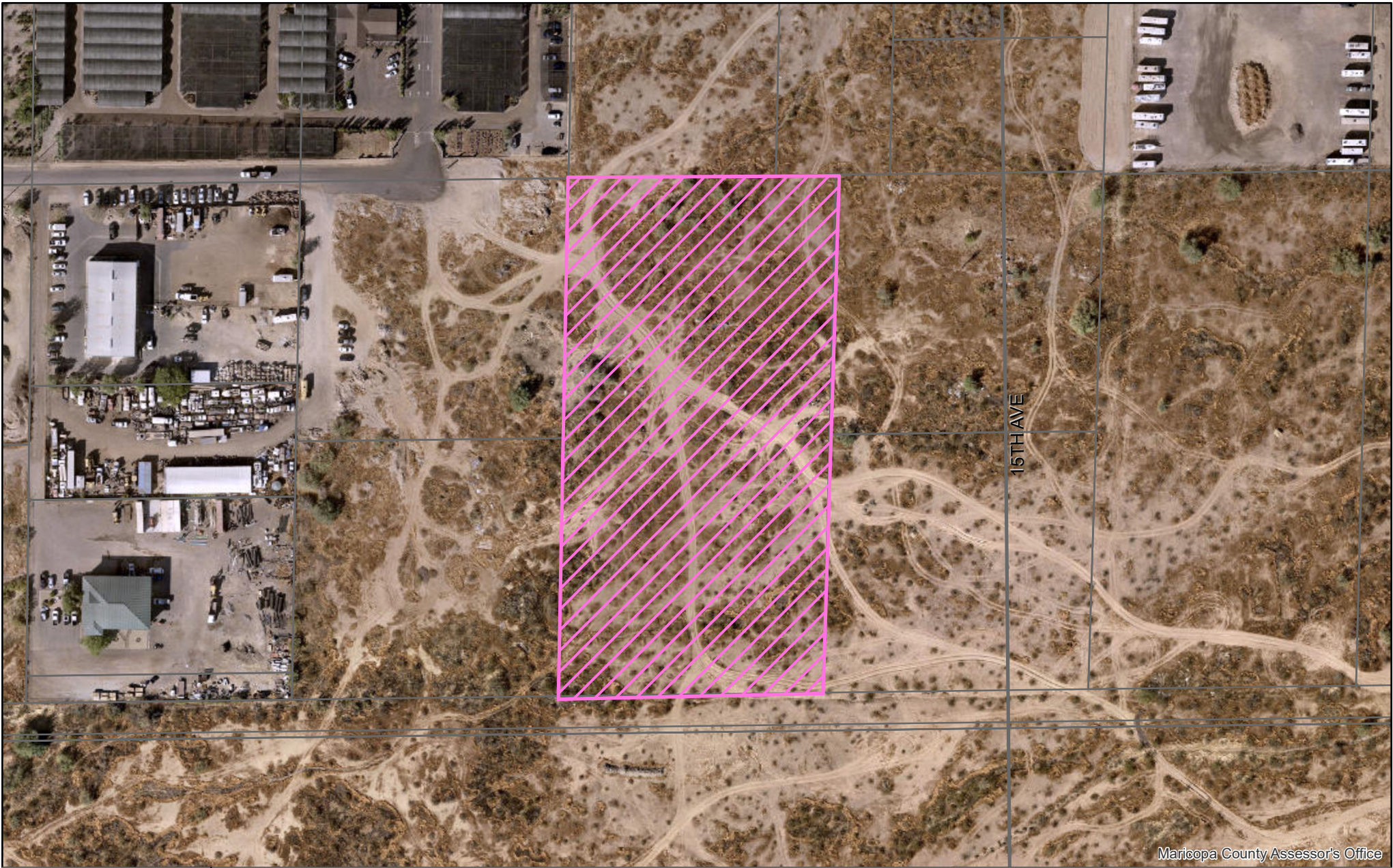
PHO-2-23--Z-18-10-1

**Property Location: Southeast corner of 13th Avenue and Parkview Lane alignments**



**Planning & Development Department**





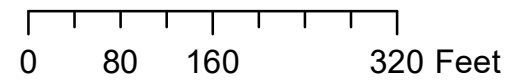
Maricopa County Assessor's Office

PHO-2-23--Z-18-10-1

**Property Location: Southeast corner of 13th Avenue and Parkview Lane alignments**



**Planning & Development Department**





Opus AE Group, L.L.C.  
10350 Bren Road West  
Minnetonka, MN 55343-0110  
952-656-4444

Opus Design Build, L.L.C.  
10350 Bren Road West  
Minnetonka, MN 55343-0110  
952-656-4444

CONSULTANT  
Civil Engineer  
Kinley-Horn and Associates, INC  
7740 N. 16th Street, Suite 300  
Phoenix, AZ 85021  
PH: (602) 215-1211  
Contact: Chuck Wirt, P.E.  
Email: Chuck.Wirt@kinley-horn.com

Architect  
Opus AE Group, LLC  
10350 Bren Road West  
Minnetonka, MN 55343  
PH: (952) 656-4666  
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Contact: John Wade  
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Developer / Owner  
Opus Development Company, LLC  
2505 E Camelback Rd, Suite 100  
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Contact: Matthew Vranesky  
Email: Matthew.Vranesky@opus-group.com

Landscaping Architect  
Studio DPA  
PO Box 3489  
Gilbert, AZ 85299  
PH: (480) 577-5818  
Contact: Tim Dougherty  
Email: TJD@studiodpa.com

PROJECT  
**Deer Valley 30**

PROJECT ADDRESS  
Phoenix, AZ

PROJECT NUMBER  
32013000

**ISSUE RECORD**

01/04/22 Preliminary Review Submittal  
03/28/22 2nd Preliminary Review Submittal  
09/09/22 Final Site Plan Submittal  
12/01/22 2nd Final Site Plan Submittal  
02/16/23 Plan Revision Acknowledgement  
02/23/23 PHO Submittal

**LEGAL DESCRIPTION**

**FOR PHO-1-21-Z-129-07-01**  
The West Half of the Southwest Quarter of the Southeast Quarter of the Northwest Quarter of Section 7, Township 4 North, Range 3 East of the Gila and Salt River Base and Meridian, Maricopa County, Arizona; Excepting Therefrom All Coal, Oil, Gas and Other Minerals Deposits As Reserved In The Patent.

The Southeast Quarter of the Southeast Quarter of the Southeast Quarter of the Northwest Quarter of Section 7, Township 4 North, range 3 East of the Gila and Salt River Base and Meridian, Maricopa County, Arizona. Excepting Therefrom All Coal, Oil, Gas and Other Minerals Deposits As Reserved In The Patent.

The North Half of the East Half of the Southeast Quarter of the Southeast Quarter of the Northwest Quarter of Section 7, Township 4 North, Range 3 East of the Gila and Salt River base and Meridian, Maricopa County, Arizona. Excepting Therefrom All Coal, Oil, Gas and Other Minerals Deposits As Reserved In The Patent of Said Land.

The East Half of the Southwest Quarter of the Southwest Quarter of the Northeast Quarter of Section 7, Township 4 North, Range 3 East of the Gila and Salt River Base and Meridian, Maricopa County, Arizona. Except All Coal, Oil, Gas and Other Mineral Deposits, All Uranium, Thorium, or Any Other Material Which is or May be Determined to be Peculiarly Essential to the Production of Fissionable Materials, Whether or not of Commercial Value as Reserved to the United States of America in the Patent to Said Land.

The West Half of the Southwest Quarter of the Southwest Quarter of the Northeast Quarter of Section 7, Township 4 North, Range 3 east of the Gila and Salt River Base and Meridian, Maricopa County, Arizona; Except All Coal, Oil, Gas and Other Mineral Deposits as Reserved in Patent from the United States of America Recorded as Docket 1741, Page 324.

**FOR PHO-1-21-Z-18-10-1**  
The West Half of the Southeast Quarter of the Southwest Quarter of the Northeast Quarter of Section 7, Township 4 North, Range 3 East of the Gila and Salt river base and Meridian, Maricopa County, Arizona; Except All Coal, Oil, Gas and Other Mineral Deposits as Reserved in Patent from the United States of America Recorded as Docket 2230, Page 42.

**SITE STIPULATIONS**

**FOR PHO-1-21-Z-129-07-01**  
1. The development shall be in general conformance with the site plan and elevations date stamped October 22, 2021, as modified by the following stipulations and approved by the Planning and Development Department.

2. The developer shall construct all streets within and adjacent to the development (except the frontage road) with paving, curb, gutter, sidewalk, curb ramps, streetlights, median islands, landscaping, and other incidentals as per plans approved by the Planning and Development Department. All improvements shall comply with all ADA accessibility standards.

3. The developer shall provide proof of existence of federal patented right-of-way 33-feet in width along the following streets as approved by the Street Transportation and Planning and Development Departments to include:  
a. North side of the east west midsection line Alameda Road alignment.  
b. Both sides of the north south midsection line for 15th Avenue located between Parkview Lane and Alameda Road.  
c. East side of the north south midsection line for 15th Avenue located north of Parkview Lane.  
d. South side of the Parkview Lane alignment.

4. The developer shall comply with requirements of the Finance Department's Real Estate Division for City's adoption of said patented right-of-way as public streets.

5. The developer shall dedicate right of ways for properties as approved by the Street Transportation and Planning and Development Departments to include:  
a. Minimum 40 feet for the north half of Alameda Road.  
b. Minimum 30 feet for the south half of Parkview Lane.  
c. Minimum 60 feet full width for 15th Avenue.

**FOR PHO-1-21-Z-18-10-1**  
1. The development shall be in general conformance with the site plan and elevations date stamped October 22, 2021, as modified by the following stipulations and approved by the Planning and Development Department.

2. The developer shall dedicate minimum 40 feet of right-of-way and construct the north side of Alameda Road, as approved by the Planning and Development and Street Transportation Departments.

3. The developer shall dedicate minimum 30 feet of right-of-way and construct the south side of Parkview Lane, as approved by the Planning and Development and Street Transportation Departments.

4. The developer shall construct all streets within and adjacent to the development with paving, curb, gutter, sidewalk, curb ramps, streetlights, landscaping, and other incidentals as per plans approved by the Planning and Development Department. All improvements shall comply with all ADA accessibility standards.

5. The property owner shall record a Notice of Prospective Purchasers of Proximity to Airport in order to disclose the existence, and operational characteristics of Deer Valley Airport to future owners or tenants of the property. The form and content of such documents shall be according to the templates and instructions provided which have been reviewed and approved by the City Attorney.

KIVA 21-3801  
SDEV 2100388  
PAPP 2106374  
QS 46-25, 46-26  
PRLM 2200359  
ABND 210068

**CITY OF PHOENIX**

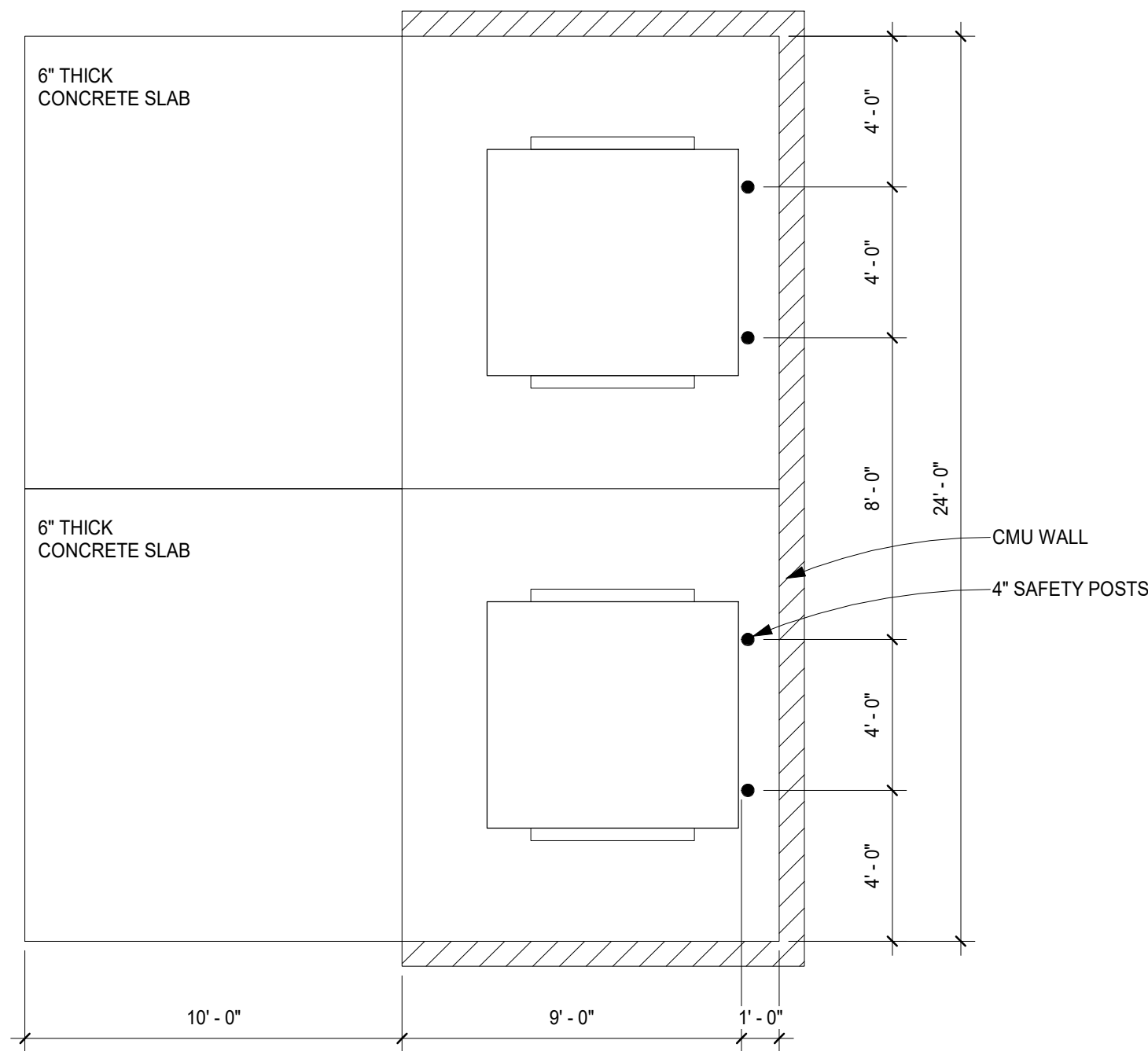
MAR 29 2023

Planning & Development  
Department

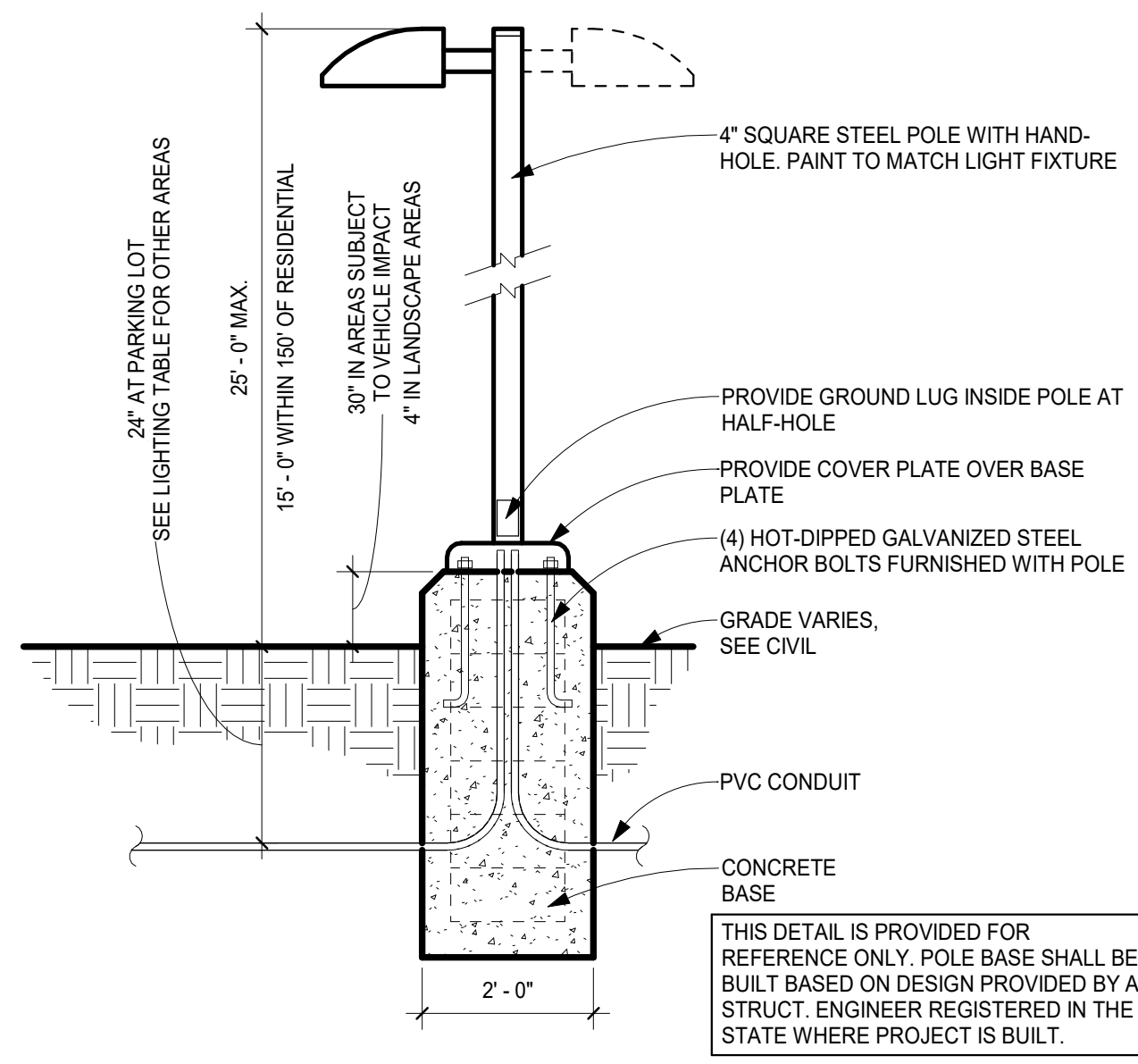
SHEET TITLE  
**25-Acres Site  
Details**

SHEET NUMBER

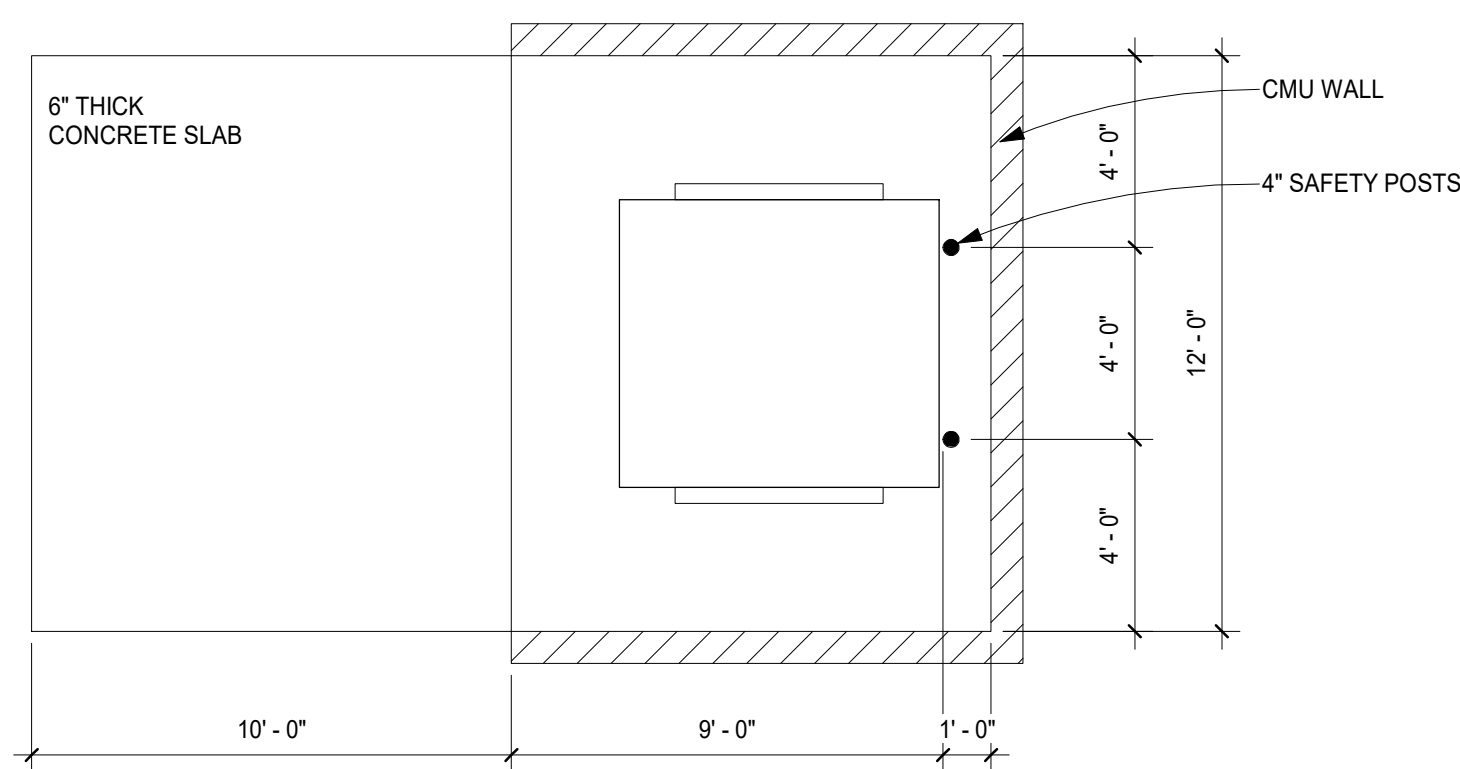
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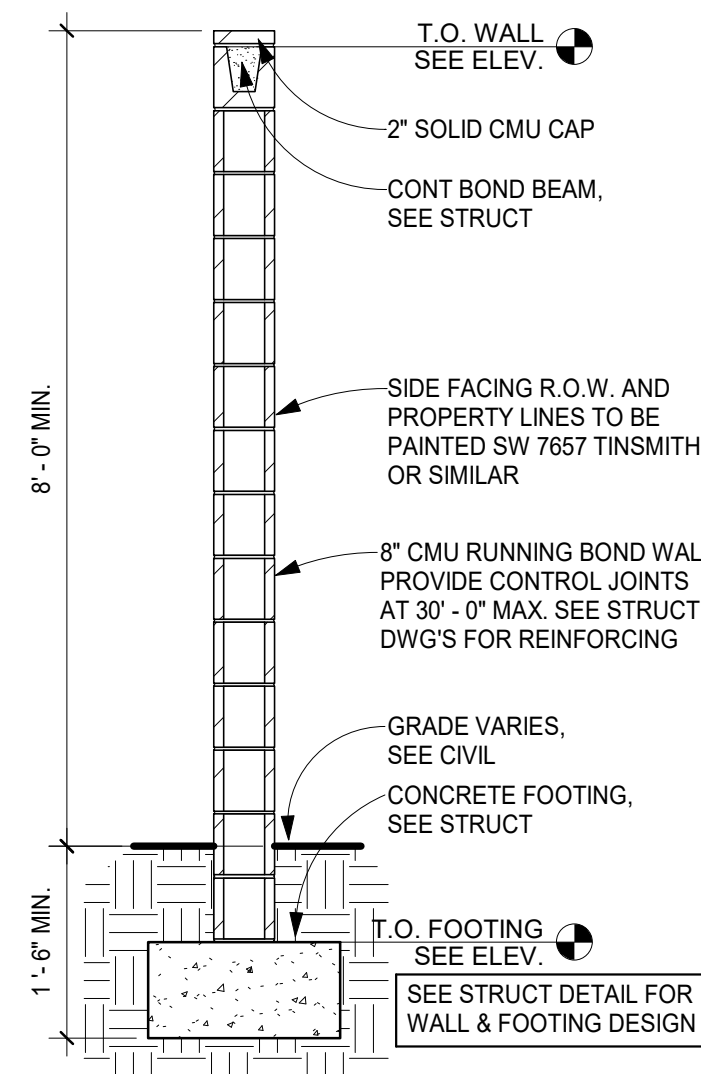
**1 TRASH AND RECYCLING BIN - BLDG A**  
1/4" = 1'-0"



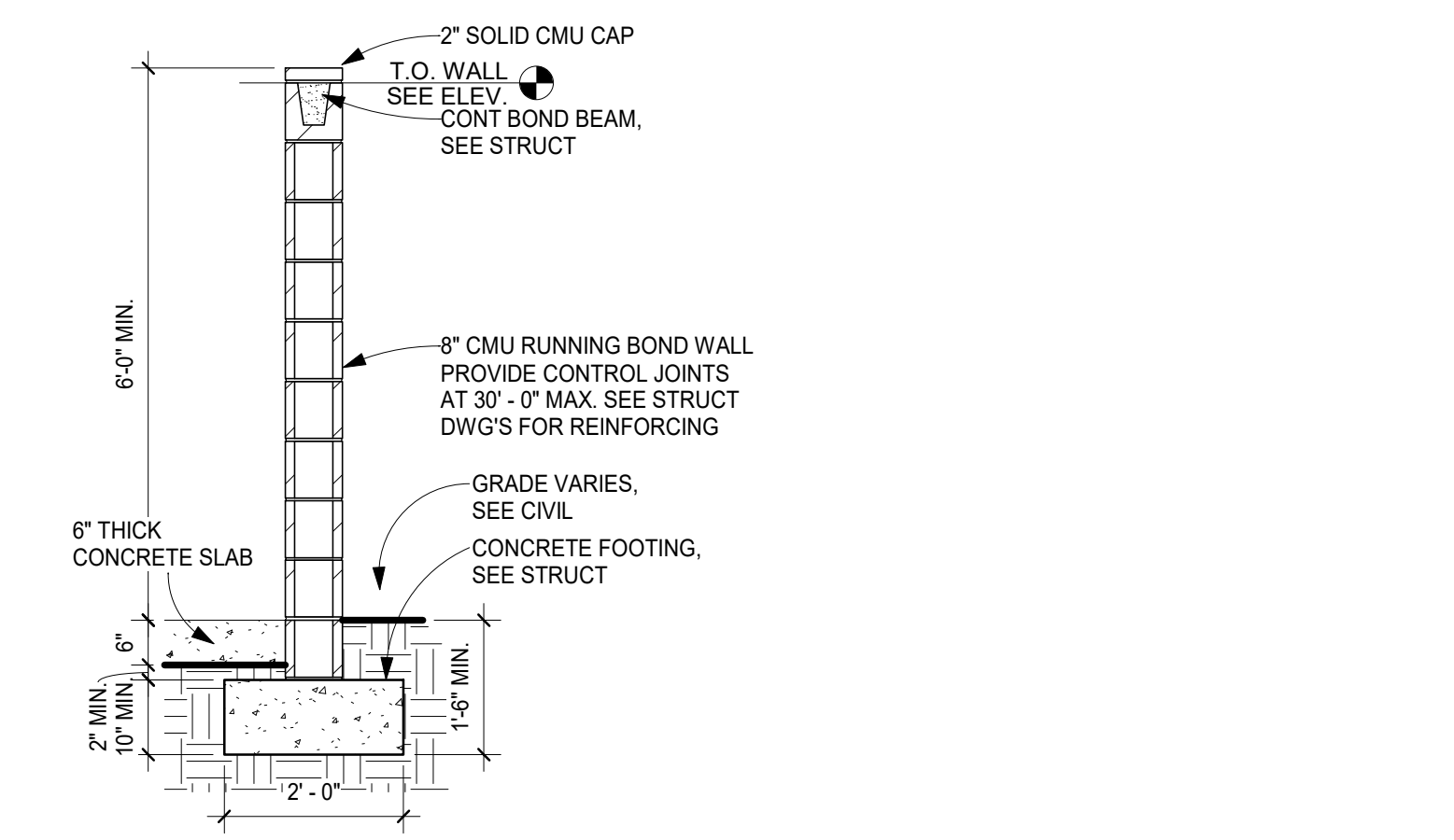
**4 LIGHT FIXTURE DETAIL**  
NOT TO SCALE



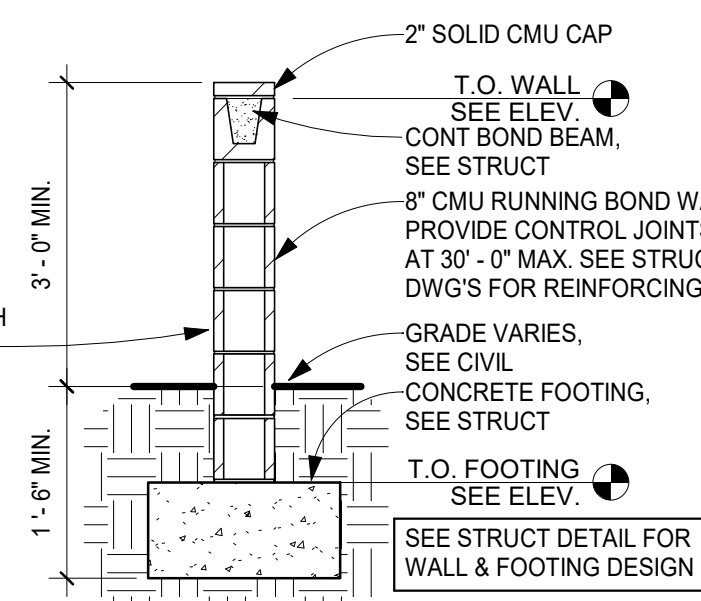
**2 TRASH AND RECYCLING BIN - BLDG B**  
1/4" = 1'-0"



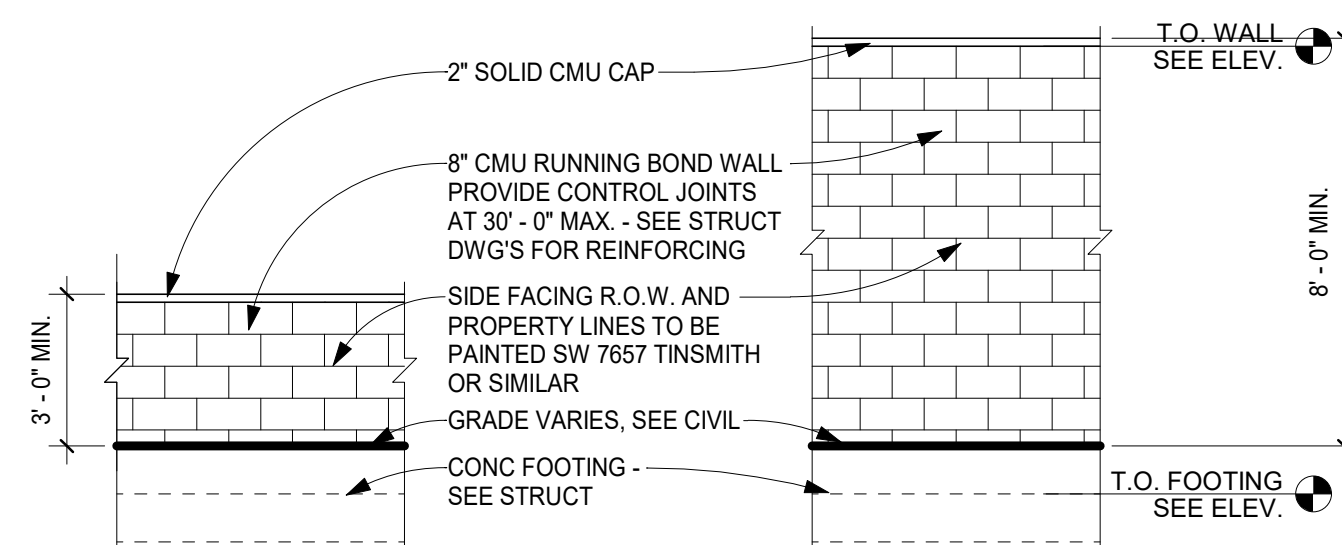
**5 8' TALL SITE WALL SECTION**  
1/2" = 1'-0"



**3 6' TALL TRASH WALL SECTION**  
1/2" = 1'-0"

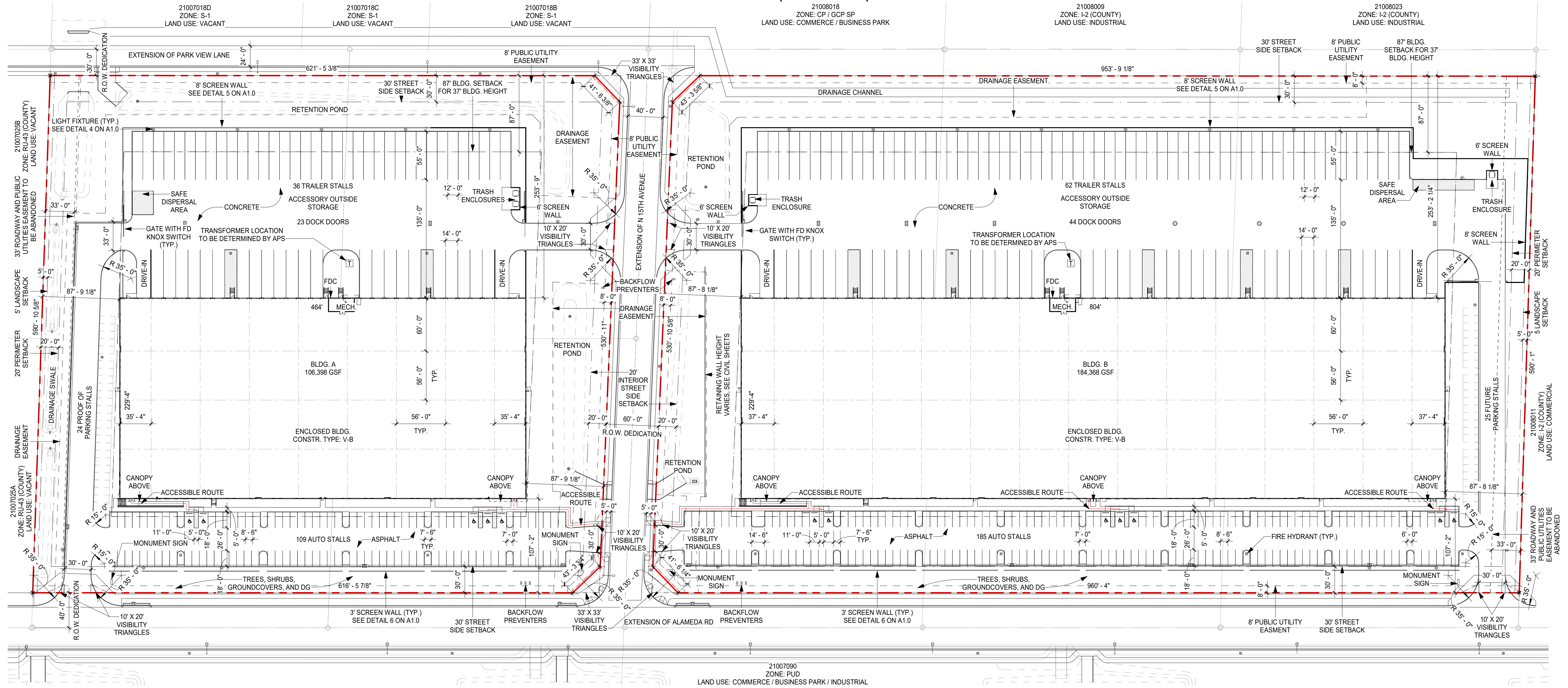


**6 3' TALL SITE WALL SECTION**  
1/2" = 1'-0"



**7 PARTIAL SITE WALL ELEVATIONS**





**OPUS**  
THE OPUS GROUP

Opus AE Group, L.L.C.  
10350 Bren Road West  
Minnetonka, MN 55343-0110  
952-656-4444

Opus Design Build, L.L.C.  
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CONSULTANT  
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Ph: (602) 215-1211  
Contact: Chuck Wray, P.E.  
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Ph: (602) 656-4666  
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Contact: Matthew Vioransky  
Email: Matthew.Vioransky@opus-group.com

Landscaping Architect: Studio DPA PO Box 3499 Gilbert, AZ 85299  
Ph: (480) 577-5818  
Contact: Tim Daugherty  
Email: T.J.D@studiodpa.com

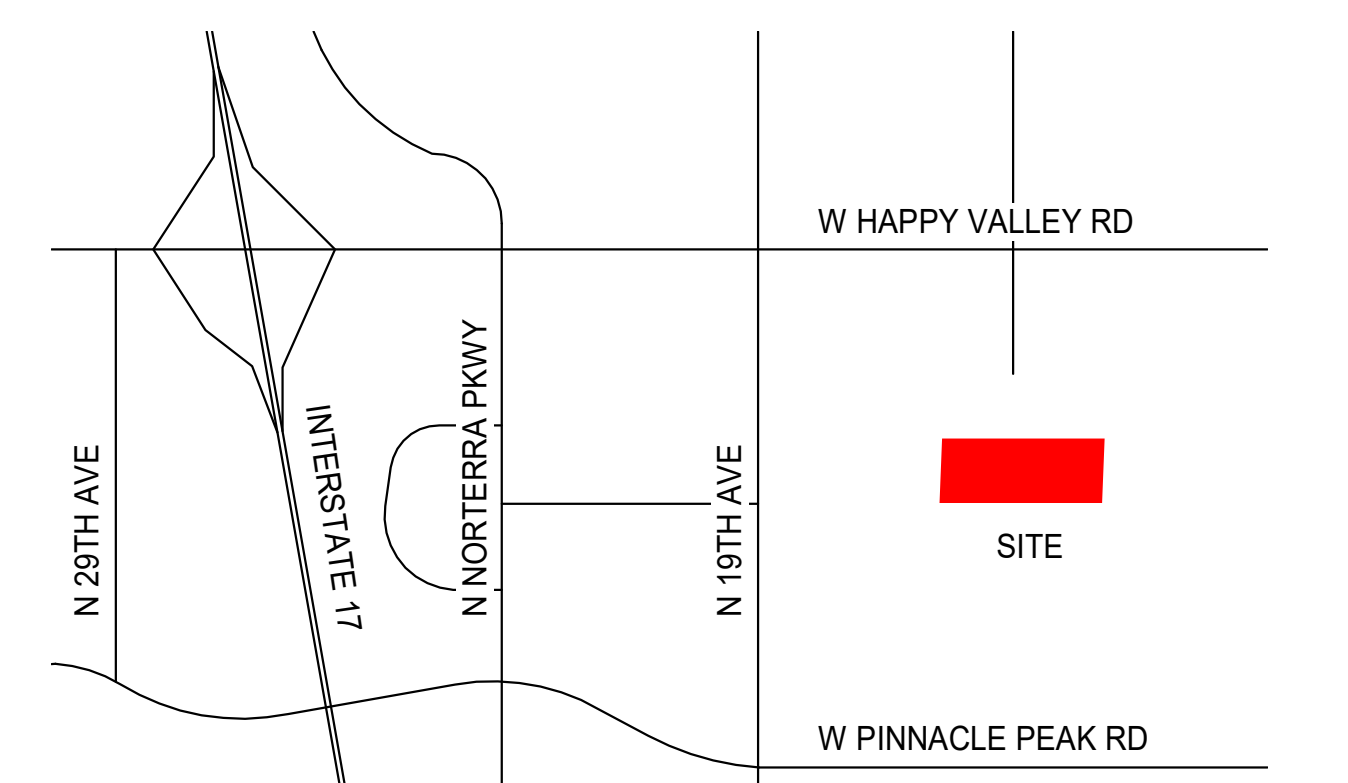
PROJECT  
**Deer Valley 30**

PROJECT ADDRESS  
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PROJECT NUMBER  
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09/09/22 Final Site Plan Submittal  
12/01/22 2nd Final Site Plan Submittal  
02/16/23 Plan Revision Acknowledgement  
02/23/23 PHO Submittal

1 25-Acres Site - Concept Site Plan  
1" = 60'-0"



2 Vicinity Map 25-Acres Site  
NOT TO SCALE

| PARKING  | REQUIRED          | PROPOSED          |
|--|-------------------|-------------------|
| <b>BLDG A</b>  |                   |                   |
| 10% OFFICE USE BLDG. AREA                              | 10,640 SF         | 10,640 SF         |
| 90% UNSPECIFIED INDUSTRIAL USE BLDG. AREA              | 95,758 SF         | 95,758 SF         |
| <b>TOTAL BLDG. AREA</b>                                | <b>106,398 SF</b> | <b>106,398 SF</b> |
| 1 STALL/300 SF OFFICE                                  | 35 STALLS         | 35 STALLS         |
| 1 STALL/1,000 SF FOR 1-150,000 SF INDUSTRIAL USE       | 96 STALLS         | 98 STALLS         |
| <b>TOTAL STALLS REQUIRED</b>                           | <b>131 STALLS</b> | <b>133 STALLS</b> |
| ACCESSIBLE STALLS REQUIRED IF 101-150 STALLS IN LOT    | 5 STALLS          | 5 STALLS          |
| <b>TOTAL ACCESSIBLE STALLS REQUIRED</b>                | <b>5 STALLS</b>   | <b>5 STALLS</b>   |
| <b>BLDG B</b>  |                   |                   |
| 10% OFFICE USE BLDG. AREA                              | 18,437 SF         | 18,437 SF         |
| 90% UNSPECIFIED INDUSTRIAL USE BLDG. AREA              | 165,931 SF        | 165,931 SF        |
| <b>TOTAL BLDG. AREA</b>                                | <b>184,368 SF</b> | <b>184,368 SF</b> |
| 1 STALL/300 SF OFFICE                                  | 61 STALLS         | 61 STALLS         |
| 1 STALL/2,000 SF FOR 150,000-500,000 SF INDUSTRIAL USE | 83 STALLS         | 83 STALLS         |
| <b>TOTAL STALLS REQUIRED</b>                           | <b>144 STALLS</b> | <b>210 STALLS</b> |
| ACCESSIBLE STALLS REQUIRED IF 101-150 STALLS IN LOT    | 5 STALLS          | -                 |
| ACCESSIBLE STALLS REQUIRED IF 200-300 STALLS IN LOT    | 7 STALLS          | 7 STALLS          |
| <b>TOTAL ACCESSIBLE STALLS REQUIRED</b>                | <b>5 STALLS</b>   | <b>7 STALLS</b>   |

**PROJECT DESCRIPTION**

Deer Valley 25 Acres Industrial consists of approximately 22 acres of undeveloped land in the Deer Valley region, located north of Phoenix Deer Valley Airport and east of Interstate 17. The site is north of Alameda Road and divided down the middle by North Fifteenth Avenue. As planned, there are two buildings totaling approximately 290,766 gross square feet. Building A is approximately 106,398 gross square feet and Building B is approximately 184,368 gross square feet. Both buildings are fully enclosed.

This is a speculative industrial project without known tenants at the time of this submittal. The project will attract a wide variety of industrial, manufacturing, warehousing, and/or office uses.

Building A has two primary entrances and Building B has three primary entrances, all facing Alameda Road. The primary architectural features provide visual interest through the application of canopies over entrances, three different and complimentary paint colors, horizontal reveals, a textural formliner, and vertical plane breaks.

Access to each site is from Alameda and North 15th Avenue. Auto parking is located in front of the buildings. Proof of parking provides flexibility for future tenants' needs and is located west of Building A and east of Building B. Each building has a secured 185-foot truck court on the north side of the buildings. The courts are secured by eight-foot screen walls. The truck staging area is to be considered accessory outside storage with storage length likely greater than 48 hours. From the street view, thoughtful groupings of landscaping provides visual relief in companionship with the screen walls.

**PROJECT INFORMATION**

| Building A         |                   |
|--------------------|-------------------|
| Gross Area         | +/- 10.29 Acres   |
| Net Area           | +/- 448,430 SF    |
| Building Area      | +/- 8.78 Acres    |
| Lot Coverage       | +/- 382,295 SF    |
| Auto Parking       | +/- 106,398 GSF   |
| Proof of Parking   | +/- 37' / 1 Story |
| Total Parking      | 27.8 %            |
| Accessible Parking | 109 Stalls        |
| Dock Doors         | 24 Stalls         |
| Drive-In Doors     | 133 Stalls        |
| Trailer Stalls     | 5 Stalls          |
| Construction Type  | 23 Doors          |
|                    | 2 Doors           |
|                    | 36 Stalls         |
|                    | V-B (Enclosed)    |

| Building B         |                   |
|--------------------|-------------------|
| Gross Area         | +/- 15.41 Acres   |
| Net Area           | +/- 671,398 SF    |
| Building Area      | +/- 13.35 Acres   |
| Lot Coverage       | +/- 581,540 SF    |
| Auto Parking       | +/- 184,368 GSF   |
| Proof of Parking   | +/- 37' / 1 Story |
| Total Parking      | 31.7 %            |
| Accessible Parking | 185 Stalls        |
| Dock Doors         | 25 Stalls         |
| Drive-In Doors     | 210 Stalls        |
| Trailer Stalls     | 7 Stalls          |
| Construction Type  | 44 Doors          |
|                    | 2 Doors           |
|                    | 62 Stalls         |
|                    | V-B (Enclosed)    |

**ZONING**

Zone District: CP/GCP Commerce Park / General Commerce Park

Overlay District: Deer Valley Airport Overlay (DVAO Area 1)

Zoning Cases: Z-129-07 and Z-18-10. Stipulations on Sheet A1.0.

**ZONING PARKING REQUIREMENTS**

Unspecified Industrial Use (Shell Building): for 1-150,000 SF 1 stall per 1,000 SF; for 150,001-500,000 SF 1 stall per 2,000 SF; for 500,001 SF plus 1 stall per 2,500 SF

Office: 1 per 300 SF

Industrial Plants, Manufacturing, Wholesale (including Warehouses): 1 stall per 1.5 warehouse or production workers and 1 space per 300 SF of administrative office. If the facility runs more than one shift a day, employee count will be based on the 2 largest shifts

Accessible Parking Required: for 1-25 total stalls in parking lot: 1 required accessible space; for 26-50: 2; for 51-75: 3; for 76-100: 4; for 101-150: 5; for 151-200: 6; for 201-300: 7; for 301-400: 8; for 401-500: 9; for 1,001 and over: 20 plus 1 for each 100 spaces, or fraction thereof over 1,000.

Proposed Parking Mix: 10% Office, 90% Industrial

Building A: 131 Stalls Required, 5 to be accessible (96 Industrial + 35 Office)

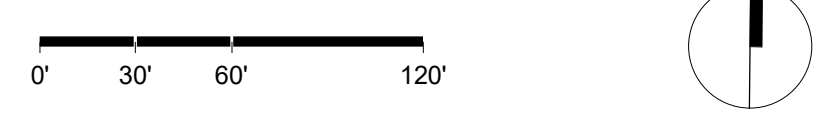
Building B: 144 Stalls Required, 5 to be accessible (83 Industrial + 61 Office)

**SITE PLAN NOTES**

- Development and use of this site will conform with all applicable codes and ordinances.
- This project is located in the City of Phoenix water service area and has been designated as having an assured water supply.
- All new or relocated utilities will be placed underground.
- All signage requires separate approvals and permits.
- Any lighting will be placed so as to direct light away from the adjacent residential districts and will not exceed one-foot candle at the property line. No noise, odor, or vibration will be emitted so that it exceeds the general level of noise, odor, or vibration emitted by uses outside of the site.
- Owners of property adjacent to public right-of-way will have the responsibility for maintaining all landscaping within the rights-of-way in accordance with approved plans.

**SITE PLAN NOTES ADDITIONAL**

- Smoke, gas and odor emissions shall comply with Regulation III of the Maricopa County Air Pollution Control Rules and Regulations.
- The disposal of all waste materials shall comply with title 9, chapter 8, articles 18 and 4 of the Hazardous Waste Regulations as adopted by the Arizona Health Department.
- The average noise level, measured at the property line, shall not exceed fifty-five dB (l dn) when measured on an "A weighted" sound level meter and according to the procedures of the Environmental Protection Agency.



KIVA 21-3801  
SDEV 2100388  
PAPP 2106374  
QS 46-25, 46-26  
PRLM 2200359  
ABND 210068

**CITY OF PHOENIX**  
MAR 29 2023  
Planning & Development  
Department

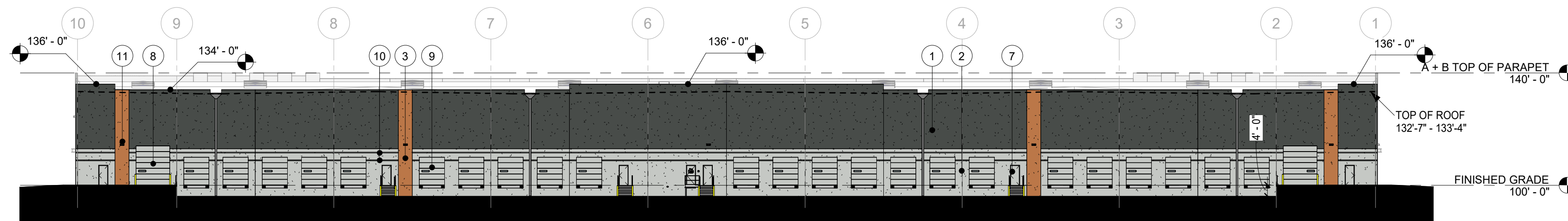
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**25-Acres Site - Concept Site Plan**

SHEET NUMBER  
**A1.1**

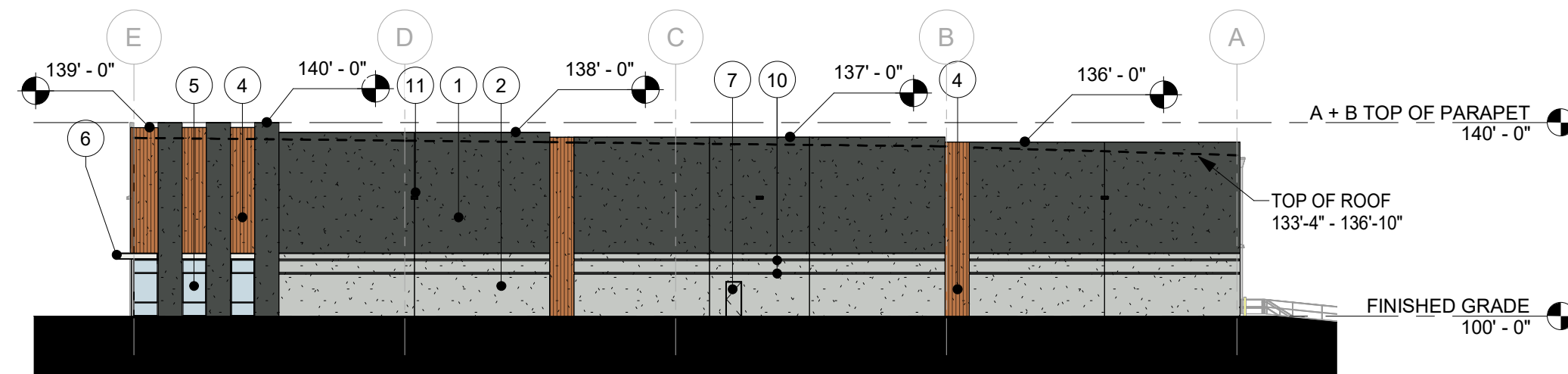


Opus AE Group, L.L.C.  
10350 Bren Road West  
Minnetonka, MN 55343-0110  
952-656-4444

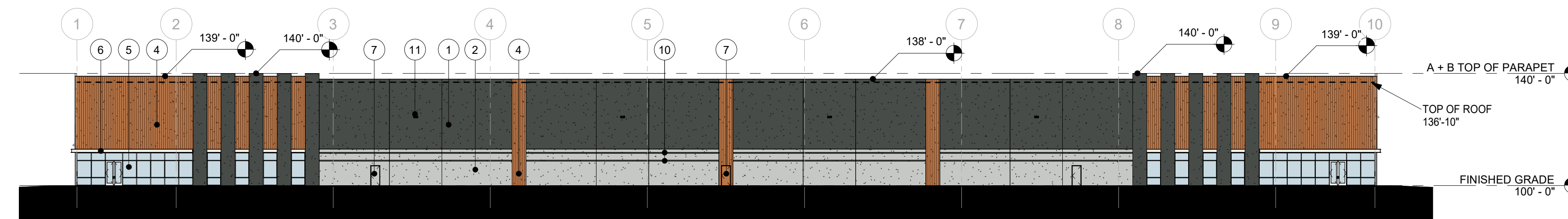
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10350 Bren Road West  
Minnetonka, MN 55343-0110  
952-656-4444



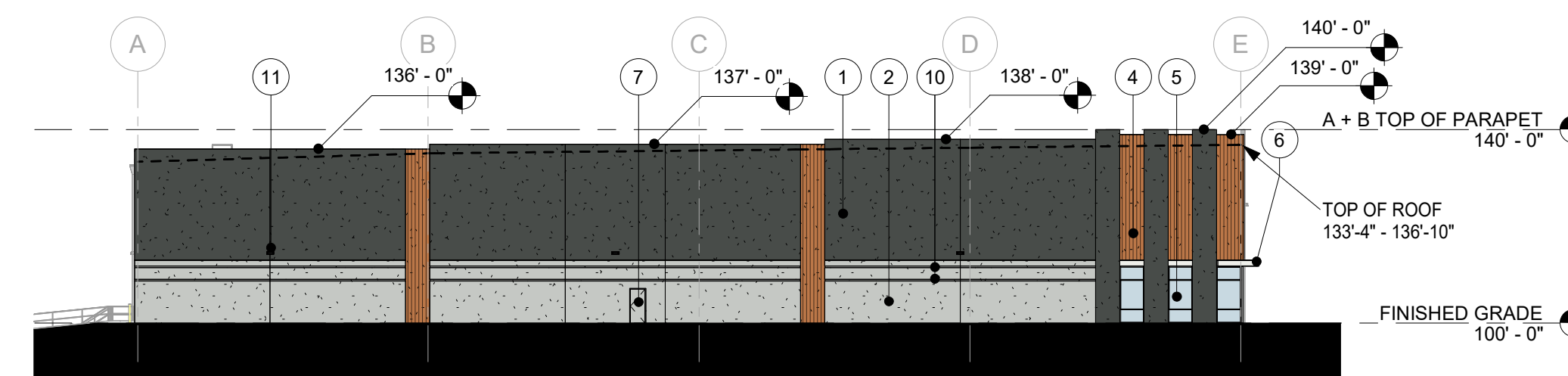
1 NORTH ELEVATION @ BLD A  
1" = 30'-0"



2 EAST ELEVATION @ BLD A  
1" = 30'-0"



3 SOUTH ELEVATION @ BLD A  
1" = 30'-0"



4 WEST ELEVATION @ BLD A  
1" = 30'-0"

**KEYNOTE LEGEND**

- 1 CONCRETE PAINTED COLOR #1 - SW 7062 ROCK BOTTOM OR SIMILAR
- 2 CONCRETE PAINTED COLOR #2 - SW 7657 TINSMITH OR SIMILAR
- 3 CONCRETE PAINTED COLOR #3 - SW 6362 TIGEREYE OR SIMILAR
- 4 CONCRETE W/ FORMLINER PAINTED COLOR #3 - SW 6362 TIGEREYE OR SIMILAR
- 5 STOREFRONT VISION GLASS W/ ALUMINUM FRAME
- 6 METAL CANOPY PAINTED COLOR #4 - SW 7006 EXTRA WHITE OR SIMILAR
- 7 HOLLOW METAL DOOR - PAINTED TO MATCH COLOR OF SURROUNDING PANEL
- 8 DRIVE-IN DOOR - COLOR TO MATCH PAINT COLOR #2 SW 7657 TINSMITH OR SIMILAR
- 9 OVERHEAD DOCK DOORS - COLOR TO MATCH PAINT COLOR #2 SW 7657 TINSMITH OR SIMILAR
- 10 HORIZONTAL REVEALS
- 11 WALL-MOUNTED LIGHT

NOTE: ROOFTOP EQUIPMENT NOT PLANNED TO BE INSTALLED WITH CORE AND SHELL BUILDING.

KIVA 21-3801  
SDEV 2100388  
PAPP 2106374  
QS 46-25, 46-26  
PRLM 2200359

**CITY OF PHOENIX**  
**MAR 29 2023**  
**Planning & Development Department**

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**Landscaping Architect**  
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PO Box 3489  
Gilbert, AZ 85299  
PH: (480) 577-5818  
Contact: Tim Dougherty  
Email: TJD@studiodpa.com

**PROJECT**  
**Deer Valley 30**

**PROJECT ADDRESS**  
**Phoenix, AZ**

**PROJECT NUMBER**  
**32013000**

01/04/22 Preliminary Review Submittal  
03/28/22 2nd Preliminary Review Submittal

**DATE**  
**03/28/22**

**PROJECT MANAGER**  
**CL**

**DRAWN BY**  
**S. OLSON**

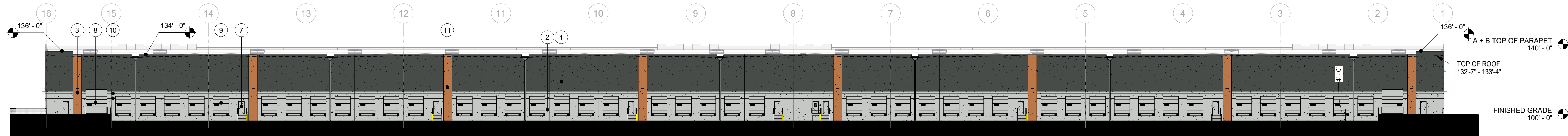
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**J. WADE**

REGISTRATION

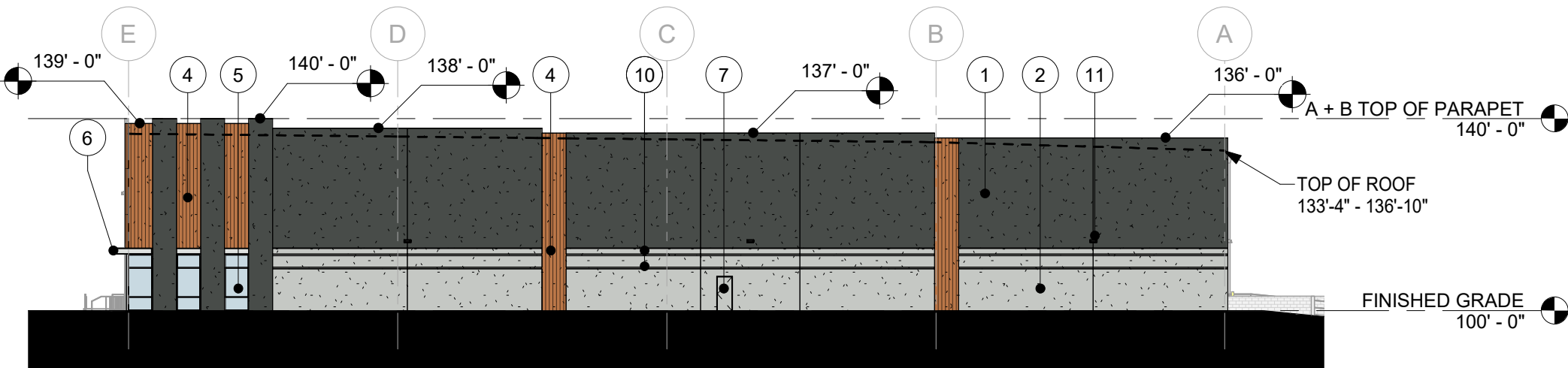
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**BUILDING A ELEVATIONS**

**SHEET NUMBER**

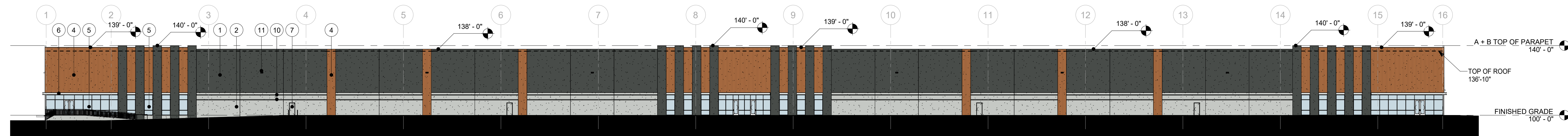
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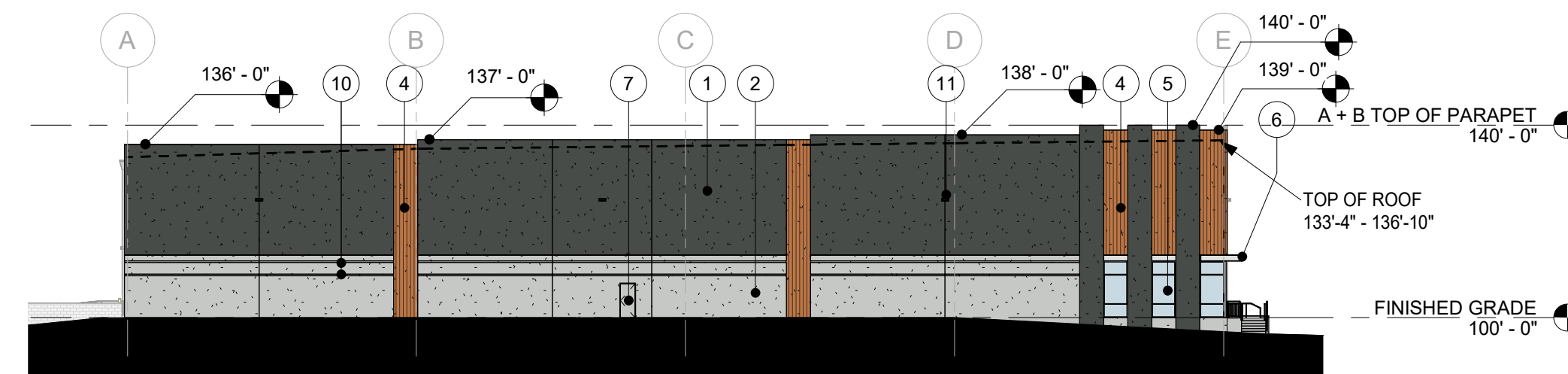
1 NORTH ELEVATION @ BLD B  
1" = 30'-0"



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NOTE: ROOFTOP EQUIPMENT NOT PLANNED TO BE INSTALLED WITH CORE AND SHELL BUILDING.



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PROJECT  
**Deer Valley 30**

PROJECT ADDRESS  
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01/04/22 Preliminary Review Submittal  
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REGISTRATION

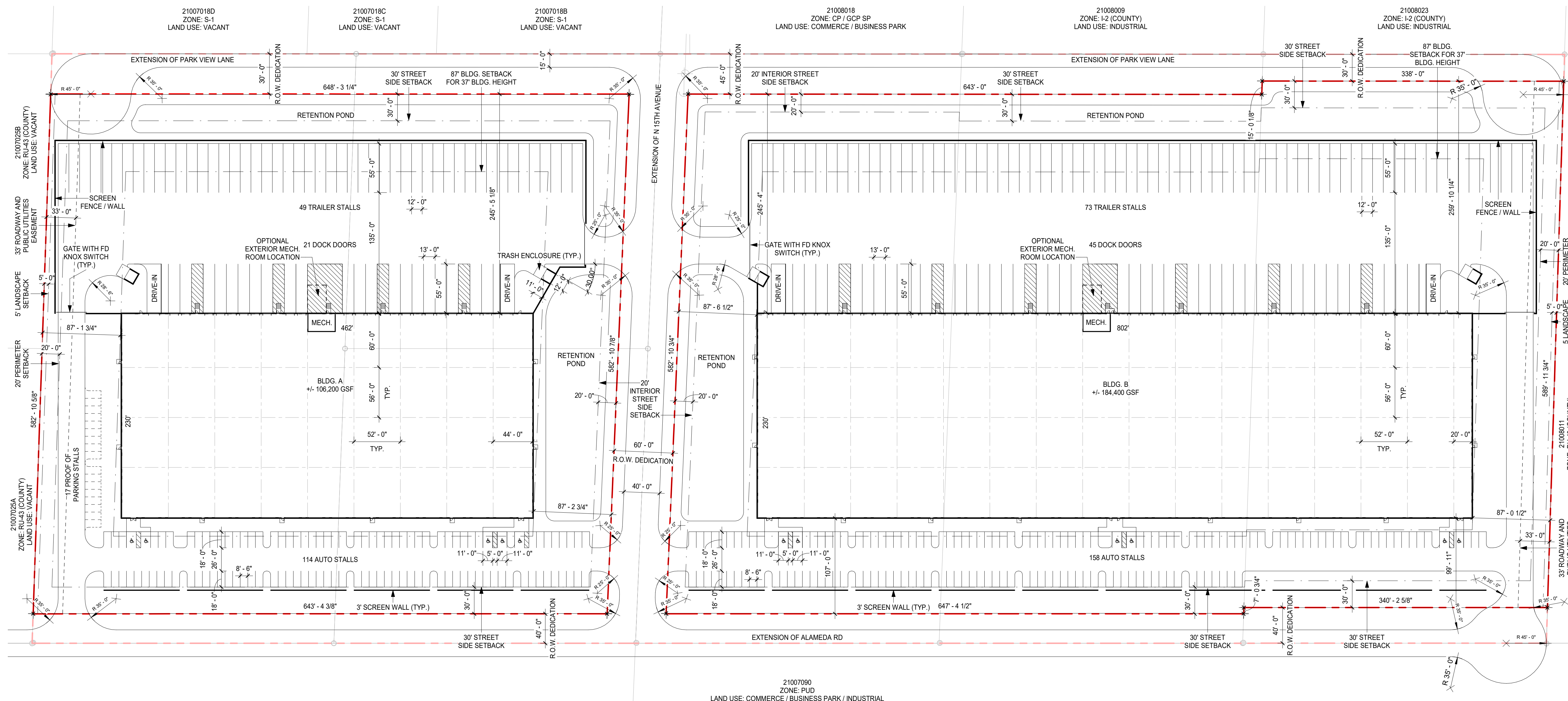
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**CITY OF PHOENIX**  
MAR 29 2023  
Planning & Development  
Department

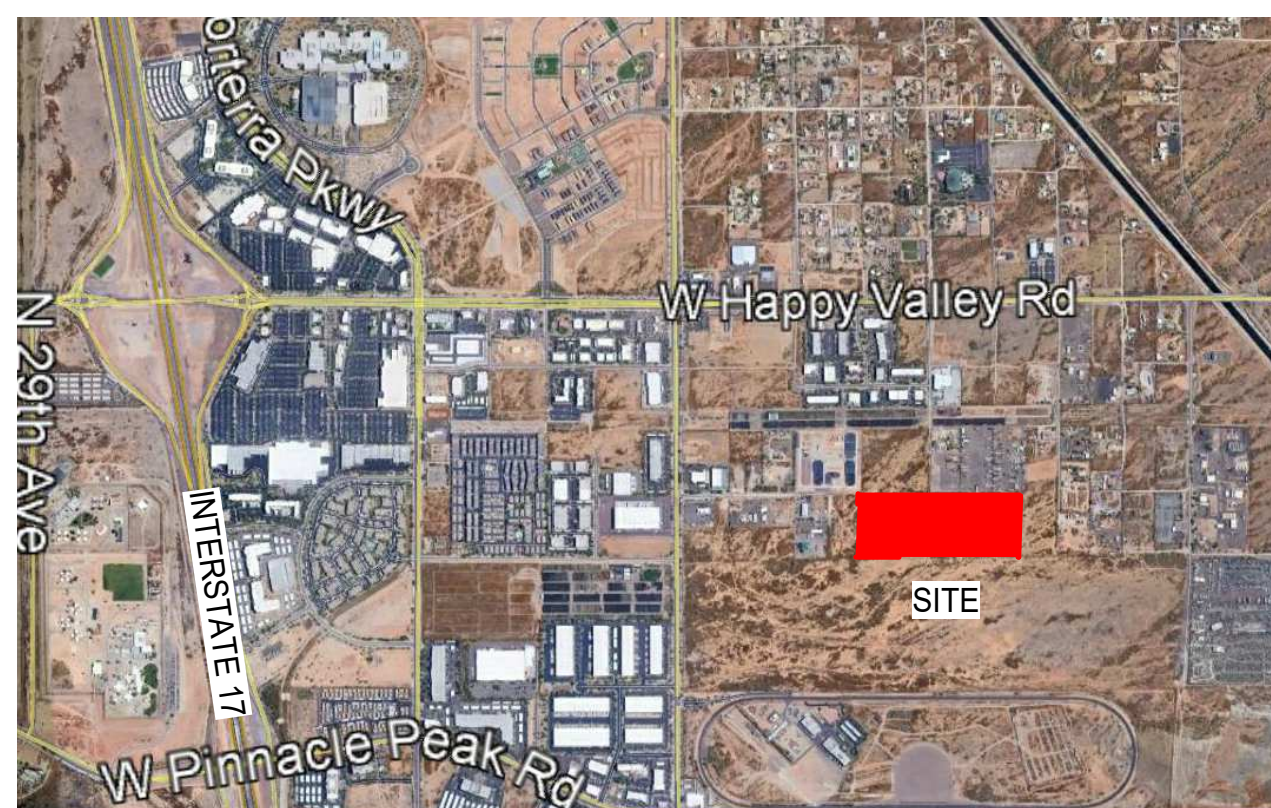
SHEET TITLE  
**BUILDING B  
ELEVATIONS**

SHEET NUMBER

**A6**



**1 LEVEL 1 25-Acre Site**  
1" = 60'-0"



**2 Vicinity Map 25-Acres Site**  
1" = 24000'



**PROJECT INFORMATION**

**Total Site Area**  
Gross Area +/- 25.71 Acres  
Net Area +/- 21.85 Acres

**Building A**  
Gross Area +/- 10.29 Acres  
Net Area +/- 8.64 Acres  
Building Area +/- 106,200 GSF  
Building Height +/- 37' 1 Story  
Lot Coverage / F.A.R. 28.2 %  
Auto Parking 114 Stalls  
Proof of Parking 17 Stalls  
Total Parking 131 Stalls  
Dock Doors 21 Doors  
Drive-In Doors 2 Doors  
Trailer Stalls 49 Stalls

**Building B**  
Gross Area +/- 15.41 Acres  
Net Area +/- 13.21 Acres  
Building Area +/- 184,400 GSF  
Building Height +/- 37' / 1 Story  
Lot Coverage / F.A.R. 32.0 %  
Auto Parking 158 Stalls  
Dock Doors 45 Doors  
Drive-In Doors 2 Doors  
Trailer Stalls 73 Stalls

**ZONING**

**Zone District:** CP/GCP Commerce Park / General Commerce Park

**Overlay District:** Deer Valley Airport Overlay (DVAO Area 1)

**Zoning Cases:** Z-129-07 and Z-18-10

**ZONING PARKING REQUIREMENTS**

**Unspecified Industrial Use (Shell Building):**  
for 1-150,000 SF 1 stall per 1,000 SF;  
for 150,001-500,000 SF 1 stall per 2,000 SF;  
for 500,001 SF plus 1 stall per 2,500 SF

**Office:** 1 per 300 SF

**Industrial Plants, Manufacturing, Wholesale (including Warehouses):**  
1 stall per 1.5 warehouse or production workers and 1 space per 300 SF of administrative office. If the facility runs more than one shift a day, employee count will be based on the 2 largest shifts

**Proposed Parking Mix:** 10% Office, 90% Industrial

**Building A:** 131 Stalls Required (96 Industrial + 35 Office)

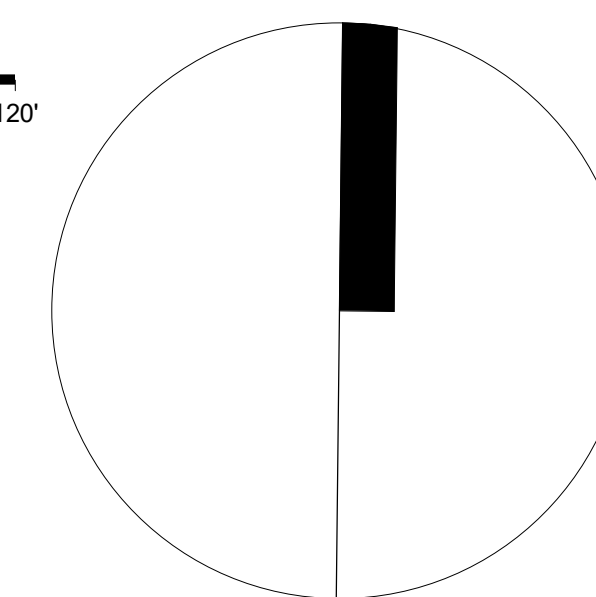
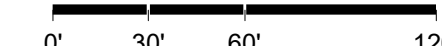
**Building B:** 144 Stalls Required (83 Industrial + 61 Office)

**SITE PLAN NOTES**

- Development and use of this site will conform with all applicable codes and ordinances.
- This project is located in the City of Phoenix water service area and has been designated as having an assured water supply.
- All new or relocated utilities will be placed underground.
- All signage requires separate approvals and permits.
- Any lighting will be placed so as to direct light away from the adjacent residential districts and will not exceed one-foot candle at the property line. No noise, odor, or vibration will be emitted so that it exceeds the general level of noise, odor, or vibration emitted by uses outside of the site.
- Owners of property adjacent to public right-of-way will have the responsibility for maintaining all landscaping within the rights-of-way in accordance with approved plans.

**SITE PLAN NOTES ADDITIONAL**

- Smoke, gas and odor emissions shall comply with Regulation III of the Maricopa County Air Pollution Control Rules and Regulations.
- The disposal of all waste materials shall comply with title 9, chapter 8, articles 18 and 4 of the Hazardous Waste Regulations as adopted by the Arizona Health Department.
- The average noise level, measured at the property line, shall not exceed fifty-five dB (l dn) when measured on an "A weighted" sound level meter and according to the procedures of the Environmental Protection Agency.
- Explosive or hazardous processes: Certification shall be provided by the Phoenix Fire Department Prevention Bureau that all manufacturing, storage and waste processes on the site shall meet safety and environmental standards as administered by the Bureau.
- Outdoor lighting shall be shielded so that:
  - No source of illumination is directly visible from a public street or from residentially zoned property.
  - Light intensity does not exceed 1 footcandle on any adjacent residentially zoned property.



KIVA  
SDEV  
PAPP  
QS

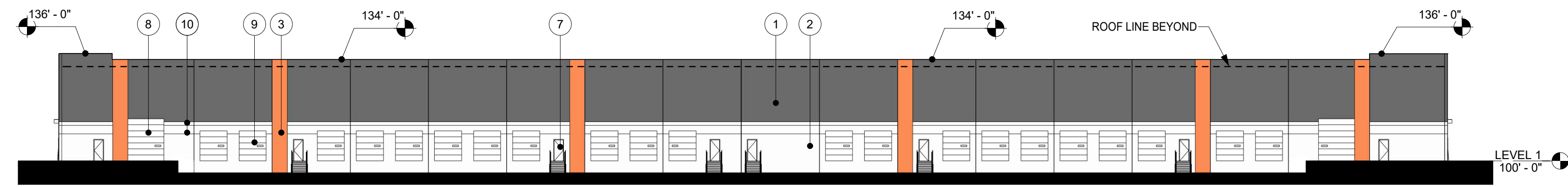
**CITY OF PHOENIX**  
OCT 22 2021  
Planning & Development  
Department



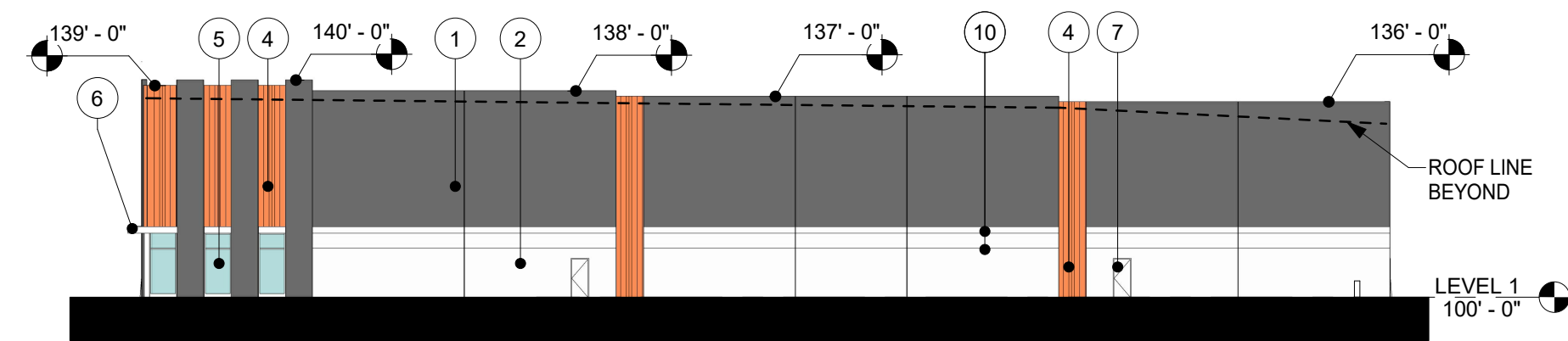
PERSPECTIVE AT BUILDING A



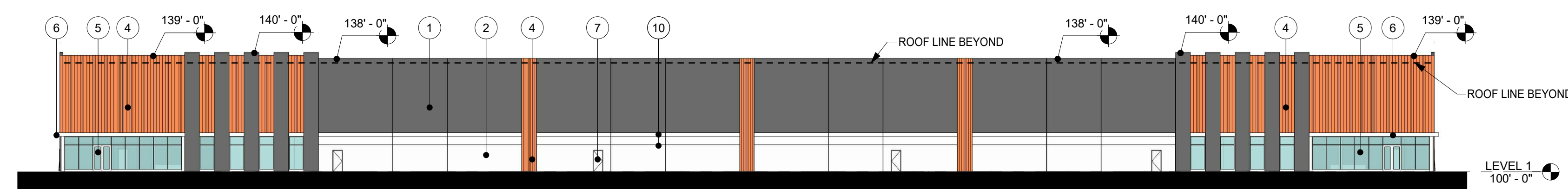
PERSPECTIVE AT BUILDING A - SOUTHEAST ENTRY



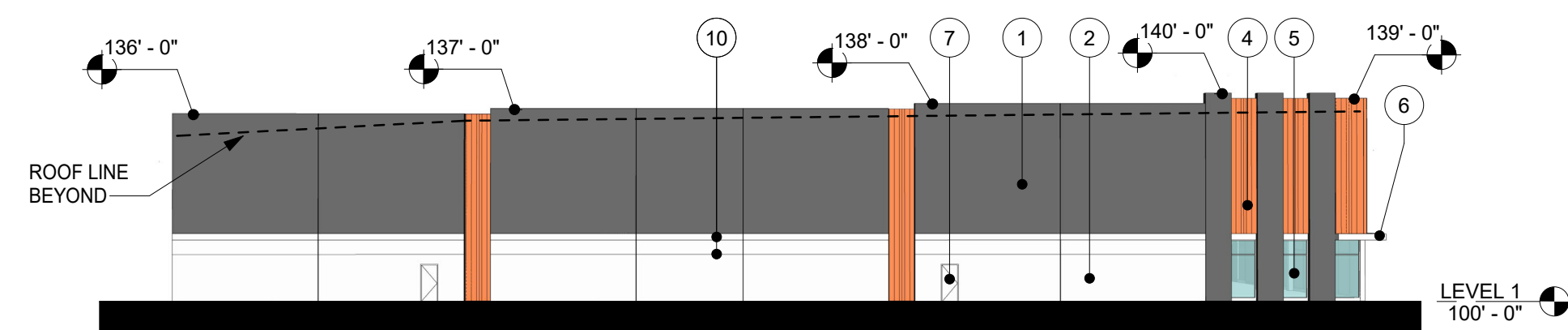
1 NORTH ELEVATION @ BLD A  
1" = 30'-0"



2 EAST ELEVATION @ BLD A  
1" = 30'-0"



3 SOUTH ELEVATION @ BLD A  
1" = 30'-0"



4 WEST ELEVATION @ BLD A  
1" = 30'-0"

| KEYNOTE LEGEND |   |
|----------------|---|
| 1              | CONCRETE PAINTED COLOR #1 - DARK GRAY               |
| 2              | CONCRETE PAINTED COLOR #2 - LIGHT GRAY              |
| 3              | CONCRETE PAINTED COLOR #3 - ORANGE                  |
| 4              | CONCRETE W/ FORMLINER PAINTED COLOR #3 - ORANGE     |
| 5              | STOREFRONT VISION GLASS W/ ALUMINUM FRAME           |
| 6              | METAL CANOPY  |
| 7              | HOLLOW METAL DOOR - COLOR TO MATCH PAINT COLOR #2   |
| 8              | DRIVE-IN DOOR - COLOR TO MATCH PAINT COLOR #2       |
| 9              | OVERHEAD DOCK DOORS - COLOR TO MATCH PAINT COLOR #2 |
| 10             | HORIZONTAL REVEALS                                  |

**ISSUE RECORD**



PERSPECTIVE AT CENTER ENTRY



PERSPECTIVE AT SOUTHEAST ENTRY

| KEYNOTE LEGEND |   |
|----------------|---|
| 1              | CONCRETE PAINTED COLOR #1 - DARK GRAY               |
| 2              | CONCRETE PAINTED COLOR #2 - LIGHT GRAY              |
| 3              | CONCRETE PAINTED COLOR #3 - ORANGE                  |
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| 5              | STOREFRONT VISION GLASS W/ ALUMINUM FRAME           |
| 6              | METAL CANOPY  |
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| 9              | OVERHEAD DOCK DOORS - COLOR TO MATCH PAINT COLOR #2 |
| 10             | HORIZONTAL REVEALS                                  |

CONSULTANT

PROJECT

**Deer Valley 30**

PROJECT ADDRESS  
Phoenix, AZ

PROJECT NUMBER  
32013000

**ISSUE RECORD**

DATE  
10/08/21  
PROJECT MANAGER

DRAWN BY  
M CAMERON  
CHECKED BY  
J WADE

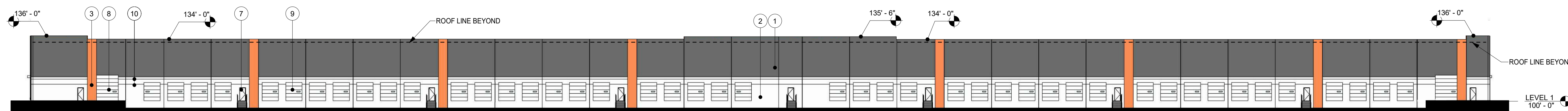
REGISTRATION

SHEET TITLE  
**BUILDING B  
ELEVATIONS**

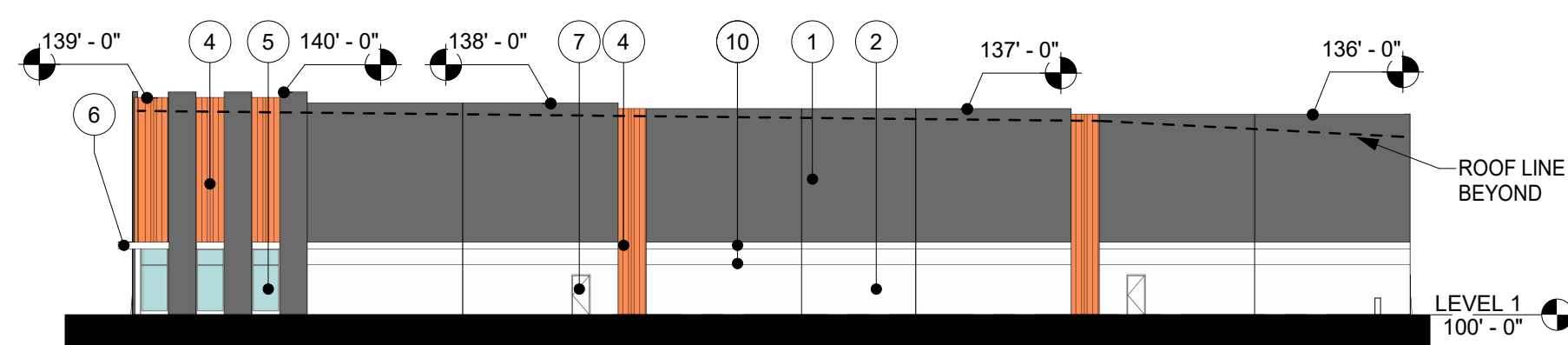
SHEET NUMBER

**A5**

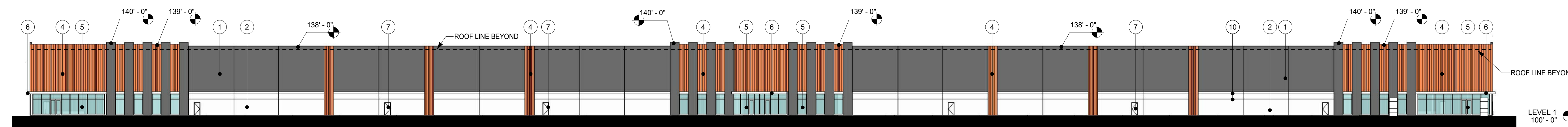
Hearing Date: 5/17/23



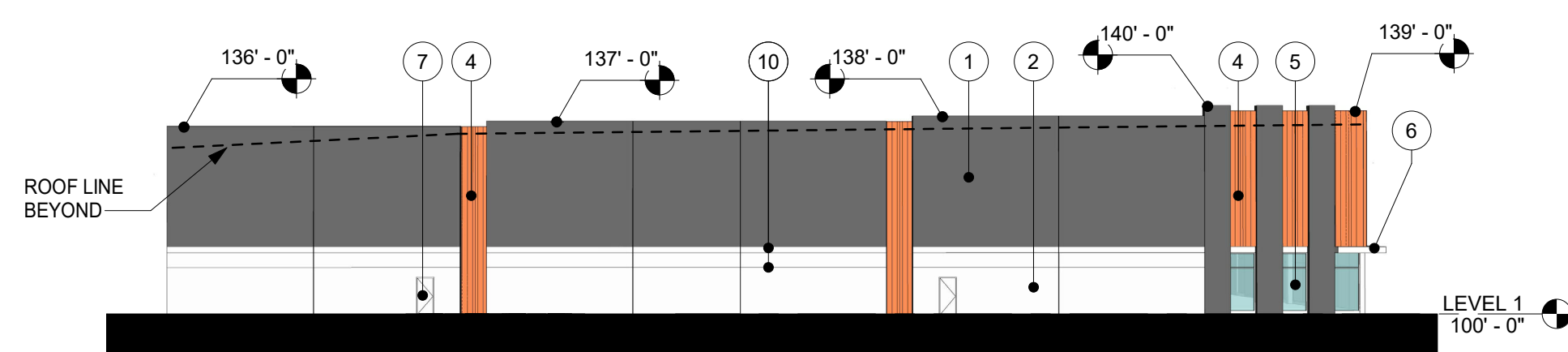
1 NORTH ELEVATION @ BLD B  
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3 SOUTH ELEVATION @ BLD B  
1" = 30'-0"



4 WEST ELEVATION @ BLD B  
1" = 30'-0"

PLOT DATE: 10/08/2021 1:45:13 PM

PHO-2-23--Z-18-10-1

Stipulated Elevations - PHO-1-21

**CITY OF PHOENIX**  
OCT 22 2021  
Planning & Development  
Department

REPORT OF PLANNING HEARING OFFICER ACTION  
Adam Stranieri, Planner III, Hearing Officer  
Bradley Wylam, Planner I, Assisting

December 15, 2021

|                 |  |
|-----------------|--|
| ITEM NO: 3      |  |
|                 | DISTRICT 1   |
| SUBJECT:        |  |
| Application #:  | PHO-1-21--Z-18-10-1  |
| Location:       | Southeast corner of 13th Avenue and Parkview Lane alignments   |
| Zoning:         | CP/GCP DVAO  |
| Acreage:        | 5.16   |
| Request:        | 1) Review of conceptual site plans and elevations per Stipulation 1.<br>2) Modification of Stipulation 2 regarding dedicating 40 feet of right-of-way for the north half of Alameda Road and 30 feet for the south half of Parkview Road.<br>3) Technical correction to Stipulation 3. |
| Applicant:      | Ed Bull, Burch & Cracchiolo PA   |
| Owner:          | North K LLC  |
| Representative: | Ed Bull, Burch & Cracchiolo PA   |

**ACTIONS:**

Planning Hearing Officer Recommendation: The Planning Hearing Officer recommended approval with a modification and an additional stipulation.

Village Planning Committee (VPC) Recommendation: The Deer Valley Village Planning Committee opted not to hear this case.

**DISCUSSION:**

*This item was heard concurrently with Item Nos. 1 (PHO-1-21—Z-128-07-1) and 2 (PHO-1-21—Z-129-07-1).*

Ali Bull, representative with Burch and Cracchiolo, provided an overview of the three concurrent case areas (PHO-1-21—Z-128-07-1, PHO-1-21—Z-129-07-1, and PHO-1-21—Z-18-10-1) and original rezoning cases. She stated that each case required approval of conceptual site plans. She noted that the applicant worked with the Street Transportation Department to finalize the modifications regarding dedication of right-of-way and provided a summary of each proposal. She stated that the street widths and proposed site plans are consistent with recent approvals and existing streets in the area.

Adam Stranieri, Planning Hearing Officer, stated that the Deer Valley Village Planning Committee opted not to hear the request and no public correspondence had been received. He noted that the subject property depicted on the conceptual site plan is proposed to develop in conjunction with the property to the west in companion Rezoning Case No. PHO-1-21—Z-129-07-1. He stated the proposed conceptual site plan depicts two industrial shell buildings of approximately 106,200 and 184,400 square feet with an approximate height of 37 feet. He stated this development would be consistent with the land use pattern in the surrounding area. He stated that the building elevations include architectural features such as multiple colors, materials, metal canopies, and other façade relief. He stated that the modification of Stipulation 2 regarding a dedication of right-of-way for the north side of Alameda Road and south side of Parkview Lane be approved with a modification. He stated that splitting the dedication requirements, which results in an additional stipulation will clarify the requirements and is recommended by the Street Transportation Department. He noted that the recommendation for approval regarding the conceptual site plan does not require the implementation of the cul-de-sac terminations as shown on the plan, but that street construction and design will be approved by the Street Transportation Department.

**FINDINGS:**

- 1) The applicant submitted a conceptual site plan and building elevations in compliance with Stipulation 1. This stipulation is recommended to be deleted and replaced with a requirement for general conformance to the plans submitted. Note that the subject property of this case is proposed to develop in conjunction with the property to the west in Rezoning Case No. PHO-1-21—Z-129-07-1 (companion case also heard on this agenda).

The conceptual site plan depicts two industrial shell buildings of approximately 106,200 and 184,400 square feet with an approximate height of 37 feet. Vehicular access is provided at multiple driveways along 15th Avenue, Alameda Road, and Park View Lane. Conceptual elevations include architectural features and details such as multiple colors, materials, metal canopies, offsets, reveals, and other façade relief. The proposal is consistent in scale and character with the land use pattern in the surrounding area.

Additionally, note that the cul-de-sac terminations shown on the site plan are not intended to be governed by the general conformance stipulation. Parkview Lane to the east and west will connect to adjacent parcels. Street construction and design is to be approved by the Street Transportation Department.

- 2) The request to modify Stipulation 2 is recommended to be approved with a modification and additional stipulation to provide current standard



language regarding right-of-way dedication and split the dedication requirements for Alameda Road and Parkview Lane into separate stipulations for clarity. This recommendation is consistent with the recommendation of the Street Transportation Department.

**STIPULATIONS:**

|                     |   |
|---------------------|---|
| 1.                  | <p><del>That conceptual site plan(s) and elevations shall be approved by the Planning Hearing Officer through the public hearing process prior to the Planning and Development Services Department preliminary site plan approval. This review is for conceptual purposes only. Specific development standards and requirements will be determined through the site plan approval process with the Planning and Development Services Department.</del></p> <p>THE DEVELOPMENT SHALL BE IN GENERAL CONFORMANCE WITH THE SITE PLAN AND ELEVATIONS DATE STAMPED OCTOBER 22, 2021, AS MODIFIED BY THE FOLLOWING STIPULATIONS AND APPROVED BY THE PLANNING AND DEVELOPMENT DEPARTMENT.</p> |
| 2.                  | <p><del>That The developer shall dedicate MINIMUM right-of-way totaling 40 feet OF RIGHT-OF-WAY AND CONSTRUCT for the north half SIDE of Alameda Road, and that right-of-way totaling 30 feet shall be dedicated for the south half of Parkview Road as approved by the Street Transportation Department and the Planning and Development Services AND STREET TRANSPORTATION DepartmentS.</del></p>   |
| 3.                  | <p>THE DEVELOPER SHALL DEDICATE MINIMUM 30 FEET OF RIGHT-OF-WAY AND CONSTRUCT THE SOUTH SIDE OF PARKVIEW LANE, AS APPROVED BY THE PLANNING AND DEVELOPMENT AND STREET TRANSPORTATION DEPARTMENTS.</p>   |
| 4.<br><del>3.</del> | <p><del>That The developer shall construct all streets within and adjacent to the development with paving, curb, gutter, sidewalk, curb ramps, streetlights, landscaping, and other incidentals as per plans approved by the Planning and Development Services Department. All improvements shall comply with all ADA accessibility standards.</del></p>  |
| 5.<br>4.            | <p><del>That The property owner shall record a Notice of Prospective Purchasers of Proximity to Airport in order to disclose the existence, and operational characteristics of Deer Valley Airport to future owners or tenants of the property. The form and content of such documents shall be according to the templates and instructions provided which have been reviewed and approved by the City Attorney.</del></p>  |

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Upon request, this publication will be made available within a reasonable length of time through appropriate auxiliary aids or services to accommodate an individual with a disability. This publication may be made available through the following auxiliary aids or services: large print, Braille, audiotape or computer diskette. Please contact the Planning and Development Department, Angie Holdsworth, at voice number 602-495-5622 or TTY use 7-1-1.

**This item was adopted.**

- 62 Cooling Tower Water Treatment Services Agreement (Ordinance S-48267)

**This item was adopted.**

### **PLANNING AND ZONING MATTERS**

- 63 Final Plat - Hurley Ranch Phase 2 - PLAT 200637 - North of Broadway Road and West of 83rd Avenue

**This item was approved.**

- 64 Final Plat - 10215 S. 27th Avenue - 210082 - Southeast Corner of Lodge Drive and 27th Avenue

**This item was approved.**

- 65 Remove/Replace Zoning District - Cave Creek and Dynamite Boulevard Annexation 508 - 4328 E. Dynamite Blvd. (Ordinance G-6944)

**This item was adopted.**

- 66 Remove/Replace Zoning District - Ismail Annexation 510 - 3335 W. Baseline Road (Ordinance G-6945)

**This item was adopted.**

- 67 Amend City Code - Ordinance Adoption - Rezoning Application PHO-1-21--Z-18-10-1 - Southeast Corner of 13th Avenue and Parkview Lane Alignments (Ordinance G-6948)

**This item was adopted.**

- 68 Amend City Code - Ordinance Adoption - Rezoning Application PHO-1-21--Z-128-07-1 - Approximately 800 Feet East of 19th Avenue and the Alameda Road Alignment (Ordinance G-6946)

**This item was adopted.**

- 69 Amend City Code - Ordinance Adoption - Rezoning Application PHO-1-21--Z-129-07-1 - Approximately 1,825 Feet East of 19th Avenue and the Alameda Road Alignment (Ordinance G-6947)

**This item was adopted.**

- 70 Amend City Code - Ordinance Adoption - Rezoning Application PHO-1-21--Z-52-08-7 - Northwest Corner of 67th Avenue and Baseline Road (Ordinance G-6949)



# City of Phoenix

PLANNING AND DEVELOPMENT DEPARTMENT

## APPLICATION FOR PLANNING HEARING OFFICER ACTION

**APPLICATION NO: PHO-2-23--Z-18-10**

**Council District: 1**

**Request For:** Stipulation Modification

**Reason for Request:** Request to modify Stipulation 1 regarding general conformance. Request to modify Stipulation 3 regarding right-of-way improvements.

| Owner  | Applicant   | Representative   |
|--|---|--|
| Deer Valley Industrial Venture LLC   | Opus Development Company, LLC   | Jason Morris, Withey Morris Baugh, PLC   |
| 2555 East Camelback Road, Suite 100<br>Phoenix AZ 85016<br>(602) 260-0600<br>hannah@witheymorris.com | 2555 East Camelback Road, Suite 100<br>Phoenix AZ 85016<br>(602) 648-5077<br>matthew.visnansky@opus-group.com | 2525 East AZ Biltmore Circle, Ste A-212<br>Phoenix AZ 85016<br>P: (602) 260-0600 F:<br>hannah@witheymorris.com |

**Property Location:** Southeast corner of 13th Avenue and Parkview Lane alignments

Zoning Map: O-7 Quarter Section: 46-25 APN: 210-07-002 Acreage: 5.17

Village: Deer Valley

Last Hearing: CC HEARING

Previous Opposition: No

Date of Original City Council Action: 12/15/2010

Previous PHO Actions: 01/26/2022 230 PM

Zoning Vested: CP/GCP DVAO

Supplemental Map No.: \_\_\_\_\_

Planning Staff: 081754

An applicant may receive a clarification from the city of its interpretation or application of a statute, ordinance, code or authorized substantive policy statement. To request clarification or to obtain further information on the application process and applicable review time frames, please call 602-262-7131 (option 6), email zoning.mailbox@phoenix.gov or visit our website at <http://phoenix.gov/pdd/licensetimes.html>.

A Filing Fee had been paid to the City Treasurer to cover the cost of processing this application. The fee will be retained to cover the cost whether or not the request is granted

| Fee        | Fee Waived | Fee Date   | Receipt    | Purpose             |
|------------|------------|------------|------------|---------------------|
| \$1,080.00 | \$0.00     | 03/29/2023 | 23-0023100 | Original Filing Fee |

Signature of Applicant: \_\_\_\_\_ DATE: \_\_\_\_\_

### Hearing Results

| Planning Hearing Officer | Planning Commission | City Council     |
|--------------------------|---------------------|------------------|
| Date: <u>05/17/2023</u>  | Date: _____         | Date: _____      |
| Appealed?: _____         | Appealed?: _____    | Appealed?: _____ |
| Action: _____            | Action: _____       | Action: _____    |



March 29, 2023

**VIA HAND DELIVERY**

Adam Stranieri  
Planning Hearing Officer  
Phoenix Planning & Development Department  
200 West Washington Street, 2nd Floor  
Phoenix, Arizona 85003

Re: Stipulation Modification – Z-18-10 – Southeast corner of 13<sup>th</sup> Avenue and Parkview Lane alignments

Dear Mr. Stranieri:

This firm represents Opus Development Company (the “Developer”) regarding its proposal to develop a light industrial project on CP/GCP zoned property located at the southeast corner of 13<sup>th</sup> Avenue and Parkview Lane alignments, Phoenix, which is also known as Maricopa County APN 210-08-007 (the “Property”). Please see attached **Exhibit A** for an aerial view of the Property and surrounding area. As explained herein, the proposed development requires modification of stipulations for approval, which the Phoenix City Council last modified on January 26, 2022 with case PHO-1-21—Z-18-10-1. This request is also running concurrently with an adjacent PHO case that will modify the stipulations for Z-129-07, as both of these PHO cases encompass the project boundaries. See **Exhibit B** showing the zoning map with the two cases outlined.

**BACKGROUND**

On January 26, 2022, the Phoenix City Council approved the PHO case to modify the stipulations to allow an industrial project on this site. However, since that time the Developer has done additional analysis on the traffic flows and site conditions on the Property. The prepared traffic analysis (**Exhibit C**) determines that the Parkview Lane alignments and associated ROW improvements to the east of 15<sup>th</sup> Avenue will be a “road to nowhere” and will not serve the site or the surrounding land effectively. In addition, there are conflicts with the County properties to the north that would deter this roadway to be constructed fully. The analysis also determined that the Alameda Road alignment improvements and constructed roadway, located on the southern portion of the Property, will be sufficient to move traffic east and west and would better serve the traffic flows to and from this Property. The Alameda connection stretches from 19<sup>th</sup> Street to 7<sup>th</sup> Street and will be fully improved. Please find the updated site plan and elevations at **Exhibit D**.

Opus Development Company looks forward to developing a highly demanded Class A industrial project on this site. In order to allow this quality development, we are requesting modifications to the previously approved stipulations on the Property.

**STIPULATION MODIFICATION**

To allow the proposed development of the Property, we propose the following modification of stipulations approved for Z-18-10:

1. The development shall be in general conformance with the site plan **DATE STAMPED X, 2023** and elevations date stamped ~~October 22, 2021,~~ **X, 2023** as modified by the following stipulations and approved by the Planning and Development Department.

Rationale: Due to the modification of the Parkview Lane roadway and more details with the site plan and elevation, we are proposing a new version of the site plan and elevations for this proposal.

2. The developer shall dedicate minimum 40 feet of right-of-way and construct the north side of Alameda Road, as approved by the Planning and Development and Street Transportation Departments.

No change.

3. The development shall dedicate minimum 30 feet right-of-way ~~and construct the south side of Parkview Lane,~~ as approved by the Planning and Development and Street Transportation Departments.

Rationale: As noted in the traffic analysis, the removal of the Parkview Lane alignment on the east side of 15<sup>th</sup> Avenue was not serving the site. In addition the full improvements of Alameda Rd has better connectivity to the east and west of the Property. The previous iteration showing the Parkview Lane roadway had a road to nowhere and was not effective in moving traffic.

4. The developer shall construct all streets within and adjacent to the development with paving, curb, gutter, sidewalk, curb ramps, streetlights, landscaping, and other incidentals as per plans approved by the Planning and Development Department. All improvements shall comply with all ADA accessibility standards.


No change.

5. The property owner shall record a Notice of Prospective Purchasers of Proximity to Airport in order to disclose the existence, and operational characteristics of Deer Valley Airport to future owners or tenants of the property. The form and content of such documents shall be according to the templates and instructions provided which have been reviewed and approved by the City Attorney.

No change.

Very truly yours,

WITHEY MORRIS P.L.C.

By   
Jason Morris

Attachments

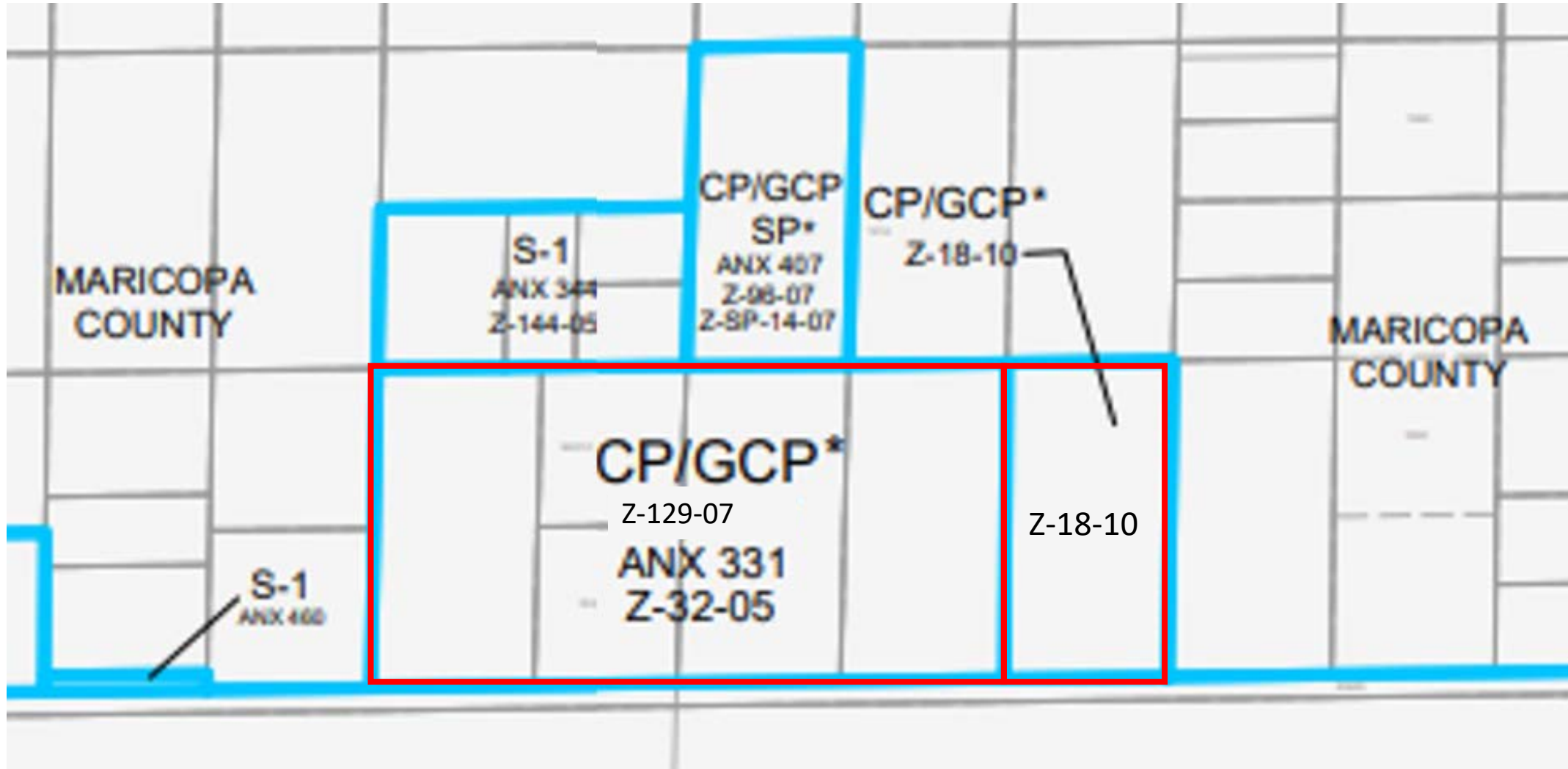
# Exhibit A

# Map





## Exhibit B



# Exhibit C

# Deer Valley 30

Traffic Impact Study  
3rd Submittal

North of Alameda Road and  
East of 19th Ave  
Phoenix, Arizona

March 2023  
Project No. 21-1430

Prepared For:  
**Opus Development Company, LLC**  
2555 E. Camelback Road, Suite 100  
Phoenix, Arizona 85016

For Submittal to:  
**City of Phoenix**

Prepared By:



10605 North Hayden Road  
Suite 140  
Scottsdale, Arizona 85260  
480-659-4250

**DEER VALLEY 30  
TRAFFIC IMPACT STUDY  
3<sup>RD</sup> SUBMITTAL**

**North of Alameda Road and East of 19<sup>th</sup> Avenue  
Phoenix, Arizona**

**Prepared for:**  
Opus Development Company, LLC  
2555 E Camelback Road, Suite 100  
Phoenix, Arizona 85016

**For Submittal to:**  
City of Phoenix

---

**Prepared By:**



**CivTech Inc.**

10605 North Hayden Road  
Suite 140  
Scottsdale, Arizona 85260  
Office: (480) 659-4250  
Fax: (480) 659-0566



*Dawn D. Cartier*

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**March 2023**

CivTech Project No. 21-1430

## TABLE OF CONTENTS

|   |           |
|---|-----------|
| <b>EXECUTIVE SUMMARY .....</b>                | <b>1</b>  |
| <b>INTRODUCTION AND PURPOSE .....</b>         | <b>7</b>  |
| Study Requirements .....                      | 7         |
| Study Area.....                               | 8         |
| Horizon Years .....                           | 8         |
| <b>EXISTING CONDITIONS .....</b>              | <b>11</b> |
| Existing Land Use.....                        | 11        |
| Surrounding Land Use .....                    | 11        |
| Existing Roadway Network.....                 | 11        |
| Existing Intersection Configurations.....     | 13        |
| Existing Traffic Volumes.....                 | 14        |
| Existing Capacity Analysis .....              | 17        |
| <b>PROPOSED DEVELOPMENT.....</b>              | <b>19</b> |
| Site Location .....                           | 19        |
| Site Density/Intensity .....                  | 19        |
| Site Access .....                             | 19        |
| Trip Generation.....                          | 21        |
| Vehicle Trip Distribution And Assignment..... | 23        |
| Future Background Traffic.....                | 27        |
| Total Traffic Volumes.....                    | 28        |
| <b>TRAFFIC AND IMPROVEMENT ANALYSIS.....</b>  | <b>33</b> |
| Traffic Signal Warrant Analysis.....          | 38        |
| Turn Lane Queue Length Analysis .....         | 39        |
| <b>CONCLUSIONS .....</b>                      | <b>44</b> |
| <b>LIST OF REFERENCES .....</b>               | <b>48</b> |
| <b>TECHNICAL APPENDICES .....</b>             | <b>49</b> |

## LIST OF TABLES

|   |           |
|---|-----------|
| <b>Table 1 – Level of Service Criteria for Controlled Intersections .....</b>       | <b>17</b> |
| <b>Table 2 – Existing Peak Hour Levels of Service.....</b>                          | <b>18</b> |
| <b>Table 3 – Trip Generation .....</b>  | <b>21</b> |
| <b>Table 4 – Site Trip Distribution.....</b>  | <b>23</b> |
| <b>Table 5 – 2024 Peak Hour Intersection Levels of Service Scenario A.....</b>      | <b>33</b> |
| <b>Table 6 – 2024 Peak Hour Intersection Levels of Service Scenario B.....</b>      | <b>37</b> |
| <b>Table 7 – Volume-Based Traffic Signal Warrant Analysis Results Summary .....</b> | <b>39</b> |
| <b>Table 8 – Turn Lane Queue Storage Lengths .....</b>                              | <b>40</b> |

## LIST OF FIGURES

|   |           |
|---|-----------|
| <b>Figure 1 – Vicinity Map .....</b>  | <b>10</b> |
| <b>Figure 2 – Existing Lane Configurations and Stop Controls.....</b>                 | <b>15</b> |
| <b>Figure 3 – Existing Peak Hour Traffic Volumes .....</b>                            | <b>16</b> |
| <b>Figure 4 – Site Plan and Access.....</b>   | <b>20</b> |
| <b>Figure 5 – Trip Distribution .....</b>   | <b>24</b> |
| <b>Figure 6A – Site Generated Traffic Volumes – Scenario A .....</b>                  | <b>25</b> |
| <b>Figure 6B – Site Generated Traffic Volumes – Scenario B .....</b>                  | <b>26</b> |
| <b>Figure 7A – 2024 Background Traffic Volumes – Scenario A.....</b>                  | <b>29</b> |
| <b>Figure 7B – 2024 Background Traffic Volumes – Scenario B .....</b>                 | <b>30</b> |
| <b>Figure 8A – 2024 Total Traffic Volumes – Scenario A .....</b>                      | <b>31</b> |
| <b>Figure 8B – 2024 Total Traffic Volumes – Scenario B .....</b>                      | <b>32</b> |
| <b>Figure 9A – Proposed Lane Configurations and Traffic Control – Scenario A.....</b> | <b>42</b> |
| <b>Figure 9B – Proposed Lane Configurations and Traffic Control – Scenario B.....</b> | <b>43</b> |

## EXECUTIVE SUMMARY

The Deer Valley 30 (DV30) “Project” will develop two non-contiguous rectangular land tracts located on the north side of the Alameda Road alignment, east of 19<sup>th</sup> Avenue and west of 7<sup>th</sup> Avenue, in the Deer Valley Village area of north Phoenix. Both sites, the smaller and more westerly of the two (the “DV30 West” site) containing 5.14 acres and the larger and more easterly of the two (the “DV30 East” site) containing 25.71 acres, are currently undeveloped and vacant. The DV30 West site begins approximately 500 feet east of 19<sup>th</sup> Avenue and has an almost 690-foot-long Alameda Road edge. The DV30 East site begins approximately 1820 feet east of 19<sup>th</sup> Avenue, ends 1,650 feet west of 7<sup>th</sup> Avenue and has an almost 1,700-foot-long Alameda Road edge.

Both DV30 sites are zoned CP/GCP (Commerce Park/General Commerce Park). Consistent with this zoning designation, current development plans for the DV30 West site call for a single, 62,800 square foot shell industrial building surrounded by surface parking and development plans for the DV30 East site call for two shell industrial buildings, collectively containing 290,600 square feet of industrial space.

CivTech, Inc. has been retained by Opus Development Company, LLC to prepare the traffic impact study (TIS) required by the City as a condition of site plan approval for Deer Valley 30. The purpose of the analysis documented in this report is to recognize and account for the trip generation of the proposed development, the impact this new traffic will have on the surrounding streets and intersections, and any off-site traffic impact mitigation likely to be warranted by the Project. The format and content of this report, and the approach and methodology used to reach the conclusions documented in this report are consistent with guidance provided in City of Phoenix *Street Planning and Design Guidelines Section 12.1.2 Traffic Impact Studies, December 2009*.

Over the past year, CivTech has completed traffic impact studies to support rezoning requests that have since been approved by the City of Phoenix for three other significantly sized sites in the immediately surrounding area, Arizona State Land Department (ASLD) Supplier Site A, ASLD Supplier Site B, and ASLD Supplier Site C. Following the rezoning, development rights for the three supplier sites were acquired by MREG DV Land LLC (aka Mack Real Estate (or, “Mack”) for whom CivTech has since completed an update to the original TIS for the largest and most proximate to the Deer Valley 30 sites, Supplier Site A. Supplier Site A borders the south side of the Alameda Road alignment and extends west to 19<sup>th</sup> Avenue, east to 7<sup>th</sup> Avenue and south to Sara Bass Place (the halfway point between Alameda Road and Pinnacle Peak Road. The updated Supplier Site A TIS accounts for a more trip generation intense land use plan than did the original TIS for that site. The updated TIS for Supplier Site A was recently approved by the City of Phoenix. The relevance of Supplier Site development plans to the Deer Valley TIS is that it is anticipated that a significant portion of Supplier Site development and all of the associated off-site roadway and traffic control improvements will have occurred by the time the first building on either of the Deer Valley 30 sites is ready to open.

This report considers the traffic impact of Deer Valley 30 as currently proposed under each of two pairs of future (horizon year) scenarios, each pair in turn having both “Build” scenario and a “No-Build” scenario. The two pairs are referred to throughout the report, as “Scenario A’s” and the “Scenario B’s”. All horizon year scenarios share the following characteristics:



1. The year is 2024.
2. Local and regional growth collectively, exclusive of that which may be caused by development of what are referred to throughout this report as the “Supplier Site” projects, has caused traffic volumes within the study area to grow at an average annual rate of 3.6% since 2021.

The primary difference between the Scenario A’s and the Scenario B’s is the extent to which the Supplier Site projects, three other significant planned future development projects in the immediately surrounding area have proceeded in advance of Deer Valley 30 development. In other words,

1. both Build Scenario A and No-Build Scenario A have Supplier Site traffic accounted for in the background traffic volumes and have anticipated Supplier Site off-site roadway improvements accounted for in the assumed pre-existing roadway network; and
2. neither Build Scenario B nor No-Build Scenario B has any Supplier Site traffic accounted for in its background traffic volumes nor any study area roadway improvements by others accounted for in its assumed pre-existing roadway network.

The analysis documented in this report for Scenario A reflects the following assumptions regarding changes that are anticipated to occur in conjunction with the development of Supplier Site A, prior to vertical development occurring on either of the DV30 sites:

1. It has been assumed for Scenario A that Alameda Road will have been improved to an interim two-lane, (i.e., “south side half-street”) condition, from 19th Avenue to 7th Avenue.
2. It has been assumed for Scenario A that the intersection of 19th Avenue and Alameda Road will have been improved, as part of the above-cited half street improvements or otherwise, to include the full northeast and southeast quadrants of the intersection in their respective ultimate geometric configuration within the limits of the intersection corner returns.
3. It has been assumed for Scenario A that 7<sup>th</sup> Avenue will have been improved as necessary to provide at least two continuous travel lanes, one northbound lane and one southbound lane, from Happy Valley Road to Pinnacle Peak Road.

The analysis documented in this report for Scenario B reflects the assumption that all Deer Valley 30 development will be fully built out prior to any development on any Supplier Site having occurred (at least in advance of any of that development generating more than a nominal amount of traffic within the study area) and without any significant study area roadway improvements having been made by others.

Off-site improvements to be completed with Deer Valley 30 development, under both Build Scenario A and Build Scenario B, include the following:

1. constructing and dedicating to the City of Phoenix, the DV30 East and DV 30 West site-adjacent segments of the ultimate north half of Alameda Road.
2. constructing and dedicating to the City of Phoenix a full street segment of 15<sup>th</sup> Avenue, the planned future alignment of which runs north-south through the DV 30 East site,

approximately 660 feet east of its western edge. This improvement will effectively split the DV30 East site into two, the more westerly site having a resultant net area of 8.6 acres and the more easterly site having a resultant net area of 13.2 acres. This improvement is required for consistency with the City's current street classification map which depicts 15<sup>th</sup> Avenue, from Happy Valley Road to Williams Drive (i.e., the back side of Deer Valley Airport) as a single continuous segment of minor collector street.

3. constructing and dedicating to the City of Phoenix, the DV30 East site-adjacent south side half of Parkview Lane, the alignment of which coincides with the northern edge of the DV30 East site. This will include approximately 650 lineal feet of half street west of 15<sup>th</sup> Avenue.
4. constructing direct access driveways on the north side of Alameda Road and the east side and west side respectively on 15<sup>th</sup> Avenue, as depicted in Figure 4 of this report.

Additional off-site improvements to be completed with Deer Valley 30 development under Scenario B include constructing additional half street segments of Alameda Road, as necessary to provide two continuous travel lanes (one eastbound lane and one westbound lane) from 19<sup>th</sup> Avenue to the eastern limit of the DV30 East site, plus additional pavement as necessary to provide vehicle turnaround provisions at the eastern limit of the half-street improvements and as further necessary to provide two westbound lanes, one to be a westbound left turn lane and the other to be a shared through/right turn lane at the intersection of 19<sup>th</sup> Avenue and Alameda Road.

Under either Scenario A or Scenario B, the Deer Valley 30 development will be responsible for installing a signal at the intersection of 19<sup>th</sup> Avenue and Alameda Road if the signal is warranted in the opening year or, depositing in escrow 25% of the signal cost if the signal is not warranted in the opening year.

Under either Scenario A or Scenario B, the Deer Valley 30 development will be responsible for installing a signal at the intersection of 7<sup>th</sup> Avenue and Alameda Road if the signal is warranted in the opening year or, depositing in escrow 25% of the signal cost if the signal is not warranted in the opening year.

The following conclusions have been documented in this study:

#### GENERAL

- Deer Valley 30 is anticipated to generate a maximum of 1,748 vehicle trips over the course of a typical weekday, with approximately 210 of those trips occurring during the AM peak hour (182 in/28 out) and 143 trips occurring during the PM peak hour (20 in/123 out). This conclusion was reached using trip generation equations obtained from the Institute of Transportation Engineers (ITE) Trip Generation Manual for "light industrial" and "general office" land use classifications. This approach was taken as a conservative measure because "light industrial" it has the highest peak hour trip rates of any ITE-recognized industrial land use category for which a 37-foot-tall industrial shell building would likely be appropriate, and because the general office use has peak hour trip rates that are anywhere from three to nine times those of the comparable period trip rates for light industrial uses. In short, should the ultimate uses of any of the proposed DV30

buildings be something more like a high-cube warehouse type facility, actual trip generation values will likely be considerably lower.

### EXISTING CONDITIONS

- Results of the existing conditions analysis indicate that all existing study intersections are operating with acceptable levels of service (LOS D or better) on all approaches under current lane configurations and traffic control.

### BUILDOUT YEAR 2024

- “Build” and “No-Build” conditions have been analyzed for each of two horizon year scenarios. All “No-Build” horizon year scenarios are ones in which it is 2024 and existing traffic volumes have continued to grow at an average annual rate of 3.6% since 2021.
- All Horizon Year “Build” scenarios are additionally characterized by both Deer Valley 30 sites having been fully developed and generating traffic at full buildout levels, north side half-street segments of Alameda Road having been built adjacent to both Deer Valley 30 sites, 15<sup>th</sup> Avenue having been improved to a full street condition from Alameda Road to Parkview Lane, and Parkview Lane having been improved to a south side half street condition east and west of 15<sup>th</sup> Avenue within the limits of the DV30 East sites.
- All Horizon Year Scenario A’s are additionally characterized by all Supplier Sites having been fully developed and generating traffic at full buildout levels in accordance with current land use assumptions about those sites as detailed in the most current versions of the City of Phoenix-approved traffic impact studies for those sites, Alameda Road has been improved to a two-lane south side half street condition from 19<sup>th</sup> Avenue to 7<sup>th</sup> Avenue, the intersection of 19<sup>th</sup> Avenue and Alameda Road has been improved to its ultimate configuration, at least to the limits of all four intersection returns, and 7<sup>th</sup> Avenue has been improved to a two-lane half street (minimum) condition from Alameda Road to Pinnacle Peak Road.
- Horizon Year “Build” Scenario B is uniquely characterized by Alameda Road having been constructed to at least a half street condition, from 19<sup>th</sup> Avenue east to the eastern limit of the DV30 East site, only.
- Results of the Horizon Year Scenario A analysis indicate the following improvements will be warranted with or without development having occurred on either of the Deer Valley 30 sites and, if implemented will allow acceptable levels of service to be achieved (or, if already being achieved, maintained) through 2024 and buildout of all ASLD/Mack Supplier Site and Deer Valley 30 development as currently proposed:
  - At the already signalized intersection of **19<sup>th</sup> Avenue and Happy Valley Road**, dual left turn lanes and protected left turn phasing on/for all four approaches will both be warranted and are therefore recommended to maintain acceptable levels of service during both peak hours through 2024, with or without Deer Valley 30 development. In addition, since the addition of protected left turn phases will take

away some green time from the through movements, it is also recommended that the cycle length be changed from 96 seconds to 105 seconds. The intersection appears to be configured to accommodate dual left turns of roughly equal length of what are now striped as single turn lanes (about 250 feet) such that dual left turn lanes can be created through pavement marking modifications. The extent of the traffic signal equipment improvements necessary to add the protected only phases is not fully known but will require at a minimum, new left turn signal heads on all four approaches. With the recommended turn lane and signal improvements, this intersection should provide acceptable levels of service on all approaches during both peak hours through buildout of all ASLD/Mack Supplier Site and Deer Valley 30 development as currently proposed.

- At the minor approach stop-controlled intersection of **19<sup>th</sup> Avenue and Alameda Road**, the introduction of an east leg and westbound approach volumes of the magnitude projected with or without Deer Valley 30 development will cause traffic signal control to be both warranted per applicable *Manual on Uniform Traffic Control Devices* (MUTCD) standards, and necessary to maintain acceptable levels of service on all approaches. It is recommended that the signal pole foundations, conduit, pull boxes and all other underground and ground level features necessary to signalize the intersection be in place before any development that is dependent on the east leg of this intersection for access is open to everyday traffic (i.e., before this segment of Alameda Road needs to be more than a construction access road). It is further recommended that exclusive left turn lanes be provided on all four approaches to this intersection to maximize the efficiency of the intersection. The northbound and southbound left turn lanes should provide the City's standard minimum of 150 feet of queue storage length. Two-way left turn lanes already exist along 19<sup>th</sup> Avenue in this vicinity and can just be restriped near the intersection to convert them to single direction turn lanes. It is recommended that the westbound left turn lane provide at least 75 feet of queue storage from the start, and provide 250 feet of queue storage length before both Supplier Site A and Deer Valley 30 sites are fully developed. Width to provide 250 feet of queue storage length is not likely to exist until such time as the property on the northeast corner of the intersection develops and with that development the site-adjacent segment of the ultimate north half of Alameda Road gets constructed and dedicated. The eastbound approach currently provides enough width immediately west of the intersection to provide a short eastbound left turn only lane (enough for 1-2 vehicles to queue while still allowing an upstream vehicle wanting to turn right (and/or through in the proposed/with east leg condition) to pass them. While 150 feet of turn lane queue storage is the City's standard and should ultimately be provided, until such time as considerably more development occurs along Alameda Road west of 19<sup>th</sup> Avenue, the existing queue storage provisions should be adequate. Once signalized and improved as necessary to provide an exclusive left turn lane on all approaches, this intersection should provide acceptable levels of service on all approaches during both peak hours through buildout of all ASLD/Mack Supplier Site and Deer Valley 30 development as currently proposed.

- At the already signalized intersection of **19<sup>th</sup> Avenue and Pinnacle Peak Road**, continued traffic growth, with or without Deer Valley 30 development, is likely to cause need for traffic signal timing adjustments in order for acceptable levels of services to continue to be achieved on all approaches. Efforts to optimize the signal timing to achieve acceptable levels of service under both Build and No Build scenarios, indicate significant reductions in driver delay on both northbound and southbound approaches, under both scenarios could be achieved by making the following signal timing adjustments:
  - Extend the northbound through phase from 45 seconds to 51 seconds and the northbound left turn phase from 14 seconds to 21 seconds.
  - Extend the southbound through phase from 30 seconds to 31 seconds.
- At the currently stop sign controlled (northbound approach only) intersection of **7<sup>th</sup> Avenue and Happy Valley Road**, continued growth in background traffic, even without any ASLD/Mack Supplier Site or Deer Valley 30 development, is likely to cause need for widening of Happy Valley Road to provide traffic signal control an exclusive westbound left turn lane before the end of 2024. Deer Valley 30 is not expected to add any traffic to this intersection until Happy Valley Rd and Desert Peak Pkwy connect to provide an east-west arterial alternative to L101, Deer Valley Drive and Sonoran Boulevard.
- At the intersection of **7<sup>th</sup> Avenue and Alameda Road**, traffic signal control is not anticipated to be warranted and necessary to provide acceptable levels of service until growth in traffic, beyond that caused by ASLD/Mack Supplier Site and Deer Valley 30 development.
- At the intersection of **7<sup>th</sup> Avenue and Pinnacle Peak Road**, continued growth in background traffic, even without any ASLD/Mack Supplier Site or Deer Valley 30 development, is likely to cause need for traffic signal control before the end of 2024. Under traffic signal control with a 100-second cycle length, this intersection should provide acceptable levels of service on all approaches during both peak hours through buildout of all ASLD/Mack Supplier Site and Deer Valley 30 development as currently proposed.

## INTRODUCTION AND PURPOSE

The Deer Valley 30 (DV30) “Project” will develop two non-contiguous rectangular land tracts located on the north side of the Alameda Road alignment, east of 19<sup>th</sup> Avenue and west of 7<sup>th</sup> Avenue, in the Deer Valley Village area of north Phoenix. Both sites, the smaller and more westerly of the two (the “DV30 West” site) containing 5.14 acres and the larger and more easterly of the two (the “DV30 East” site) containing 25.71 acres, are currently undeveloped and vacant. The DV30 West site begins approximately 500 feet east of 19<sup>th</sup> Avenue and has an almost 690-foot-long Alameda Road edge. The DV30 East site begins approximately 1820 feet east of 19<sup>th</sup> Avenue, ends 1,650 feet west of 7<sup>th</sup> Avenue and has an almost 1,700-foot-long Alameda Road edge. A vicinity map identifying the two DV30 sites is provided in **Figure 1**.

Both DV30 sites are zoned CP/GCP (Commerce Park/General Commerce Park). Consistent with this zoning designation, current development plans for the DV30 West site call for a single, 62,800 square foot shell industrial building surrounded by surface parking and development plans for the DV30 East site call for two shell industrial buildings, collectively containing 290,600 square feet of floor area.

CivTech, Inc. has been retained by Opus Development Company, LLC to prepare the traffic impact study (TIS) required by the City as a condition of site plan approval for Deer Valley 30. The purpose of the analysis documented in this report is to recognize and account for the trip generation of the proposed development, the impact this new traffic will have on the surrounding streets and intersections, and any off-site traffic impact mitigation likely to be warranted by the Project.

Over the past year, CivTech has completed traffic impact studies to support rezoning requests that have since been approved by the City of Phoenix for three other significantly sized sites in the immediately surrounding area, Arizona State Land Department (ASLD) Supplier Site A, ASLD Supplier Site B, and ASLD Supplier Site C. Following the rezoning, development rights for the three supplier sites were acquired by MREG DV Land LLC (aka Mack Real Estate (or, “Mack”) for whom CivTech has since completed an update to the original TIS for the largest and most proximate to the Deer Valley 30 sites, Supplier Site A. Supplier Site A borders the south side of the Alameda Road alignment and extends west to 19<sup>th</sup> Avenue, east to 7<sup>th</sup> Avenue and south to Sara Bass Place (the halfway point between Alameda Road and Pinnacle Peak Road. The updated Supplier Site A TIS accounts for a more trip generation intense land use plan than did the original TIS for that site. The updated TIS for Supplier Site A was recently approved by the City of Phoenix.

The relevance of Supplier Site development plans to the Deer Valley TIS is that it is anticipated that a significant portion of Supplier Site development and all of the associated off-site roadway and traffic control improvements will have occurred by the time the first building on either of the Deer Valley 30 sites is ready to open.

## STUDY REQUIREMENTS

The content of this report, and the approach and methodology used to reach the conclusions documented in this report are consistent with guidance provided in *City of Phoenix Street Planning and Design Guidelines Section 12.1.2 Traffic Impact Studies*, December 2009.

## STUDY AREA

The study area considered in this analysis includes the following intersections:

- 19<sup>th</sup> Avenue and Happy Valley Road
- 19<sup>th</sup> Avenue & Parkview Lane
- 19<sup>th</sup> Avenue and Alameda Road
- 15<sup>th</sup> Avenue and Happy Valley Road
- 7<sup>th</sup> Avenue and Happy Valley Road
- 19<sup>th</sup> Avenue and Optum Driveway
- 19<sup>th</sup> Avenue and Sarah Bass Place
- 19<sup>th</sup> Avenue and Pinnacle Peak Road
- 7<sup>th</sup> Avenue and Pinnacle Peak Road

## HORIZON YEARS

Per the above-referenced, City of Phoenix *Traffic Impact Studies* guidance, a traffic impact study for a development project anticipated to generate fewer than 1,000 trips during either peak hour is generally only required to analyze existing conditions and a single horizon year, typically the opening year or anticipated earliest year in which full buildout will be reached. As will be discussed in more detail later in this report, Deer Valley 30 is expected to generate fewer than 500 trips during either peak hour and could very likely be fully developed and occupied by 2024. For this reason and for consistency with the Supplier Site A TIS, this report documents peak hour level of service analysis for a single horizon year of 2024, the same horizon year for which analysis is documented in the City of Phoenix-approved Supplier Site A TIS. Horizon year analysis has been performed for each of two pairs of horizon year scenarios, a pair of Horizon Year Scenario A's and a pair of Horizon Year Scenario B's". All horizon year scenarios share the following characteristics:

3. The year is 2024.
4. Local and regional growth collectively, exclusive of that which may be caused by development of what are referred to throughout this report as the "Supplier Site" projects, has caused traffic volumes within the study area to grow at an average annual rate of 3.6% since 2021.

The primary difference between the Scenario A's and the Scenario B's is the extent to which the Supplier Site projects have proceeded in advance of Deer Valley 30 development. In other words,

3. both Build Scenario A and No-Build Scenario A have Supplier Site traffic accounted for in the background traffic volumes and have anticipated Supplier Site off-site roadway improvements accounted for in the assumed pre-existing roadway network; and
4. neither Build Scenario B nor No-Build Scenario B has any Supplier Site traffic accounted for in its background traffic volumes nor any study area roadway improvements by others accounted for in its assumed pre-existing roadway network.

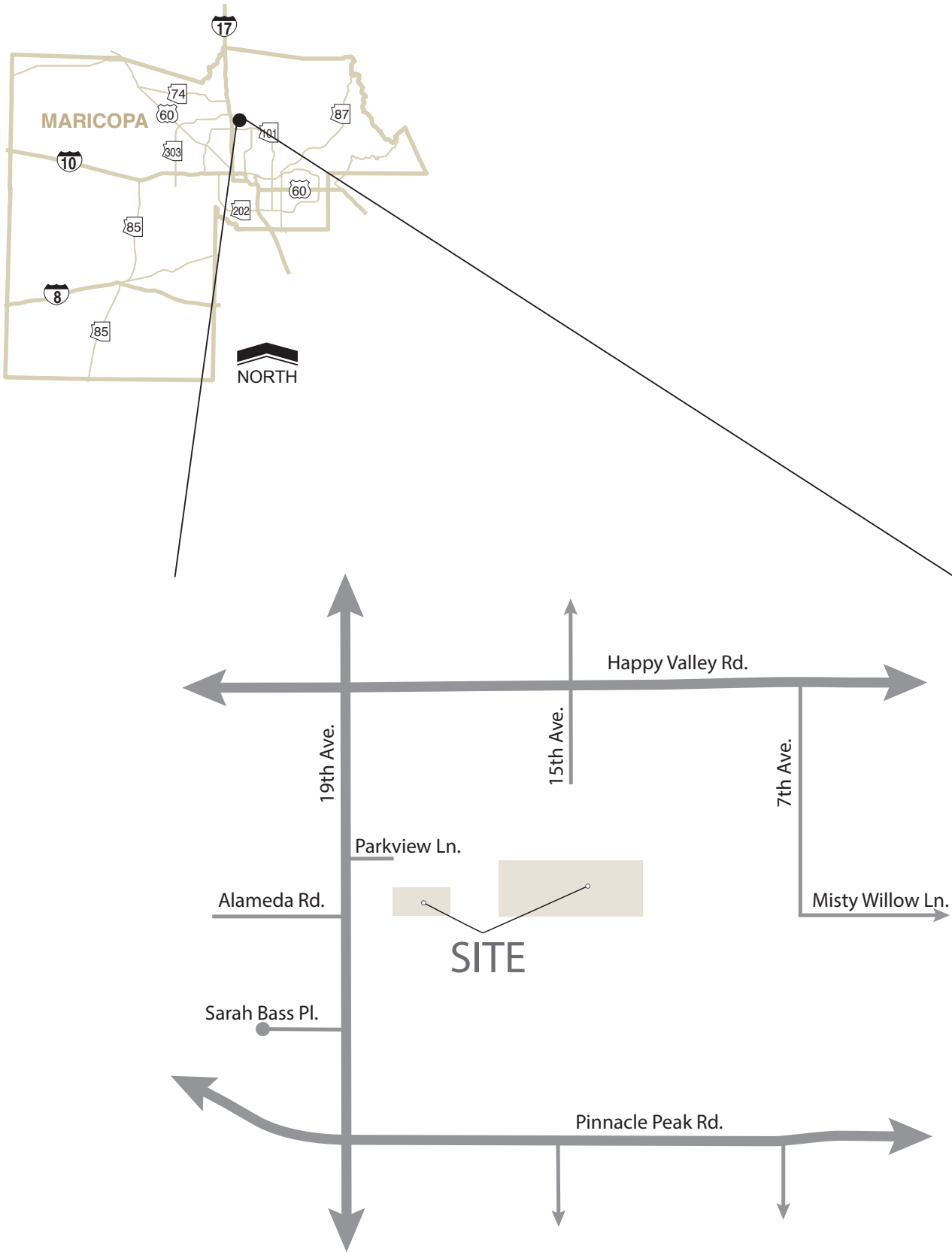
The analysis documented in this report for Scenario A reflects the following assumptions regarding changes that are anticipated to occur in conjunction with the development of Supplier Site A, prior to vertical development occurring on either of the DV30 sites:

4. It has been assumed for Scenario A that Alameda Road will have been improved to an interim two-lane, (i.e., "south side half-street") condition, from 19th Avenue to 7th Avenue.

5. It has been assumed for Scenario A that the intersection of 19th Avenue and Alameda Road will have been improved, as part of the above-cited half street improvements or otherwise, to include the full northeast and southeast quadrants of the intersection in their respective ultimate geometric configuration within the limits of the intersection corner returns.
6. It has been assumed for Scenario A that 7<sup>th</sup> Avenue will have been improved as necessary to provide at least two continuous travel lanes, one northbound lane and one southbound lane, from Happy Valley Road to Pinnacle Peak Road.

The analysis documented in this report for Scenario B reflects the assumption that all Deer Valley 30 development will be fully built out prior to any development on any Supplier Site having occurred (at least in advance of any of that development generating more than a nominal amount of traffic within the study area) and without any significant study area roadway improvements having been made by others.





**Figure 1:** Vicinity Map

## EXISTING CONDITIONS

### EXISTING LAND USE

Both Deer Valley 30 sites, the smaller and more westerly of the two (the “DV30 West” site) containing 5.14 acres and the larger and more easterly of the two (the “DV30 East” site) containing 25.71 acres, are currently undeveloped and vacant. The DV30 West site begins approximately 500 feet east of 19<sup>th</sup> Avenue and has an almost 690-foot-long Alameda Road edge. The DV30 East site begins approximately 1820 feet east of 19<sup>th</sup> Avenue, ends 1,650 feet west of 7<sup>th</sup> Avenue and has an almost 1,700-foot-long Alameda Road edge.

### SURROUNDING LAND USE

The majority of land in the immediately surrounding area is either undeveloped and vacant or developed for generally heavy industrial type uses. West of 19<sup>th</sup> Avenue between Pinnacle Peak Road and Happy Valley Road development begins to generally transition to lighter industrial/business park use, followed by (further to the west and closer to I-17/Black Canyon Freeway) further transition to commercial retail, office and multi-family residential uses. North of Happy Valley Road and west of 19<sup>th</sup> Avenue is the USAA corporate office campus and south of Pinnacle Peak Road is generally more light industrial and business park development, south of which is Deer Valley Airport.

### EXISTING ROADWAY NETWORK

The existing roadway network within the study area includes the following streets and intersections.

**Pinnacle Peak Road** is a generally east-west aligned arterial street that is continuous within the City of Phoenix from 59<sup>th</sup> Avenue on the west to 7<sup>th</sup> Street on the east, and then again, east of the Central Arizona Project (CAP) Canal from Cave Creek Dam Road to Scottsdale Road. Between I-17 and 19<sup>th</sup> Avenue, Pinnacle Peak Road provides two travel lanes in each direction separated by a two-way left turn lane (TWLTL), and bike lanes on both sides. Between 19<sup>th</sup> Avenue and Central Avenue, Pinnacle Peak Road narrows to a single travel lane in each direction, only until it crosses Central Avenue where it flares back out to provide a TWLTL all the way to 7<sup>th</sup> Street. Pinnacle Peak Road provides direct access to the I-17 Black Canyon Freeway via a grade separated interchange, a mile west of 19<sup>th</sup> Avenue. Within the study area, the posted speed limit along Pinnacle Peak Road is 35 miles per hour (mph) east of 19<sup>th</sup> Avenue, and 40 mph hour to the west.

**Happy Valley Road** is an east-west aligned major arterial road within the City of Phoenix. There are three lanes and a bike lane in each direction of travel separated by a raised median. East of 19<sup>th</sup> Avenue the raised median transitions into a TWLTL and the road narrows to two lanes in each direction of travel. East of 17<sup>th</sup> Avenue, Happy Valley Road narrows even further to one lane in each direction of travel with no median or TWLTL. Happy Valley Road begins just west of the Loop 303 and continues east until curving to the south and transitioning into 7<sup>th</sup> Street. Within the vicinity of the site, the posted speed limit along Happy Valley Road is 45 mph.

**19<sup>th</sup> Avenue** is a north-south aligned major arterial roadway that is continuous as 19<sup>th</sup> Avenue from Dobbins Road to the south, to Jomax Road to the north and then, as North Valley Parkway, from Jomax Road to the Westland Road (half-mile south of Carefree Highway) to the north. Within the study area, 19<sup>th</sup> Avenue generally provides three travel lanes in the northbound direction, two travel lanes in the southbound direction, a two-way left turn lane (TWLTL) between travel directions, and striped bike lanes on both sides. The posted speed limit along 19<sup>th</sup> Avenue within the study area is 45 mph. 19<sup>th</sup> Avenue provides access to the Loop 101/Agua Fria Freeway via a grade-separated interchange, approximately two miles south of Pinnacle Peak Road.

**15<sup>th</sup> Avenue** is a north-south aligned minor collector roadway that, exists within a dedicated public right of way, from Pinnacle Peak Road south to Williams Drive (north side of Deer Valley Airport) and from 900 feet north of the DV 30 East site, north to Parsons Road. North of Parsons Road, 15<sup>th</sup> Avenue continues across private property to just south of the Central Arizona Project (CAP) canal. 15<sup>th</sup> Avenue is not striped within the study area. The posted speed limit along 15<sup>th</sup> Avenue within the study area is 25 mph. 15<sup>th</sup> Avenue is represented as a future minor collector street within the study area where it does not exist today, including across both the DV 30 East site and the Supplier Site A site to the south.

**7<sup>th</sup> Avenue** is a north-south aligned roadway that exists within the study area from Happy Valley Road on the north (just south of the CAP canal) to a quarter-mile south of the Alameda Road alignment on the south, and again for the first 850 feet +/- south of Pinnacle Peak Road, just north of Deer Valley Airport. The speed limit is no posted along either of these segments. While other existing segments of 7<sup>th</sup> Avenue are functionally classified by the City of Phoenix as arterial streets, the study area segments of 7<sup>th</sup> Avenue are not recognized on the most current version of the City's Street Classification Map.

**Sarah Bass Place** is an east-west aligned local commercial street within the study area that runs from 19<sup>th</sup> Avenue on the east to a cul-de-sac turnaround, approximately 850 feet to the west. Sara Bass Place provides a single travel lane (though they are not striped) in each direction and allows on-street parking along both sides. There are no speed limit signs along this segment.

**Alameda Road** is an east-west aligned, collector street within the study area. It currently runs from 23<sup>rd</sup> Avenue on the west to 19<sup>th</sup> Avenue on the east and again (as Misty Willow Lane), from 7<sup>th</sup> Avenue on the west to Central Avenue on the east. There are no speed limit signs along either study area segment of Alameda Road/Misty Willow Lane.

**Parkview Lane** is an east-west aligned local street within a dedicated public right of way from 19<sup>th</sup> Avenue to a point approximately 900 feet to the east of 19<sup>th</sup> Avenue. From 900 east of 19<sup>th</sup> Avenue to approximately 150 feet west of the DV30 East site, Parkview Lane exists as minimally improved, varying width roadway. Parkview Lane does not exist at all from 150 feet west of the DV 30 East site to 7<sup>th</sup> Avenue. There are no speed limit signs along the study area segment of Parkview Lane.

## EXISTING INTERSECTION CONFIGURATIONS

The intersection of **19<sup>th</sup> Avenue and Pinnacle Peak Road** is signalized with permissive-protected left turn phasing on the northbound approach and permissive (only) left turn phasing on the southbound, eastbound and westbound approaches. The northbound approach consists of a dedicated left turn lane, two through lanes, a shared through/right turn lane and a bicycle lane. The southbound approach consists of a dedicated left turn lane, one through lane, a shared through/right turn lane and a bicycle lane. The eastbound approach consists of a dedicated left turn lane, one through lane, a shared through/right turn lane and a bicycle lane. The westbound approach consists of a dedicated left turn lane, one through lane and a shared through/right turn lane. There are signalized pedestrian crosswalks across all legs of the intersection.

The intersection of **19<sup>th</sup> Avenue and the Optum Driveway** is stop sign controlled on the eastbound approach. The northbound approach consists of a dedicated left turn lane, three through lanes and a bicycle lane. The southbound approach consists of one through lane, one shared through/right turn lane and a bicycle lane. The eastbound approach consists of one shared left/right turn lane.

The intersection of **19<sup>th</sup> Avenue and Parkview Lane/Today's Patio Driveway** is stop sign controlled on the eastbound and westbound approaches. The westbound approach consists of a single right turn egress-only lane. The northbound approach consists of a two way left turn lane (TWLTL), two through lanes, a shared through/right turn lane and a bicycle lane. The southbound approach consists of a dedicated left turn lane, two through lanes and a bicycle lane. The eastbound approach consists of a single shared left/right turn lane.

The intersection of **19<sup>th</sup> Avenue and Sarah Bass Place** is stop sign controlled on the eastbound approach. The northbound approach consists of a dedicated left turn lane, three through lanes and a bicycle lane. The southbound approach consists of a through lane, a shared through/right turn lane and a bicycle lane. The west leg is not currently striped; however it is wide enough to provide separate eastbound left turn and eastbound right turn lanes in addition to a single westbound travel lane immediately west of 19<sup>th</sup> Avenue.

The intersection of **19<sup>th</sup> Avenue and Alameda Road** is stop sign controlled on the eastbound approach. The northbound approach consists of a dedicated left turn lane, three through lanes and a bicycle lane. The southbound approach consists of a through lane, a shared through/right turn lane and a bicycle lane. The eastbound approach is not explicitly striped, however once fully improved to its ultimate collector street configuration, there will be adequate pavement width to provide two eastbound approach lanes, one striped as a left turn only lane and the other to function as a shared through/right turn lane.

The intersection of **19<sup>th</sup> Avenue and Happy Valley Road** is signalized intersection with protected/permissive left turn phasing on all approaches. The northbound and southbound approaches are striped to designate a single exclusive left turn lane, two through lanes, a bicycle lane and a single exclusive right turn lane. The eastbound and westbound approaches are each striped to designate a single exclusive left turn lane, two through lanes, a shared through/right turn lane and a bicycle lane. There pedestrian crosswalks across all four legs of the intersection.

The intersection of **7<sup>th</sup> Avenue and Happy Valley Road** is an unsignalized intersection with stop sign control on the northbound approach. The northbound approach is not currently striped, however there is adequate pavement width on the south leg to provide an exclusive left turn lane and an exclusive right turn lane on the northbound approach. The eastbound approach striped to provide a shared through/right turn lane and a bicycle lane. The westbound approach is striped to provide a shared through/left turn lane and a bicycle lane.

The intersection of **7<sup>th</sup> Avenue and Pinnacle Peak Road** is unsignalized with stop sign control on the northbound approach. The northbound approach consists of a single shared left turn/right turn lane. The eastbound approach consists of one through lane and a dedicated right turn lane. The westbound approach consists of a shared left turn/through lane.

The intersection of **15<sup>th</sup> Avenue and Happy Valley Road** is unsignalized with stop sign control on the northbound and southbound approaches only. All four approaches provide a single shared left turn/through/right turn lane. The north leg of the intersection is not currently paved.

Existing intersection lane configurations and traffic controls are illustrated in **Figure 2**.

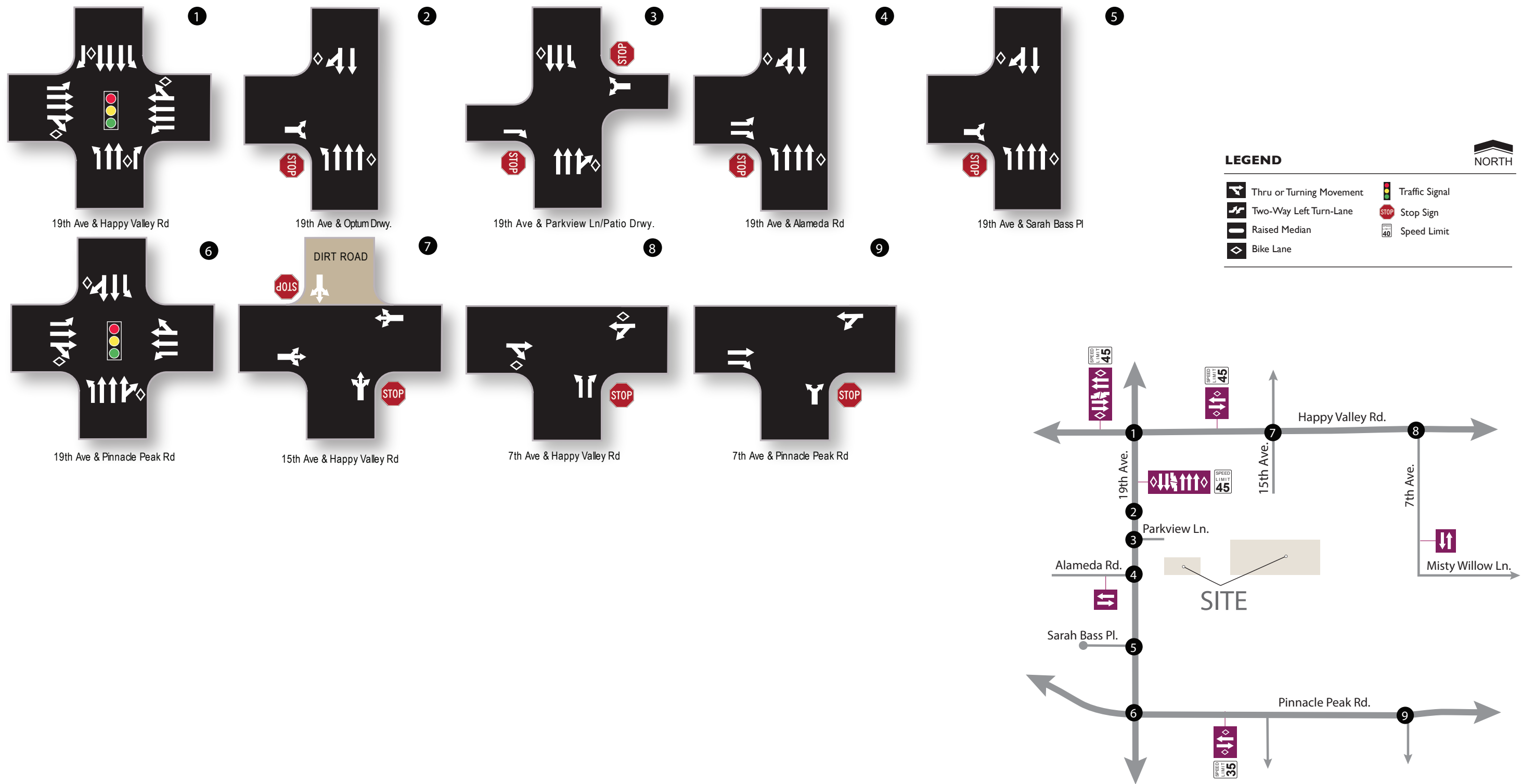
## EXISTING TRAFFIC VOLUMES

With permission from Mack Real Estate, traffic count data collected by Field Data Services of Arizona, Inc. for the ASLD/Mack Supplier Site A TIS was re-used for the Deer Valley 30 TIS. The utilized turning movement counts were recorded at the following nine (9) study intersections, from 7:00-9:00 AM and 4:00-6:00 PM on Thursday, July 15, 2021:

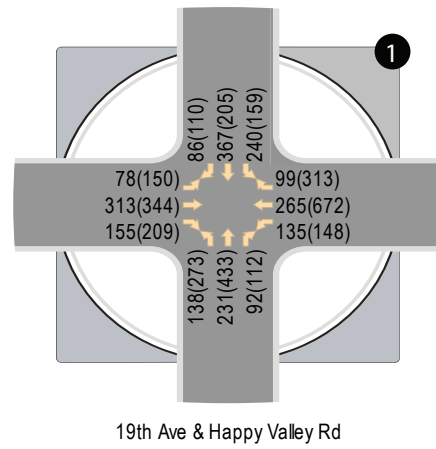
- 19<sup>th</sup> Avenue and Happy Valley Road
- 19<sup>th</sup> Avenue & Parkview Lane
- 19<sup>th</sup> Avenue and Alameda Road
- 15<sup>th</sup> Avenue and Happy Valley Road
- 7<sup>th</sup> Avenue and Happy Valley Road
- 19<sup>th</sup> Avenue and Optum Driveway
- 19<sup>th</sup> Avenue and Sarah Bass Place
- 19<sup>th</sup> Avenue and Pinnacle Peak Road
- 7<sup>th</sup> Avenue and Pinnacle Peak Road

Due to the COVID-19 pandemic, traffic patterns have changed and traffic volumes were lower in 2021 than what is typically seen in this area. Many of the effects of COVID-19 have diminished in this area, however, in order to remain conservative and in recognition also that most local schools were on summer break in July, a 15% adjustment factor was applied to the traffic count data recorded at the above-referenced intersections.

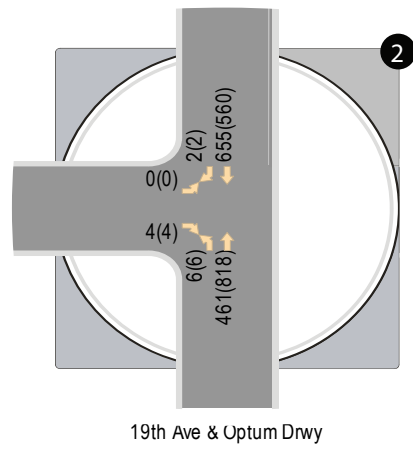
In addition to the traffic count data collected in July 2021, peak hour traffic count data was recorded in October 2021 at two additional intersections along 19<sup>th</sup> Avenue between Happy Valley Road and Alameda Road, one at 19<sup>th</sup> Avenue and Parkview Lane/Today's Patio driveway just north of Alameda Road and the other at 19<sup>th</sup> Avenue and the Optum driveway, just north of Parkview Lane. The October counts were not adjusted and were used as a check against the adjusted July counts to determine whether further adjustments were warranted, as well as to balance volumes between intersections along 19<sup>th</sup> Avenue. The resultant adjusted and balanced traffic volumes used for the remainder of this analysis are presented in **Figure 3**. Unadjusted traffic volume data obtained for this study have been included in **Appendix B**.



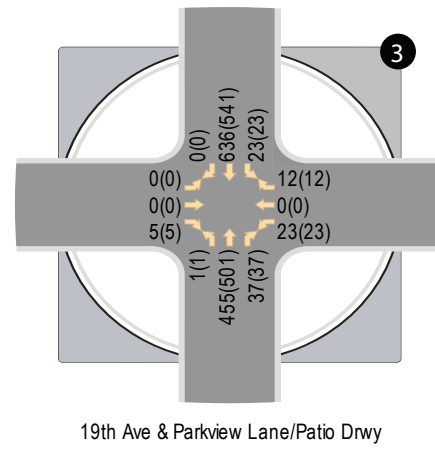
**Figure 2: Existing Lane Configurations and Traffic Controls**



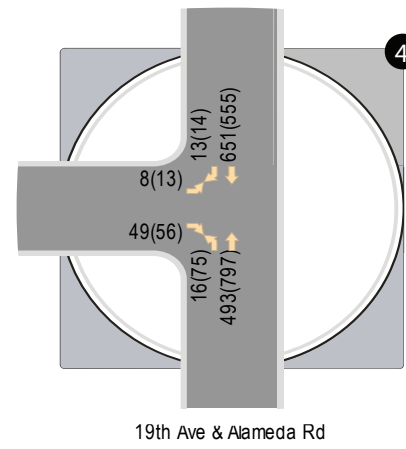
19th Ave & Happy Valley Rd



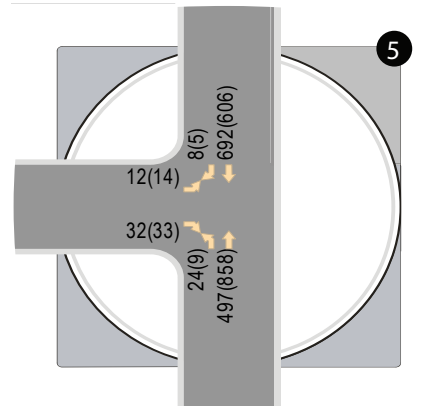
19th Ave & Optum Drwy



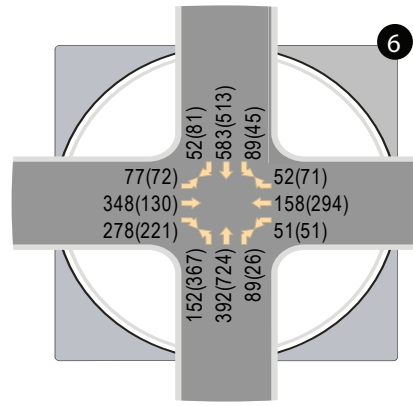
19th Ave & Parkview Lane/Patio Drwy



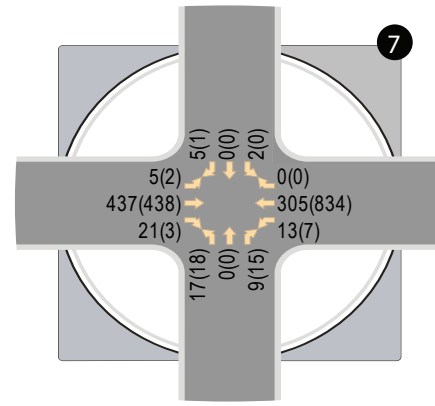
19th Ave & Alameda Rd



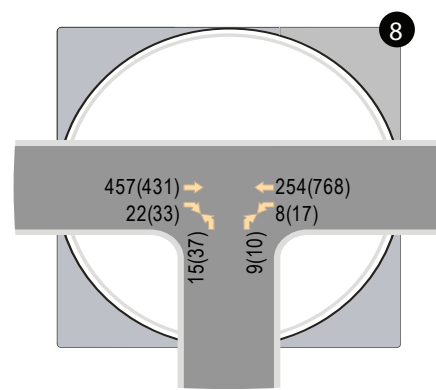
19th Ave & Sarah Bass Pl



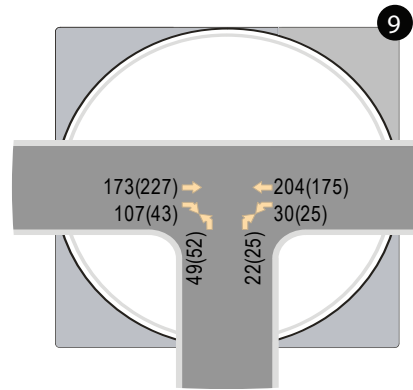
19th Ave & Pinnacle Peak Rd



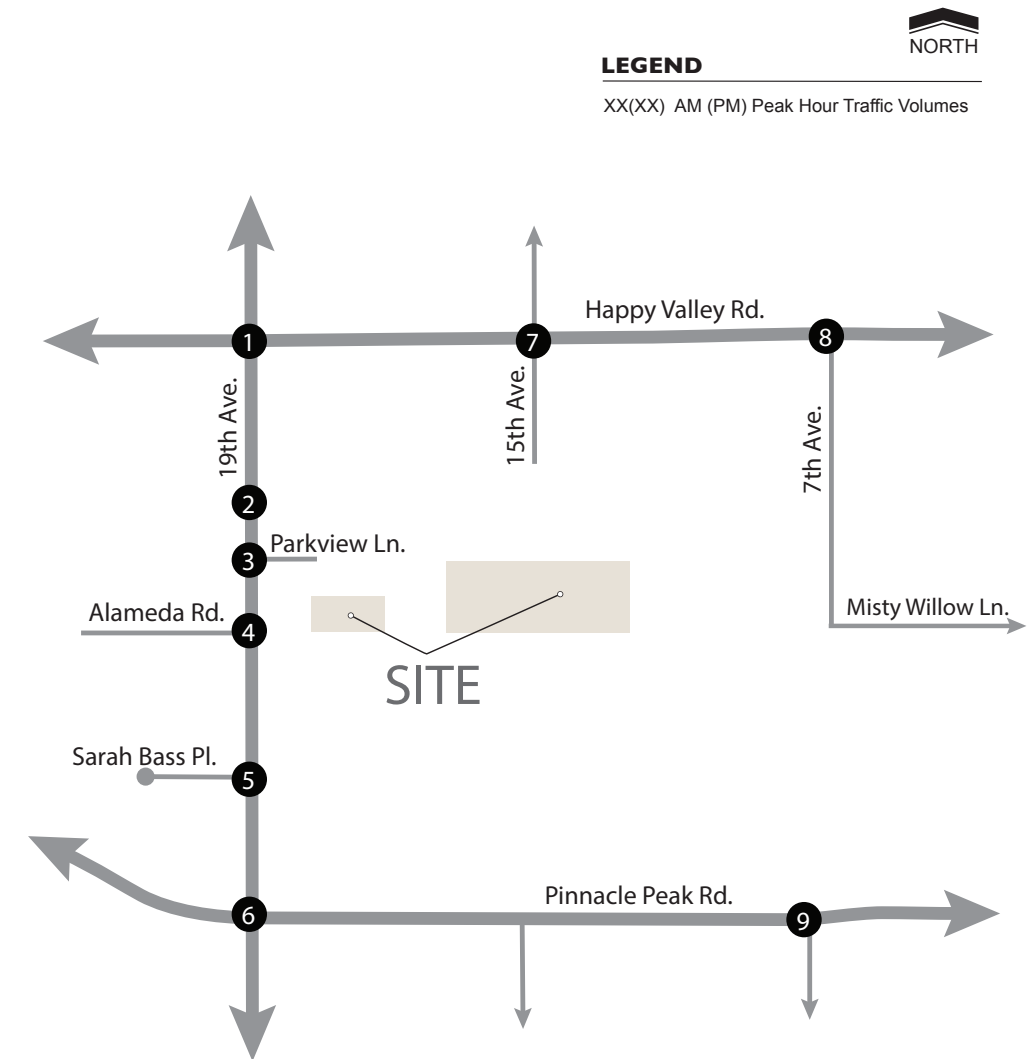
15th Ave & Happy Valley Rd



7th Ave & Happy Valley Rd



7th Ave & Pinnacle Peak Rd



**Figure 3: Existing Traffic Volumes**

## EXISTING CAPACITY ANALYSIS

Peak hour capacity analyses have been conducted for the study intersections based on existing intersection configurations and traffic volumes. All intersections have been analyzed using the methodologies presented in the *Highway Capacity Manual (HCM), Special Report 209*, and Updated 2016 and using Synchro software, version 11.0 under the HCM 6<sup>th</sup> edition (2016) methodology.

The concept of level of service (LOS) uses qualitative measures that characterize operational conditions within the traffic stream. The individual levels of service are described by factors that include speed, travel time, freedom to maneuver, traffic interruptions, and comfort and convenience. Six levels of service are defined for each type of facility for which analysis procedures are available. They are given letter designations A through F, with LOS A representing the best operating conditions and LOS F the worst. Each level of service represents a range of operating conditions. Levels of service for intersections are defined within ranges of average control delay per vehicle, the number of seconds a vehicle can expect to wait due to the presence of a traffic control device. **Table 1** lists the level of service criteria for signalized and unsignalized intersections, respectively.

**Table 1 – Level of Service Criteria for Controlled Intersections**

| Level-of-Service | Signalized<br>Control Delay (sec/veh) | Unsignalized<br>Control Delay (sec/veh) |
|------------------|---------------------------------------|---|
| A                | ≤ 10                                  | ≤ 10                                    |
| B                | > 10-20                               | > 10-15                                 |
| C                | > 20-35                               | > 15-25                                 |
| D                | > 35-55                               | > 25-35                                 |
| E                | > 55-80                               | > 35-50                                 |
| F                | > 80 (or v/c > 1)                     | > 50 (or v/c > 1)                       |

*Source: Exhibits 19-8, 20-2, 21-8, and 22-8, Highway Capacity Manual, 6<sup>th</sup> Edition (2016)*

Synchro 11.0 software calculates the LOS per the HCM 6<sup>th</sup> edition (2016) methodology. The 6<sup>th</sup> edition HCM documents the signalized LOS calculation methodology which takes into account lane geometry, traffic volumes and cycle length/phasing to compute LOS. Synchro analysis worksheets report individual movement delay/LOS and overall delay/LOS for signalized intersections; unsignalized intersection worksheets report the worst-case delay/LOS and the average overall intersection delay. Signal timing for the existing signalized intersections was obtained from the City of Phoenix. Results of the existing level of service analyses are shown in **Table 2** for both AM and PM peak hours. The existing conditions analysis worksheets and existing signal timing sheets have been included in **Appendix C**.



**Table 2 – Existing Peak Hour Levels of Service**

| ID | Intersection   | Intersection Control | Approach/<br>Movement | Existing LOS   |
|----|--|----------------------|-----------------------|----------------|
|    |  |                      |                       | AM (PM)        |
| 1  | 19 <sup>th</sup> Avenue & Happy Valley Road            | Signal               | NB                    | B (B)          |
|    |  |                      | SB                    | B (B)          |
|    |  |                      | EB                    | B (C)          |
|    |  |                      | WB                    | C (C)          |
|    |  |                      | <b>Overall</b>        | <b>B (C)</b>   |
| 2  | 19 <sup>th</sup> Avenue & Optum Driveway               | 1-way stop (EB)      | NB Left<br>EB Shared  | A (A)<br>B (B) |
| 3  | 19 <sup>th</sup> Avenue & Parkview Lane/Patio Driveway | 2-way stop (EB/WB)   | NB Left               | A (A)          |
|    |  |                      | SB Left               | B (B)          |
|    |  |                      | EB Shared             | B (B)          |
|    |  |                      | WB Shared             | C (C)          |
| 4  | 19 <sup>th</sup> Avenue & Alameda Road                 | 1-way stop (EB)      | NB Left               | A (A)          |
|    |  |                      | EB Left               | C (C)          |
|    |  |                      | EB Right              | B (B)          |
| 5  | 19 <sup>th</sup> Avenue & Sarah Bass Place             | 1-way stop (EB)      | NB Left               | A (A)          |
|    |  |                      | EB Left               | C (C)          |
|    |  |                      | EB Right              | B (B)          |
| 6  | 19 <sup>th</sup> Avenue & Pinnacle Peak Road           | Signal               | NB                    | B (D)          |
|    |  |                      | SB                    | C (D)          |
|    |  |                      | EB                    | B (B)          |
|    |  |                      | WB                    | B (B)          |
|    |  |                      | <b>Overall</b>        | <b>C (C)</b>   |
| 7  | 15 <sup>th</sup> Avenue & Happy Valley Road            | 2-way stop (NB/SB)   | NB Shared             | C (D)          |
|    |  |                      | SB Shared             | B (C)          |
|    |  |                      | EB Left               | A (A)          |
|    |  |                      | EB Through            | A (A)          |
|    |  |                      | WB Left               | A (A)          |
|    |  |                      | WB Through            | A (A)          |
|    |  |                      |                       |                |
| 8  | 7 <sup>th</sup> Avenue & Happy Valley Road             | 1-way stop (NB)      | NB Shared             | B (D)          |
|    |  |                      | WB Left               | A (A)          |
|    |  |                      | WB Through            | A (A)          |
| 9  | 7 <sup>th</sup> Avenue & Pinnacle Peak Road            | 1-way stop (NB)      | NB Shared             | B (B)          |
|    |  |                      | WB Left               | A (A)          |
|    |  |                      | WB Through            | A (A)          |

The results of the existing conditions analysis summarized in **Table 2** indicate that all study intersections operate with acceptable levels of service (LOS D or better).

## PROPOSED DEVELOPMENT

### SITE LOCATION

The site consists of two parcels located north of the Alameda Road alignment and east of 19<sup>th</sup> Avenue in the City of Phoenix, Arizona.

### SITE DENSITY/INTENSITY

The site consists of approximately 360,800 square feet (SF) of industrial building area. The western parcel consists of a single building with 70,200 SF. The eastern parcel consists of two industrial buildings totaling 106,200 SF and 184,400 SF respectively. The two parcels do not connect.

### SITE ACCESS

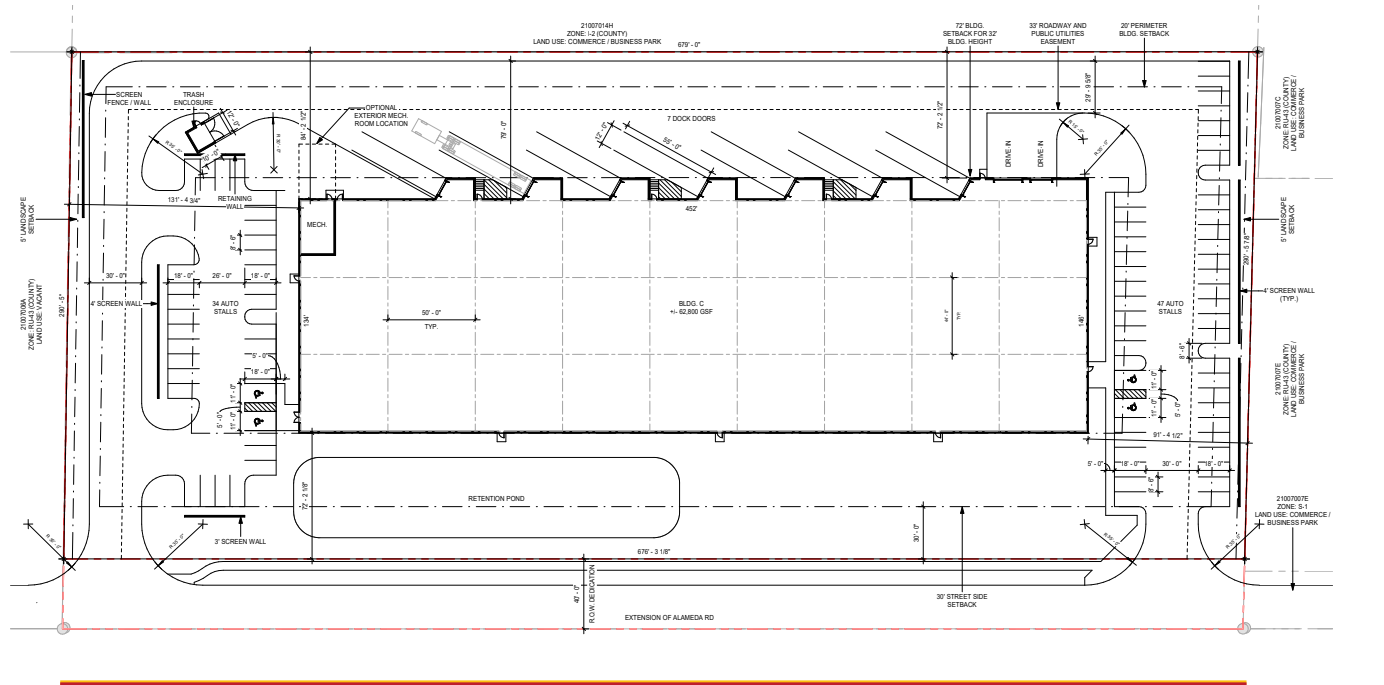
The DV30 West site development will include construction of two full movement driveways along Alameda Road. The DV30 East site development will include construction of two full movement driveways along Alameda Road, and four full movement driveways, two on each side of the street, along 15<sup>th</sup> Avenue.

The DV30 site-generated traffic volumes are low enough that a single point of access to and from the existing arterial street network is all that is needed until such time as other development occurs along Alameda Road, to accommodate all the site traffic without causing excessive delays at any study intersection.

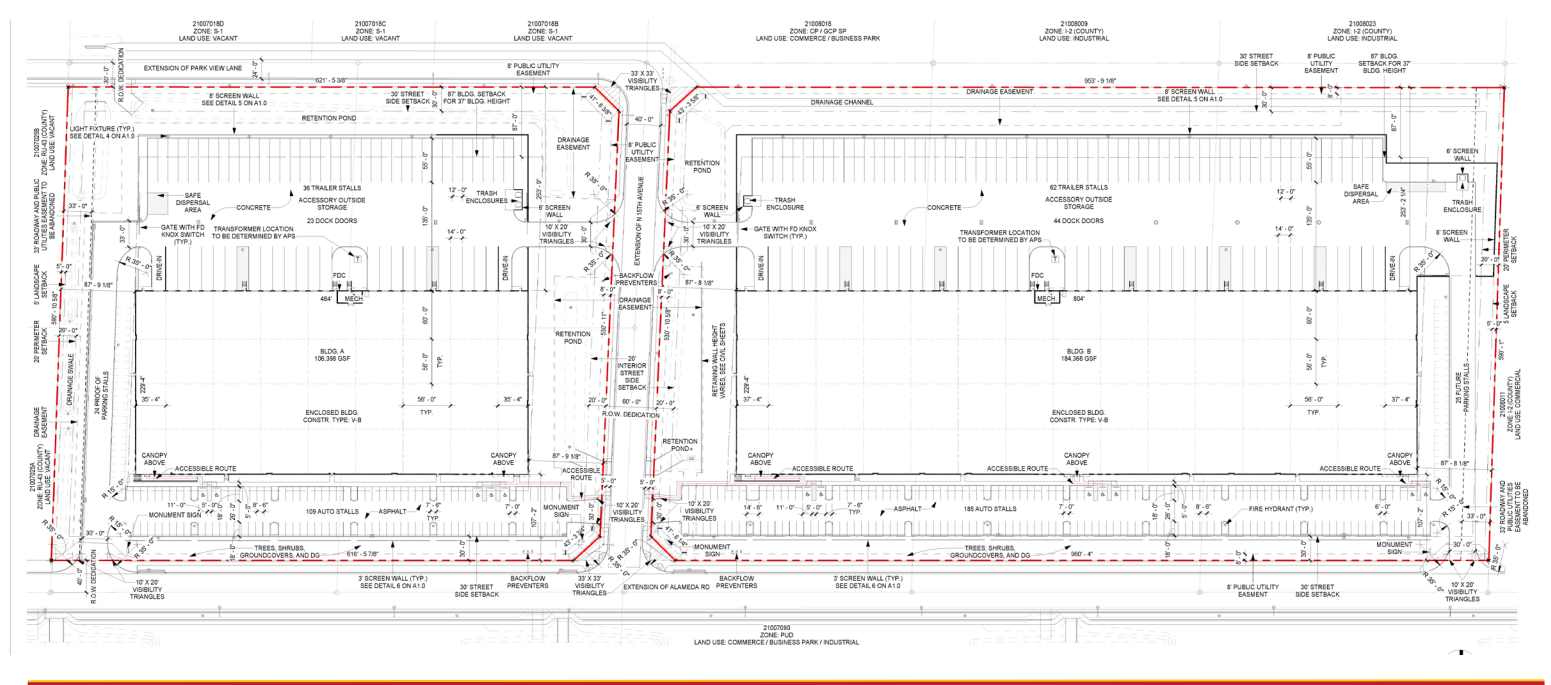
Supplier Site A is anticipated to construct Alameda Road further to the east to connect with 7<sup>th</sup> Avenue. Although this connection is not necessary for the DV30 site volumes alone, since Supplier Site A will also be contributing traffic to the intersection of 19<sup>th</sup> Avenue and Alameda Road, this extension of Alameda Road will allow for alternate routes for both sites. 15<sup>th</sup> Avenue currently exists from Happy Valley and extends approximately 0.3 miles south. The 15<sup>th</sup> Avenue alignment will be constructed on-site; however, it will not connect to the existing alignment since the anticipated site volumes generated by the Deer Valley 30 development are low and the access along Alameda Road along with the improvements to 7<sup>th</sup> Avenue provided by the Supplier Site A development will accommodate the site generated volumes.

The current site plans for Deer Valley 30 are presented in in **Figure 4**.

**West Site**



**East Site**



\* Gross Acreage, before dedications

**Figure 4: Site Plan and Access**

## TRIP GENERATION

The potential trip generation for the proposed development was estimated utilizing the Institute of Transportation Engineers (ITE) *Trip Generation Manual, 10<sup>th</sup> Edition* and *Trip Generation Handbook, 3<sup>d</sup> Edition*. The ITE *Trip Generation Manual* contains data collected by various transportation professionals for a wide range of different land uses. The data are summarized in the report and average rates and equations have been established that correlate the relationship between an independent variable that describes the development size and generated trips for each categorized land use. The report provides information for daily and peak hour trips.

Deer Valley 30 will consist of three industrial buildings and each building will consist of some dedicated office space. The ITE land use code (LUC) used for the industrial portion of each building is LUC 110 for General Light Industrial and the LUC for the office space is LUC 710 for General Office Building. The anticipated trip generation is summarized in **Table 3** Detailed trip generation calculations are provided in **Appendix D**.

**Table 3 – Trip Generation**

| Proposed Use                               | ITE LUC | Size    | Units | Weekday Trips |              |           |              |           |            |            |
|--|---------|---------|-------|---------------|--------------|-----------|--------------|-----------|------------|------------|
|  |         |         |       | Daily         | AM Peak Hour |           | PM Peak Hour |           |            |            |
|  |         |         |       | Total         | In           | Out       | Total        | In        | Out        | Total      |
| <b>Building A &amp; B (DV30 East Site)</b> |         |         |       |               |              |           |              |           |            |            |
| General Light Industrial                   | 110     | 261,540 | SF    | 1,050         | 80           | 11        | 91           | 9         | 63         | 72         |
| General Office                             | 710     | 29,060  | SF    | 320           | 46           | 8         | 54           | 6         | 29         | 35         |
| <b>Building C (DV 30 West Site)</b>        |         |         |       |               |              |           |              |           |            |            |
| General Light Industrial                   | 110     | 63,180  | SF    | 298           | 28           | 4         | 32           | 4         | 23         | 27         |
| General Office                             | 710     | 7,020   | SF    | 80            | 28           | 5         | 33           | 1         | 8          | 9          |
| <b>Subtotal</b>                            |         |         |       | <b>1,748</b>  | <b>182</b>   | <b>28</b> | <b>210</b>   | <b>20</b> | <b>123</b> | <b>143</b> |

As summarized in **Table 3**, Deer Valley 30 is anticipated to generate up to 1,748 vehicle trips over the course of a typical weekday, with approximately 210 of those trips occurring during the AM peak hour (182 in/28 out) and 143 trips occurring during the PM peak hour (20 in/123 out). This conclusion was reached using trip generation equations obtained from the Institute of Transportation Engineers (ITE) *Trip Generation Manual, 10<sup>th</sup> Edition* for “light industrial” and “general office” land use classifications, respectively. This approach was taken as a conservative measure because “light industrial” it has the highest peak hour trip rates of any ITE-recognized industrial land use category for which a 37-foot-tall industrial shell building would likely be appropriate, and because the general office use has peak hour trip rates that are anywhere from three to nine times those of the comparable period trip rates for light industrial uses. In short, should the ultimate uses of any of the proposed DV30 buildings be something more like a high-cube warehouse type facility, actual trip generation values will likely be considerably lower.

It should be noted that the floor area values indicated in Table 3 for Building C are collectively approximately 10% higher than the 62,800 square feet indicate on the most current site plan for the DV30 West Site, that site plan for the DV30 West Site presented in **Figure 4** of this report. This is because the values in **Table 3** were obtained from a slightly older site plan, the site plan

that was current at the time of the first TIS submittal. As a consequence, the combined total building floor area proposed for Deer Valley 30 as a whole is slightly (approximately 2%) less than that represented in **Table 3** and the trip generation potential of Deer Valley 30 as a whole is likely to be slightly lower than that indicated in **Table 3** as well.

## VEHICLE TRIP DISTRIBUTION AND ASSIGNMENT

A single trip distribution pattern was assumed for the proposed development. It is expected that the proposed development will generate trips based on future population within a 7-mile radius of the site due to the close proximity to both the I-17 and Loop 101 freeways. Future total population within a 7-mile radius of the site, as projected by the 2030 socio-economic data compiled by the Maricopa Association of Governments (MAG), was used as a basis to estimate trip distribution. The resulting trip distribution percentages for the study area are shown in **Table 4**. The trip distribution calculations are included in **Appendix E**.

**Table 4 – Site Trip Distribution**

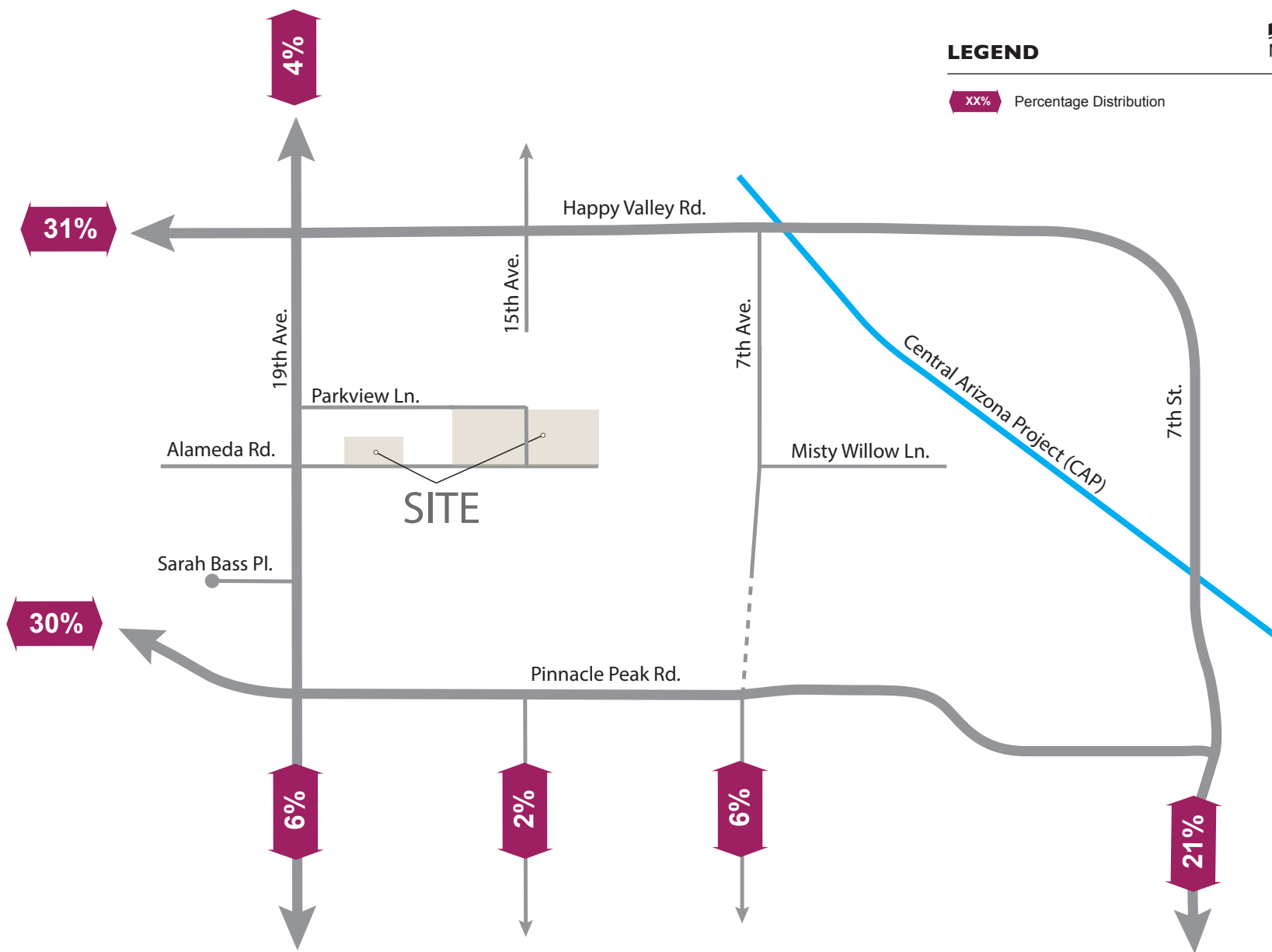
| Direction (To/From)  | Percentage  |
|--|-------------|
| North on 19 <sup>th</sup> Avenue (north of Happy Valley Road)  | 4%          |
| West on Happy Valley Road (west of 19 <sup>th</sup> Avenue)    | 31%         |
| West on Pinnacle Peak Road (west of 19 <sup>th</sup> Avenue)   | 30%         |
| South on 19 <sup>th</sup> Avenue (south of Pinnacle Peak Road) | 6%          |
| South on 15 <sup>th</sup> Avenue (south of Pinnacle Peak Road) | 2%          |
| South on 7 <sup>th</sup> Avenue (south of Pinnacle Peak Road)  | 6%          |
| South on 7 <sup>th</sup> Street (south of Pinnacle Peak Road)  | 21%         |
| <b>Total</b>   | <b>100%</b> |

**Figure 5** illustrates the trip distribution percentages noted in **Table 4** on the roadway network within the study area. The percentages presented in **Figure 5** were applied to the site trips generated to determine the AM and PM peak hour site traffic at the intersections within the study area. **Figure A** and **Figure 6B** present the resulting site generated traffic volumes for the proposed development under Horizon Year Build Scenario A .and Horizon Year Build Scenario B, respectively.

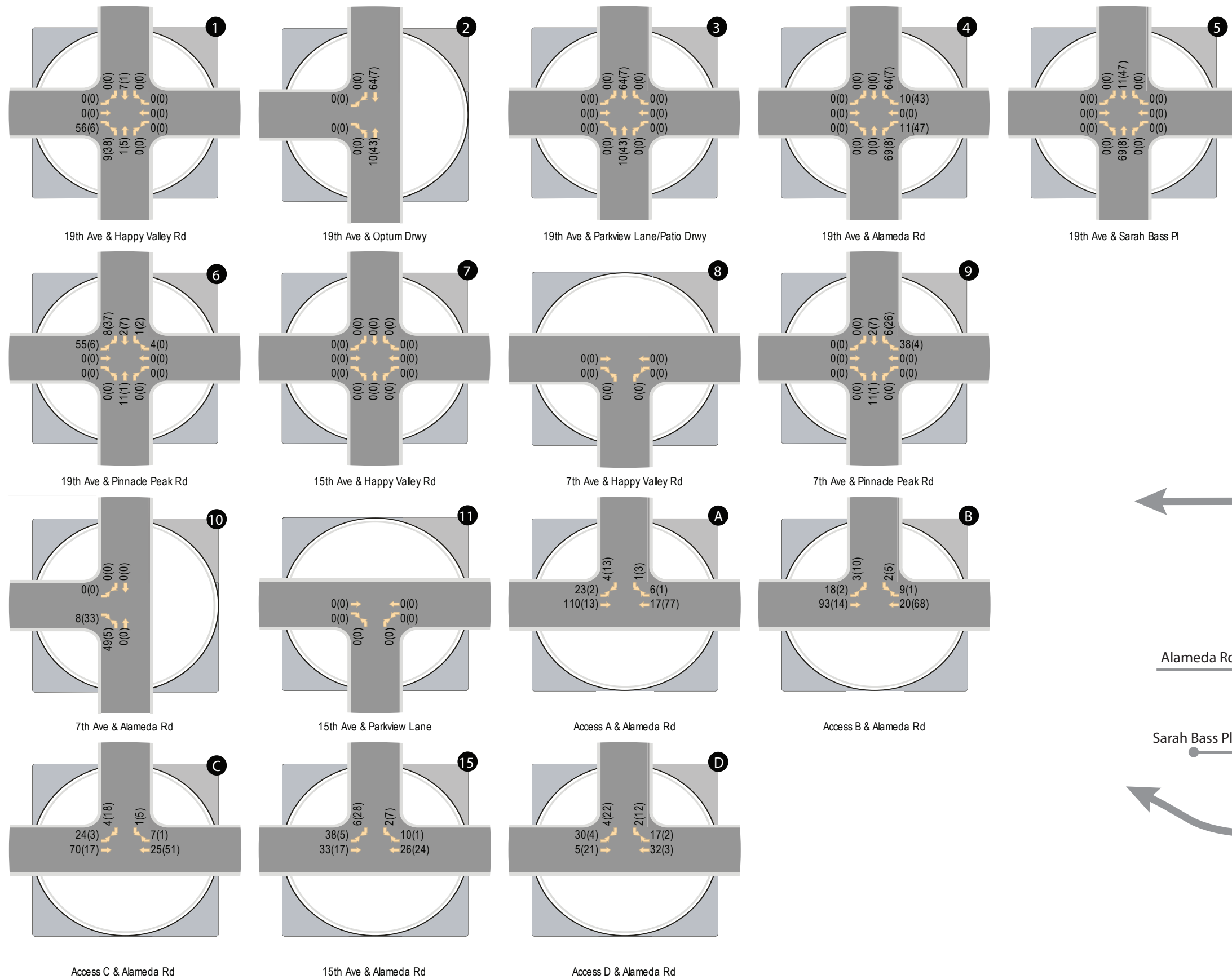


### LEGEND

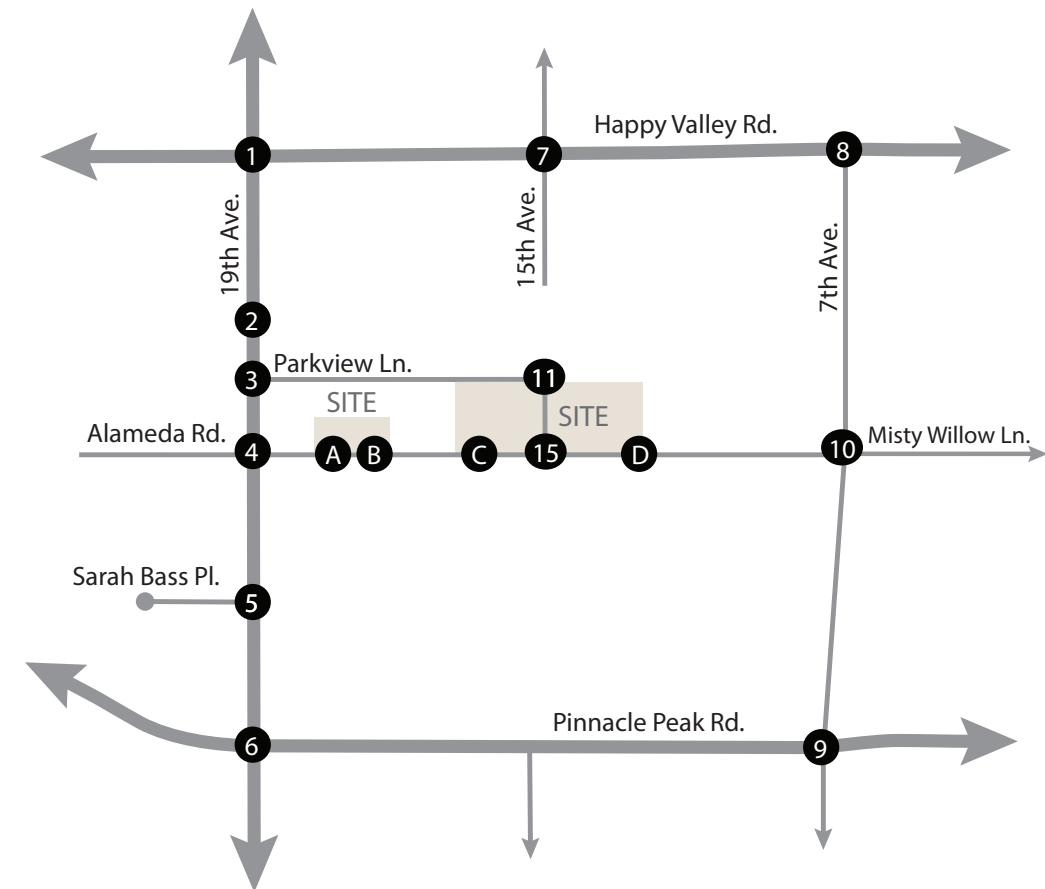
XX% Percentage Distribution



**Figure 5: Trip Distribution**

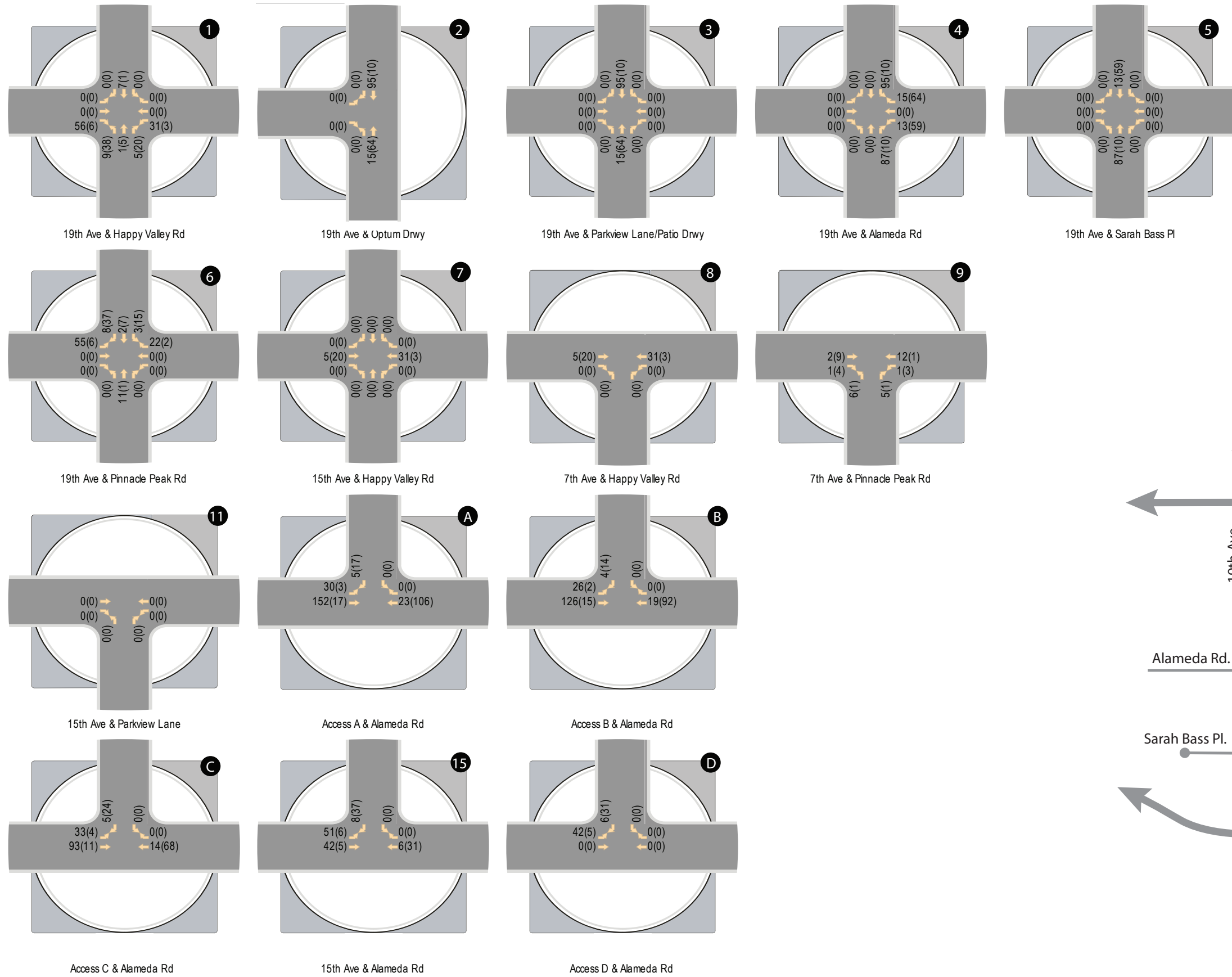


**LEGEND**  
 XX(XX) AM (PM) Peak Hour Traffic Volumes



**Figure 6A: Site Generated Traffic Volumes Scenario A**

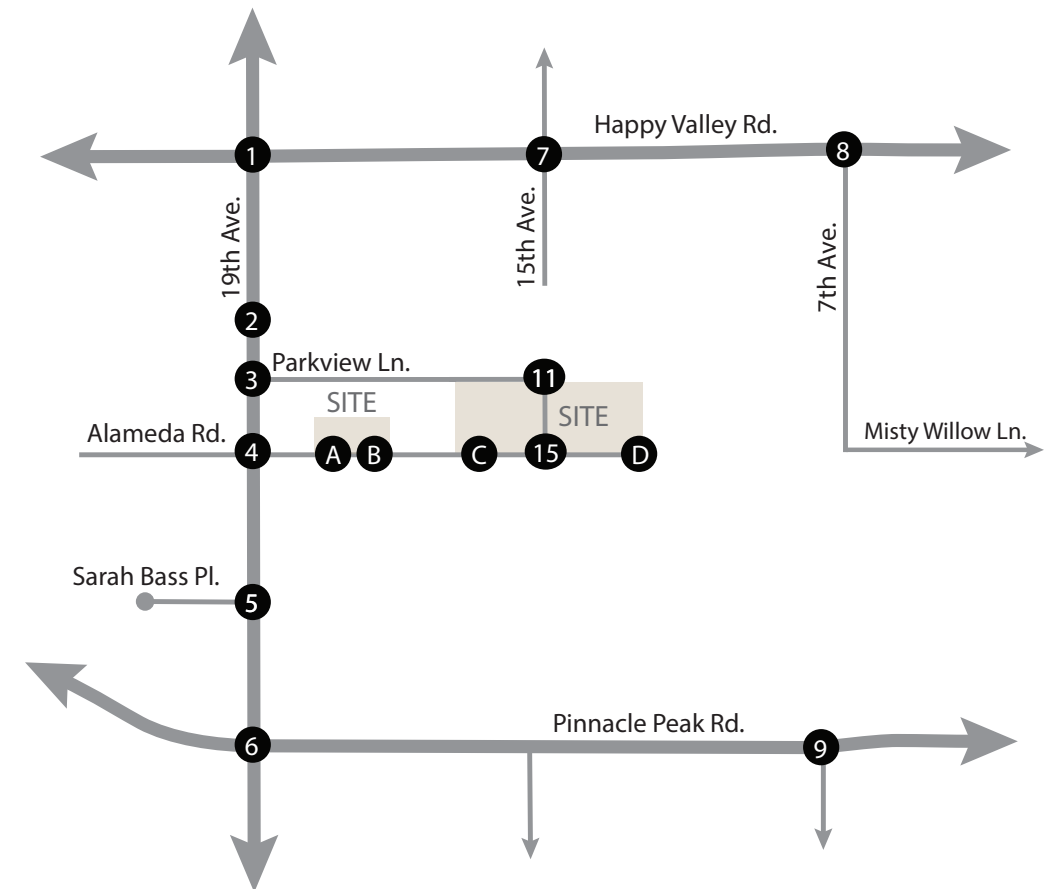




**LEGEND**

XX(XX) AM (PM) Peak Hour Traffic Volumes

NORTH



**Figure 6B: Site Generated Traffic Volumes Scenario B**

## FUTURE BACKGROUND TRAFFIC

For consistency with the manner in which existing traffic volumes were grown to establish horizon year base background traffic volumes for the ASLD/Mack Supplier Site A TIS, CivTech used an assumed average annual growth rate of 3.6% for the 2021-2024 time period, yielding a total background growth adjustment factor (the factor applied to existing traffic volumes to approximately 2024 base background traffic volumes) of 1.112. The source of information used to establish a growth rate for the Supplier Site A TIS was historical average annual daily traffic volume (AADT) data for I-17 between Deer Valley Road and Happy Valley Road obtained from the Arizona Department of Transportation (ADOT) website, <https://azdot.gov/planning/transportation-analysis/traffic-monitoring>. Base background traffic growth calculation backup documentation is provided in **Appendix F**.

In addition to accounting for regional growth cause increases in background traffic volumes between now and 2024, the traffic anticipated to be added to each study intersection by the full build-out of each of the ASLD/Mack Supplier Sites (A, B and C) was layered onto the 2024 base background traffic volumes to approximate what are effectively “all-in” 2024 background traffic volumes and the hereinafter referred to “No Build” condition for Scenario A. The land use assumptions upon which trip generation was estimated (and in turn, upon which development-generated peak hour traffic volumes were assigned to each study intersection) are briefly described below:

- For ASLD/Mack Supplier Site A, comprised of approximately the 157 acres bound by the Alameda Road alignment to the north, 7<sup>th</sup> Avenue to the east, the Sara Bass Place alignment to the south and 19<sup>th</sup> Avenue to the west, it was assumed that approximately 672,000 square feet of general office use and the trip generation equivalent of a 2.02 million square foot industrial park will have been developed on this site and become occupied by 2024,
- For ASLD/Mack Supplier Site B, comprised of 110 acres just northeast of the intersection of 7<sup>th</sup> Street and Alameda Road, it was assumed that 479,000 square feet of warehousing and the trip generation equivalent of a 1.44 million square foot industrial park will have been developed and become occupied by 2024.
- For ASLD/Mack Supplier Site C, comprised of 75 acres just southeast of the intersection of 7<sup>th</sup> Street and Pinnacle Peak Road, it was assumed that 327,000 square feet of warehousing and the trip generation equivalent of a 980,000 square foot industrial park will have been developed on this site and become occupied by 2024.

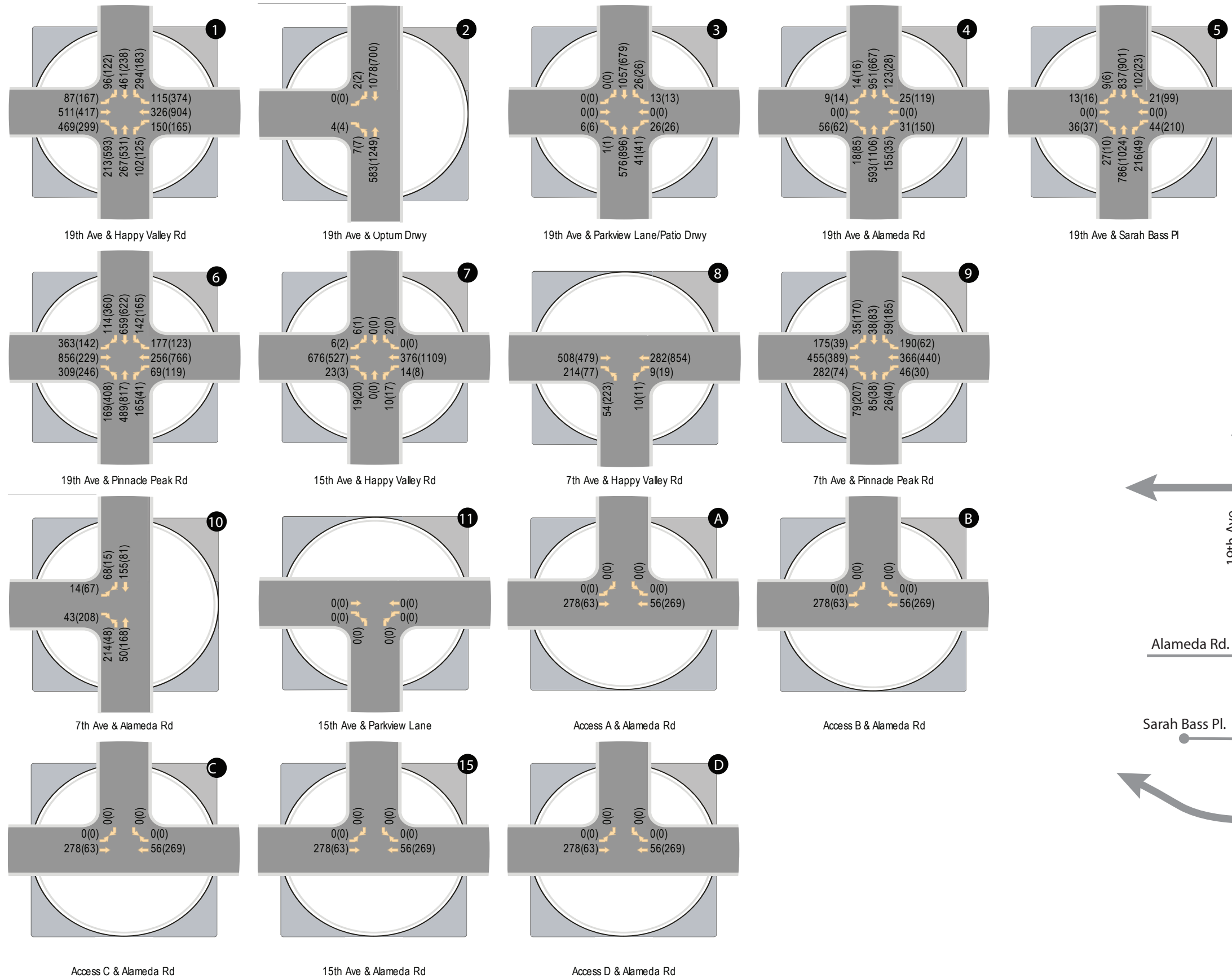
Scenario B does not include surrounding development site traffic and analyzes a scenario in which Deer Valley 30 is the first development to be constructed in the area. In order to compute 2024 background traffic volumes, or “No Build” volumes, the existing traffic volumes were grown by 3.6% per year, only.

The resultant (all-in) background volumes for the buildout year of 2024 for Scenario A are presented in **Figure 7A**, the background traffic volumes for Scenario B are presented in **Figure**

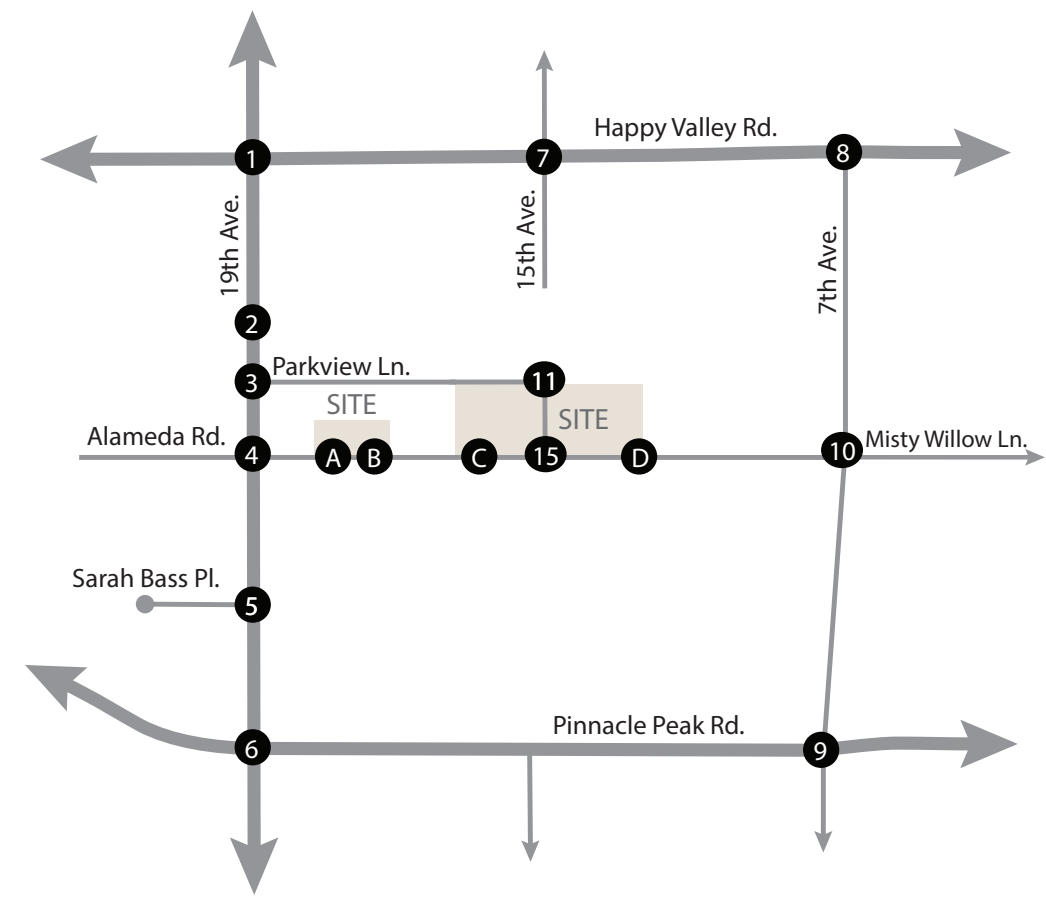
**7B.** Site traffic assignment figures obtained from the latest version of each of the three ASLD/Mach Supplier Site traffic impact studies to be included in Scenario A, are also provided in **Appendix F**.

### **TOTAL TRAFFIC VOLUMES**

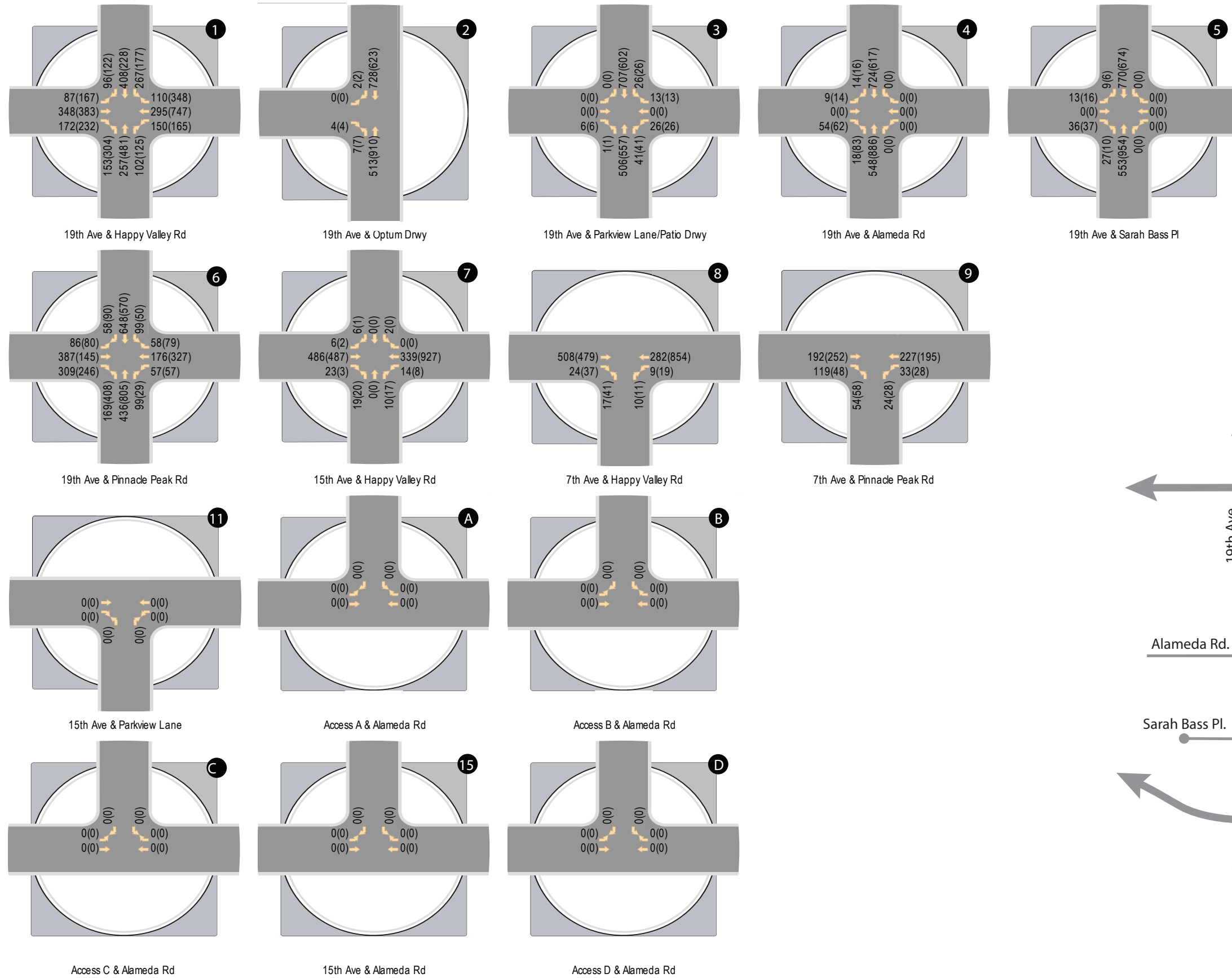
Total traffic volumes, the volumes used to analyze 2024 “Build” Conditions, were determined by adding Deer Valley 30 site-generated traffic volumes to the all-in background traffic volumes for both scenarios. Resultant 2024 AM and PM peak hour total traffic volumes for scenario A are presented in **Figure 8A**, for scenario B, the total traffic volumes are presented in **Figure 8B**.



**LEGEND**  
 XX(XX) AM (PM) Peak Hour Traffic Volumes

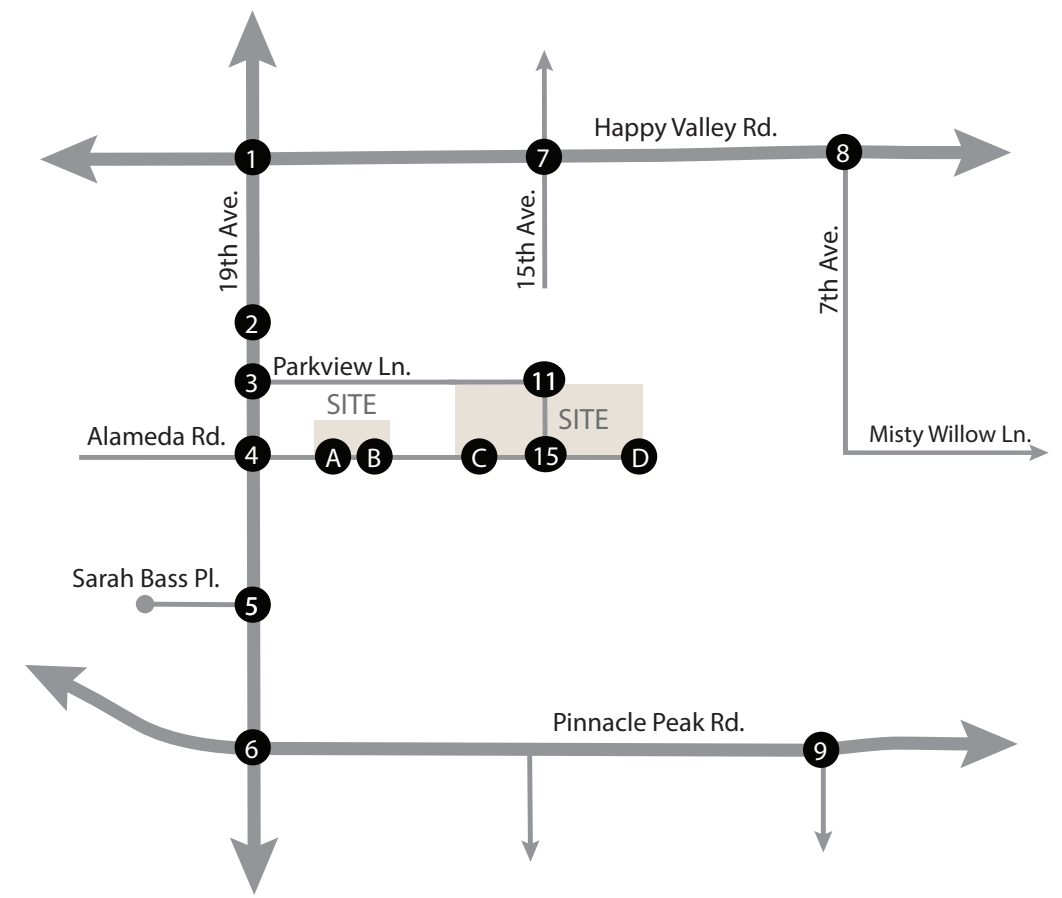


**Figure 7A: 2024 Background Traffic Volumes Scenario A**

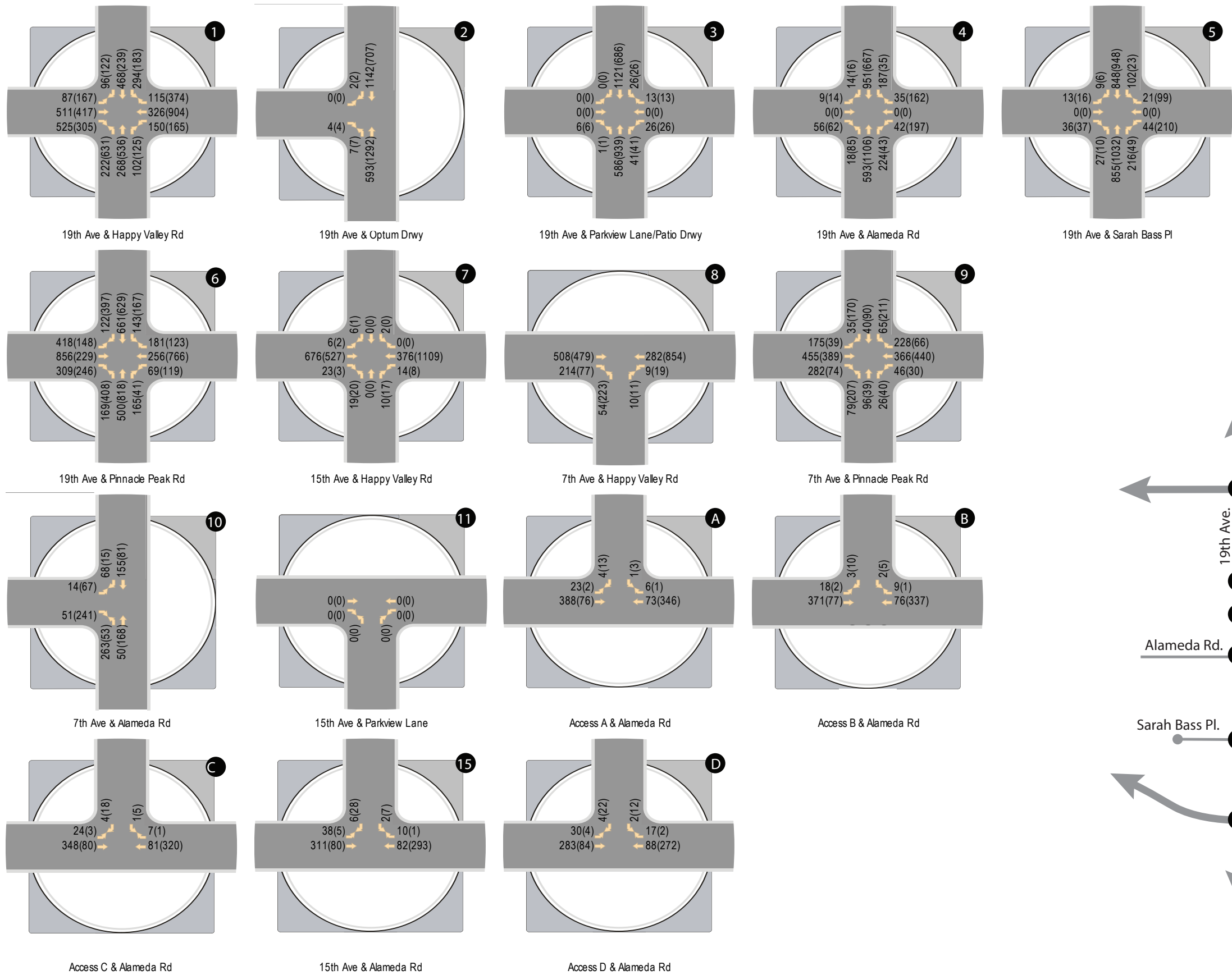


**LEGEND**  
 XX(XX) AM (PM) Peak Hour Traffic Volumes

**NORTH**

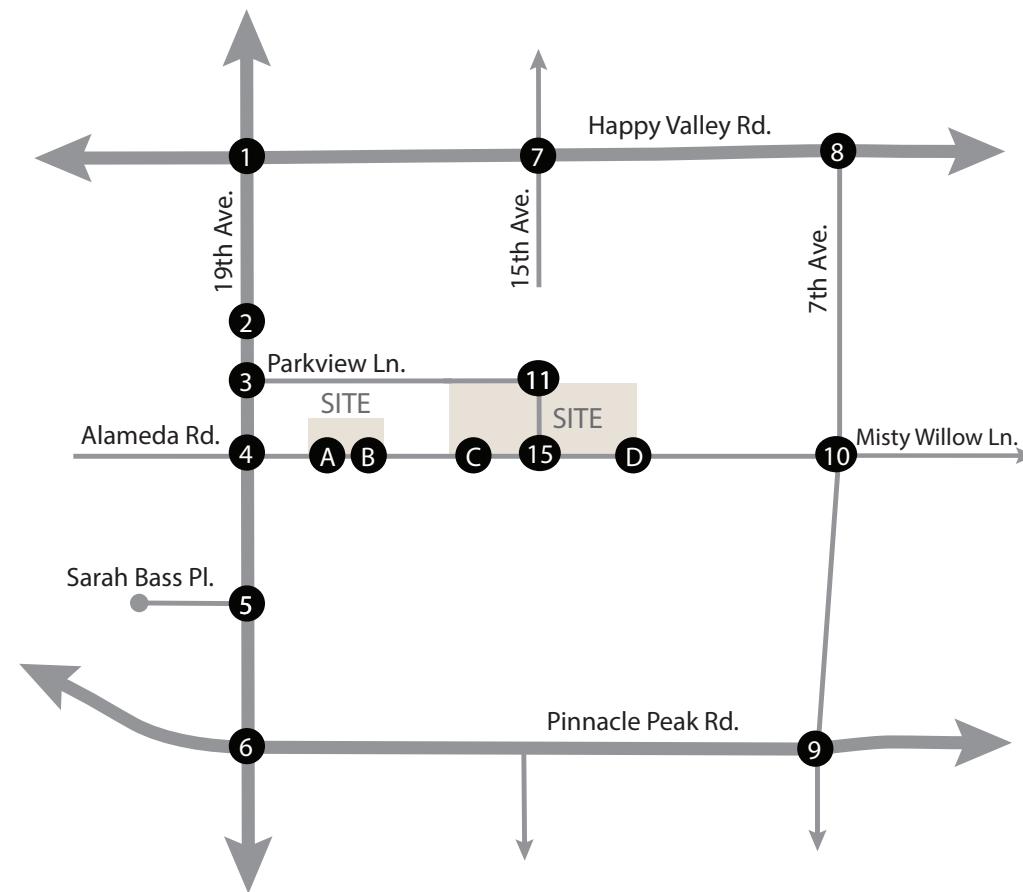


**Figure 7B: 2024 Background Traffic Volumes Scenario B**

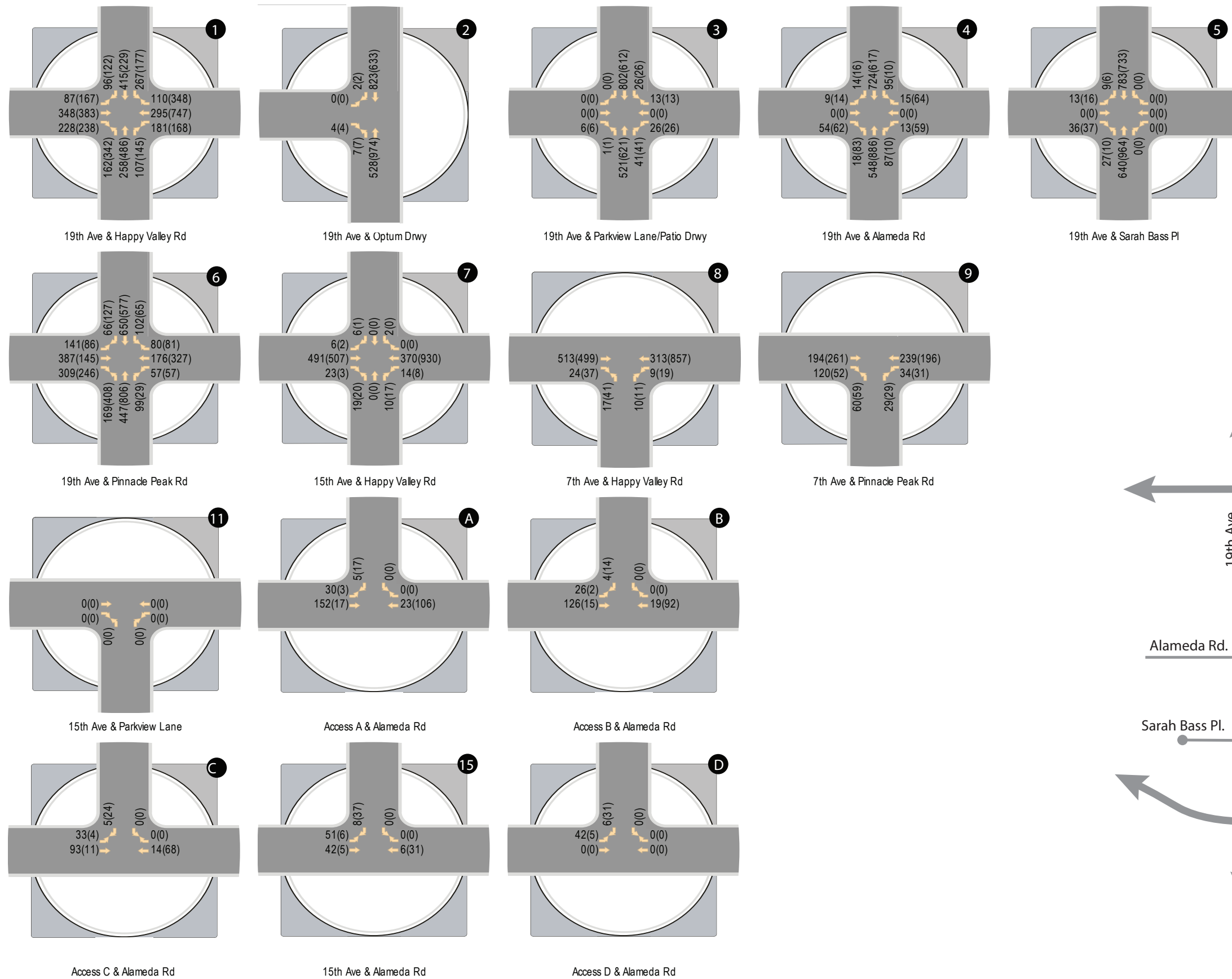


**LEGEND**

XX(X) AM (PM) Peak Hour Traffic Volumes



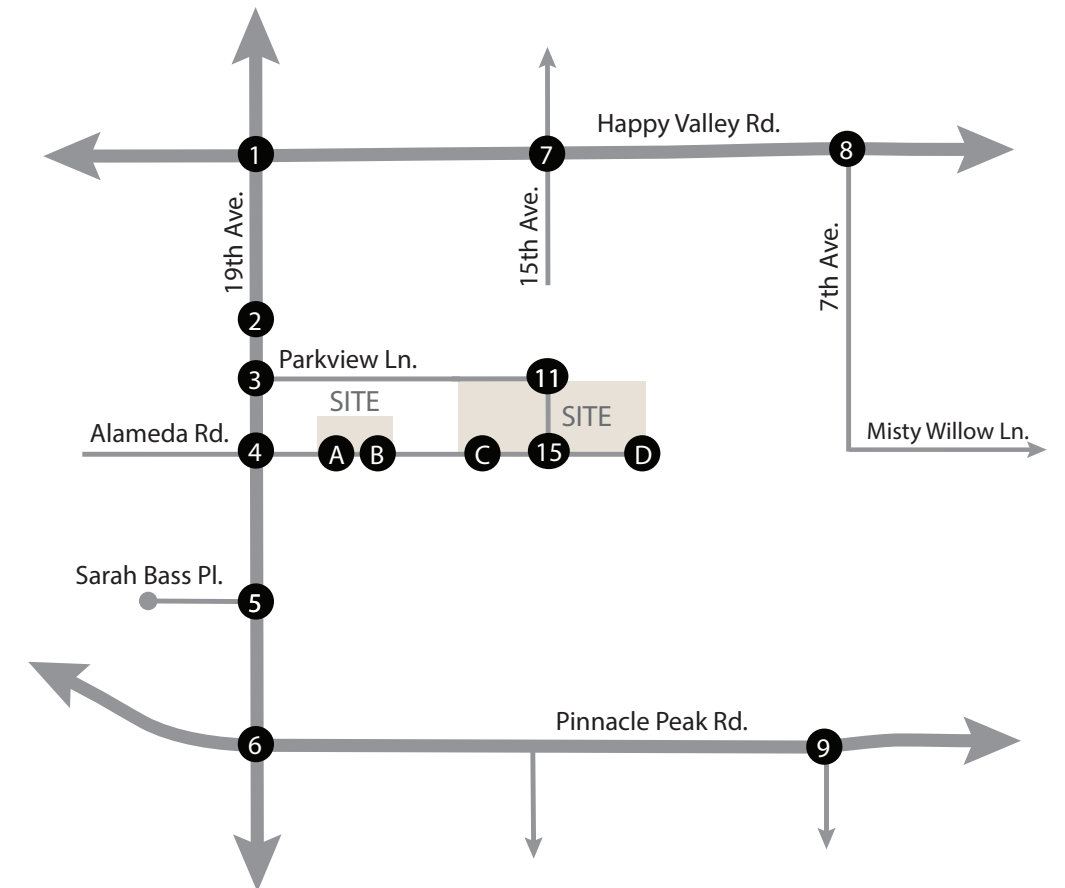
**Figure 8A: 2024 Total Traffic Volumes Scenario A**



**LEGEND**

XX(XX) AM (PM) Peak Hour Traffic Volumes

NORTH



**Figure 8B: 2024 Total Traffic Volumes Scenario B**

## TRAFFIC AND IMPROVEMENT ANALYSIS

The overall intersection and approach levels of service for Scenario A are summarized in **Table 5** for the 2024 background (No Build) and total (Build) traffic conditions. Detailed intersection capacity analysis and level of service reports for the No Build scenario are provided in **Appendix G** and reports for the Build scenario are provided in **Appendix H**.

The overall intersection and approach levels of service for Scenario B are summarized in **Table 6** for the 2024 background (No Build) and total (Build) traffic conditions. Detailed intersection capacity analysis and level of service reports for the No Build scenario are provided in **Appendix I** and reports for the Build scenario are provided in **Appendix J**.

### Scenario A

**Table 5 – 2024 Peak Hour Intersection Levels of Service Scenario A**

| ID | Intersection                                  | Intersection Control        | Approach/<br>Movement | No Build LOS | Build LOS    |
|----|---|-----------------------------|-----------------------|--------------|--------------|
|    |   |                             |                       | AM (PM)      | AM (PM)      |
| 1  | 19 <sup>th</sup> Ave & Happy Valley Rd        | Signal                      | NB                    | D (D)        | D (D)        |
|    |   |                             | SB                    | D (D)        | D (D)        |
|    |   |                             | EB                    | D (D)        | D (D)        |
|    |   |                             | WB                    | D (D)        | C (D)        |
|    |   |                             | <b>Overall</b>        | <b>D (D)</b> | <b>D (D)</b> |
| 2  | 19 <sup>th</sup> Ave & Optum Drwy             | 1-way stop (EB)             | NB Left               | B (A)        | B (A)        |
|    |   |                             | EB Shared             | B (B)        | B (B)        |
| 3  | 19 <sup>th</sup> Ave & Parkview Ln/Patio Drwy | 2-way stop (EB/WB)          | NB Left               | B (A)        | B (B)        |
|    |   |                             | SB Left               | B (C)        | B (C)        |
|    |   |                             | EB Shared             | B (B)        | B (D)        |
|    |   |                             | WB Shared             | D (E)        | D (E)        |
|    |   | Mitigated (Upstream Signal) | NB Left               | B (A)        | B (A)        |
|    | SB Left                                       | A (A)                       | A (A)                 |              |              |
|    | EB Shared                                     | B (B)                       | B (B)                 |              |              |
|    | WB Shared                                     | C (C)                       | C (C)                 |              |              |
| 4  | 19 <sup>th</sup> Ave & Alameda Rd             | 2-way stop (EB/WB)          | NB Left               | B (A)        | B (A)        |
|    |   |                             | SB Left               | C (C)        | C (C)        |
|    |   |                             | EB Left               | F (F)        | F (F)        |
|    |   |                             | EB Thru/Right         | B (B)        | B (B)        |
|    |   | WB Left                     | F (F)                 | F (F)        |              |
|    | WB Thru/Right                                 | B (B)                       | B (C)                 |              |              |
|    | Mitigated (Signal)                            | NB                          | A (A)                 | A (A)        |              |
| SB |   | A (A)                       | A (A)                 |              |              |
| EB |   | D (D)                       | D (C)                 |              |              |
|    | WB  | C (D)                       | C (D)                 |              |              |
|    | <b>Overall</b>                                | <b>A (B)</b>                | <b>A (B)</b>          |              |              |
| 5  | 19 <sup>th</sup> Ave & Sarah Bass Pl          | 1-way stop (EB)             | NB Left               | B (B)        | B (B)        |
|    |   |                             | EB Left               | C (C)        | C (C)        |
|    |   |                             | EB Right              | B (B)        | B (B)        |
| 6  | 19 <sup>th</sup> Ave & Pinnacle Peak Rd       | Signal                      | NB                    | C (D)        | C (D)        |
|    |   |                             | SB                    | D (D)        | D (F)        |
|    |   |                             | EB                    | D (D)        | E (D)        |
|    |   |                             | WB                    | C (C)        | C (C)        |
|    |   |                             | <b>Overall</b>        | <b>D (D)</b> | <b>D (E)</b> |



| ID | Intersection                           | Intersection Control        | Approach/Movement  | No Build LOS                                       | Build LOS  |
|----|--|-----------------------------|--|--|--|
|    |  |                             |  | AM (PM)  | AM (PM)  |
|    |  | Mitigated (Signal Timing)   | NB<br>SB<br>EB<br>WB<br><b>Overall</b>                                     | -  | C (D)<br>D (D)<br>D (D)<br>C (C)<br><b>D (D)</b>   |
| 7  | 15 <sup>th</sup> Ave & Happy Valley Rd | 2-way stop (NB/SB)          | NB Shared<br>SB Shared<br>EB Left<br>EB Thru<br>WB Left<br>WB Thru         | D (F)<br>C (C)<br>A (B)<br>A (A)<br>A (A)<br>A (A) | D (F)<br>C (C)<br>A (B)<br>A (A)<br>A (A)<br>A (A) |
|    |  | Mitigated (Upstream Signal) | NB Shared<br>SB Shared<br>EB Left<br>EB Thru<br>WB Left<br>WB Thru         | D (B)<br>C (D)<br>A (C)<br>A (A)<br>A (A)<br>A (A) | D (B)<br>C (D)<br>A (C)<br>A (A)<br>A (A)<br>A (A) |
| 8  | 7 <sup>th</sup> Ave & Happy Valley Rd  | 1-way stop (NB)             | NB Shared<br>WB Left<br>WB Thru  | C (F)<br>A (A)<br>A (A)                            | C (F)<br>A (A)<br>A (A)                            |
|    |  | Mitigated (Signal)          | NB<br>EB<br>WB<br><b>Overall</b>   | B (C)<br>C (B)<br>B (C)<br><b>C (C)</b>            | B (C)<br>C (B)<br>B (C)<br><b>C (C)</b>            |
|    |  |                             |  |  |  |
| 9  | 7 <sup>th</sup> Ave & Pinnacle Peak Rd | 2-way stop (NB/SB)          | NB Left<br>NB Thru/Right<br>SB Left<br>SB Thru/Right<br>EB Left<br>WB Left | F (F)<br>F (C)<br>F (F)<br>F (F)<br>A (A)<br>A (A) | F (F)<br>F (C)<br>F (F)<br>F (F)<br>A (A)<br>A (A) |
|    |  | Mitigated (Signal)          | NB<br>SB<br>EB<br>WB<br><b>Overall</b>                                     | C (C)<br>D (D)<br>D (C)<br>D (C)<br><b>D (C)</b>   | C (C)<br>D (D)<br>D (C)<br>C (C)<br><b>D (C)</b>   |
|    |  |                             |  |  |  |
| 10 | 7 <sup>th</sup> Ave & Alameda Rd       | 1-way stop (EB)             | NB Left<br>EB Shared   | A (A)<br>B (B)                                     | A (A)<br>B (B)                                     |
| 11 | 15 <sup>th</sup> Ave & Parkview Ln     | 1-way stop (NB)             | NB Shared<br>WB Left   | -  | A (A)<br>A (A)                                     |
| A  | Access A & Alameda Rd                  | 1-way stop (SB)             | SB Shared<br>EB Left<br>EB Thru  | -  | A (B)<br>A (A)<br>A (A)                            |
| B  | Access B & Alameda Rd                  | 1-way stop (SB)             | SB Shared<br>EB Left<br>EB Thru  | -  | B (B)<br>A (A)<br>A (A)                            |
| C  | Access C & Alameda Rd                  | 1-way stop (SB)             | SB Shared<br>EB Left<br>EB Thru  | -  | A (B)<br>A (A)<br>A (A)                            |
| 15 | 15 <sup>th</sup> Ave & Alameda Rd      | 1-way stop (SB)             | SB Shared<br>EB Left<br>EB Thru  | -  | A (B)<br>A (A)<br>A (A)                            |

| ID | Intersection          | Intersection Control | Approach/Movement               | No Build LOS | Build LOS               |
|----|-----------------------|----------------------|---------------------------------|--------------|-------------------------|
|    |                       |                      |                                 | AM (PM)      | AM (PM)                 |
| D  | Access D & Alameda Rd | 1-way stop (SB)      | SB Shared<br>EB Left<br>EB Thru | -            | A (B)<br>A (A)<br>A (A) |

The results of the Synchro analysis summarized in **Table 5** indicate the following improvements will be warranted by a combination of traffic increases caused by regional growth and Supplier Site development, with or without development having occurred on either of the Deer Valley 30 sites and, if implemented will allow acceptable levels of service to be achieved (or, if already being achieved, maintained) through 2024 and buildout of all ASLD/Mack Supplier Site and Deer Valley 30 development as currently proposed:

At the already signalized intersection of **19<sup>th</sup> Avenue and Happy Valley Road**, dual left turn lanes and protected left turn phasing on/for all four approaches will both be warranted and are therefore recommended to maintain acceptable levels of service during both peak hours through 2024, with or without Deer Valley 30 development. In addition, since the addition of protected left turn phases will take away some green time from the through movements, it is also recommended that the cycle length be changed from 96 seconds to 105 seconds. The intersection appears to be configured to accommodate dual left turns of roughly equal length of what are now striped as single turn lanes (about 250 feet) such that dual left turn lanes can be created through pavement marking modifications. The extent of the traffic signal equipment improvements necessary to add the protected only phases is not fully known but will require at a minimum, new left turn signal heads on all four approaches. With the recommended turn lane and signal improvements, this intersection should provide acceptable levels of service on all approaches during both peak hours through buildout of all ASLD/Mack Supplier Site and Deer Valley 30 development as currently proposed.

At the minor approach stop-controlled intersection of **19<sup>th</sup> Avenue and Alameda Road**, the introduction of an east leg and westbound approach volumes of the magnitude projected with or without Deer Valley 30 development will cause traffic signal control to be both warranted per applicable *Manual on Uniform Traffic Control Devices* (MUTCD) standards, and necessary to maintain acceptable levels of service on all approaches. It is recommended that the signal pole foundations, conduit, pull boxes and all other underground and ground level features necessary to signalize the intersection be in place before any development that is dependent on the east leg of this intersection for access is open to everyday traffic (i.e., before this segment of Alameda Road needs to be more than a construction access road). It is further recommended that exclusive left turn lanes be provided on all four approaches to this intersection to maximize the efficiency of the intersection. The northbound and southbound left turn lanes should provide the City’s standard minimum of 150 feet of queue storage length. Two-way left turn lanes already exist along 19<sup>th</sup> Avenue in this vicinity and can just be restriped near the intersection to convert them to single direction turn lanes. It is recommended that the westbound left turn lane provide at least 75 feet of queue storage from the start, and provide 250 feet of queue storage length before both Supplier Site A and Deer Valley 30 sites are fully developed. Width to provide 250 feet of queue storage length is not likely to exist until such time as the property on the northeast corner of the intersection develops and with that development the site-adjacent segment of the

ultimate north half of Alameda Road gets constructed and dedicated. The eastbound approach currently provides enough width immediately west of the intersection to provide a short eastbound left turn only lane (enough for 1-2 vehicles to queue while still allowing an upstream vehicle wanting to turn right (and/or through in the proposed/with east leg condition) to pass them. While 150 feet of turn lane queue storage is the City's standard and should ultimately be provided, until such time as considerably more development occurs along Alameda Road west of 19<sup>th</sup> Avenue, the existing queue storage provisions should be adequate. Once signalized and improved as necessary to provide an exclusive left turn lane on all approaches, this intersection should provide acceptable levels of service on all approaches during both peak hours through buildout of all ASLD/Mack Supplier Site and Deer Valley 30 development as currently proposed.

At the already signalized intersection of **19<sup>th</sup> Avenue and Pinnacle Peak Road**, continued traffic growth, with or without Deer Valley 30 development, is likely to cause need for traffic signal timing adjustments in order for acceptable levels of services to continue to be achieved on all approaches. Efforts to optimize the signal timing to achieve acceptable levels of service under both Build and No Build scenarios, indicate significant reductions in driver delay on both northbound and southbound approaches, under both scenarios could be achieved by making the following signal timing adjustments:

- Extend the northbound through phase from 45 seconds to 51 seconds and the northbound left turn phase from 14 seconds to 21 seconds.
- Extend the southbound through phase from 30 seconds to 31 seconds.

At the currently stop sign controlled (northbound approach only) intersection of **7<sup>th</sup> Avenue and Happy Valley Road**, continued growth in background traffic, even without any ASLD/Mack Supplier Site or Deer Valley 30 development, is likely to cause need for widening of Happy Valley Road to provide traffic signal control an exclusive westbound left turn lane before the end of 2024. Deer Valley 30 is not expected to add any traffic to this intersection until Happy Valley Rd and Desert Peak Pkwy connect to provide an east-west arterial alternative to L101, Deer Valley Drive and Sonoran Boulevard.

At the intersection of **7<sup>th</sup> Avenue and Pinnacle Peak Road**, continued growth in background traffic, even without any ASLD/Mack Supplier Site or Deer Valley 30 development, is likely to cause need for traffic signal control before the end of 2024. Under traffic signal control with a 100-second cycle length, this intersection should provide acceptable levels of service on all approaches during both peak hours through buildout of all ASLD/Mack Supplier Site and Deer Valley 30 development as currently proposed.

Scenario B

**Table 6 – 2024 Peak Hour Intersection Levels of Service Scenario B**

| ID | Intersection                                  | Intersection Control | Approach/ Movement | No Build LOS | Build LOS    |
|----|---|----------------------|--------------------|--------------|--------------|
|    |   |                      |                    | AM (PM)      | AM (PM)      |
| 1  | 19 <sup>th</sup> Ave & Happy Valley Rd        | Signal               | NB                 | C (D)        | C (C)        |
|    |   |                      | SB                 | D (C)        | C (C)        |
|    |   |                      | EB                 | B (C)        | C (C)        |
|    |   |                      | WB                 | B (B)        | C (D)        |
|    |   |                      | <b>Overall</b>     | <b>C (C)</b> | <b>C (C)</b> |
| 2  | 19 <sup>th</sup> Ave & Optum Drwy             | 1-way stop (EB)      | NB Left            | A (A)        | B (A)        |
|    |   |                      | EB Shared          | B (B)        | B (B)        |
| 3  | 19 <sup>th</sup> Ave & Parkview Ln/Patio Drwy | 2-way stop (EB/WB)   | NB Left            | A (A)        | A (A)        |
|    |   |                      | SB Left            | B (B)        | B (B)        |
|    |   |                      | EB Shared          | B (B)        | B (B)        |
|    |   |                      | WB Shared          | C (C)        | C (C)        |
| 4  | 19 <sup>th</sup> Ave & Alameda Rd             | 2-way stop (EB/WB)   | NB Left            | A (A)        | A (A)        |
|    |   |                      | SB Left            | A (A)        | A (B)        |
|    |   |                      | EB Left            | C (B)        | C (C)        |
|    |   |                      | EB Thru/Right      | B (B)        | B (B)        |
|    |   |                      | WB Left            | A (A)        | C (C)        |
|    |   |                      | WB Thru/Right      | A (A)        | A (B)        |
| 5  | 19 <sup>th</sup> Ave & Sarah Bass Pl          | 1-way stop (EB)      | NB Left            | B (A)        | B (A)        |
|    |   |                      | EB Left            | C (C)        | C (C)        |
|    |   |                      | EB Right           | B (B)        | B (B)        |
| 6  | 19 <sup>th</sup> Ave & Pinnacle Peak Rd       | Signal               | NB                 | C (C)        | C (C)        |
|    |   |                      | SB                 | D (D)        | D (D)        |
|    |   |                      | EB                 | C (C)        | C (C)        |
|    |   |                      | WB                 | B (C)        | B (C)        |
|    |   |                      | <b>Overall</b>     | <b>C (C)</b> | <b>C (C)</b> |
| 7  | 15 <sup>th</sup> Ave & Happy Valley Rd        | 2-way stop (NB/SB)   | NB Shared          | C (E)        | C (E)        |
|    |   |                      | SB Shared          | B (C)        | B (C)        |
|    |   |                      | EB Shared          | A (B)        | A (B)        |
|    |   |                      | WB Shared          | A (A)        | A (A)        |
| 8  | 7 <sup>th</sup> Ave & Happy Valley Rd         | 1-way stop (NB)      | NB Shared          | C (E)        | C (E)        |
|    |   |                      | WB Left            | A (A)        | A (A)        |
|    |   |                      | WB Thru            | A (A)        | A (A)        |
| 9  | 7 <sup>th</sup> Ave & Pinnacle Peak Rd        | 2-way stop (NB/SB)   | NB Left            | B (B)        | C (C)        |
|    |   |                      | NB Thru/Right      | A (B)        | A (B)        |
|    |   |                      | SB Left            | A (A)        | A (A)        |
|    |   |                      | SB Thru/Right      | A (A)        | A (A)        |
|    |   |                      | EB Left            | A (A)        | A (A)        |
|    |   |                      | WB Left            | A (A)        | A (A)        |
| 11 | 15 <sup>th</sup> Ave & Parkview Ln            | 1-way stop (NB)      | NB Shared          | -            | A (A)        |
|    |   |                      | WB Left            | -            | A (A)        |
| A  | Access A & Alameda Rd                         | 1-way stop (SB)      | SB Shared          | -            | A (A)        |
|    |   |                      | EB Left            | -            | A (A)        |
|    |   |                      | EB Thru            | -            | A (A)        |
| B  | Access B & Alameda Rd                         | 1-way stop (SB)      | SB Shared          | -            | A (A)        |
|    |   |                      | EB Left            | -            | A (A)        |
|    |   |                      | EB Thru            | -            | A (A)        |

| ID | Intersection                      | Intersection Control | Approach/Movement               | No Build LOS | Build LOS               |
|----|-----------------------------------|----------------------|---------------------------------|--------------|-------------------------|
|    |                                   |                      |                                 | AM (PM)      | AM (PM)                 |
| C  | Access C & Alameda Rd             | 1-way stop (SB)      | SB Shared<br>EB Left<br>EB Thru | -            | A (A)<br>A (A)<br>A (A) |
| 15 | 15 <sup>th</sup> Ave & Alameda Rd | 1-way stop (SB)      | SB Shared<br>EB Left<br>EB Thru | -            | A (A)<br>A (A)<br>A (A) |
| D  | Access D & Alameda Rd             | 1-way stop (SB)      | SB Shared<br>EB Left<br>EB Thru | -            | A (A)<br>A (A)<br>A (A) |

The results of the Synchro analysis summarized in **Table 6** indicate the following improvements will be warranted with development having only occurred for the Deer Valley 30 site.

At the already signalized intersection of **19<sup>th</sup> Avenue and Happy Valley Road**, permissive-protected phasing is currently being utilized and is recommended to continue being utilized with some minor green time adjustments. Dual left turn lanes are not needed on any of the approaches in this scenario since the permissive-protected phasing allows enough green time for the left turning vehicles to clear the intersection with minimal delays and queue lengths.

## TRAFFIC SIGNAL WARRANT ANALYSIS

CivTech completed a volume-based traffic signal warrant analysis in accordance with standard traffic signal warranting criteria found in the *Manual on Uniform Traffic Control Devices, 2009 Edition* (MUTCD) for four of the Deer Valley 30 TIS study intersections as part of the traffic impact analysis performed for the ASLD/Mack Supplier Site A TIS update currently under review by the City of Phoenix. The four analyzed intersections are 19<sup>th</sup> Avenue and Alameda Road, 7<sup>th</sup> Avenue and Pinnacle Peak Road, 7<sup>th</sup> Avenue and Happy Valley Road, and 7<sup>th</sup> Avenue and Alameda Road. The intersection of 7<sup>th</sup> Avenue and Alameda Road is only considered in Scenario A since the extension of Alameda Road is not necessary if only the DV30 development is present.

For scenario A, or the ultimate buildout scenario, the results of the traffic signal warrant analysis indicate that traffic signals will be warranted by 2024 at all of these intersections, with or without Supplier Site A development with the exception of 7<sup>th</sup> Avenue and Alameda Road. For this intersection, the minor street approach volume is not high enough to meet any of the three signal warrants. A comprehensive explanation of the applicable traffic signal warrant criteria and analysis approach is provided in the Supplier Site A TIS and is therefore has not been repeated in this report. However, for scope consistency with the ASLD/Mach Supplier Site A TIS, traffic signal warrant analysis has been repeated as part of the Deer Valley 30 TIS for what, in the Supplier Site A TIS is considered the 2024 "Build" scenario and in this TIS is considered the 2024 "No Build" scenario, and a separate traffic signal warrant analysis performed in the exact same manner has additionally been completed for the Deer Valley 30 "2024 Build" Scenario.

For Scenario B, only the intersection of 19<sup>th</sup> Avenue and Alameda Road meets the volume criteria for all three signal warrants. Signal warrants are not satisfied at the other two intersections and are therefore not warranted with only Deer Valley 30 traffic volumes.

**Table 7 – Volume-Based Traffic Signal Warrant Analysis Results Summary**

| Intersection                             | Posted Speed Limit on Major Road | Design Speed Limit on Major Road | Warrant Met Without Site Traffic (Background A) (Y/N)? | Warrant Met Without Site Traffic (Background B) (Y/N)? | Warrant Met with Site Traffic (Total A) (Y/N)? | Warrant Met with Site Traffic (Total B) (Y/N)? |
|--|----------------------------------|----------------------------------|--|--|--|--|
| 19 <sup>th</sup> Ave and Alameda Rd      | 45 mph                           | 50 mph                           | Y  | N  | Y  | N  |
| 7 <sup>th</sup> Ave and Happy Valley Rd  | 45 mph                           | 50 mph                           | Y  | N  | Y  | N  |
| 7 <sup>th</sup> Ave and Pinnacle Peak Rd | 35 mph                           | 40 mph                           | Y  | N  | Y  | N  |
| 7 <sup>th</sup> Ave & Alameda Rd         | 35 mph                           | 40 mph                           | N  | -  | N  | -  |

**Table 7** summarizes the volume-based warrant analysis results. For Scenario A, the scenario which includes Supplier Site A traffic volumes in the background traffic calculations, all three signal warrants are met for all three of the study intersections with or without the addition of DV30 site traffic.

For Scenario B, the scenario which does not include Supplier Site A traffic volumes and only includes DV30 site traffic, none of the signal warrants are met for the study intersections. The intersection of 19<sup>th</sup> Avenue and Alameda Road will be the main entry/exit for both Supplier Site A and DV30 once both are constructed; the signal warrant analysis results indicate that a signal is only warranted at this location if Supplier Site A is constructed. If only DV30 is constructed, a signal is not warranted at this location and not needed due to the adequate levels of service discussed previously. Detailed signal warrant analysis worksheets are provided in **Appendix I**.

## TURN LANE QUEUE LENGTH ANALYSIS

Adequate turn storage should be provided on any intersection approach where turn lanes are permitted and/or warranted. A queuing analysis was performed for all warranted/required intersection turn lanes using future total turning movement volumes. The turn lane queuing analysis was performed by applying (with the help of Synchro analysis software) HCM “95<sup>th</sup> Percentile Queue” methodology. The 95<sup>th</sup> Percentile methodology takes into account the intersection geometry, intersection traffic control, conflicting traffic flow and whether the movement is a left turn or a right turn.

2024 total traffic volumes were utilized for the calculations. Results are summarized in **Table 8**. Calculations for the AASHTO queue storage length recommendations and the 95<sup>th</sup> percentile HCM 2016 queue storage length recommendations are provided in **Appendix J**. The 95<sup>th</sup> percentile queue storage lengths are given in vehicles and multiplied by 25 feet per vehicle to determine the storage length.

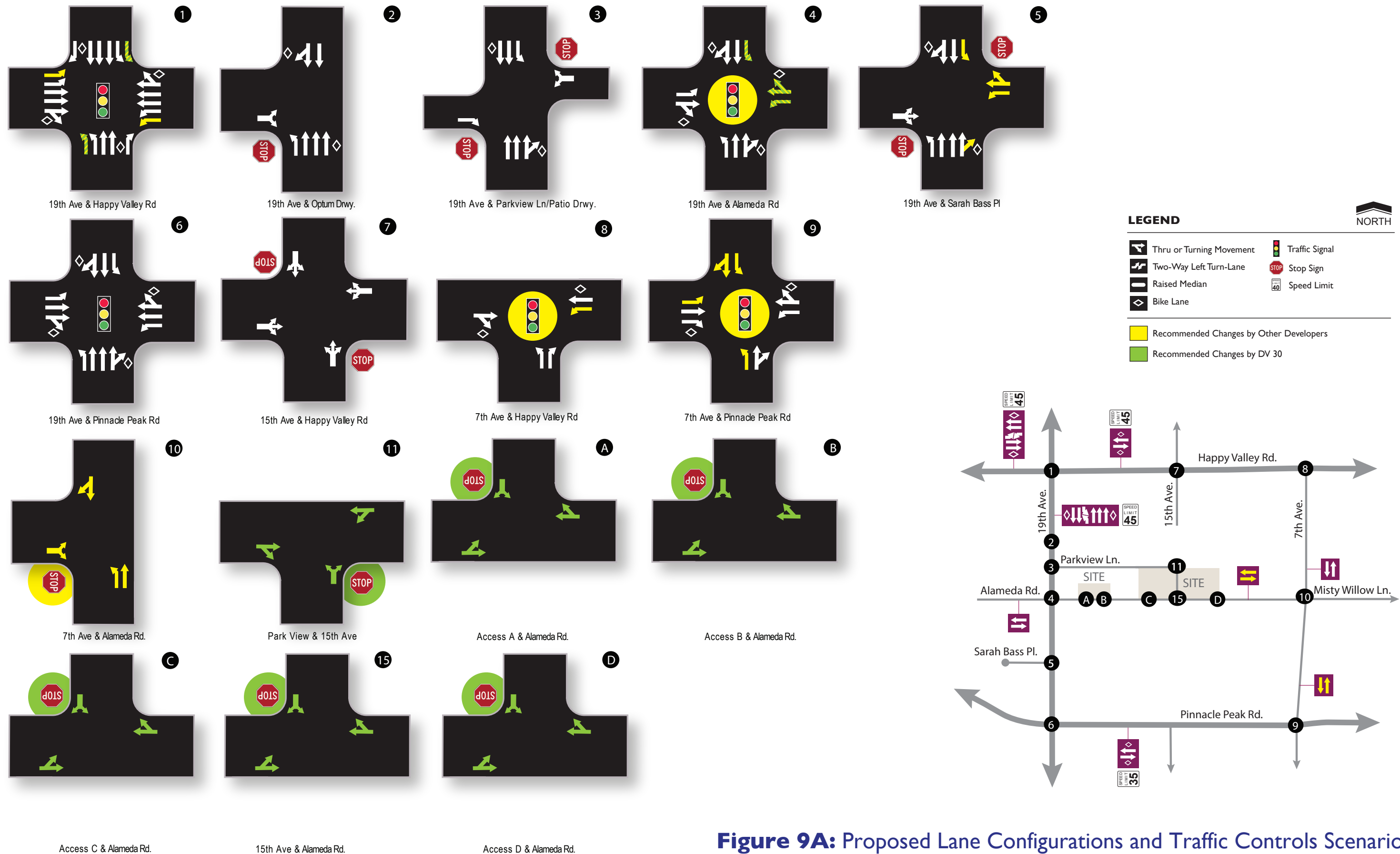
**Table 8 – Turn Lane Queue Storage Lengths**

| ID       | Intersection   | Intersection Control | Movement | Queue Storage |                    |                    |               |
|----------|--|----------------------|----------|---------------|--------------------|--------------------|---------------|
|          |  |                      |          | Existing (1)  | HCM Scenario A (3) | HCM Scenario B (3) | Recommended   |
| 1        | 19 <sup>th</sup> Avenue & Happy Valley Road            | Signal               | NB Left  | 265'          | 265'               | 255'               | (7)2@265'     |
|          |  |                      | SB Left  | 265'          | 205'               | 200'               | (7)2@265'     |
|          |  |                      | EB Left  | 350'          | 130'               | 220'               | (7)2@350'     |
|          |  |                      | WB Left  | 255'          | 95'                | 135'               | (7)2@255'     |
|          |  |                      | NB Right | 260'          | 35'                | 45'                | No Change     |
|          |  |                      | SB Right | 265'          | 30'                | 25'                | No Change     |
| 2        | 19 <sup>th</sup> Avenue & Optum Driveway               | 1-way stop (EB)      | NB Left  | TWLTL         | <25'               | <25'               | No Change     |
| 3        | 19 <sup>th</sup> Avenue & Parkview Lane/Patio Driveway | 2-way stop (EB/WB)   | NB Left  | TWLTL         | <25'               | <25'               | No Change     |
|          |  |                      | SB Left  | TWLTL         | <25'               | <25'               | No Change     |
| 4        | 19 <sup>th</sup> Avenue & Alameda Road                 | 2-way stop (EB/WB)   | NB Left  | TWLTL         | 45'                | <25'               | 150'          |
|          |  |                      | SB Left  | TWLTL         | 175'               | <25'               | 150'          |
|          |  |                      | EB Left  | --            | 25'                | <25'               | (4)150'       |
|          |  |                      | WB Left  | --            | 245'               | <25'               | (5) 250'      |
| 5        | 19 <sup>th</sup> Avenue & Sarah Bass Place             | 1-way stop (EB)      | NB Left  | TWLTL         | <25'               | <25'               | No Change     |
| 6        | 19 <sup>th</sup> Avenue & Pinnacle Peak Road           | Signal               | NB Left  | 210'          | 480'               | 440'               | (6) No Change |
|          |  |                      | SB Left  | 185'          | 255'               | 135'               | (6) No Change |
|          |  |                      | EB Left  | 270'          | 520'               | 105'               | (6) No Change |
|          |  |                      | WB Left  | 160'          | 130'               | 55'                | No Change     |
| 8        | 7 <sup>th</sup> Avenue & Happy Valley Road             | Signal               | NB Left  | --            | 255'               | -                  | 255'          |
|          |  |                      | WB Left  | --            | <25'               | -                  | (4)150'       |
| 9        | 7 <sup>th</sup> Avenue & Pinnacle Peak Road            | Signal               | NB Left  | --            | 255'               | -                  | 255'          |
|          |  |                      | SB Left  | --            | 285'               | -                  | 280'          |
|          |  |                      | EB Left  | --            | 295'               | -                  | 295'          |
|          |  |                      | WB Left  | --            | 45'                | -                  | (4)150'       |
|          |  |                      | EB Right | 175'          | 50'                | -                  | No Change     |
|          |  | 2-way stop (NB/SB)   | NB Left  | --            | --                 | <25'               | <25'          |
| SB Left  | --   | --                   | <25'     | <25'          | (4) 150'           |                    |               |
| EB Left  | --   | --                   | -        | <25'          | <25'               | (4) 150'           |               |
| WB Left  | --   | --                   | <25'     | <25'          | <25'               | (4) 150'           |               |
| EB Right | 175'   | --                   | <25'     | <25'          | <25'               | No Change          |               |
| 10       | 7 <sup>th</sup> Avenue & Alameda Road                  | 1-way stop (EB)      | NB Left  | --            | <25'               | <25'               | (4)150'       |

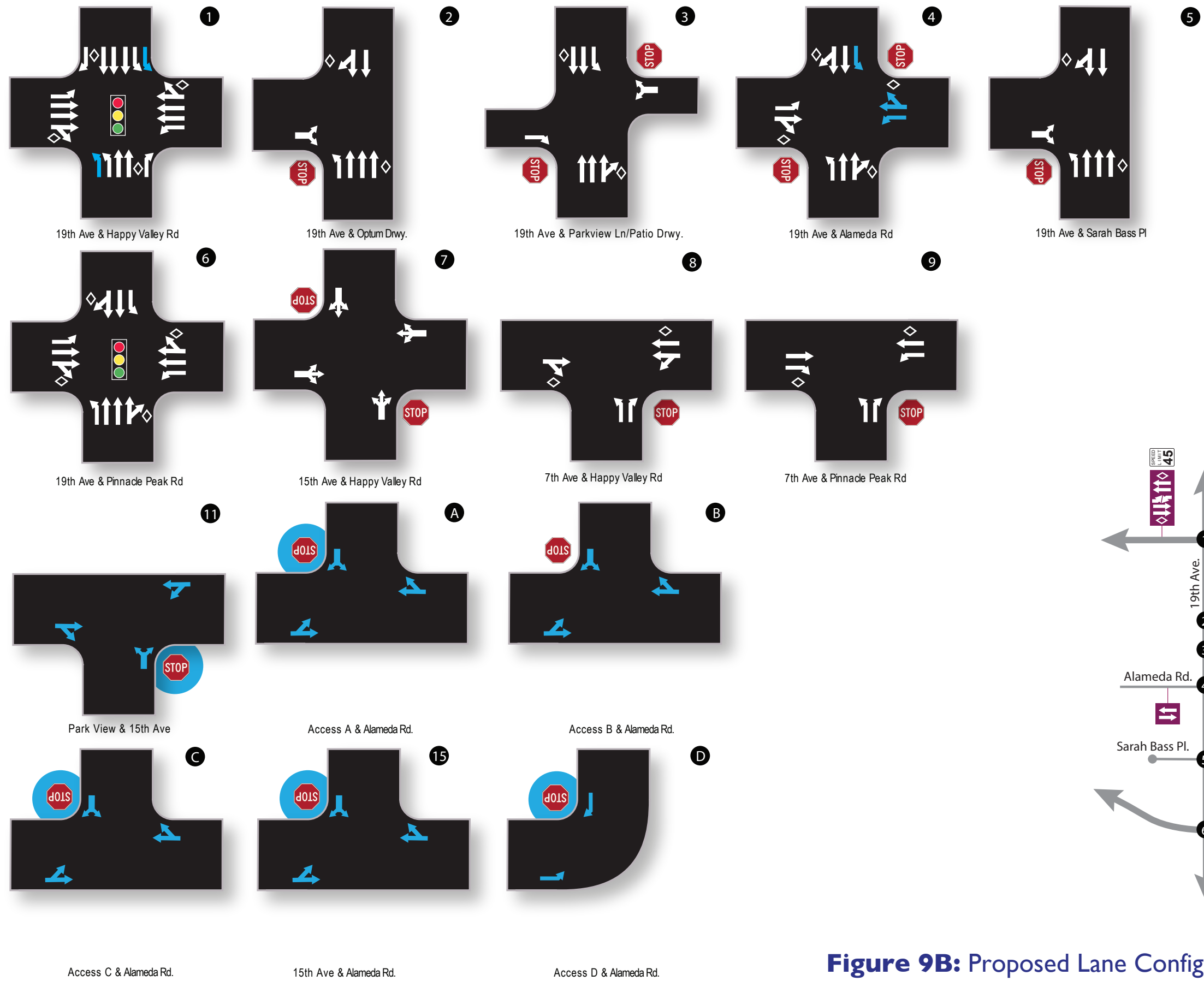
- (1) Striped length, actual storage capacity clear of adjacent through lane may be longer.
- (2) HCM 95<sup>th</sup> percentile queue reported feet/lane.
- (3) City of Phoenix minimum left turn lane storage on an arterial street approach to an arterial cross street is 250 feet; on an arterial street approach to a collector cross street is 150' and on an arterial street approach to a local street is 100'.
- (4) City of Phoenix right turn lane storage length on an arterial street approach to a driveway should be a minimum of 100 feet and a maximum of 250 feet.
- (5) Additional storage for left turning vehicles is available as TWLTL in advance of the striped single direction turn lane.
- (6) Existing left turn bay is striped for a single left turn lane but already configured (wide enough) for dual left turn lanes; re-stripe for dual lefts and adjust signal equipment as necessary to provide protected only left turn phase for this approach.

The recommended storage lengths in **Table 8** are provided for buildout year 2024 using the total traffic projections. Proposed lane configurations are shown in **Figure 9A** and **Figure 9B**, for Build Scenario A and Build Scenario B, respectively.





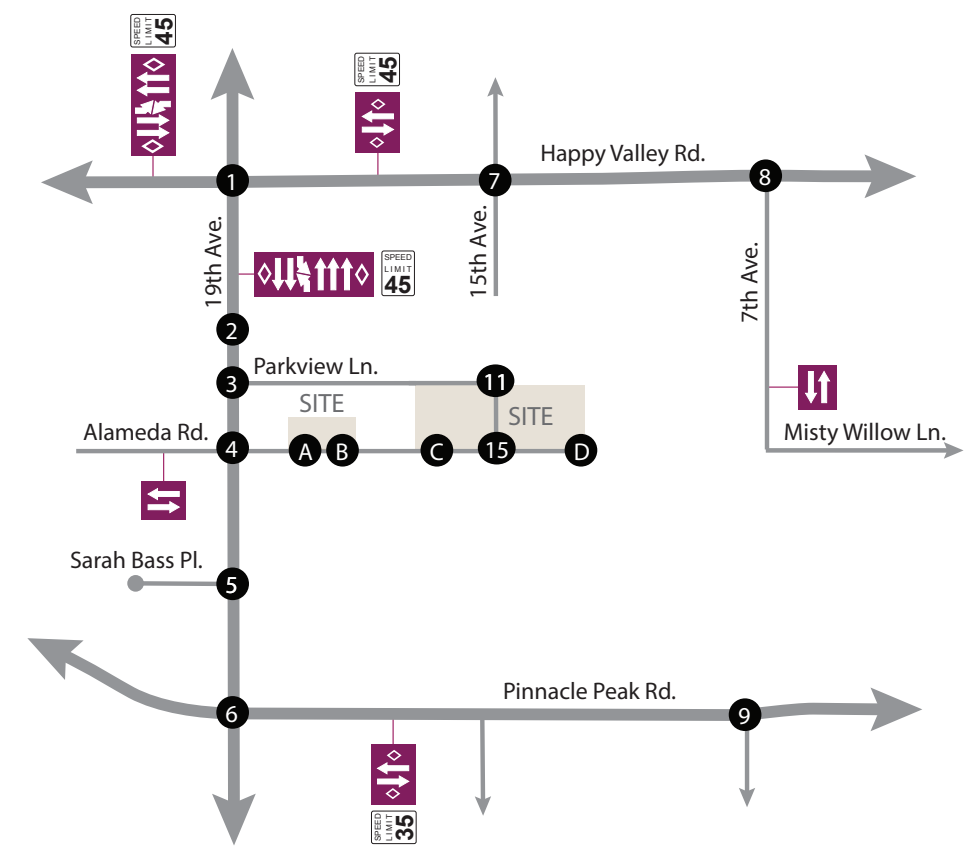
**Figure 9A: Proposed Lane Configurations and Traffic Controls Scenario A**



**LEGEND**

|  |                |
|--|----------------|
|  | Traffic Signal |
|  | Stop Sign      |
|  | Speed Limit    |
|  |                |
|  |                |

NORTH



**Figure 9B: Proposed Lane Configurations and Traffic Controls Scenario B**

## CONCLUSIONS

The following conclusions have been documented in this study:

### GENERAL

- Deer Valley 30 is anticipated to generate a maximum of 1,748 vehicle trips over the course of a typical weekday, with approximately 210 of those trips occurring during the AM peak hour (182 in/28 out) and 143 trips occurring during the PM peak hour (20 in/123 out). This conclusion was reached using trip generation equations obtained from the Institute of Transportation Engineers (ITE) Trip Generation Manual for “light industrial” and “general office” land use classifications. This approach was taken as a conservative measure because “light industrial” it has the highest peak hour trip rates of any ITE-recognized industrial land use category for which a 37-foot-tall industrial shell building would likely be appropriate, and because the general office use has peak hour trip rates that are anywhere from three to nine times those of the comparable period trip rates for light industrial uses. In short, should the ultimate uses of any of the proposed DV30 buildings be something more like a high-cube warehouse type facility, actual trip generation values will likely be considerably lower.

### EXISTING CONDITIONS

- Results of the existing conditions analysis indicate that all existing study intersections are operating with acceptable levels of service (LOS D or better) on all approaches under current lane configurations and traffic control.

### BUILDOUT YEAR 2024

- “Build” and “No-Build” conditions have been analyzed for each of two horizon year scenarios. All “No-Build” horizon year scenarios are ones in which it is 2024 and existing traffic volumes have continued to grow at an average annual rate of 3.6% since 2021.
- All Horizon Year “Build” scenarios are additionally characterized by both Deer Valley 30 sites having been fully developed and generating traffic at full buildout levels, north side half-street segments of Alameda Road having been built adjacent to both Deer Valley 30 sites, 15<sup>th</sup> Avenue having been improved to a full street condition from Alameda Road to Parkview Lane, and Parkview Lane having been improved to a south side half street condition east and west of 15<sup>th</sup> Avenue within the limits of the DV30 East sites.
- All Horizon Year Scenario A’s are additionally characterized by all Supplier Sites having been fully developed and generating traffic at full buildout levels in accordance with current land use assumptions about those sites as detailed in the most current versions of the City of Phoenix-approved traffic impact studies for those sites, Alameda Road has been improved to a two-lane south side half street condition from 19<sup>th</sup> Avenue to 7<sup>th</sup> Avenue, the intersection of 19<sup>th</sup> Avenue and Alameda Road has been improved to its ultimate configuration, at least to the limits of all four intersection returns, and 7<sup>th</sup> Avenue has been improved to a two-lane half street (minimum) condition from Alameda Road to Pinnacle Peak Road.

- Horizon Year “Build” Scenario B is uniquely characterized by Alameda Road having been constructed to at least a half street condition, from 19<sup>th</sup> Avenue east to the eastern limit of the DV30 East site, only.
- Results of the Horizon Year Scenario A analysis indicate the following improvements will be warranted with or without development having occurred on either of the Deer Valley 30 sites and, if implemented will allow acceptable levels of service to be achieved (or, if already being achieved, maintained) through 2024 and buildout of all ASLD/Mack Supplier Site and Deer Valley 30 development as currently proposed:
  - At the already signalized intersection of **19<sup>th</sup> Avenue and Happy Valley Road**, dual left turn lanes and protected left turn phasing on/for all four approaches will both be warranted and are therefore recommended to maintain acceptable levels of service during both peak hours through 2024, with or without Deer Valley 30 development. In addition, since the addition of protected left turn phases will take away some green time from the through movements, it is also recommended that the cycle length be changed from 96 seconds to 105 seconds. The intersection appears to be configured to accommodate dual left turns of roughly equal length of what are now striped as single turn lanes (about 250 feet) such that dual left turn lanes can be created through pavement marking modifications. The extent of the traffic signal equipment improvements necessary to add the protected only phases is not fully known but will require at a minimum, new left turn signal heads on all four approaches. With the recommended turn lane and signal improvements, this intersection should provide acceptable levels of service on all approaches during both peak hours through buildout of all ASLD/Mack Supplier Site and Deer Valley 30 development as currently proposed.
  - At the minor approach stop-controlled intersection of **19<sup>th</sup> Avenue and Alameda Road**, the introduction of an east leg and westbound approach volumes of the magnitude projected with or without Deer Valley 30 development will cause traffic signal control to be both warranted per applicable *Manual on Uniform Traffic Control Devices* (MUTCD) standards, and necessary to maintain acceptable levels of service on all approaches. Under either Scenario A or Scenario B, the Deer Valley 30 development will be responsible for installing a signal at the intersection of 19th Avenue and Alameda Road if the signal is warranted in the opening year or, depositing in escrow 25% of the signal cost if the signal is not warranted in the opening year. It is recommended that, even if signalization is not yet warranted in the opening year, the signal pole foundations, conduit, pull boxes and all other underground and ground level features necessary to signalize the intersection be in place before any development that is dependent on the east leg of this intersection for access is open to everyday traffic (i.e., before this segment of Alameda Road needs to be more than a construction access road). It is further recommended that exclusive left turn lanes be provided on all four approaches to this intersection to maximize the efficiency of the intersection. The northbound and southbound left turn lanes should provide the City’s standard minimum of 150

feet of queue storage length. Two-way left turn lanes already exist along 19<sup>th</sup> Avenue in this vicinity and can just be restriped near the intersection to convert them to single direction turn lanes. It is recommended that the westbound left turn lane provide at least 75 feet of queue storage from the start, and provide 250 feet of queue storage length before both Supplier Site A and Deer Valley 30 sites are fully developed. Width to provide 250 feet of queue storage length is not likely to exist until such time as the property on the northeast corner of the intersection develops and with that development the site-adjacent segment of the ultimate north half of Alameda Road gets constructed and dedicated. The eastbound approach currently provides enough width immediately west of the intersection to provide a short eastbound left turn only lane (enough for 1-2 vehicles to queue while still allowing an upstream vehicle wanting to turn right (and/or through in the proposed/with east leg condition) to pass them. While 150 feet of turn lane queue storage is the City's standard and should ultimately be provided, until such time as considerably more development occurs along Alameda Road west of 19<sup>th</sup> Avenue, the existing queue storage provisions should be adequate. Once signalized and improved as necessary to provide an exclusive left turn lane on all approaches, this intersection should provide acceptable levels of service on all approaches during both peak hours through buildout of all ASLD/Mack Supplier Site and Deer Valley 30 development as currently proposed.

- At the already signalized intersection of **19<sup>th</sup> Avenue and Pinnacle Peak Road**, continued traffic growth, with or without Deer Valley 30 development, is likely to cause need for traffic signal timing adjustments in order for acceptable levels of services to continue to be achieved on all approaches. Efforts to optimize the signal timing to achieve acceptable levels of service under both Build and No Build scenarios, indicate significant reductions in driver delay on both northbound and southbound approaches, under both scenarios could be achieved by making the following signal timing adjustments:
  - Extend the northbound through phase from 45 seconds to 51 seconds and the northbound left turn phase from 14 seconds to 21 seconds.
  - Extend the southbound through phase from 30 seconds to 31 seconds.
- At the currently stop sign controlled (northbound approach only) intersection of **7<sup>th</sup> Avenue and Happy Valley Road**, continued growth in background traffic, even without any ASLD/Mack Supplier Site or Deer Valley 30 development, is likely to cause need for widening of Happy Valley Road to provide traffic signal control an exclusive westbound left turn lane before the end of 2024. Deer Valley 30 is not expected to add any traffic to this intersection until Happy Valley Rd and Desert Peak Pkwy connect to provide an east-west arterial alternative to L101, Deer Valley Drive and Sonoran Boulevard.
- At the intersection of **7<sup>th</sup> Avenue and Alameda Road**, the Deer Valley 30 development will be responsible for installing a signal if the signal is warranted in

the opening year or, depositing in escrow 25% of the signal cost if the signal is not warranted in the opening year. A traffic signal control is not anticipated to be warranted at this intersection until growth in traffic, beyond that caused by ASLD/Mack Supplier Site and Deer Valley 30 development has occurred.

- At the intersection of **7<sup>th</sup> Avenue and Pinnacle Peak Road**, continued growth in background traffic, even without any ASLD/Mack Supplier Site or Deer Valley 30 development, is likely to cause need for traffic signal control before the end of 2024. Under traffic signal control with a 100-second cycle length, this intersection should provide acceptable levels of service on all approaches during both peak hours through buildout of all ASLD/Mack Supplier Site and Deer Valley 30 development as currently proposed.

## LIST OF REFERENCES

*Highway Capacity Manual, Sixth Edition: A Guide for Multimodal Mobility Analysis.* Transportation Research Board, Washington, D.C., 2018.

*Manual on Uniform Traffic Control Devices.* U.S. Department of Transportation, Federal Highway Administration, Washington, D.C., 2009.

*A Policy on Geometric Design of Highways and Streets, 7th Edition, American Association of State Highway and Transportation Officials, Washington, D.C., 2018.*

*Street Planning and Design Guidelines,* City of Phoenix Street Transportation Department, Phoenix, Arizona, December 2009.

*Trip Generation Manual, 10th Edition,* Institute of Transportation Engineers, Washington, D.C., 2017.

*Trip Generation Handbook, 3rd Edition, Institute of Transportation Engineers,* Washington, D.C., 2014.

## **TECHNICAL APPENDICES**

- APPENDIX A: REVIEW COMMENTS AND RESPONSES**
- APPENDIX B: EXISTING TRAFFIC COUNTS**
- APPENDIX C: EXISTING PEAK HOUR ANALYSIS**
- APPENDIX D: TRIP GENERATION CALCULATIONS**
- APPENDIX E: TRIP DISTRIBUTION CALCULATIONS**
- APPENDIX F: BACKGROUND GROWTH CALCULATIONS**
- APPENDIX G: 2024 NO BUILD PEAK HOUR ANALYSIS**
- APPENDIX H: 2024 BUILD PEAK HOUR ANALYSIS**
- APPENDIX I: TRAFFIC SIGNAL WARRANT ANALYSIS**
- APPENDIX J: QUEUE STORAGE ANALYSIS**



## **APPENDIX A**

### **REVIEW COMMENTS AND RESPONSES**



**City of Phoenix**  
STREET TRANSPORTATION DEPARTMENT

January 31, 2021

Tove Christina White, P.E.  
CivTech, Inc.  
10605 N Hayden Road  
Scottsdale AZ 85260

**RE: Comments - Deer Valley 30 TIA – KIVA 21-3801 – Second Submittal**

Ms. White,

The City of Phoenix Street Transportation Department has reviewed this submittal of the Traffic Impact Analysis for Deer Valley 30 project and has the comments listed below.

Please address all comments. Failure to address each comment may result in delays in the approval process. Please resubmit the revised traffic study to me. If you have any questions, please contact me at [Muhannad.zubi@Phoenix.gov](mailto:Muhannad.zubi@Phoenix.gov). Thank you.

Best Regards,

*Muhannad Zubi*

Muhannad Al Zubi, PE, PTOE  
Traffic Engineer III  
City of Phoenix  
Street Transportation Department

C: Chris Kowalsky

Derek Fancon



# City of Phoenix

STREET TRANSPORTATION DEPARTMENT

|  |                             |
|--|-----------------------------|
| <b>Project:</b> 21-3801  | <b>Name:</b> Deer Valley 30 |
| <b>Prepared by:</b> CivTech  | <b>Engineer:</b> Tove White |
| <b>Date of Study:</b> January 11, 2022                                     | <b>Submittal:</b> Second    |
| <b>Reviewed by:</b><br>City of Phoenix Street Transportation<br>Department | <b>Date:</b> 1-31-2022      |

| Comments |   |
|----------|---|
| 1.       | The purpose of the discussion of “no-build” scenario is not clear. The City requires that the development’s traffic impact including background traffic be analyzed, up to the horizon year and the impacts be mitigated by opening year, or the development shall present a commitment and schedule to construct the mitigations.  |
| 2.       | The TIA should clarify that warranted signals at the intersection of 19th Ave and Alameda Rd, 7th Ave and Pinnacle Peak, and 7th Ave and Happy Valley Rd, will require the development either to install the signal or deposit in escrow 25% of the signal cost, depending on if the warrant is met by opening or after. Please provide a clarification and a schedule for the warranted signals and the development’s commitment.  |
| 3.       | Please provide a signal warrant for the intersection of Alameda and 7 <sup>th</sup> Avenue. The development shall either install the signal or deposit in escrow 25% of the signal cost, depending on if the warrant is met by opening or after   |
| 4.       | The stipulated improvements to the adjacent roadway network shall be completed by the development by opening: <ol style="list-style-type: none"><li>1. The developer shall provide 40 feet of paving, from the face-of-curb to the face-of-curb, centered on the monument line on 15th Avenue.</li><li>2. The developer shall provide 20 feet of paving from the monument line to the face-of-curb and 4 feet of paving south of the monument line on Park View Lane for the entirety of the parcel. The developer shall provide a minimum of 24 feet of paving from the development connecting to the existing Park View Lane to the west and terminate in an approved cul-de-sac on the eastern end of site.</li><li>3. The developer shall provide 20 feet of paving from the monument line to the face-of-curb and 4 feet of paving south of the monument line on Alameda</li></ol> |



## City of Phoenix

STREET TRANSPORTATION DEPARTMENT

|    |  |
|----|--|
|    | <p>Road. The developer shall provide a ½ street connection of a cross section E with a minimum 24 feet of paving.</p> <p>4. Site plan to identify connection to either 19th Avenue or 7th Avenue, appropriate street termination in an approved cul-de-sac will be required at the opposite end.</p> |
| 5. | <p>Please use the more conservative lengths for queuing calculations provided in Table-8. Referenced technologies and methods mentioned in the Civtech comment response might not be implemented at all locations.</p>   |
| 6. | <p>Please resubmit a clearer image of figure 4</p>   |

Reviewer Name, Agency: Muhannad Al Zubi, P.E., City of Phoenix

| Item | Review Comment   | Response  |
|------|--|---|
| 1.   | The purpose of the discussion of “no-build” scenario is not clear. The City requires that the development’s traffic impact including background traffic be analyzed, up to the horizon year and the impacts be mitigated by opening year, or the development shall present a commitment and schedule to construct the mitigation.  | <b>Response to Review Comment No. 1:</b> The "no-build" scenario discussion has two purposes. One purpose is to document how existing year traffic volumes (presented in TIS Figure 3) were converted to horizon year background (future non-site) traffic volumes (presented in TIS Figure 7A and TIS Figure 7B, respectively). This is a City of Phoenix requirement, based on CivTech's interpretation of guidance provided in <i>Section 12.1.3.1.3 - Future Off-Site Traffic</i> of the City's <i>Street Planning and Design Guidelines - January 1, 2009</i> , specifically that portion of the guidance which reads, "If a future horizon year is included in the study, the method for estimating the future traffic volumes must be documented". The other/second purpose was to recognize traffic operational deficiencies that are likely to exist in the horizon year as a consequence of continued growth in traffic volumes within the study area independent of any new traffic the proposed development might add. The total traffic impact on the study area roadway network in the horizon year is a cumulative impact caused by background traffic and site traffic, collectively.   |
| 2.   | The TIA should clarify that warranted signals at the intersection of 19th Ave and Alameda Rd, 7th Ave and Pinnacle Peak, and 7th Ave and Happy Valley Rd, will require the development either to install the signal or deposit in escrow 25% of the signal cost, depending on if the warrant is met by opening or after. Please provide a clarification and a schedule for the warranted signals and the development’s commitment. | <p><b>Response to Review Comment No. 2, Part 1:</b> With regard to the intersection of 19th Avenue and Alameda Road, the <i>Executive Summary</i> and <i>Conclusions and Recommendations</i> sections of the TIS have each been updated to acknowledge that the Deer Valley 30 development will be responsible for installing a signal if the signal is warranted in the opening year or depositing in escrow 25% of the signal cost if the signal is not warranted in the opening year. Statements to this effect appear on pages 3 and 45 of the 3rd Submittal version of the TIS.</p> <p><b>Response to Review Comment No. 2, Part 2:</b> With regard to the intersections of 7th Avenue and Pinnacle Peak Road and 7th Avenue and Happy Valley Road, it has been acknowledged by the City of Phoenix that because (1) the Deer Valley 30 development is anticipated to generate fewer than 500 trips per hour during the highest volume peak hour; (2) both of these intersections are located well outside the (1/4 mile from the site) study area boundary generally required to be considered in a traffic impact study for a proposed development project of this size/intensity and (3) the Deer Valley 30 development is anticipated to contribute so little traffic to either of these intersections, the Deer Valley 30 development will not have any installation or cost participation responsibility for signals at either of these locations.</p> |

Reviewer Name, Agency: Muhannad Al Zubi, P.E., City of Phoenix

| Item | Review Comment   | Response   |
|------|--|--|
| 3.   | Please provide a signal warrant (analysis) for the intersection of Alameda (Road) and 7th Avenue. The development shall either install the signal or deposit in escrow 25% of the signal cost, depending on if the warrant is met by opening or after  | <b>Response to Review Comment No. 3:</b> The TIS has been updated to recognize both that traffic signal control is not anticipated to be warranted at this intersection until growth in traffic, beyond that caused by ASLD/Mack Supplier Site and Deer Valley 30 development has occurred and that the Deer Valley 30 development and that the Deer Valley 30 development will be responsible for installing a signal if the signal is warranted in the opening year or, depositing in escrow 25% of the signal cost if the signal is not warranted in the opening year. These statements appear on page 3 and on pages 46-47 of the 3rd submittal version of the TIS.          |
| 4.   | The stipulated improvements to the adjacent roadway network shall be completed by the development by opening:  | <b>Response to Review Comment No. 4 (generally):</b> See responses to individual components of this review comment, below.   |
| 4.a: | The developer shall provide 40 feet of paving, from the face-of-curb to the face-of-curb, centered on the monument line on 15th Avenue.  | <b>Response to Review Comment No. 4.a:</b> Acknowledged.   |
| 4.b: | The developer shall provide 20 feet of paving from the monument line to the face-of-curb and 4 feet of paving (north*) of the monument line on Park View Lane for the entirety of the parcel. The developer shall provide a minimum of 24 feet of paving from the development connecting to the existing Park View Lane to the west and terminate in an approved cul-de-sac on the eastern end of site. <i>*Original review comment states this as "south"; CivTech assumes the intent was to say "north".</i> | <b>Response to Review Comment No. 4.b:</b> Acknowledged. TIS figures 6A, 6B, 8A, 8B, 9A and 9B have been updated to show Park View Lane as a continuous segment from 19th Avenue to the eastern boundary of the DV30 East site.  |
| 4.c: | The developer shall provide 20 feet of paving from the monument line to the face-of-curb and 4 feet of paving south of the monument line on Alameda Road. The developer shall provide a ½ street connection of a cross section E with a minimum 24 feet of paving.   | <b>Response to Review Comment No. 4.c:</b> Acknowledged.   |
| 4.d: | Site plan to identify connection to either 19th Avenue or 7th Avenue, appropriate street termination in an approved cul-de-sac will be required at the opposite end.   | <b>Response to Review Comment No. 4.d:</b> It is CivTech's understanding that since these review comments were issued, OPUS and the City have reached agreement that on how the site plan will represent the off-site improvements to be provided along Alameda Road with the Deer Valley 30 project. The current, agreed upon site plans, one for the 5-acre (DV30 West) site/parcel, and one of the 25-acre (DV30 East) site/parcel are attached to this comment response document for immediate reference. These site plans are also represented (using higher resolutions copies than were used for earlier submittals) in Figure 4 of the 3rd Submittal version of the TIS. |

Reviewer Name, Agency: Muhannad Al Zubi, P.E., City of Phoenix

| Item | Review Comment  | Response   |
|------|---|--|
| 5.   | Please use the more conservative lengths for queuing calculations provided in Table-8. Referenced technologies and methods mentioned in the CivTech comment response might not be implemented at all locations. | <p><b>Response to Review Comment No. 5:</b> The queue lengths recommended in Table 8 of the TIS are supported by analysis performed in accordance with City of Phoenix accepted methods and in a manner consistent with that used for the City of Phoenix-approved TIS performed for the Supplier Site A development. The City of Phoenix standard storage length for new turn lanes is 150 feet on collector streets and 250 feet on arterial streets. Where a new turn lane has been recommended and the HCM calculated 95th-percentile queue length is shorter than the standard length, the standard length has still been recommended. Where the HCM calculated length is shorter than the existing striped length, no change is recommended and where the HCM calculated length is longer than the existing striped length, either the calculated length is recommended or an explanation as to why an alternate length has been recommend such as the existence of additional storage capacity in the upstream approach taper area and/or an upstream segment of two-way left turn lane) is provided in the footnotes of the table. As a side note and with regard to the intersection of 19th Avenue and Happy Valley Road, specifically, peak hour level of service analysis has been performed again, this time recognizing that the signal phasing has been upgraded since CivTech initially analyzed this intersection for the original Supplier Site A TIS, to include protected/permitted left turn phasing on all approaches. Under this phasing scheme, the intersection can accommodate full buildout of Deer Valley 30, under the Deer Valley 30 develops first scenario without warranting dual left turn lanes on any approach. Phase recall that the Deer Valley 30 develops first scenario (Scenario B in the 2nd Submittal version of the TIS) is the scenario under which we do not assume there will be any Supplier Site A (SSA) development nor any SSA-related off-site improvements to rely on in the horizon year and under which Deer Valley 30 would provide a half street connection along the Alameda Road alignment, from 19th Avenue east to and adjacent to the Deer Valley 30 sites.</p> |
| 6.   | Please resubmit a clearer image of Figure 4.  | <p><b>Response to Review Comment No. 6:</b> Figure 4 as it was presented in the 2nd Submittal version of the TIS has been updated with a higher resolution image of the two Deer Valley 30 site plans. The updated version appears as Figure 4 on page 20 in the 3rd Submittal version of the TIS.</p>   |

CONSULTANT

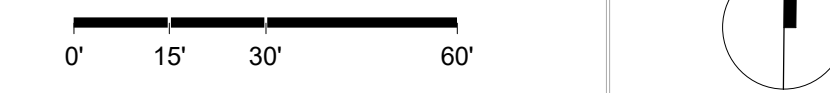
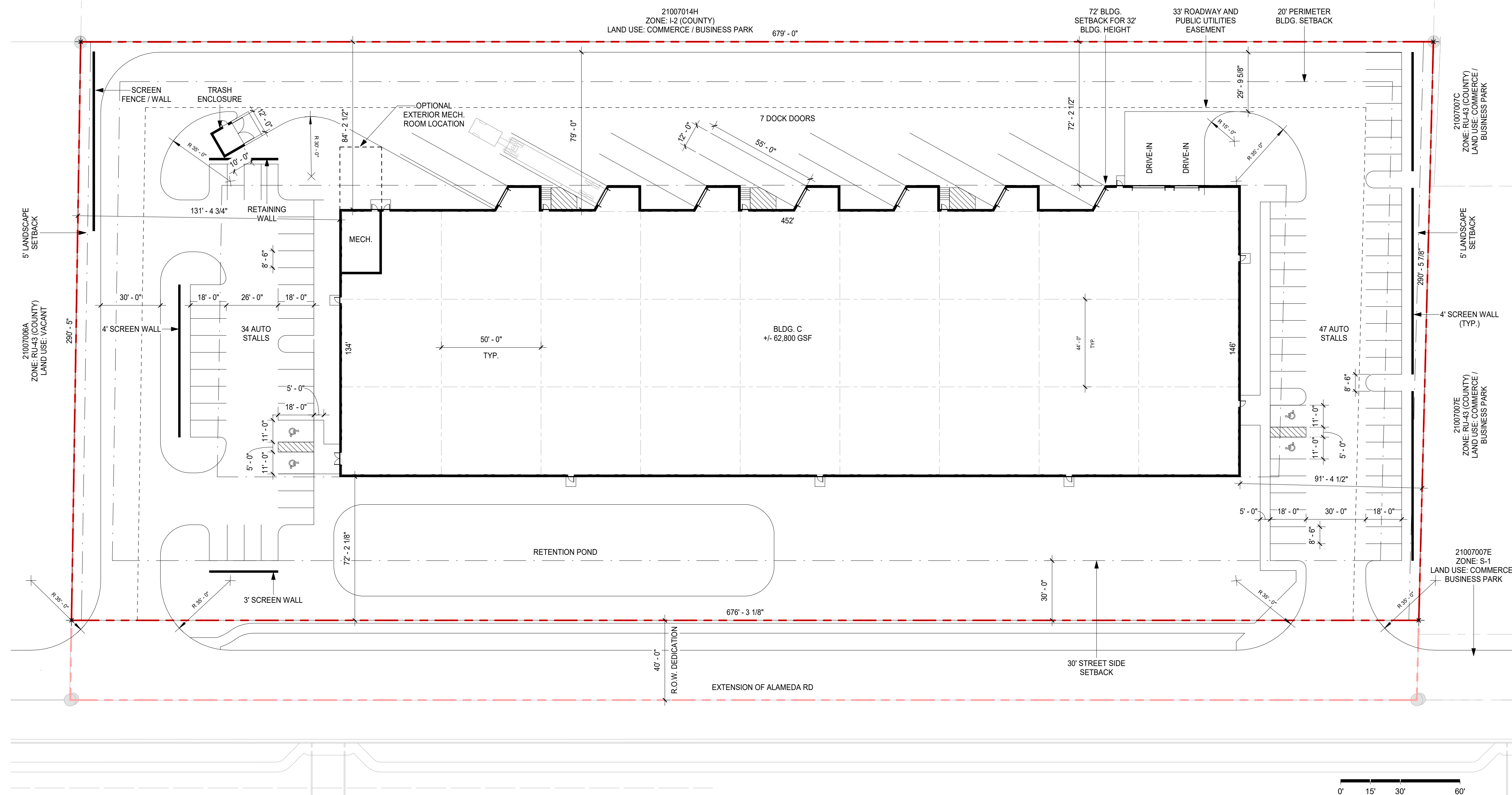
PROJECT

**Deer Valley 30**

PROJECT ADDRESS  
Phoenix, AZ

PROJECT NUMBER  
32013000

**ISSUE RECORD**



**1 5-Acres Site - Concept Site Plan**  
1" = 30'-0"



**2 Vicinity Map 5-Acres Site**  
1" = 24000'



**PROJECT INFORMATION**

|                        |                   |
|------------------------|-------------------|
| <b>Total Site Area</b> |                   |
| Gross Area             | +/- 5.14 Acres    |
| Net Area               | +/- 4.52 Acres    |
| <b>Building C</b>      |                   |
| Building Area          | +/- 62,800 GSF    |
| Building Height        | +/- 32' / 1 Story |
| Lot Coverage / F.A.R.  | 31.9 %            |
| Total Auto Parking     | 81 Stalls         |
| Accessible Parking     | 4 Stalls          |
| Dock Doors             | 7 Doors           |
| Drive-In Doors         | 2 Door            |

**ZONING**

**Zone District:** CP/GCP Commerce Park / General Commerce Park  
**Overlay District:** Deer Valley Airport Overlay (DVAO Area 1)  
**Zoning Cases:** Z-128-07  
**ZONING PARKING REQUIREMENTS**  
**Unspecified Industrial Use (Shell Building):**  
for 1-150,000 SF 1 stall per 1,000 SF;  
for 150,001-500,000 SF 1 stall per 2,000 SF;  
for 500,001 SF plus 1 stall per 2,500 SF  
**Office:** 1 per 300 SF  
**Industrial Plants, Manufacturing, Wholesale (including Warehouses):**  
1 stall per 1.5 warehouse or production workers and 1 space per 300 SF of administrative office. If the facility runs more than one shift a day, employee count will be based on the 2 largest shifts

**SITE PLAN NOTES**

- i. Development and use of this site will conform with all applicable codes and ordinances.
- ii. This project is located in the City of Phoenix water service area and has been designated as having an assured water supply.
- iii. All new or relocated utilities will be placed underground.
- iv. All signage requires separate approvals and permits.
- v. Any lighting will be placed so as to direct light away from the adjacent residential districts and will not exceed one-foot candle at the property line. No noise, odor, or vibration will be emitted so that it exceeds the general level of noise, odor, or vibration emitted by uses outside of the site.
- vi. Owners of property adjacent to public right-of-way will have the responsibility for maintaining all landscaping within the rights-of-way in accordance with approved plans.

**SITE PLAN NOTES ADDITIONAL**

1. Smoke, gas and odor emissions shall comply with Regulation III of the Maricopa County Air Pollution Control Rules and Regulations.
2. The disposal of all waste materials shall comply with title 9, chapter 8, articles 18 and 4 of the Hazardous Waste Regulations as adopted by the Arizona Health Department.
3. The average noise level, measured at the property line, shall not exceed fifty-five dB (l dn) when measured on an "A weighted" sound level meter and according to the procedures of the Environmental Protection Agency.
4. Explosive or hazardous processes: Certification shall be provided by the Phoenix Fire Department Prevention Bureau that all manufacturing, storage and waste processes on the site shall meet safety and environmental standards as administered by the Bureau.
5. Outdoor lighting shall be shielded so that:
  - a. No source of illumination is directly visible from a public street or from residentially zoned property.
  - b. Light intensity does not exceed 1 footcandle on any adjacent residentially zoned property.

KIVA  
SDEV  
PAPP  
QS

**Accessible Parking Required:**  
for 1-25 total stalls in parking lot: 1 required accessible space; for 26-50: 2; for 51-75: 3; for 76-100: 4; for 101-150: 5; for 151-200: 6; for 201-300: 7; for 301-400: 8; for 401-500: 9; for 1,001 and over: 20 plus 1 for each 100 spaces, or fraction thereof over 1,000.  
**Proposed Parking Mix:** 10% Office, 90% Industrial  
**Building A:** 78 Stalls Required, 4 to be accessible (57 Industrial + 21 Office)

SHEET TITLE  
**5-Acres Site - Concept Site Plan**

SHEET NUMBER



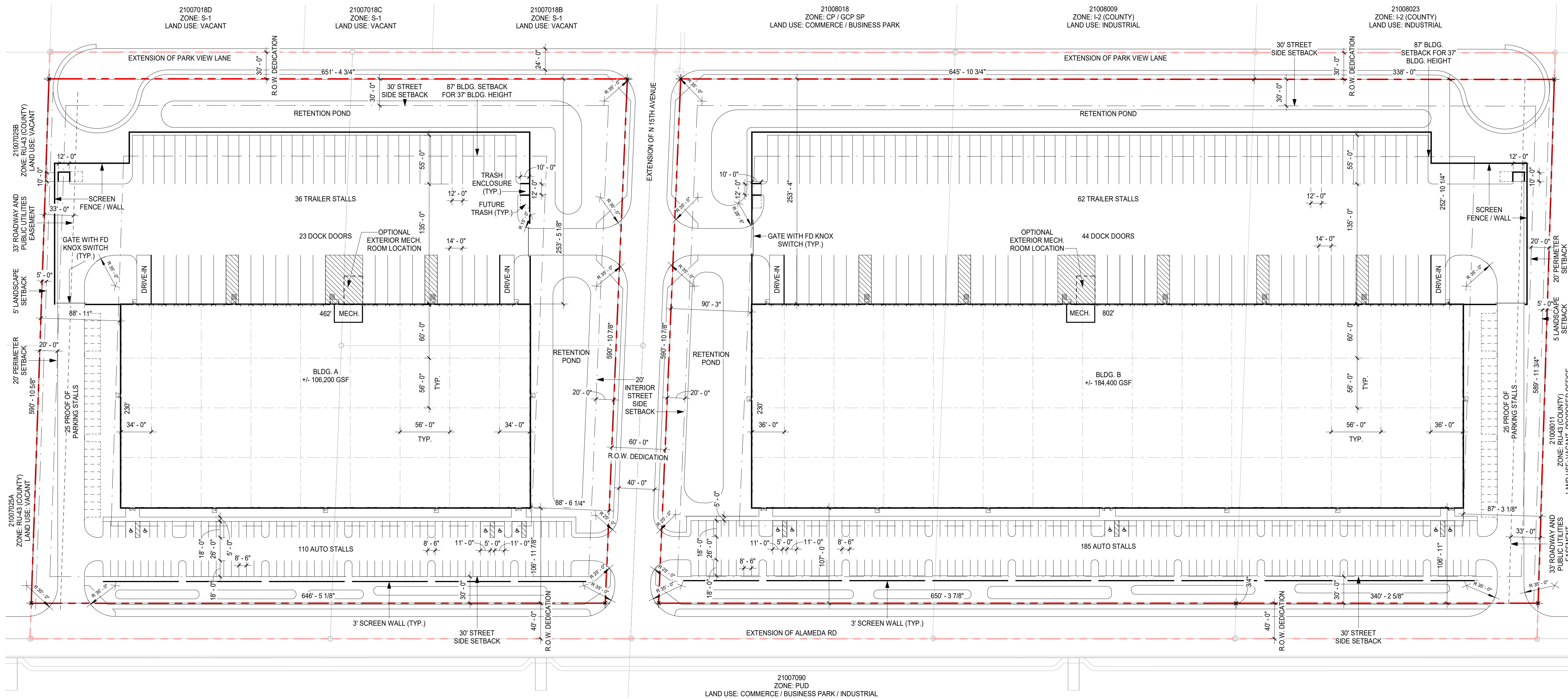
CONSULTANT

PROJECT  
**Deer Valley 30**

PROJECT ADDRESS  
Phoenix, AZ

PROJECT NUMBER  
32013000

**ISSUE RECORD**



**1** 25-Acres Site - Concept Site Plan  
1" = 60'-0"



**2** Vicinity Map 25-Acres Site  
1:24000

**PROJECT INFORMATION**

**Total Site Area**  
Gross Area +/- 25.71 Acres  
Net Area +/- 22.17 Acres

**Building A**  
Gross Area +/- 10.29 Acres  
Net Area +/- 8.80 Acres  
Building Area +/- 106,200 GSF  
Building Height +/- 37' / 1 Story  
Lot Coverage / F.A.R. 23.7 %  
Auto Parking 110 Stalls  
Proof of Parking 25 Stalls  
Total Parking 135 Stalls  
Accessible Parking 5 Stalls  
Dock Doors 23 Doors  
Drive-In Doors 2 Doors  
Trailer Stalls 36 Stalls

**Building B**  
Gross Area +/- 15.41 Acres  
Net Area +/- 13.37 Acres  
Building Area +/- 184,400 GSF  
Building Height +/- 37' / 1 Story  
Lot Coverage / F.A.R. 31.7 %  
Auto Parking 185 Stalls  
Proof of Parking 25 Stalls  
Total Parking 210 Stalls  
Accessible Parking 6 Stalls  
Dock Doors 44 Doors  
Drive-In Doors 2 Doors  
Trailer Stalls 62 Stalls

**ZONING**

**Zone District:** CP/GCP Commerce Park / General Commerce Park

**Overlay District:** Deer Valley Airport Overlay (DVAO Area 1)

**Zoning Cases:** Z-129-07 and Z-18-10

**ZONING PARKING REQUIREMENTS**

**Unspecified Industrial Use (Shell Building):**  
for 1-150,000 SF 1 stall per 1,000 SF;  
for 150,001-500,000 SF 1 stall per 2,000 SF;  
for 500,001 SF plus 1 stall per 2,500 SF

**Office:** 1 per 300 SF

**Industrial Plants, Manufacturing, Wholesale (including Warehouses):**  
1 stall per 1.5 warehouse or production workers and 1 space per 300 SF of administrative office. If the facility runs more than one shift a day, employee count will be based on the 2 largest shifts

**Accessible Parking Required:**  
for 1-25 total stalls in parking lot: 1 required accessible space; for 26-50: 2; for 51-75: 3; for 76-100: 4; for 101-150: 5; for 151-200: 6; for 201-300: 7; for 301-400: 8; for 401-500: 9; for 1,001 and over: 20 plus 1 for each 100 spaces, or fraction thereof over 1,000.

**Proposed Parking Mix:** 10% Office, 90% Industrial

**Building A:** 131 Stalls Required, 5 to be accessible (96 Industrial + 35 Office)

**Building B:** 144 Stalls Required, 5 to be accessible (83 Industrial + 61 Office)

**SITE PLAN NOTES**

- i. Development and use of this site will conform with all applicable codes and ordinances.
- ii. This project is located in the City of Phoenix water service area and has been designated as having an assured water supply.
- iii. All new or relocated utilities will be placed underground.
- iv. All signage requires separate approvals and permits.
- v. Any lighting will be placed so as to direct light away from the adjacent residential districts and will not exceed one-foot candle at the property line. No noise, odor, or vibration will be emitted so that it exceeds the general level of noise, odor, or vibration emitted by uses outside of the site.
- vi. Owners of property adjacent to public right-of-way will have the responsibility for maintaining all landscaping within the rights-of-way in accordance with approved plans.

**SITE PLAN NOTES ADDITIONAL**

- 1. Smoke, gas and odor emissions shall comply with Regulation III of the Maricopa County Air Pollution Control Rules and Regulations.
- 2. The disposal of all waste materials shall comply with title 9, chapter 8, articles 18 and 4 of the Hazardous Waste Regulations as adopted by the Arizona Health Department.
- 3. The average noise level, measured at the property line, shall not exceed fifty-five dB (l dn) when measured on an "A weighted" sound level meter and according to the procedures of the Environmental Protection Agency.
- 4. Explosive or hazardous processes: Certification shall be provided by the Phoenix Fire Department Prevention Bureau that all manufacturing, storage and waste processes on the site shall meet safety and environmental standards as administered by the Bureau.
- 5. Outdoor lighting shall be shielded so that:
  - a. No source of illumination is directly visible from a public street or from residentially zoned property.
  - b. Light intensity does not exceed 1 footcandle on any adjacent residentially zoned property.

KIVA  
SDEV  
PAPP  
QS

DATE  
01/07/22

PROJECT NUMBER

DRAWN BY  
S. OLSON  
CHECKED BY  
J. WADE

REGISTRATION

SHEET TITLE  
**25-Acres Site -  
Concept Site Plan**

SHEET NUMBER



**City of Phoenix**  
STREET TRANSPORTATION DEPARTMENT

November 24, 2021

Tove Christina White, P.E.  
CivTech, Inc.  
10605 N Hayden Road  
Scottsdale AZ 85260

**RE: Deer Valley 30 TIA – KIVA 21-3801**

Ms. White,

The City of Phoenix Street Transportation Department has reviewed this submittal of the Traffic Impact Analysis for Deer Valley 30 project and has the comments listed below. Please address all comments. Failure to address each comment may result in delays in the approval process. Please resubmit the revised traffic study to me. If you have any questions, please contact me at [Muhannad.zubi@Phoenix.gov](mailto:Muhannad.zubi@Phoenix.gov). Thank you.

Best Regards,

*Muhannad Zubi*

Muhannad Al Zubi, PE, PTOE  
Traffic Engineer III  
City of Phoenix  
Street Transportation Department

C: Chris Kowalsky

Derek Fancon



# City of Phoenix

STREET TRANSPORTATION DEPARTMENT

|  |                             |
|--|-----------------------------|
| <b>Project:</b> 213801   | <b>Name:</b> Deer Valley 30 |
| <b>Prepared by:</b> CivTech  | <b>Engineer:</b> Tove White |
| <b>Date of Study:</b> October 18, 2021                                     | <b>Submittal:</b> first     |
| <b>Reviewed by:</b><br>City of Phoenix Street Transportation<br>Department | <b>Date:</b> 11-19-2021     |

| Comments |   |
|----------|---|
| 1.       | Improvements assumed to be completed by others prior to the development of this project, please elaborate on who will complete these improvements and who verified these assumptions. Page 1 and 2.   |
| 2.       | Since the improvements on page 1 are assumed to be completed by opening and are included as mitigation to this development's impact, the development is confirming that this project will complete these improvements in case others do not complete them by opening. Page 1 and 2.   |
| 3.       | Remove irrelevant editorial about 15th Ave. Need to confirm that 15th Ave is to be built per the COP Street Classification Map. Page 2.   |
| 4.       | TIA needs to confirm that Parkview Lane shall connect to the existing Parkview Lane to the west as the row exist to make this connection. East end shall terminate in a temporary turnaround easement dedicated and constructed, so it can be extended east with future developments. Please remove commentary that neither of these streets is needed. Page 2.   |
| 5.       | Bullet point 3-d, is not relevant to the TIA. Page 3.   |
| 6.       | Bullet 3-b, stating when AND IF renders this statement irrelevant. Page-3.  |
| 7.       | Bullet 3-b, if this statement is part of the mitigation of this development's impact, then the developer needs to confirm completion by opening. Page-3.  |
| 8.       | The four scenarios discussed in the build out are confusing. What is a "No-Build Mitigated", if this is a no build, what is being mitigated? Page 3.  |
| 9.       | In the discussion of the "Buildout Year 2024", it states " <b>The No Build</b> scenarios are ones in which existing traffic volumes have continued to grow at an average annual rate of 3.6% since 2021, <b>Deer Valley 30</b> and all ASLD/Mack Supplier Sites have <b>been fully developed and are generating traffic</b> at full buildout levels in accordance with current land use assumptions". Not very clear what is this telling us? Page 3. |



## City of Phoenix

STREET TRANSPORTATION DEPARTMENT

|     |  |
|-----|--|
| 10. | The improvements referenced in the mitigated condition, if they are a part of the mitigation assumptions for this development, the project needs to confirm that the development will construct these improvements if not completed by others. Page 4. |
| 11. | Development shall contribute to the cost of the <b>signals which are warranted by horizon year</b> at a rate not less than 25% of the total cost in an escrow account in coordination with the Street Transportation Department.                       |
| 12. | Alameda improvements have been stipulated in the Pre-Application and is required to terminate in a cul-de-sac in the interim condition.  |
| 13. | Table 7 on page 33: The developer shall implement the recommended changes.   |
| 14. | Table 7 on page 33: why not use the more conservative lengths out of the three methods?  |

Disposition Codes: (1) Will Comply (2) Will Evaluate (3) Delete Comment (4) Defer to Consultant/Owner

Reviewer Name, Agency: **Muhannad Al Zubi, City of Phoenix**

| Item | Location   | Review Comment   | (Code) & Response   |
|------|------------|--|---|
| 1.   | Page 1 & 2 | Improvements assumed to be completed by others prior to the development of this project, please elaborate on who will complete these improvements and who verified these assumptions.  | <b>Disposition Code 2:</b> While it is still anticipated that before the end of 2024, the Supplier Site A developer(s) will have completed construction of the south half of Alameda Road from 19th Avenue to 7th Avenue and the now missing segment of 7th Avenue, between Alameda Road/Misty Willow Lane and Pinnacle Peak Road, CivTech understands that because this is not certain, a second pair of horizon year scenarios - one in which DV 30 development precedes Supplier Site off-site improvements has been included in this revision. <b>***Note: A "Pair" of horizon year scenarios, for the purposes of this explanation, includes a "No-Build" scenario and a "Build" scenario.***</b> Accordingly, the DV 30 TIS now addresses two pairs of horizon year scenarios, a pair of Horizon Year Scenario A's and a pair of Horizon Year Scenario B's. Horizon Year Scenario A's, the same horizon year scenarios addressed in the original (1st Submittal version) DV 30 TIS, are those in which: (A) The year is 2024; (B) Supplier Sites A, B and C are fully developed; (C) All of the off-site roadway improvements to be completed in conjunction with Supplier Site A, B and C development, including the above described half street segments of Alameda Road and of 7th Avenue respectively, are complete and open to traffic. Horizon Year Scenario B's introduced with this submittal of the DV 30 TIS, are those in which: (A) The year is 2024; (B) No Supplier Site development nor any of the Supplier Site-associated off-site roadway improvements to Alameda Road or 7th Avenue have been made.  |
| 2.   | Page 1 & 2 | Since the improvements on page 1 are assumed to be completed by opening and are included as mitigation to this development's impact, the development is confirming that this project will complete these improvements in case others do not complete them by opening.  | <b>Disposition Code 2:</b> The DV 30 TIA has been updated to include a second analysis scenario, Horizon Year Scenario B, to address the question of off-site improvements. A new set of volumes has been completed for this scenario removing all of the Supplier Site volumes from the background. Additional Synchro analysis and Signal Warrant analyses have been conducted with these new volumes and the results indicate that many of the previously recommended off-site improvements are not warranted with only the DV 30 site. None of the three previously recommended traffic signals are warranted without the Supplier Site A traffic and the connection along Alameda Road from the eastern border of the site to 7th Avenue is also not needed to assist in traffic flow. The recommendations both with and without the Supplier Site A traffic (Scenario A and Scenario B, respectively) are included in the executive summary of the TIS as well as summarized in Figures 9A and 9B.  |
| 3.   | Page 2     | Remove irrelevant editorial about 15th Ave. Need to confirm that 15th Ave is to be built per the COP Street Classification Map.  | <b>Disposition Code 1:</b> The statement regarding 15th Avenue has been updated in the executive summary to better reflect the improvements and changes that will occur to 15th Avenue.   |
| 4.   | Page 2     | TIA needs to confirm that Parkview Lane shall connect to the existing Parkview Lane to the west as the (ROW exists) to make this connection. East end shall terminate in a temporary turnaround easement dedicated and constructed, so it can be extended east with future developments. Please remove commentary that neither of these streets is needed. | <b>Disposition Code 2/3:</b> Commentary regarding need for Parkview Lane has been removed from the report as requested. As to Parkview Lane improvements and with reference made to the DV 30 East Site plan presented in Figure 4, it is our understanding that consensus between the City and the developer has been reached and that the agreed upon extents and limits of DV 30 dedications and improvements to Parkview Lane are generally as follows: DV 30 will (A) dedicate a 30-foot wide strip of land/Right-of-Way (ROW) along the entire northern edge of the DV 30 East Site for future Parkview Lane, plus whatever additional portion of the DV 30 East Site near its northwest corner and northeast corner respectively, that may be needed to provide vehicle turnaround provisions within dedicated ROW at the eastern and western limits of DV 30's Parkview Lane construction; (B) construct a 24-foot-wide (minimum) "south half" segment of Parkview Lane within the limits of the DV 30 East Site, plus vehicle turnaround provisions at either or both endpoints. As to construction of Parkview Lane outside of the above described limits, it is CivTech's further understanding that, (A) as verified a second time on 1/9/2022, Parkview Lane currently exists as a fully improved street on both sides of the ultimate centerline (within a dedicated, 60-foot-wide full street ROW) for the first 340 feet +/- east of 19th Avenue. (B) From 340 feet +/- east of 19th Avenue to about 490 feet +/- east of 19th Avenue, there is what appears to be a fully improved north half within a 30-foot-wide north half ROW. (C) From 490 feet +/- east of 19th Avenue to about 835 feet +/- east of 19th Avenue, there is a marginally improved, varying width (generally 20-24 feet wide) paved segment that proceeds within a 55-foot-wide (25-foot wide "north half" + 30-foot wide "south half") ROW. (D) From 835 feet +/- east of 19th Avenue to about 890 feet +/- east of 19th Avenue, there is a 30-foot-wide south half right of way and a continuation of the marginally improved varying width (mostly north of the future centerline) roadway. (E) From 890 feet +/- east of 19th Avenue to a point approximately 1700 feet east of 19th Avenue (and approximately 185 feet west of the DV 30 East Site), the marginally improved segment of Parkview Lane is located on private property. (F) Based on CivTech's discussions with Mr. Zubi in early late October 2021, it is understood by CivTech that there are patent easements along the Parkview Lane edges of those land parcels located between that segment of Parkview Lane that exists within a fully dedicated ROW and the western limits of the DV30 East Site, with which a third party (developer or other) could make additional improvements to Parkview Lane to the extent necessary to provide a |
| 5.   | Page 3     | Bullet point 3-b, is not relevant to the TIA.  | <b>Disposition Code 1:</b> This statement has been removed from the executive summary of the TIS. A more concise replacement statement has been added to still discuss 15th Avenue and the improvements that will be made.  |
| 6.   | Page 3     | Bullet 3-b, stating when AND IF renders this statement irrelevant.   | Refer to Comment Response for Comment #5  |
| 7.   | Page 3     | Bullet 3-b, if this statement is part of the mitigation of this development's impact, then the developer needs to confirm completion by opening.   | Refer to Comment Response for Comment #5  |

Disposition Codes: (1) Will Comply (2) Will Evaluate (3) Delete Comment (4) Defer to Consultant/Owner

Reviewer Name, Agency: **Muhannad Al Zubi, City of Phoenix**

| Item | Location | Review Comment   | (Code) & Response   |
|------|----------|--|---|
| 8.   | Page 3   | The four scenarios discussed in the build out are confusing. What is a "No-Build Mitigation", if this is a no build, what is being mitigated?  | <b>Disposition Code 2:</b> The No-Build Mitigated scenario addresses traffic delays in the background, or no-build, scenario. At the intersection of 19th Avenue and Happy Valley Road in Scenario A, all four approaches warrant the addition of a second left turn lane. In Scenario B, the northbound and southbound approaches both warrant the addition of a second left turn lane without site traffic. These improvements are recommended to occur prior to the completion of DV 30 as the delays are present without the DV 30 site traffic and DV 30 contributes little to no traffic to these left turn approaches. The No-Build Mitigation scenario recognizes the need for these dual left turn lanes and recommends them to be completed with or without the DV 30 site; they are also recommended in the No-Build condition so as not to confuse these improvements with the improvements that are warranted by the DV 30 site.   |
| 9.   | Page 3   | In the discussion of the "Buildout Year 2024", it states "The No Build scenarios are ones in which existing traffic volumes have continued to grow at an average annual rate of 3.6% since 2021, DV 30 and all ASLD/Mack Supplier Sites have been fully developed and are generating traffic at full buildout levels in accordance with current land use assumptions". Not very clear what is this telling us? | <b>Disposition Code 2:</b> The cited statements are related to the No-Build scenario (perhaps for the purposes of this response, we should call the No-Build "Scenario", a No-Build "Version") of what is now being referred to as Horizon Year Scenario A. The No-Build version of Horizon Year Scenario A is one in which Supplier Site A, B and C development precede any DV 30 development. Under this version of Horizon Year Scenario A, existing traffic volumes within the study area will have grown as a result of both general growth in Phoenix Metropolitan area population (for which CivTech made a 3.6% per year upward adjustment to existing traffic volumes) and as a result of significant development (specifically development of Supplier Sites A, B and C) having occurred in the immediately surrounding area (for which CivTech made an additional adjustment). In other words (and in the context of the two scenarios now being considered), the No Build scenario is one in which general growth in population and development of Supplier Sites A, B and C have caused background traffic volumes as they existed in 2021 to rise |
| 10.  | Page 4   | The improvements referenced in the mitigated condition, if they are a part of the mitigation assumptions for this development, the project needs to confirm that the development will construct these improvements if not completed by others  | <b>Disposition Code 2:</b> This comment has been addressed by adding a second horizon year scenario to the TIS which identifies the off-site roadway improvements the DV 30 developer will construct, beyond those required adjacent to the DV 30 sites if DV 30 development precedes completion of those improvements to Alameda Road and 7th Avenue anticipated to be completed in conjunction with Supplier Site A development.  |
| 11.  |          | Development shall contribute to the cost of the <u>signals which are warranted by horizon year</u> at a rate not less than 25% of the total cost in an escrow account in coordination with the Street Transportation Department.   | <b>Disposition Code 1:</b> The DV 30 developer has agreed to contribute 25% to the cost of a traffic signal at the intersection of 19th Avenue and Alameda Road. No other not yet existing traffic signals within the study area will be needed to accommodate DV 30 traffic.   |
| 12.  |          | Alameda improvements have been stipulated in the Pre-Application and is required to terminate in a cul-de-sac in the interim condition.  | <b>Disposition Code 1:</b> Alameda Road will be improved in general accordance with the site plans presented in Figure 4 except as may otherwise be required by the City of Phoenix to provide for vehicle turnaround provisions near the eastern edge of the DV 30 East Site in the event that the south half of Alameda Road has not already been constructed from the eastern terminus of the DV 30 East Site segment to 7th Avenue (in which case a turnaround adjacent to DV 30 East would not be necessary).  |
| 13.  | Page 33  | <b>Table 7:</b> The developer shall implement the recommended changes.   | <b>Disposition Code 1:</b> The inclusion of a second analysis scenario, Scenario B, in this revised TIS allows the City and the Developer to recognize which specific roadway improvements are warranted by the DV 30 site and which are warranted with the Supplier Site A site. The DV 30 developer has agreed to contribute to additional costs that are not warranted by the DV 30 site alone (i.e. the traffic signal at 19th Avenue and Alameda Road) and will assist with the relevant improvements mentioned in Scenario B of this TIS.   |
| 14.  | Page 33  | <b>Table 7:</b> why not use the more conservative lengths out of the three methods?  | <b>Disposition Code 2:</b> The recommended turn lane queue lengths are those deemed to most appropriate in the context of multiple factors, including factors such as the advancements that have been made in traffic-activated signal timing and phasing technology that are not considered in the AASHTO equations that tend to yield the highest storage length values. Due to the limitations of the AASHTO equations, the AASHTO-based results have been removed from the queue storage tables.  |

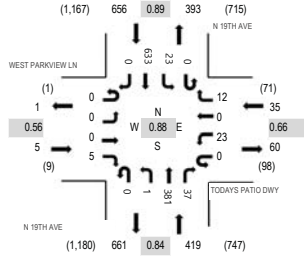
## **APPENDIX B**

### **EXISTING TRAFFIC COUNTS**

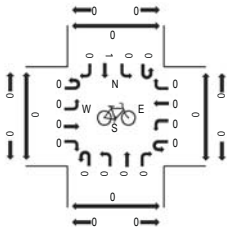


**Location:** 1 N 19TH AVE & TODAYS PATIO DWY AM  
**Date:** Wednesday, October 6, 2021  
**Peak Hour:** 07:30 AM - 08:30 AM  
**Peak 15-Minutes:** 07:45 AM - 08:00 AM

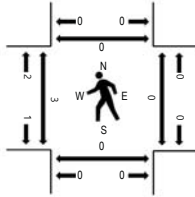
**Peak Hour - Motorized Vehicles**



**Peak Hour - Bicycles**



**Peak Hour - Pedestrians**



Note: Total study counts contained in parentheses.

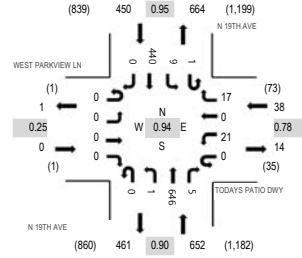
**Traffic Counts - Motorized Vehicles**

| Interval Start Time | WEST PARKVIEW LN |      |           |       | TODAYS PATIO DWY |      |            |       | N 19TH AVE Northbound |      |      |       | N 19TH AVE Southbound |        |       |      | Rolling Hour | Pedestrian Crossings |   |   |   |   |
|---------------------|------------------|------|-----------|-------|------------------|------|------------|-------|-----------------------|------|------|-------|-----------------------|--------|-------|------|--------------|----------------------|---|---|---|---|
|                     | Eastbound        |      | Westbound |       | Northbound       |      | Southbound |       | Total                 | West | East | South | North                 |        |       |      |              |                      |   |   |   |   |
|                     | U-Turn           | Left | Thru      | Right | U-Turn           | Left | Thru       | Right |                       |      |      |       |                       | U-Turn | Left  | Thru |              | Right                |   |   |   |   |
| 7:00 AM             | 0                | 0    | 0         | 0     | 0                | 8    | 0          | 6     | 0                     | 0    | 63   | 6     | 0                     | 3      | 116   | 0    | 202          | 1,028                | 2 | 0 | 0 | 0 |
| 7:15 AM             | 0                | 0    | 0         | 4     | 0                | 3    | 0          | 5     | 0                     | 0    | 56   | 6     | 0                     | 2      | 141   | 0    | 217          | 1,089                | 2 | 0 | 0 | 0 |
| 7:30 AM             | 0                | 0    | 0         | 4     | 0                | 8    | 0          | 2     | 0                     | 1    | 88   | 6     | 0                     | 7      | 177   | 0    | 293          | 1,115                | 1 | 0 | 0 | 0 |
| 7:45 AM             | 0                | 0    | 0         | 1     | 0                | 3    | 0          | 2     | 0                     | 0    | 115  | 9     | 0                     | 8      | 178   | 0    | 316          | 1,037                | 1 | 0 | 0 | 0 |
| 8:00 AM             | 0                | 0    | 0         | 0     | 0                | 8    | 0          | 5     | 0                     | 0    | 87   | 13    | 0                     | 6      | 144   | 0    | 253          | 966                  | 1 | 0 | 0 | 0 |
| 8:15 AM             | 0                | 0    | 0         | 0     | 0                | 4    | 0          | 3     | 0                     | 0    | 91   | 9     | 0                     | 2      | 134   | 0    | 243          | 0                    | 0 | 0 | 0 | 0 |
| 8:30 AM             | 0                | 0    | 0         | 0     | 0                | 5    | 0          | 5     | 0                     | 0    | 80   | 9     | 0                     | 2      | 114   | 0    | 215          | 0                    | 0 | 0 | 0 | 0 |
| 8:45 AM             | 0                | 0    | 0         | 0     | 0                | 2    | 0          | 2     | 0                     | 0    | 105  | 3     | 0                     | 7      | 126   | 0    | 245          | 0                    | 0 | 0 | 0 | 0 |
| Count Total         | 0                | 0    | 0         | 9     | 0                | 41   | 0          | 30    | 0                     | 1    | 685  | 61    | 0                     | 37     | 1,130 | 0    | 1,994        | 7                    | 0 | 0 | 0 | 0 |
| Peak Hour           | 0                | 0    | 0         | 5     | 0                | 23   | 0          | 12    | 0                     | 1    | 381  | 37    | 0                     | 23     | 633   | 0    | 1,115        | 3                    | 0 | 0 | 0 | 0 |

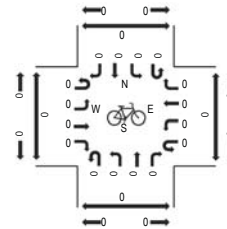


**Location:** 1 N 19TH AVE & TODAYS PATIO DWY PM  
**Date:** Wednesday, October 6, 2021  
**Peak Hour:** 04:15 PM - 05:15 PM  
**Peak 15-Minutes:** 05:00 PM - 05:15 PM

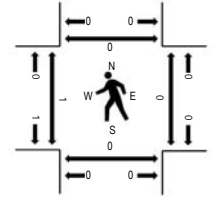
**Peak Hour - Motorized Vehicles**



**Peak Hour - Bicycles**



**Peak Hour - Pedestrians**



Note: Total study counts contained in parentheses.

**Traffic Counts - Motorized Vehicles**

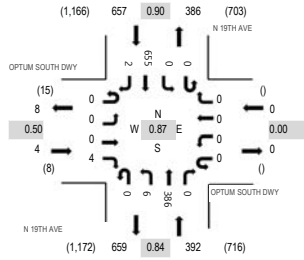
| Interval Start Time | WEST PARKVIEW LN |      |           |       | TODAYS PATIO DWY |      |            |       | N 19TH AVE Northbound |      |       |       | N 19TH AVE Southbound |        |      |      | Rolling Hour | Pedestrian Crossings |   |   |   |   |
|---------------------|------------------|------|-----------|-------|------------------|------|------------|-------|-----------------------|------|-------|-------|-----------------------|--------|------|------|--------------|----------------------|---|---|---|---|
|                     | Eastbound        |      | Westbound |       | Northbound       |      | Southbound |       | Total                 | West | East  | South | North                 |        |      |      |              |                      |   |   |   |   |
|                     | U-Turn           | Left | Thru      | Right | U-Turn           | Left | Thru       | Right |                       |      |       |       |                       | U-Turn | Left | Thru |              | Right                |   |   |   |   |
| 4:00 PM             | 0                | 1    | 0         | 0     | 0                | 9    | 0          | 7     | 0                     | 0    | 160   | 3     | 0                     | 5      | 106  | 0    | 291          | 1,128                | 0 | 0 | 0 | 0 |
| 4:15 PM             | 0                | 0    | 0         | 0     | 0                | 6    | 0          | 7     | 0                     | 0    | 145   | 1     | 0                     | 2      | 101  | 0    | 262          | 1,140                | 0 | 0 | 0 | 0 |
| 4:30 PM             | 0                | 0    | 0         | 0     | 0                | 10   | 0          | 4     | 0                     | 0    | 166   | 0     | 0                     | 4      | 115  | 0    | 299          | 1,120                | 0 | 0 | 0 | 0 |
| 4:45 PM             | 0                | 0    | 0         | 0     | 0                | 2    | 0          | 5     | 0                     | 0    | 157   | 1     | 1                     | 1      | 109  | 0    | 276          | 1,031                | 1 | 0 | 0 | 0 |
| 5:00 PM             | 0                | 0    | 0         | 0     | 0                | 3    | 0          | 1     | 0                     | 1    | 178   | 3     | 0                     | 2      | 115  | 0    | 303          | 967                  | 0 | 0 | 0 | 0 |
| 5:15 PM             | 0                | 0    | 0         | 0     | 0                | 5    | 0          | 2     | 0                     | 0    | 144   | 4     | 0                     | 1      | 86   | 0    | 242          | 3                    | 0 | 0 | 0 | 0 |
| 5:30 PM             | 0                | 0    | 0         | 0     | 0                | 5    | 0          | 3     | 0                     | 0    | 116   | 1     | 0                     | 0      | 85   | 0    | 210          | 0                    | 0 | 0 | 0 | 0 |
| 5:45 PM             | 0                | 0    | 0         | 0     | 0                | 2    | 0          | 2     | 0                     | 0    | 100   | 2     | 0                     | 5      | 101  | 0    | 212          | 0                    | 0 | 0 | 0 | 0 |
| Count Total         | 0                | 1    | 0         | 0     | 0                | 42   | 0          | 31    | 0                     | 1    | 1,166 | 15    | 1                     | 20     | 818  | 0    | 2,095        | 4                    | 0 | 0 | 0 | 0 |
| Peak Hour           | 0                | 0    | 0         | 0     | 0                | 21   | 0          | 17    | 0                     | 1    | 646   | 5     | 1                     | 9      | 440  | 0    | 1,140        | 1                    | 0 | 0 | 0 | 0 |



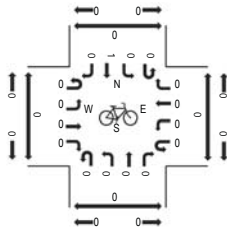


**Location:** 2 N 19TH AVE & OPTUM SOUTH DWY AM  
**Date:** Wednesday, October 6, 2021  
**Peak Hour:** 07:30 AM - 08:30 AM  
**Peak 15-Minutes:** 07:45 AM - 08:00 AM

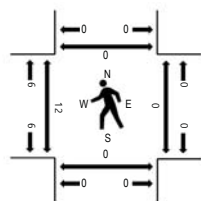
**Peak Hour - Motorized Vehicles**



**Peak Hour - Bicycles**



**Peak Hour - Pedestrians**



Note: Total study counts contained in parentheses.

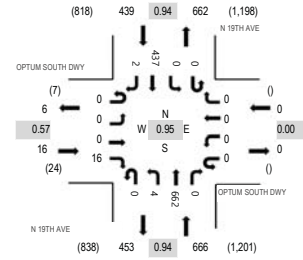
**Traffic Counts - Motorized Vehicles**

| Interval<br>Start Time | OPTUM SOUTH DWY |      |      |       | OPTUM SOUTH DWY |      |      |       | N 19TH AVE |      |      | N 19TH AVE |        |      | Rolling<br>Hour | Pedestrian Crossings |       |       |       |       |      |       |
|------------------------|-----------------|------|------|-------|-----------------|------|------|-------|------------|------|------|------------|--------|------|-----------------|----------------------|-------|-------|-------|-------|------|-------|
|                        | Eastbound       |      |      |       | Westbound       |      |      |       | Northbound |      |      | Southbound |        |      |                 | Total                | West  | East  | South | North |      |       |
|                        | U-Turn          | Left | Thru | Right | U-Turn          | Left | Thru | Right | U-Turn     | Left | Thru | Right      | U-Turn | Left |                 |                      |       |       |       |       | Thru | Right |
| 7:00 AM                | 0               | 0    | 0    | 0     | 0               | 0    | 0    | 0     | 0          | 2    | 66   | 0          | 0      | 0    | 117             | 0                    | 185   | 971   | 2     | 0     | 0    | 0     |
| 7:15 AM                | 0               | 0    | 0    | 0     | 0               | 0    | 0    | 0     | 0          | 0    | 62   | 0          | 0      | 0    | 145             | 0                    | 207   | 1,031 | 3     | 0     | 0    | 0     |
| 7:30 AM                | 0               | 0    | 0    | 1     | 0               | 0    | 0    | 0     | 0          | 1    | 88   | 0          | 0      | 0    | 185             | 0                    | 275   | 1,053 | 3     | 0     | 0    | 0     |
| 7:45 AM                | 0               | 0    | 0    | 1     | 0               | 0    | 0    | 0     | 0          | 3    | 114  | 0          | 0      | 0    | 185             | 1                    | 304   | 982   | 6     | 0     | 0    | 0     |
| 8:00 AM                | 0               | 0    | 0    | 0     | 0               | 0    | 0    | 0     | 0          | 1    | 91   | 0          | 0      | 0    | 153             | 0                    | 245   | 919   | 2     | 0     | 0    | 0     |
| 8:15 AM                | 0               | 0    | 0    | 2     | 0               | 0    | 0    | 0     | 0          | 1    | 93   | 0          | 0      | 0    | 132             | 1                    | 229   |       | 1     | 0     | 0    | 0     |
| 8:30 AM                | 0               | 0    | 0    | 1     | 0               | 0    | 0    | 0     | 0          | 2    | 84   | 0          | 0      | 0    | 117             | 0                    | 204   |       | 7     | 0     | 0    | 0     |
| 8:45 AM                | 0               | 0    | 0    | 3     | 0               | 0    | 0    | 0     | 0          | 3    | 105  | 0          | 0      | 0    | 130             | 0                    | 241   |       | 0     | 0     | 0    | 0     |
| Count Total            | 0               | 0    | 0    | 8     | 0               | 0    | 0    | 0     | 0          | 13   | 703  | 0          | 0      | 0    | 1,164           | 2                    | 1,890 |       | 24    | 0     | 0    | 0     |
| Peak Hour              | 0               | 0    | 0    | 4     | 0               | 0    | 0    | 0     | 0          | 6    | 386  | 0          | 0      | 0    | 655             | 2                    | 1,053 |       | 12    | 0     | 0    | 0     |

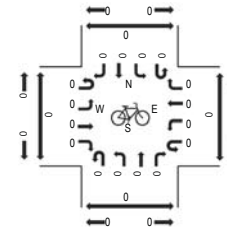


**Location:** 2 N 19TH AVE & OPTUM SOUTH DWY PM  
**Date:** Wednesday, October 6, 2021  
**Peak Hour:** 04:15 PM - 05:15 PM  
**Peak 15-Minutes:** 05:00 PM - 05:15 PM

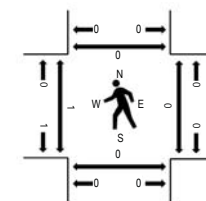
**Peak Hour - Motorized Vehicles**



**Peak Hour - Bicycles**



**Peak Hour - Pedestrians**



Note: Total study counts contained in parentheses.

**Traffic Counts - Motorized Vehicles**

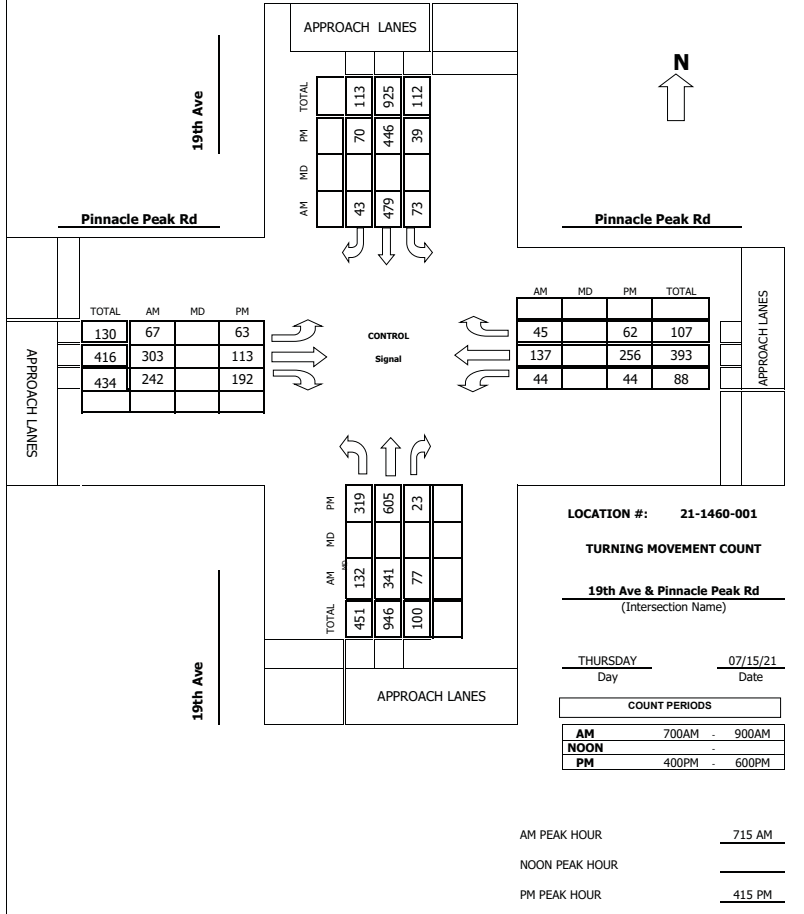
| Interval<br>Start Time | OPTUM SOUTH DWY |      |      |       | OPTUM SOUTH DWY |      |      |       | N 19TH AVE |      |       | N 19TH AVE |        |      | Rolling<br>Hour | Pedestrian Crossings |       |       |       |       |      |       |
|------------------------|-----------------|------|------|-------|-----------------|------|------|-------|------------|------|-------|------------|--------|------|-----------------|----------------------|-------|-------|-------|-------|------|-------|
|                        | Eastbound       |      |      |       | Westbound       |      |      |       | Northbound |      |       | Southbound |        |      |                 | Total                | West  | East  | South | North |      |       |
|                        | U-Turn          | Left | Thru | Right | U-Turn          | Left | Thru | Right | U-Turn     | Left | Thru  | Right      | U-Turn | Left |                 |                      |       |       |       |       | Thru | Right |
| 4:00 PM                | 0               | 0    | 0    | 1     | 0               | 0    | 0    | 0     | 0          | 0    | 166   | 0          | 0      | 0    | 107             | 0                    | 274   | 1,099 | 1     | 0     | 0    | 0     |
| 4:15 PM                | 0               | 0    | 0    | 5     | 0               | 0    | 0    | 0     | 0          | 0    | 153   | 0          | 0      | 0    | 100             | 1                    | 259   | 1,121 | 0     | 0     | 0    | 0     |
| 4:30 PM                | 0               | 0    | 0    | 3     | 0               | 0    | 0    | 0     | 0          | 3    | 168   | 0          | 0      | 0    | 116             | 1                    | 291   | 1,097 | 0     | 0     | 0    | 0     |
| 4:45 PM                | 0               | 0    | 0    | 1     | 0               | 0    | 0    | 0     | 0          | 0    | 163   | 0          | 0      | 0    | 110             | 0                    | 275   | 1,012 | 1     | 0     | 0    | 0     |
| 5:00 PM                | 0               | 0    | 0    | 7     | 0               | 0    | 0    | 0     | 0          | 0    | 178   | 0          | 0      | 0    | 111             | 0                    | 296   | 944   | 0     | 0     | 0    | 0     |
| 5:15 PM                | 0               | 1    | 0    | 3     | 0               | 0    | 0    | 0     | 0          | 0    | 146   | 0          | 0      | 0    | 84              | 1                    | 235   |       | 4     | 0     | 0    | 0     |
| 5:30 PM                | 0               | 0    | 0    | 2     | 0               | 0    | 0    | 0     | 0          | 0    | 121   | 0          | 0      | 0    | 83              | 0                    | 206   |       | 0     | 0     | 0    | 0     |
| 5:45 PM                | 0               | 0    | 0    | 1     | 0               | 0    | 0    | 0     | 0          | 0    | 102   | 0          | 0      | 0    | 104             | 0                    | 207   |       | 0     | 0     | 0    | 0     |
| Count Total            | 0               | 1    | 0    | 23    | 0               | 0    | 0    | 0     | 0          | 4    | 1,197 | 0          | 0      | 0    | 815             | 3                    | 2,043 |       | 6     | 0     | 0    | 0     |
| Peak Hour              | 0               | 0    | 0    | 16    | 0               | 0    | 0    | 0     | 0          | 4    | 662   | 0          | 0      | 0    | 437             | 2                    | 1,121 |       | 1     | 0     | 0    | 0     |

Intersection Turning Movement  
Prepared by:



Project #: **21-1460-001**

**TMC SUMMARY OF 19th Ave & Pinnacle Peak Rd**



Intersection Turning Movement  
Prepared by:



N-S STREET: 19th Ave DATE: 07/15/21 LOCATION: Phoenix

E-W STREET: Pinnacle Peak Rd DAY: THURSDAY PROJECT#: 21-1460-001

| LANES:   | NORTHBOUND |    |    | SOUTHBOUND |     |    | EASTBOUND |    |    | WESTBOUND |    |    | TOTAL |
|----------|------------|----|----|------------|-----|----|-----------|----|----|-----------|----|----|-------|
|          | NL         | NT | NR | SL         | ST  | SR | EL        | ET | ER | WL        | WT | WR |       |
| 6:00 AM  | 1          | 3  | 0  | 1          | 2   | 0  | 1         | 2  | 0  | 1         | 2  | 0  |       |
| 6:15 AM  |            |    |    |            |     |    |           |    |    |           |    |    |       |
| 6:30 AM  |            |    |    |            |     |    |           |    |    |           |    |    |       |
| 6:45 AM  |            |    |    |            |     |    |           |    |    |           |    |    |       |
| 7:00 AM  | 29         | 72 | 9  | 10         | 116 | 8  | 3         | 67 | 41 | 6         | 26 | 11 | 398   |
| 7:15 AM  | 23         | 71 | 17 | 16         | 116 | 14 | 19        | 95 | 69 | 12        | 35 | 11 | 498   |
| 7:30 AM  | 25         | 95 | 32 | 17         | 153 | 11 | 17        | 77 | 67 | 14        | 27 | 12 | 547   |
| 7:45 AM  | 40         | 88 | 13 | 23         | 121 | 5  | 14        | 78 | 63 | 10        | 41 | 15 | 511   |
| 8:00 AM  | 44         | 87 | 15 | 17         | 89  | 13 | 17        | 53 | 43 | 8         | 34 | 7  | 427   |
| 8:15 AM  | 32         | 78 | 11 | 13         | 118 | 9  | 20        | 44 | 38 | 10        | 46 | 10 | 429   |
| 8:30 AM  | 30         | 98 | 12 | 9          | 123 | 19 | 11        | 36 | 52 | 19        | 52 | 12 | 473   |
| 8:45 AM  | 24         | 90 | 4  | 15         | 95  | 15 | 18        | 49 | 49 | 9         | 37 | 8  | 413   |
| 9:00 AM  |            |    |    |            |     |    |           |    |    |           |    |    |       |
| 9:15 AM  |            |    |    |            |     |    |           |    |    |           |    |    |       |
| 9:30 AM  |            |    |    |            |     |    |           |    |    |           |    |    |       |
| 9:45 AM  |            |    |    |            |     |    |           |    |    |           |    |    |       |
| 10:00 AM |            |    |    |            |     |    |           |    |    |           |    |    |       |
| 10:15 AM |            |    |    |            |     |    |           |    |    |           |    |    |       |
| 10:30 AM |            |    |    |            |     |    |           |    |    |           |    |    |       |
| 10:45 AM |            |    |    |            |     |    |           |    |    |           |    |    |       |
| 11:00 AM |            |    |    |            |     |    |           |    |    |           |    |    |       |
| 11:15 AM |            |    |    |            |     |    |           |    |    |           |    |    |       |
| 11:30 AM |            |    |    |            |     |    |           |    |    |           |    |    |       |
| 11:45 AM |            |    |    |            |     |    |           |    |    |           |    |    |       |

| TOTAL      | NL    | NT    | NR    | SL    | ST    | SR   | EL    | ET    | ER    | WL    | WT    | WR    | TOTAL |
|------------|-------|-------|-------|-------|-------|------|-------|-------|-------|-------|-------|-------|-------|
| Volumes    | 247   | 679   | 113   | 120   | 931   | 94   | 119   | 499   | 422   | 88    | 298   | 86    | 3696  |
| Approach % | 23.77 | 65.35 | 10.88 | 10.48 | 81.31 | 8.21 | 11.44 | 47.98 | 40.58 | 18.64 | 63.14 | 18.22 |       |
| App/Depart | 1039  | /     | 884   | 1145  | /     | 1441 | 1040  | /     | 732   | 472   | /     | 639   |       |

AM Peak Hr Begins at: 715 AM

PEAK

|            |       |       |       |       |       |      |       |       |       |       |       |       |      |
|------------|-------|-------|-------|-------|-------|------|-------|-------|-------|-------|-------|-------|------|
| Volumes    | 132   | 341   | 77    | 73    | 479   | 43   | 67    | 303   | 242   | 44    | 137   | 45    | 1983 |
| Approach % | 24.00 | 62.00 | 14.00 | 12.27 | 80.50 | 7.23 | 10.95 | 49.51 | 39.54 | 19.47 | 60.62 | 19.91 |      |

PEAK HR. FACTOR:

|  |       |       |       |       |       |
|--|-------|-------|-------|-------|-------|
|  | 0.905 | 0.822 | 0.836 | 0.856 | 0.906 |
|--|-------|-------|-------|-------|-------|

CONTROL: Signal  
COMMENT 1: 33.698289, -112.099944  
GPS:

# Intersection Turning Movement



N-S STREET: 19th Ave DATE: 07/15/21 LOCATION: Phoenix  
 E-W STREET: Pinnacle Peak Rd DAY: THURSDAY PROJECT#: 21-1460-001

| LANES:  | NORTHBOUND |     |    | SOUTHBOUND |     |    | EASTBOUND |    |    | WESTBOUND |    |    | TOTAL |
|---------|------------|-----|----|------------|-----|----|-----------|----|----|-----------|----|----|-------|
|         | NL         | NT  | NR | SL         | ST  | SR | EL        | ET | ER | WL        | WT | WR |       |
| 1:00 PM |            |     |    |            |     |    |           |    |    |           |    |    |       |
| 1:15 PM |            |     |    |            |     |    |           |    |    |           |    |    |       |
| 1:30 PM |            |     |    |            |     |    |           |    |    |           |    |    |       |
| 1:45 PM |            |     |    |            |     |    |           |    |    |           |    |    |       |
| 2:00 PM |            |     |    |            |     |    |           |    |    |           |    |    |       |
| 2:15 PM |            |     |    |            |     |    |           |    |    |           |    |    |       |
| 2:30 PM |            |     |    |            |     |    |           |    |    |           |    |    |       |
| 2:45 PM |            |     |    |            |     |    |           |    |    |           |    |    |       |
| 3:00 PM |            |     |    |            |     |    |           |    |    |           |    |    |       |
| 3:15 PM |            |     |    |            |     |    |           |    |    |           |    |    |       |
| 3:30 PM |            |     |    |            |     |    |           |    |    |           |    |    |       |
| 3:45 PM |            |     |    |            |     |    |           |    |    |           |    |    |       |
| 4:00 PM | 72         | 146 | 9  | 6          | 101 | 19 | 15        | 35 | 55 | 17        | 54 | 7  | 536   |
| 4:15 PM | 80         | 165 | 11 | 7          | 123 | 16 | 17        | 19 | 58 | 9         | 72 | 15 | 592   |
| 4:30 PM | 78         | 123 | 5  | 11         | 108 | 16 | 22        | 42 | 52 | 9         | 45 | 18 | 529   |
| 4:45 PM | 83         | 156 | 3  | 7          | 112 | 19 | 8         | 26 | 35 | 19        | 87 | 16 | 571   |
| 5:00 PM | 78         | 161 | 4  | 14         | 103 | 19 | 16        | 26 | 47 | 7         | 52 | 13 | 540   |
| 5:15 PM | 78         | 149 | 3  | 4          | 96  | 15 | 10        | 15 | 42 | 9         | 70 | 12 | 503   |
| 5:30 PM | 51         | 107 | 3  | 3          | 90  | 8  | 8         | 19 | 43 | 4         | 23 | 7  | 366   |
| 5:45 PM | 44         | 93  | 0  | 2          | 88  | 17 | 10        | 13 | 41 | 2         | 35 | 8  | 353   |
| 6:00 PM |            |     |    |            |     |    |           |    |    |           |    |    |       |
| 6:15 PM |            |     |    |            |     |    |           |    |    |           |    |    |       |
| 6:30 PM |            |     |    |            |     |    |           |    |    |           |    |    |       |
| 6:45 PM |            |     |    |            |     |    |           |    |    |           |    |    |       |

| TOTAL      | NL    | NT    | NR   | SL   | ST    | SR    | EL    | ET    | ER    | WL    | WT    | WR    | TOTAL |
|------------|-------|-------|------|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Volumes    | 564   | 1100  | 38   | 54   | 821   | 129   | 106   | 195   | 373   | 76    | 438   | 96    | 3990  |
| Approach % | 33.14 | 64.63 | 2.23 | 5.38 | 81.77 | 12.85 | 15.73 | 28.93 | 55.34 | 12.46 | 71.80 | 15.74 |       |
| App/Depart | 1702  | /     | 1302 | 1004 | /     | 1270  | 674   | /     | 287   | 610   | /     | 1131  |       |

PM Peak Hr Begins at: 415 PM

| PEAK       | NL    | NT    | NR   | SL   | ST    | SR    | EL    | ET    | ER    | WL    | WT    | WR    | TOTAL |
|------------|-------|-------|------|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Volumes    | 319   | 605   | 23   | 39   | 446   | 70    | 63    | 113   | 192   | 44    | 256   | 62    | 2232  |
| Approach % | 33.69 | 63.89 | 2.43 | 7.03 | 80.36 | 12.61 | 17.12 | 30.71 | 52.17 | 12.15 | 70.72 | 17.13 |       |

| PEAK HR. FACTOR: | NL | NT    | NR | SL | ST    | SR | EL | ET    | ER | WL | WT    | WR | TOTAL |
|------------------|----|-------|----|----|-------|----|----|-------|----|----|-------|----|-------|
|                  |    | 0.925 |    |    | 0.950 |    |    | 0.793 |    |    | 0.742 |    | 0.943 |

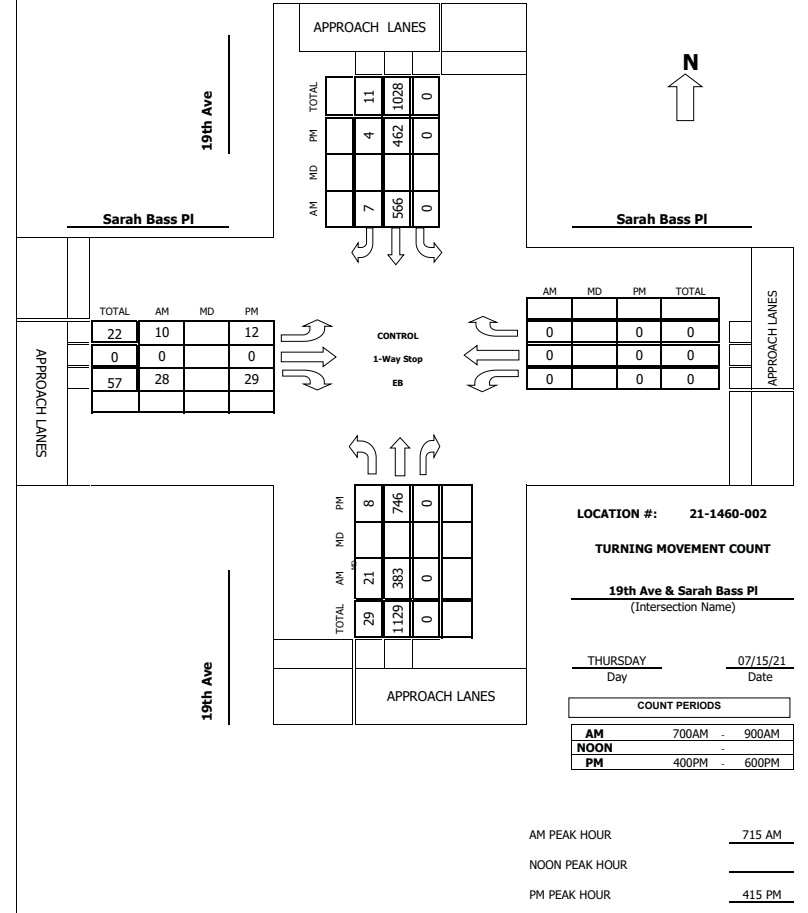
CONTROL: Signal  
 COMMENT 1: 0  
 GPS: 33.698289, -112.099944

## Intersection Turning Movement Prepared by:



Project #: 21-1460-002

### TMC SUMMARY OF 19th Ave & Sarah Bass Pl



### Intersection Turning Movement

Prepared by:



**FIELD DATA SERVICES OF ARIZONA, INC.**  
520.316.6745



veracitytrafficgroup

N-S STREET: 19th Ave DATE: 07/15/21 LOCATION: Phoneix  
E-W STREET: Sarah Bass Pl DAY: THURSDAY PROJECT# 21-1460-002

| LANES:   | NORTHBOUND |     |    | SOUTHBOUND |     |    | EASTBOUND |    |    | WESTBOUND |    |    | TOTAL |
|----------|------------|-----|----|------------|-----|----|-----------|----|----|-----------|----|----|-------|
|          | NL         | NT  | NR | SL         | ST  | SR | EL        | ET | ER | WL        | WT | WR |       |
| 6:00 AM  |            |     |    |            |     |    |           |    |    |           |    |    |       |
| 6:15 AM  |            |     |    |            |     |    |           |    |    |           |    |    |       |
| 6:30 AM  |            |     |    |            |     |    |           |    |    |           |    |    |       |
| 6:45 AM  |            |     |    |            |     |    |           |    |    |           |    |    |       |
| 7:00 AM  | 11         | 57  | 0  | 0          | 124 | 1  | 5         | 0  | 5  | 0         | 0  | 0  | 203   |
| 7:15 AM  | 5          | 91  | 0  | 0          | 148 | 0  | 4         | 0  | 9  | 0         | 0  | 0  | 257   |
| 7:30 AM  | 5          | 90  | 0  | 0          | 142 | 0  | 4         | 0  | 6  | 0         | 0  | 0  | 247   |
| 7:45 AM  | 6          | 111 | 0  | 0          | 149 | 5  | 2         | 0  | 7  | 0         | 0  | 0  | 280   |
| 8:00 AM  | 5          | 91  | 0  | 0          | 127 | 2  | 0         | 0  | 6  | 0         | 0  | 0  | 231   |
| 8:15 AM  | 11         | 92  | 0  | 0          | 129 | 1  | 5         | 0  | 3  | 0         | 0  | 0  | 241   |
| 8:30 AM  | 4          | 114 | 0  | 0          | 123 | 4  | 3         | 0  | 3  | 0         | 0  | 0  | 251   |
| 8:45 AM  | 3          | 98  | 0  | 0          | 143 | 4  | 3         | 0  | 7  | 0         | 0  | 0  | 258   |
| 9:00 AM  |            |     |    |            |     |    |           |    |    |           |    |    |       |
| 9:15 AM  |            |     |    |            |     |    |           |    |    |           |    |    |       |
| 9:30 AM  |            |     |    |            |     |    |           |    |    |           |    |    |       |
| 9:45 AM  |            |     |    |            |     |    |           |    |    |           |    |    |       |
| 10:00 AM |            |     |    |            |     |    |           |    |    |           |    |    |       |
| 10:15 AM |            |     |    |            |     |    |           |    |    |           |    |    |       |
| 10:30 AM |            |     |    |            |     |    |           |    |    |           |    |    |       |
| 10:45 AM |            |     |    |            |     |    |           |    |    |           |    |    |       |
| 11:00 AM |            |     |    |            |     |    |           |    |    |           |    |    |       |
| 11:15 AM |            |     |    |            |     |    |           |    |    |           |    |    |       |
| 11:30 AM |            |     |    |            |     |    |           |    |    |           |    |    |       |
| 11:45 AM |            |     |    |            |     |    |           |    |    |           |    |    |       |

| TOTAL      | NL   | NT    | NR   | SL   | ST    | SR   | EL    | ET   | ER    | WL   | WT   | WR   | TOTAL |
|------------|------|-------|------|------|-------|------|-------|------|-------|------|------|------|-------|
| Volumes    | 50   | 744   | 0    | 0    | 1085  | 17   | 26    | 0    | 46    | 0    | 0    | 0    | 1968  |
| Approach % | 6.30 | 93.70 | 0.00 | 0.00 | 98.46 | 1.54 | 36.11 | 0.00 | 63.89 | #### | #### | #### |       |
| App/Depart | 794  | /     | 770  | 1102 | /     | 1131 | 72    | /    | 0     | 0    | /    | 67   |       |

AM Peak Hr Begins at: 715 AM

| PEAK       | Volumes         | Approach %       |
|------------|-----------------|------------------|
| Volumes    | 21 383 0        | 0 566 7          |
| Approach % | 5.20 94.80 0.00 | 0.00 98.78 1.22  |
|            |                 | 10 0 28          |
|            |                 | 26.32 0.00 73.68 |
|            |                 | #### #### ####   |
|            |                 | 1015             |

| PEAK HR. FACTOR:                      |
|---------------------------------------|
| 0.863   0.930   0.731   0.000   0.906 |

CONTROL: 1-Way Stop (EB)  
COMMENT 1: 33.702016, -112.099975  
GPS:

### Intersection Turning Movement



**FIELD DATA SERVICES OF ARIZONA, INC.**  
520.316.6745



veracitytrafficgroup

N-S STREET: 19th Ave DATE: 07/15/21 LOCATION: Phoneix  
E-W STREET: Sarah Bass Pl DAY: THURSDAY PROJECT# 21-1460-002

| LANES:  | NORTHBOUND |     |    | SOUTHBOUND |     |    | EASTBOUND |    |    | WESTBOUND |    |    | TOTAL |
|---------|------------|-----|----|------------|-----|----|-----------|----|----|-----------|----|----|-------|
|         | NL         | NT  | NR | SL         | ST  | SR | EL        | ET | ER | WL        | WT | WR |       |
| 1:00 PM |            |     |    |            |     |    |           |    |    |           |    |    |       |
| 1:15 PM |            |     |    |            |     |    |           |    |    |           |    |    |       |
| 1:30 PM |            |     |    |            |     |    |           |    |    |           |    |    |       |
| 1:45 PM |            |     |    |            |     |    |           |    |    |           |    |    |       |
| 2:00 PM |            |     |    |            |     |    |           |    |    |           |    |    |       |
| 2:15 PM |            |     |    |            |     |    |           |    |    |           |    |    |       |
| 2:30 PM |            |     |    |            |     |    |           |    |    |           |    |    |       |
| 2:45 PM |            |     |    |            |     |    |           |    |    |           |    |    |       |
| 3:00 PM |            |     |    |            |     |    |           |    |    |           |    |    |       |
| 3:15 PM |            |     |    |            |     |    |           |    |    |           |    |    |       |
| 3:30 PM |            |     |    |            |     |    |           |    |    |           |    |    |       |
| 3:45 PM |            |     |    |            |     |    |           |    |    |           |    |    |       |
| 4:00 PM | 1          | 186 | 0  | 0          | 107 | 2  | 3         | 0  | 9  | 0         | 0  | 0  | 308   |
| 4:15 PM | 2          | 179 | 0  | 0          | 114 | 2  | 2         | 0  | 5  | 0         | 0  | 0  | 304   |
| 4:30 PM | 1          | 183 | 0  | 0          | 111 | 0  | 4         | 0  | 9  | 0         | 0  | 0  | 308   |
| 4:45 PM | 0          | 170 | 0  | 0          | 122 | 1  | 1         | 0  | 7  | 0         | 0  | 0  | 301   |
| 5:00 PM | 5          | 214 | 0  | 0          | 115 | 1  | 5         | 0  | 8  | 0         | 0  | 0  | 348   |
| 5:15 PM | 2          | 156 | 0  | 0          | 105 | 1  | 0         | 0  | 4  | 0         | 0  | 0  | 268   |
| 5:30 PM | 2          | 140 | 0  | 0          | 114 | 0  | 0         | 0  | 7  | 0         | 0  | 0  | 263   |
| 5:45 PM | 0          | 123 | 0  | 0          | 92  | 1  | 0         | 0  | 0  | 0         | 0  | 0  | 216   |
| 6:00 PM |            |     |    |            |     |    |           |    |    |           |    |    |       |
| 6:15 PM |            |     |    |            |     |    |           |    |    |           |    |    |       |
| 6:30 PM |            |     |    |            |     |    |           |    |    |           |    |    |       |
| 6:45 PM |            |     |    |            |     |    |           |    |    |           |    |    |       |

| TOTAL      | NL   | NT    | NR   | SL   | ST    | SR   | EL    | ET   | ER    | WL   | WT   | WR   | TOTAL |
|------------|------|-------|------|------|-------|------|-------|------|-------|------|------|------|-------|
| Volumes    | 13   | 1351  | 0    | 0    | 880   | 8    | 15    | 0    | 49    | 0    | 0    | 0    | 2316  |
| Approach % | 0.95 | 99.05 | 0.00 | 0.00 | 99.10 | 0.90 | 23.44 | 0.00 | 76.56 | #### | #### | #### |       |
| App/Depart | 1364 | /     | 1366 | 888  | /     | 929  | 64    | /    | 0     | 0    | /    | 21   |       |

PM Peak Hr Begins at: 415 PM

| PEAK       | Volumes         | Approach %       |
|------------|-----------------|------------------|
| Volumes    | 8 746 0         | 0 462 4          |
| Approach % | 1.06 98.94 0.00 | 0.00 99.14 0.86  |
|            |                 | 12 0 29          |
|            |                 | 29.27 0.00 70.73 |
|            |                 | #### #### ####   |
|            |                 | 1261             |

| PEAK HR. FACTOR:                      |
|---------------------------------------|
| 0.861   0.947   0.788   0.000   0.906 |

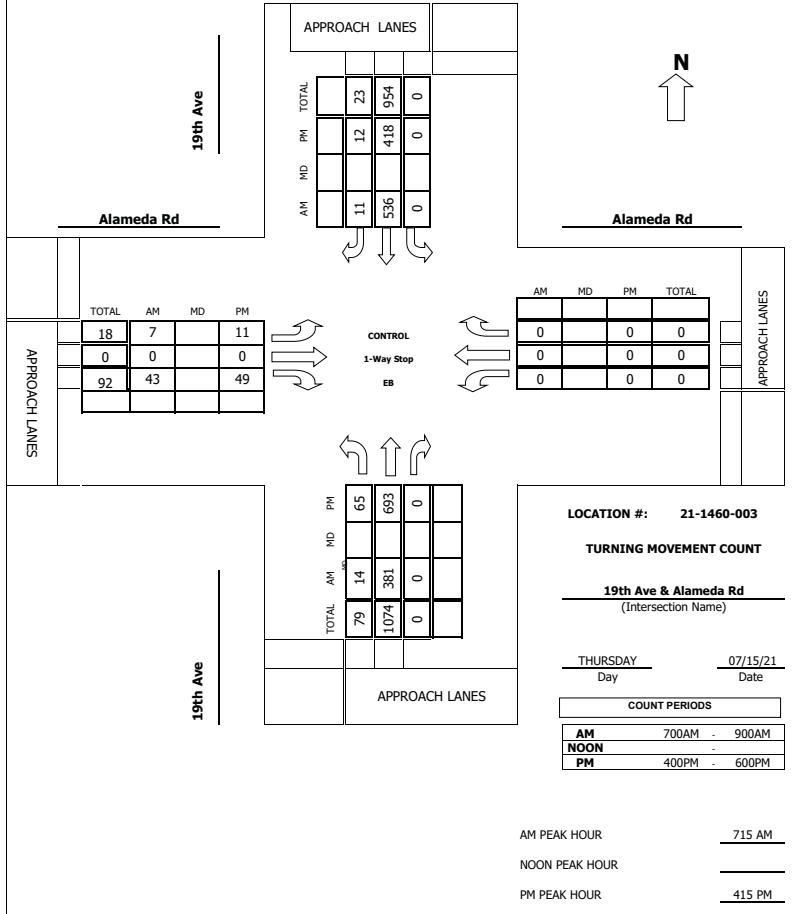
CONTROL: 1-Way Stop (EB)  
COMMENT 1: 33.702016, -112.099975  
GPS:

Intersection Turning Movement  
Prepared by:



Project #: **21-1460-003**

**TMC SUMMARY OF 19th Ave & Alameda Rd**



Intersection Turning Movement  
Prepared by:



N-S STREET: 19th Ave DATE: 07/15/21 LOCATION: Phoenix  
E-W STREET: Alameda Rd DAY: THURSDAY PROJECT#: 21-1460-003

| LANES:   | NORTHBOUND |     |    | SOUTHBOUND |     |    | EASTBOUND |    |    | WESTBOUND |    |    | TOTAL |
|----------|------------|-----|----|------------|-----|----|-----------|----|----|-----------|----|----|-------|
|          | NL         | NT  | NR | SL         | ST  | SR | EL        | ET | ER | WL        | WT | WR |       |
| 6:00 AM  | 0          | 3   | 0  | 0          | 2   | 0  | 0         | 1  | 0  | 0         | 0  | 0  |       |
| 6:15 AM  |            |     |    |            |     |    |           |    |    |           |    |    |       |
| 6:30 AM  |            |     |    |            |     |    |           |    |    |           |    |    |       |
| 6:45 AM  |            |     |    |            |     |    |           |    |    |           |    |    |       |
| 7:00 AM  | 4          | 54  | 0  | 0          | 123 | 3  | 5         | 0  | 11 | 0         | 0  | 0  | 200   |
| 7:15 AM  | 7          | 89  | 0  | 0          | 133 | 2  | 2         | 0  | 10 | 0         | 0  | 0  | 243   |
| 7:30 AM  | 4          | 94  | 0  | 0          | 136 | 1  | 0         | 0  | 11 | 0         | 0  | 0  | 246   |
| 7:45 AM  | 3          | 108 | 0  | 0          | 140 | 1  | 2         | 0  | 10 | 0         | 0  | 0  | 264   |
| 8:00 AM  | 0          | 90  | 0  | 0          | 127 | 7  | 3         | 0  | 12 | 0         | 0  | 0  | 239   |
| 8:15 AM  | 1          | 94  | 0  | 0          | 111 | 7  | 4         | 0  | 17 | 0         | 0  | 0  | 234   |
| 8:30 AM  | 2          | 111 | 0  | 0          | 122 | 4  | 1         | 0  | 10 | 0         | 0  | 0  | 250   |
| 8:45 AM  | 2          | 92  | 0  | 0          | 134 | 4  | 5         | 0  | 10 | 0         | 0  | 0  | 247   |
| 9:00 AM  |            |     |    |            |     |    |           |    |    |           |    |    |       |
| 9:15 AM  |            |     |    |            |     |    |           |    |    |           |    |    |       |
| 9:30 AM  |            |     |    |            |     |    |           |    |    |           |    |    |       |
| 9:45 AM  |            |     |    |            |     |    |           |    |    |           |    |    |       |
| 10:00 AM |            |     |    |            |     |    |           |    |    |           |    |    |       |
| 10:15 AM |            |     |    |            |     |    |           |    |    |           |    |    |       |
| 10:30 AM |            |     |    |            |     |    |           |    |    |           |    |    |       |
| 10:45 AM |            |     |    |            |     |    |           |    |    |           |    |    |       |
| 11:00 AM |            |     |    |            |     |    |           |    |    |           |    |    |       |
| 11:15 AM |            |     |    |            |     |    |           |    |    |           |    |    |       |
| 11:30 AM |            |     |    |            |     |    |           |    |    |           |    |    |       |
| 11:45 AM |            |     |    |            |     |    |           |    |    |           |    |    |       |

| TOTAL      | NL   | NT    | NR   | SL   | ST    | SR   | EL    | ET   | ER    | WL   | WT   | WR   | TOTAL |
|------------|------|-------|------|------|-------|------|-------|------|-------|------|------|------|-------|
| Volumes    | 23   | 732   | 0    | 0    | 1026  | 29   | 22    | 0    | 91    | 0    | 0    | 0    | 1923  |
| Approach % | 3.05 | 96.95 | 0.00 | 0.00 | 97.25 | 2.75 | 19.47 | 0.00 | 80.53 | #### | #### | #### |       |
| App/Depart | 755  | /     | 754  | 1055 | /     | 1117 | 113   | /    | 0     | 0    | /    | 52   |       |

AM Peak Hr Begins at: 715 AM

PEAK

|            |      |       |      |      |       |      |       |      |       |      |      |      |     |
|------------|------|-------|------|------|-------|------|-------|------|-------|------|------|------|-----|
| Volumes    | 14   | 381   | 0    | 0    | 536   | 11   | 7     | 0    | 43    | 0    | 0    | 0    | 992 |
| Approach % | 3.54 | 96.46 | 0.00 | 0.00 | 97.99 | 2.01 | 14.00 | 0.00 | 86.00 | #### | #### | #### |     |

PEAK HR. FACTOR:

|  |       |       |       |       |       |
|--|-------|-------|-------|-------|-------|
|  | 0.890 | 0.970 | 0.833 | 0.000 | 0.939 |
|--|-------|-------|-------|-------|-------|

CONTROL: 1-Way Stop (EB)  
COMMENT 1: 33.705580, -112.099991  
GPS:

# Intersection Turning Movement



N-S STREET: **19th Ave** DATE: **07/15/21** LOCATION: **Phoneix**  
 E-W STREET: **Alameda Rd** DAY: **THURSDAY** PROJECT# **21-1460-003**

| LANES:  | NORTHBOUND |     |    | SOUTHBOUND |     |    | EASTBOUND |    |    | WESTBOUND |    |    | TOTAL |
|---------|------------|-----|----|------------|-----|----|-----------|----|----|-----------|----|----|-------|
|         | NL         | NT  | NR | SL         | ST  | SR | EL        | ET | ER | WL        | WT | WR |       |
| 1:00 PM | 0          | 3   | 0  | 0          | 2   | 0  | 0         | 1  | 0  | 0         | 0  | 0  |       |
| 1:15 PM |            |     |    |            |     |    |           |    |    |           |    |    |       |
| 1:30 PM |            |     |    |            |     |    |           |    |    |           |    |    |       |
| 1:45 PM |            |     |    |            |     |    |           |    |    |           |    |    |       |
| 2:00 PM |            |     |    |            |     |    |           |    |    |           |    |    |       |
| 2:15 PM |            |     |    |            |     |    |           |    |    |           |    |    |       |
| 2:30 PM |            |     |    |            |     |    |           |    |    |           |    |    |       |
| 2:45 PM |            |     |    |            |     |    |           |    |    |           |    |    |       |
| 3:00 PM |            |     |    |            |     |    |           |    |    |           |    |    |       |
| 3:15 PM |            |     |    |            |     |    |           |    |    |           |    |    |       |
| 3:30 PM |            |     |    |            |     |    |           |    |    |           |    |    |       |
| 3:45 PM |            |     |    |            |     |    |           |    |    |           |    |    |       |
| 4:00 PM | 14         | 180 | 0  | 0          | 96  | 5  | 5         | 0  | 10 | 0         | 0  | 0  | 310   |
| 4:15 PM | 13         | 169 | 0  | 0          | 100 | 4  | 2         | 0  | 9  | 0         | 0  | 0  | 297   |
| 4:30 PM | 17         | 173 | 0  | 0          | 113 | 4  | 0         | 0  | 11 | 0         | 0  | 0  | 318   |
| 4:45 PM | 20         | 147 | 0  | 0          | 101 | 1  | 3         | 0  | 13 | 0         | 0  | 0  | 285   |
| 5:00 PM | 15         | 204 | 0  | 0          | 104 | 3  | 6         | 0  | 16 | 0         | 0  | 0  | 348   |
| 5:15 PM | 16         | 142 | 0  | 0          | 95  | 3  | 3         | 0  | 12 | 0         | 0  | 0  | 271   |
| 5:30 PM | 11         | 127 | 0  | 0          | 98  | 3  | 0         | 0  | 12 | 0         | 0  | 0  | 251   |
| 5:45 PM | 15         | 106 | 0  | 0          | 83  | 3  | 0         | 0  | 11 | 0         | 0  | 0  | 218   |
| 6:00 PM |            |     |    |            |     |    |           |    |    |           |    |    |       |
| 6:15 PM |            |     |    |            |     |    |           |    |    |           |    |    |       |
| 6:30 PM |            |     |    |            |     |    |           |    |    |           |    |    |       |
| 6:45 PM |            |     |    |            |     |    |           |    |    |           |    |    |       |

| TOTAL      | NL   | NT    | NR   | SL   | ST    | SR   | EL    | ET   | ER    | WL   | WT   | WR   | TOTAL |
|------------|------|-------|------|------|-------|------|-------|------|-------|------|------|------|-------|
| Volumes    | 121  | 1248  | 0    | 0    | 790   | 26   | 19    | 0    | 94    | 0    | 0    | 0    | 2298  |
| Approach % | 8.84 | 91.16 | 0.00 | 0.00 | 96.81 | 3.19 | 16.81 | 0.00 | 83.19 | #### | #### | #### |       |
| App/Depart | 1369 | /     | 1267 | 816  | /     | 884  | 113   | /    | 0     | 0    | /    | 147  |       |

PM Peak Hr Begins at: 415 PM

| PEAK VOLUMES | NL   | NT    | NR   | SL   | ST    | SR   | EL    | ET   | ER    | WL   | WT   | WR   | TOTAL |
|--------------|------|-------|------|------|-------|------|-------|------|-------|------|------|------|-------|
| Volumes      | 65   | 693   | 0    | 0    | 418   | 12   | 11    | 0    | 49    | 0    | 0    | 0    | 1248  |
| Approach %   | 8.58 | 91.42 | 0.00 | 0.00 | 97.21 | 2.79 | 18.33 | 0.00 | 81.67 | #### | #### | #### |       |

| PEAK HR FACTOR | NL | NT    | NR | SL | ST    | SR | EL | ET    | ER | WL | WT    | WR | TOTAL |
|----------------|----|-------|----|----|-------|----|----|-------|----|----|-------|----|-------|
| FACTOR:        |    | 0.865 |    |    | 0.919 |    |    | 0.682 |    |    | 0.000 |    | 0.897 |

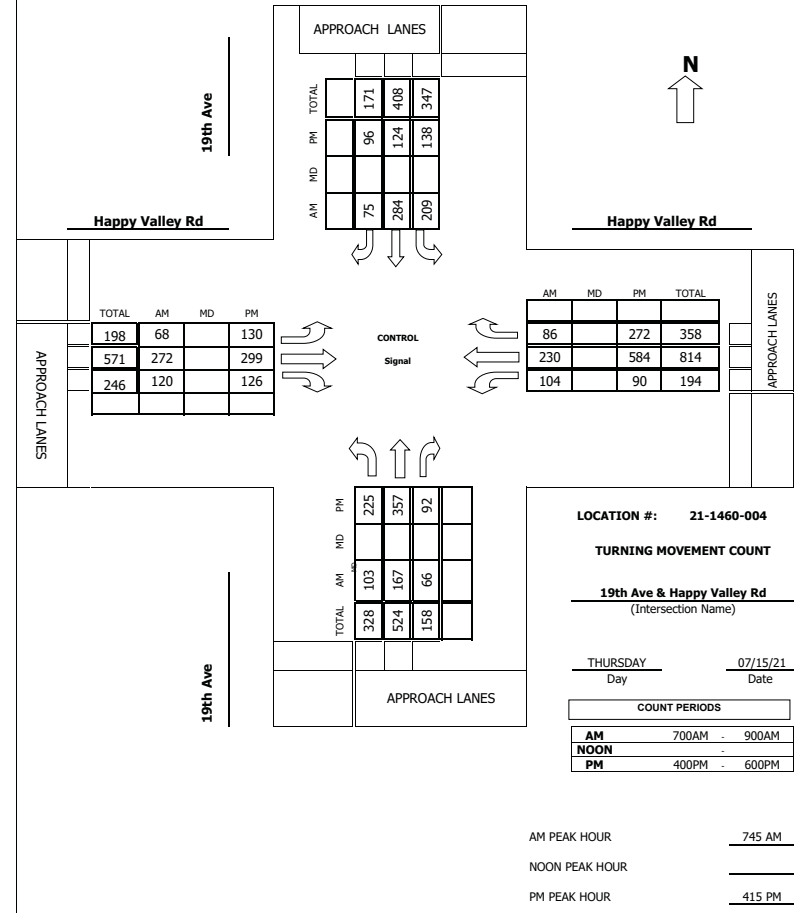
CONTROL: **1-Way Stop (EB)**  
 COMMENT 1: **0**  
 GPS: **33.705580, -112.099991**

## Intersection Turning Movement Prepared by:



Project #: **21-1460-004**

### TMC SUMMARY OF 19th Ave & Happy Valley Rd



### Intersection Turning Movement

Prepared by:



**FIELD DATA SERVICES OF ARIZONA, INC.**  
520.316.6745



veracitytrafficgroup

N-S STREET: 19th Ave DATE: 07/15/21 LOCATION: Phoenix  
E-W STREET: Happy Valley Rd DAY: THURSDAY PROJECT#: 21-1460-004

| LANES:   | NORTHBOUND |    |    | SOUTHBOUND |    |    | EASTBOUND |    |    | WESTBOUND |    |    | TOTAL |
|----------|------------|----|----|------------|----|----|-----------|----|----|-----------|----|----|-------|
|          | NL         | NT | NR | SL         | ST | SR | EL        | ET | ER | WL        | WT | WR |       |
| 6:00 AM  |            |    |    |            |    |    |           |    |    |           |    |    |       |
| 6:15 AM  |            |    |    |            |    |    |           |    |    |           |    |    |       |
| 6:30 AM  |            |    |    |            |    |    |           |    |    |           |    |    |       |
| 6:45 AM  |            |    |    |            |    |    |           |    |    |           |    |    |       |
| 7:00 AM  | 15         | 31 | 7  | 45         | 68 | 3  | 17        | 83 | 42 | 26        | 55 | 15 | 407   |
| 7:15 AM  | 21         | 40 | 17 | 44         | 73 | 12 | 12        | 76 | 41 | 19        | 50 | 13 | 418   |
| 7:30 AM  | 21         | 28 | 22 | 59         | 71 | 12 | 18        | 76 | 52 | 25        | 54 | 15 | 453   |
| 7:45 AM  | 23         | 50 | 19 | 57         | 80 | 15 | 15        | 66 | 38 | 28        | 47 | 23 | 461   |
| 8:00 AM  | 29         | 27 | 15 | 56         | 47 | 19 | 10        | 69 | 22 | 25        | 60 | 20 | 399   |
| 8:15 AM  | 28         | 44 | 14 | 40         | 74 | 20 | 15        | 61 | 31 | 25        | 60 | 20 | 432   |
| 8:30 AM  | 23         | 46 | 18 | 56         | 83 | 21 | 28        | 76 | 29 | 26        | 63 | 23 | 492   |
| 8:45 AM  | 29         | 42 | 17 | 42         | 57 | 22 | 14        | 55 | 33 | 18        | 66 | 26 | 421   |
| 9:00 AM  |            |    |    |            |    |    |           |    |    |           |    |    |       |
| 9:15 AM  |            |    |    |            |    |    |           |    |    |           |    |    |       |
| 9:30 AM  |            |    |    |            |    |    |           |    |    |           |    |    |       |
| 9:45 AM  |            |    |    |            |    |    |           |    |    |           |    |    |       |
| 10:00 AM |            |    |    |            |    |    |           |    |    |           |    |    |       |
| 10:15 AM |            |    |    |            |    |    |           |    |    |           |    |    |       |
| 10:30 AM |            |    |    |            |    |    |           |    |    |           |    |    |       |
| 10:45 AM |            |    |    |            |    |    |           |    |    |           |    |    |       |
| 11:00 AM |            |    |    |            |    |    |           |    |    |           |    |    |       |
| 11:15 AM |            |    |    |            |    |    |           |    |    |           |    |    |       |
| 11:30 AM |            |    |    |            |    |    |           |    |    |           |    |    |       |
| 11:45 AM |            |    |    |            |    |    |           |    |    |           |    |    |       |

| TOTAL      | NL    | NT    | NR    | SL    | ST    | SR    | EL    | ET    | ER    | WL    | WT    | WR    | TOTAL |
|------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Volumes    | 189   | 308   | 129   | 399   | 553   | 124   | 129   | 562   | 288   | 192   | 455   | 155   | 3483  |
| Approach % | 30.19 | 49.20 | 20.61 | 37.08 | 51.39 | 11.52 | 13.18 | 57.41 | 29.42 | 23.94 | 56.73 | 19.33 |       |
| App/Depart | 626   | /     | 592   | 1076  | /     | 1033  | 979   | /     | 1090  | 802   | /     | 768   |       |

AM Peak Hr Begins at: 745 AM

| PEAK       | Volumes   | Approach % |
|------------|---|------------|
| Volumes    | 103 167 66   209 284 75   68 272 120   104 230 86   1784                      |            |
| Approach % | 30.65 49.70 19.64   36.80 50.00 13.20   14.78 59.13 26.09   24.76 54.76 20.48 |            |

| PEAK HR. FACTOR:                      |
|---------------------------------------|
| 0.913   0.888   0.865   0.938   0.907 |

CONTROL: Signal  
COMMENT 1: 33.712836, -112.100045

### Intersection Turning Movement



**FIELD DATA SERVICES OF ARIZONA, INC.**  
520.316.6745



veracitytrafficgroup

N-S STREET: 19th Ave DATE: 07/15/21 LOCATION: Phoenix  
E-W STREET: Happy Valley Rd DAY: THURSDAY PROJECT#: 21-1460-004

| LANES:  | NORTHBOUND |    |    | SOUTHBOUND |    |    | EASTBOUND |    |    | WESTBOUND |     |    | TOTAL |
|---------|------------|----|----|------------|----|----|-----------|----|----|-----------|-----|----|-------|
|         | NL         | NT | NR | SL         | ST | SR | EL        | ET | ER | WL        | WT  | WR |       |
| 1:00 PM |            |    |    |            |    |    |           |    |    |           |     |    |       |
| 1:15 PM |            |    |    |            |    |    |           |    |    |           |     |    |       |
| 1:30 PM |            |    |    |            |    |    |           |    |    |           |     |    |       |
| 1:45 PM |            |    |    |            |    |    |           |    |    |           |     |    |       |
| 2:00 PM |            |    |    |            |    |    |           |    |    |           |     |    |       |
| 2:15 PM |            |    |    |            |    |    |           |    |    |           |     |    |       |
| 2:30 PM |            |    |    |            |    |    |           |    |    |           |     |    |       |
| 2:45 PM |            |    |    |            |    |    |           |    |    |           |     |    |       |
| 3:00 PM |            |    |    |            |    |    |           |    |    |           |     |    |       |
| 3:15 PM |            |    |    |            |    |    |           |    |    |           |     |    |       |
| 3:30 PM |            |    |    |            |    |    |           |    |    |           |     |    |       |
| 3:45 PM |            |    |    |            |    |    |           |    |    |           |     |    |       |
| 4:00 PM | 52         | 85 | 23 | 26         | 28 | 24 | 31        | 77 | 39 | 25        | 141 | 80 | 631   |
| 4:15 PM | 63         | 96 | 21 | 36         | 34 | 28 | 28        | 61 | 27 | 29        | 158 | 75 | 656   |
| 4:30 PM | 49         | 82 | 26 | 38         | 32 | 28 | 37        | 82 | 35 | 18        | 130 | 60 | 617   |
| 4:45 PM | 57         | 96 | 18 | 36         | 29 | 14 | 34        | 70 | 31 | 22        | 150 | 60 | 617   |
| 5:00 PM | 56         | 83 | 27 | 28         | 29 | 26 | 31        | 86 | 33 | 21        | 146 | 77 | 643   |
| 5:15 PM | 43         | 79 | 29 | 26         | 26 | 24 | 35        | 63 | 28 | 10        | 91  | 70 | 524   |
| 5:30 PM | 50         | 52 | 13 | 27         | 29 | 19 | 29        | 72 | 34 | 22        | 134 | 58 | 539   |
| 5:45 PM | 39         | 35 | 27 | 27         | 38 | 18 | 30        | 81 | 26 | 15        | 80  | 45 | 461   |
| 6:00 PM |            |    |    |            |    |    |           |    |    |           |     |    |       |
| 6:15 PM |            |    |    |            |    |    |           |    |    |           |     |    |       |
| 6:30 PM |            |    |    |            |    |    |           |    |    |           |     |    |       |
| 6:45 PM |            |    |    |            |    |    |           |    |    |           |     |    |       |

| TOTAL      | NL    | NT    | NR    | SL    | ST    | SR    | EL    | ET    | ER    | WL   | WT    | WR    | TOTAL |
|------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|------|-------|-------|-------|
| Volumes    | 409   | 608   | 184   | 244   | 245   | 181   | 255   | 592   | 253   | 162  | 1030  | 525   | 4688  |
| Approach % | 34.05 | 50.62 | 15.32 | 36.42 | 36.57 | 27.01 | 23.18 | 53.82 | 23.00 | 9.44 | 59.99 | 30.58 |       |
| App/Depart | 1201  | /     | 1388  | 670   | /     | 660   | 1100  | /     | 1020  | 1717 | /     | 1620  |       |

PM Peak Hr Begins at: 415 PM

| PEAK       | Volumes  | Approach % |
|------------|--|------------|
| Volumes    | 225 357 92   138 124 96   130 299 126   90 584 272   2533                    |            |
| Approach % | 33.38 52.97 13.65   38.55 34.64 26.82   23.42 53.87 22.70   9.51 61.73 28.75 |            |

| PEAK HR. FACTOR:                      |
|---------------------------------------|
| 0.936   0.913   0.901   0.903   0.965 |

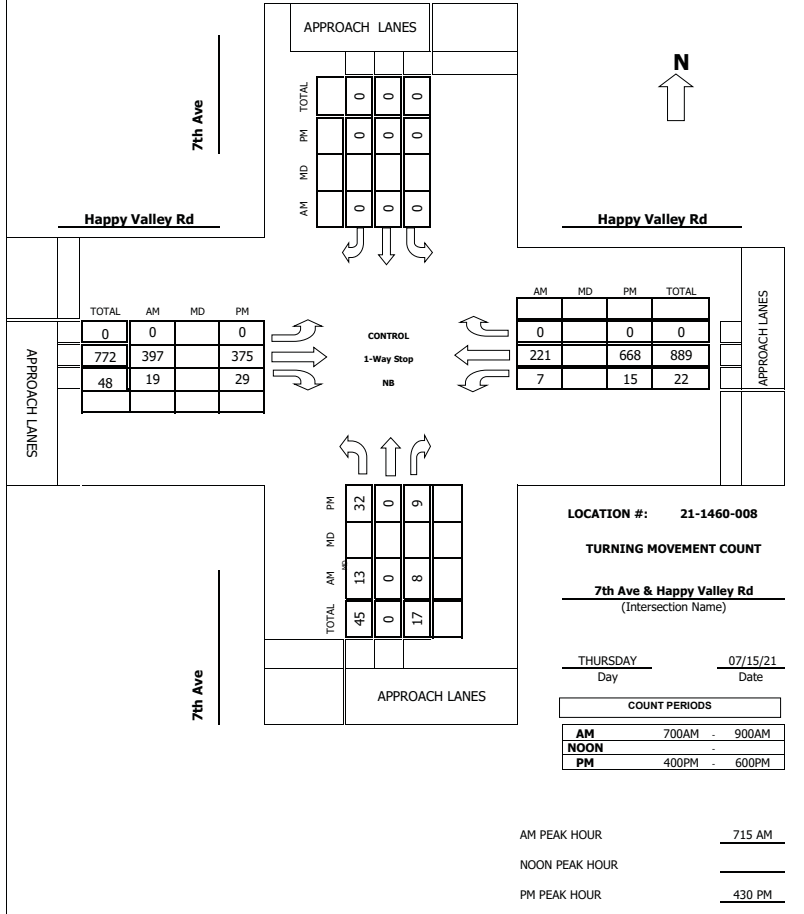
CONTROL: Signal  
COMMENT 1: 33.712836, -112.100045

Intersection Turning Movement  
Prepared by:



Project #: **21-1460-008**

**TMC SUMMARY OF 7th Ave & Happy Valley Rd**



Intersection Turning Movement  
Prepared by:



N-S STREET: **7th Ave** DATE: **07/15/21** LOCATION: **Phoenix**  
E-W STREET: **Happy Valley Rd** DAY: **THURSDAY** PROJECT# **21-1460-008**

| LANES:   | NORTHBOUND |    |    | SOUTHBOUND |    |    | EASTBOUND |     |    | WESTBOUND |    |    | TOTAL |
|----------|------------|----|----|------------|----|----|-----------|-----|----|-----------|----|----|-------|
|          | NL         | NT | NR | SL         | ST | SR | EL        | ET  | ER | WL        | WT | WR |       |
| 6:00 AM  | 0          | 1  | 0  | 0          | 0  | 0  | 0         | 1   | 0  | 0         | 1  | 0  |       |
| 6:15 AM  |            |    |    |            |    |    |           |     |    |           |    |    |       |
| 6:30 AM  |            |    |    |            |    |    |           |     |    |           |    |    |       |
| 6:45 AM  |            |    |    |            |    |    |           |     |    |           |    |    |       |
| 7:00 AM  | 1          | 0  | 0  | 0          | 0  | 0  | 0         | 77  | 1  | 0         | 43 | 0  | 122   |
| 7:15 AM  | 4          | 0  | 3  | 0          | 0  | 0  | 0         | 112 | 3  | 1         | 47 | 0  | 170   |
| 7:30 AM  | 3          | 0  | 3  | 0          | 0  | 0  | 0         | 93  | 4  | 2         | 47 | 0  | 152   |
| 7:45 AM  | 2          | 0  | 1  | 0          | 0  | 0  | 0         | 95  | 7  | 3         | 62 | 0  | 170   |
| 8:00 AM  | 4          | 0  | 1  | 0          | 0  | 0  | 0         | 97  | 5  | 1         | 65 | 0  | 173   |
| 8:15 AM  | 8          | 0  | 2  | 0          | 0  | 0  | 0         | 82  | 6  | 3         | 43 | 0  | 144   |
| 8:30 AM  | 7          | 0  | 3  | 0          | 0  | 0  | 0         | 92  | 3  | 1         | 60 | 0  | 166   |
| 8:45 AM  | 4          | 0  | 0  | 0          | 0  | 0  | 0         | 85  | 5  | 1         | 66 | 0  | 161   |
| 9:00 AM  |            |    |    |            |    |    |           |     |    |           |    |    |       |
| 9:15 AM  |            |    |    |            |    |    |           |     |    |           |    |    |       |
| 9:30 AM  |            |    |    |            |    |    |           |     |    |           |    |    |       |
| 9:45 AM  |            |    |    |            |    |    |           |     |    |           |    |    |       |
| 10:00 AM |            |    |    |            |    |    |           |     |    |           |    |    |       |
| 10:15 AM |            |    |    |            |    |    |           |     |    |           |    |    |       |
| 10:30 AM |            |    |    |            |    |    |           |     |    |           |    |    |       |
| 10:45 AM |            |    |    |            |    |    |           |     |    |           |    |    |       |
| 11:00 AM |            |    |    |            |    |    |           |     |    |           |    |    |       |
| 11:15 AM |            |    |    |            |    |    |           |     |    |           |    |    |       |
| 11:30 AM |            |    |    |            |    |    |           |     |    |           |    |    |       |
| 11:45 AM |            |    |    |            |    |    |           |     |    |           |    |    |       |

| TOTAL      | NL    | NT   | NR    | SL   | ST   | SR   | EL   | ET    | ER   | WL   | WT    | WR   | TOTAL |
|------------|-------|------|-------|------|------|------|------|-------|------|------|-------|------|-------|
| Volumes    | 33    | 0    | 13    | 0    | 0    | 0    | 0    | 733   | 34   | 12   | 433   | 0    | 1258  |
| Approach % | 71.74 | 0.00 | 28.26 | #### | #### | #### | 0.00 | 95.57 | 4.43 | 2.70 | 97.30 | 0.00 |       |
| App/Depart | 46    | /    | 0     | 0    | /    | 46   | 767  | /     | 746  | 445  | /     | 466  |       |

AM Peak Hr Begins at: 715 AM

PEAK

|            |       |      |       |      |      |      |      |       |      |      |       |      |     |
|------------|-------|------|-------|------|------|------|------|-------|------|------|-------|------|-----|
| Volumes    | 13    | 0    | 8     | 0    | 0    | 0    | 0    | 397   | 19   | 7    | 221   | 0    | 665 |
| Approach % | 61.90 | 0.00 | 38.10 | #### | #### | #### | 0.00 | 95.43 | 4.57 | 3.07 | 96.93 | 0.00 |     |

PEAK HR. FACTOR:

|  |       |       |       |       |       |
|--|-------|-------|-------|-------|-------|
|  | 0.750 | 0.000 | 0.904 | 0.864 | 0.961 |
|--|-------|-------|-------|-------|-------|

CONTROL: 1-Way Stop (NB)  
COMMENT 1:  
GPS: 33.713034, -112.082521



# Intersection Turning Movement



N-S STREET: **7th Ave** DATE: **07/15/21** LOCATION: **Phoenix**  
 E-W STREET: **Happy Valley Rd** DAY: **THURSDAY** PROJECT# **21-1460-008**

| LANES:  | NORTHBOUND |    |    | SOUTHBOUND |    |    | EASTBOUND |    |    | WESTBOUND |     |    | TOTAL |
|---------|------------|----|----|------------|----|----|-----------|----|----|-----------|-----|----|-------|
|         | NL         | NT | NR | SL         | ST | SR | EL        | ET | ER | WL        | WT  | WR |       |
| 1:00 PM | 0          | 1  | 0  | 0          | 0  | 0  | 0         | 1  | 0  | 0         | 1   | 0  |       |
| 1:15 PM |            |    |    |            |    |    |           |    |    |           |     |    |       |
| 1:30 PM |            |    |    |            |    |    |           |    |    |           |     |    |       |
| 1:45 PM |            |    |    |            |    |    |           |    |    |           |     |    |       |
| 2:00 PM |            |    |    |            |    |    |           |    |    |           |     |    |       |
| 2:15 PM |            |    |    |            |    |    |           |    |    |           |     |    |       |
| 2:30 PM |            |    |    |            |    |    |           |    |    |           |     |    |       |
| 2:45 PM |            |    |    |            |    |    |           |    |    |           |     |    |       |
| 3:00 PM |            |    |    |            |    |    |           |    |    |           |     |    |       |
| 3:15 PM |            |    |    |            |    |    |           |    |    |           |     |    |       |
| 3:30 PM |            |    |    |            |    |    |           |    |    |           |     |    |       |
| 3:45 PM |            |    |    |            |    |    |           |    |    |           |     |    |       |
| 4:00 PM | 8          | 0  | 4  | 0          | 0  | 0  | 0         | 86 | 6  | 4         | 159 | 0  | 267   |
| 4:15 PM | 8          | 0  | 3  | 0          | 0  | 0  | 0         | 77 | 5  | 2         | 180 | 0  | 275   |
| 4:30 PM | 13         | 0  | 2  | 0          | 0  | 0  | 0         | 95 | 9  | 5         | 180 | 0  | 304   |
| 4:45 PM | 6          | 0  | 3  | 0          | 0  | 0  | 0         | 98 | 9  | 3         | 150 | 0  | 269   |
| 5:00 PM | 8          | 0  | 3  | 0          | 0  | 0  | 0         | 84 | 5  | 1         | 159 | 0  | 260   |
| 5:15 PM | 5          | 0  | 1  | 0          | 0  | 0  | 0         | 98 | 6  | 6         | 179 | 0  | 295   |
| 5:30 PM | 12         | 0  | 3  | 0          | 0  | 0  | 0         | 78 | 7  | 4         | 153 | 0  | 257   |
| 5:45 PM | 8          | 0  | 3  | 0          | 0  | 0  | 0         | 69 | 1  | 1         | 142 | 0  | 224   |
| 6:00 PM |            |    |    |            |    |    |           |    |    |           |     |    |       |
| 6:15 PM |            |    |    |            |    |    |           |    |    |           |     |    |       |
| 6:30 PM |            |    |    |            |    |    |           |    |    |           |     |    |       |
| 6:45 PM |            |    |    |            |    |    |           |    |    |           |     |    |       |

| TOTAL      | NL    | NT   | NR    | SL   | ST   | SR   | EL   | ET    | ER   | WL   | WT    | WR   | TOTAL |
|------------|-------|------|-------|------|------|------|------|-------|------|------|-------|------|-------|
| Volumes    | 68    | 0    | 22    | 0    | 0    | 0    | 0    | 685   | 48   | 26   | 1302  | 0    | 2151  |
| Approach % | 75.56 | 0.00 | 24.44 | #### | #### | #### | 0.00 | 93.45 | 6.55 | 1.96 | 98.04 | 0.00 |       |
| App/Depart | 90    | /    | 0     | 0    | /    | 74   | 733  | /     | 707  | 1328 | /     | 1370 |       |

PM Peak Hr Begins at: 430 PM

| PEAK       | NL    | NT   | NR    | SL   | ST   | SR   | EL   | ET    | ER   | WL   | WT    | WR   | TOTAL |
|------------|-------|------|-------|------|------|------|------|-------|------|------|-------|------|-------|
| Volumes    | 32    | 0    | 9     | 0    | 0    | 0    | 0    | 375   | 29   | 15   | 668   | 0    | 1128  |
| Approach % | 78.05 | 0.00 | 21.95 | #### | #### | #### | 0.00 | 92.82 | 7.18 | 2.20 | 97.80 | 0.00 |       |

| PEAK HR. FACTOR: | NL | NT    | NR | SL | ST    | SR | EL | ET    | ER | WL    | WT | WR | TOTAL |
|------------------|----|-------|----|----|-------|----|----|-------|----|-------|----|----|-------|
|                  |    | 0.683 |    |    | 0.000 |    |    | 0.944 |    | 0.923 |    |    | 0.928 |

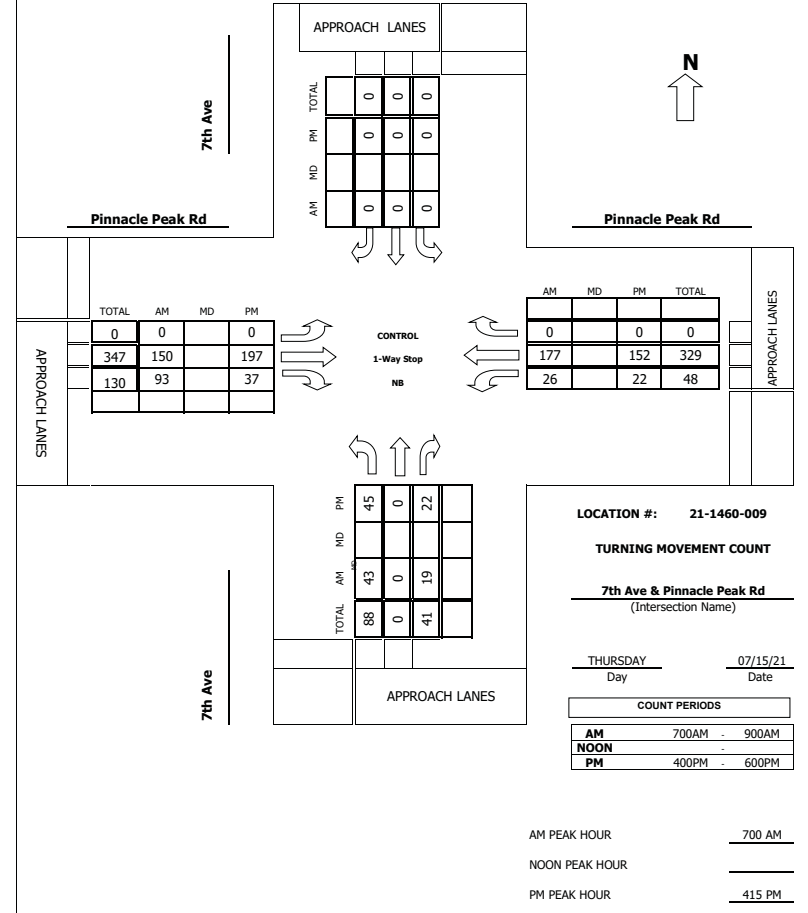
CONTROL: **1-Way Stop (NB)**  
 COMMENT 1: **0**  
 GPS: **33.713034, -112.082521**

## Intersection Turning Movement Prepared by:



Project #: **21-1460-009**

### TMC SUMMARY OF 7th Ave & Pinnacle Peak Rd



### Intersection Turning Movement

Prepared by:



**FIELD DATA SERVICES OF ARIZONA, INC.**  
520.316.6745



veracitytrafficgroup

N-S STREET: 7th Ave DATE: 07/15/21 LOCATION: Phoenix  
E-W STREET: Pinnacle Peak Rd DAY: THURSDAY PROJECT# 21-1460-009

| LANES:   | NORTHBOUND |    |    | SOUTHBOUND |    |    | EASTBOUND |    |    | WESTBOUND |    |    | TOTAL |
|----------|------------|----|----|------------|----|----|-----------|----|----|-----------|----|----|-------|
|          | NL         | NT | NR | SL         | ST | SR | EL        | ET | ER | WL        | WT | WR |       |
| 6:00 AM  | 0          | 1  | 0  | 0          | 0  | 0  | 0         | 1  | 1  | 0         | 1  | 0  |       |
| 6:15 AM  |            |    |    |            |    |    |           |    |    |           |    |    |       |
| 6:30 AM  |            |    |    |            |    |    |           |    |    |           |    |    |       |
| 6:45 AM  |            |    |    |            |    |    |           |    |    |           |    |    |       |
| 7:00 AM  | 3          | 0  | 2  | 0          | 0  | 0  | 0         | 51 | 23 | 7         | 33 | 0  | 119   |
| 7:15 AM  | 9          | 0  | 2  | 0          | 0  | 0  | 0         | 34 | 34 | 4         | 40 | 0  | 123   |
| 7:30 AM  | 19         | 0  | 5  | 0          | 0  | 0  | 0         | 36 | 21 | 5         | 45 | 0  | 131   |
| 7:45 AM  | 12         | 0  | 10 | 0          | 0  | 0  | 0         | 29 | 15 | 10        | 59 | 0  | 135   |
| 8:00 AM  | 16         | 0  | 5  | 0          | 0  | 0  | 0         | 32 | 19 | 5         | 41 | 0  | 118   |
| 8:15 AM  | 31         | 0  | 5  | 0          | 0  | 0  | 0         | 18 | 20 | 2         | 24 | 0  | 100   |
| 8:30 AM  | 47         | 0  | 29 | 0          | 0  | 0  | 0         | 33 | 9  | 2         | 26 | 0  | 146   |
| 8:45 AM  | 21         | 0  | 12 | 0          | 0  | 0  | 0         | 21 | 10 | 4         | 25 | 0  | 93    |
| 9:00 AM  |            |    |    |            |    |    |           |    |    |           |    |    |       |
| 9:15 AM  |            |    |    |            |    |    |           |    |    |           |    |    |       |
| 9:30 AM  |            |    |    |            |    |    |           |    |    |           |    |    |       |
| 9:45 AM  |            |    |    |            |    |    |           |    |    |           |    |    |       |
| 10:00 AM |            |    |    |            |    |    |           |    |    |           |    |    |       |
| 10:15 AM |            |    |    |            |    |    |           |    |    |           |    |    |       |
| 10:30 AM |            |    |    |            |    |    |           |    |    |           |    |    |       |
| 10:45 AM |            |    |    |            |    |    |           |    |    |           |    |    |       |
| 11:00 AM |            |    |    |            |    |    |           |    |    |           |    |    |       |
| 11:15 AM |            |    |    |            |    |    |           |    |    |           |    |    |       |
| 11:30 AM |            |    |    |            |    |    |           |    |    |           |    |    |       |
| 11:45 AM |            |    |    |            |    |    |           |    |    |           |    |    |       |

| TOTAL      | NL    | NT   | NR    | SL   | ST   | SR   | EL   | ET    | ER    | WL    | WT    | WR   | TOTAL |
|------------|-------|------|-------|------|------|------|------|-------|-------|-------|-------|------|-------|
| Volumes    | 158   | 0    | 70    | 0    | 0    | 0    | 0    | 254   | 151   | 39    | 293   | 0    | 965   |
| Approach % | 69.30 | 0.00 | 30.70 | #### | #### | #### | 0.00 | 62.72 | 37.28 | 11.75 | 88.25 | 0.00 |       |
| App/Depart | 228   | /    | 0     | 0    | /    | 190  | 405  | /     | 324   | 332   | /     | 451  |       |

AM Peak Hr Begins at: 700 AM

| PEAK       | NL    | NT   | NR    | SL   | ST   | SR   | EL   | ET    | ER    | WL    | WT    | WR   | TOTAL |
|------------|-------|------|-------|------|------|------|------|-------|-------|-------|-------|------|-------|
| Volumes    | 43    | 0    | 19    | 0    | 0    | 0    | 0    | 150   | 93    | 26    | 177   | 0    | 508   |
| Approach % | 69.35 | 0.00 | 30.65 | #### | #### | #### | 0.00 | 61.73 | 38.27 | 12.81 | 87.19 | 0.00 |       |

PEAK HR. FACTOR: 0.646 0.000 0.821 0.736 0.941

CONTROL: 1-Way Stop (NB)  
COMMENT 1: 33.698243, -112.083118  
GPS:

### Intersection Turning Movement



**FIELD DATA SERVICES OF ARIZONA, INC.**  
520.316.6745



veracitytrafficgroup

N-S STREET: 7th Ave DATE: 07/15/21 LOCATION: Phoenix  
E-W STREET: Pinnacle Peak Rd DAY: THURSDAY PROJECT# 21-1460-009

| LANES:  | NORTHBOUND |    |    | SOUTHBOUND |    |    | EASTBOUND |    |    | WESTBOUND |    |    | TOTAL |
|---------|------------|----|----|------------|----|----|-----------|----|----|-----------|----|----|-------|
|         | NL         | NT | NR | SL         | ST | SR | EL        | ET | ER | WL        | WT | WR |       |
| 1:00 PM |            |    |    |            |    |    |           |    |    |           |    |    |       |
| 1:15 PM |            |    |    |            |    |    |           |    |    |           |    |    |       |
| 1:30 PM |            |    |    |            |    |    |           |    |    |           |    |    |       |
| 1:45 PM |            |    |    |            |    |    |           |    |    |           |    |    |       |
| 2:00 PM |            |    |    |            |    |    |           |    |    |           |    |    |       |
| 2:15 PM |            |    |    |            |    |    |           |    |    |           |    |    |       |
| 2:30 PM |            |    |    |            |    |    |           |    |    |           |    |    |       |
| 2:45 PM |            |    |    |            |    |    |           |    |    |           |    |    |       |
| 3:00 PM |            |    |    |            |    |    |           |    |    |           |    |    |       |
| 3:15 PM |            |    |    |            |    |    |           |    |    |           |    |    |       |
| 3:30 PM |            |    |    |            |    |    |           |    |    |           |    |    |       |
| 3:45 PM |            |    |    |            |    |    |           |    |    |           |    |    |       |
| 4:00 PM | 11         | 0  | 3  | 0          | 0  | 0  | 0         | 44 | 9  | 6         | 29 | 0  | 102   |
| 4:15 PM | 14         | 0  | 7  | 0          | 0  | 0  | 0         | 37 | 12 | 5         | 42 | 0  | 117   |
| 4:30 PM | 12         | 0  | 2  | 0          | 0  | 0  | 0         | 49 | 11 | 5         | 36 | 0  | 115   |
| 4:45 PM | 12         | 0  | 7  | 0          | 0  | 0  | 0         | 61 | 5  | 7         | 39 | 0  | 131   |
| 5:00 PM | 7          | 0  | 6  | 0          | 0  | 0  | 0         | 50 | 9  | 5         | 35 | 0  | 112   |
| 5:15 PM | 8          | 0  | 1  | 0          | 0  | 0  | 0         | 41 | 6  | 2         | 46 | 0  | 104   |
| 5:30 PM | 9          | 0  | 3  | 0          | 0  | 0  | 0         | 28 | 5  | 0         | 18 | 0  | 63    |
| 5:45 PM | 7          | 0  | 1  | 0          | 0  | 0  | 0         | 11 | 4  | 2         | 21 | 0  | 46    |
| 6:00 PM |            |    |    |            |    |    |           |    |    |           |    |    |       |
| 6:15 PM |            |    |    |            |    |    |           |    |    |           |    |    |       |
| 6:30 PM |            |    |    |            |    |    |           |    |    |           |    |    |       |
| 6:45 PM |            |    |    |            |    |    |           |    |    |           |    |    |       |

| TOTAL      | NL    | NT   | NR    | SL   | ST   | SR   | EL   | ET    | ER    | WL    | WT    | WR   | TOTAL |
|------------|-------|------|-------|------|------|------|------|-------|-------|-------|-------|------|-------|
| Volumes    | 80    | 0    | 30    | 0    | 0    | 0    | 0    | 321   | 61    | 32    | 266   | 0    | 790   |
| Approach % | 72.73 | 0.00 | 27.27 | #### | #### | #### | 0.00 | 84.03 | 15.97 | 10.74 | 89.26 | 0.00 |       |
| App/Depart | 110   | /    | 0     | 0    | /    | 93   | 382  | /     | 351   | 298   | /     | 346  |       |

PM Peak Hr Begins at: 415 PM

| PEAK       | NL    | NT   | NR    | SL   | ST   | SR   | EL   | ET    | ER    | WL    | WT    | WR   | TOTAL |
|------------|-------|------|-------|------|------|------|------|-------|-------|-------|-------|------|-------|
| Volumes    | 45    | 0    | 22    | 0    | 0    | 0    | 0    | 197   | 37    | 22    | 152   | 0    | 475   |
| Approach % | 67.16 | 0.00 | 32.84 | #### | #### | #### | 0.00 | 84.19 | 15.81 | 12.64 | 87.36 | 0.00 |       |

PEAK HR. FACTOR: 0.798 0.000 0.886 0.926 0.906

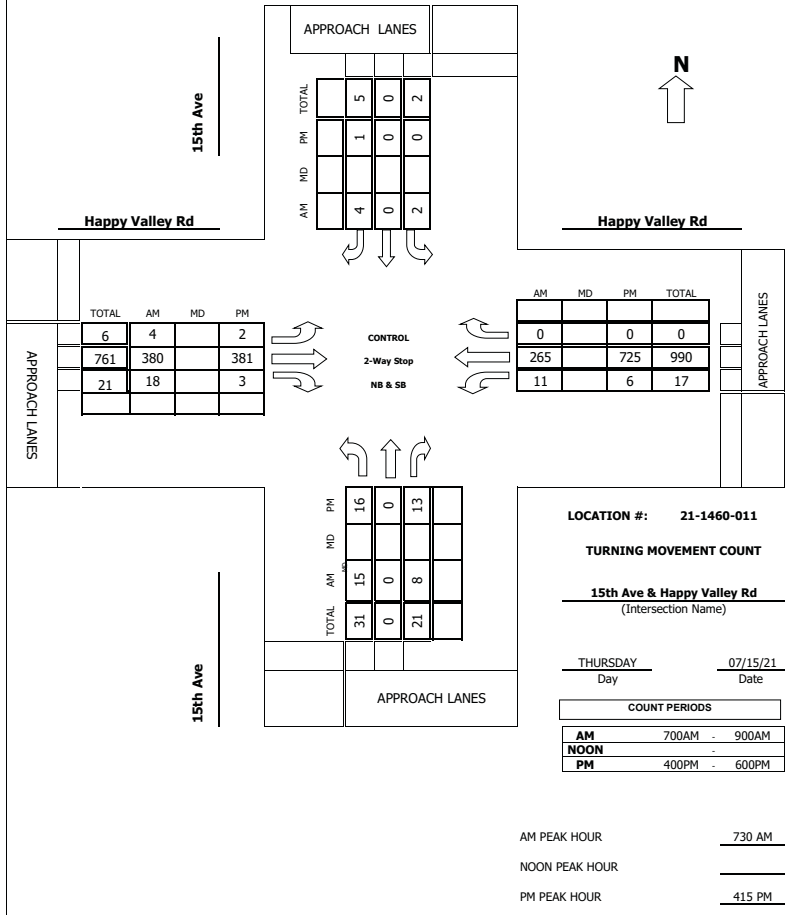
CONTROL: 1-Way Stop (NB)  
COMMENT 1: 33.698243, -112.083118  
GPS:

Intersection Turning Movement  
Prepared by:



Project #: **21-1460-011**

**TMC SUMMARY OF 15th Ave & Happy Valley Rd**



Intersection Turning Movement  
Prepared by:



N-S STREET: 15th Ave DATE: 07/15/21 LOCATION: Phoenix  
E-W STREET: Happy Valley Rd DAY: THURSDAY PROJECT#: 21-1460-011

| LANES:   | NORTHBOUND |    |    | SOUTHBOUND |    |    | EASTBOUND |     |    | WESTBOUND |    |    | TOTAL |
|----------|------------|----|----|------------|----|----|-----------|-----|----|-----------|----|----|-------|
|          | NL         | NT | NR | SL         | ST | SR | EL        | ET  | ER | WL        | WT | WR |       |
| 6:00 AM  | 0          | 1  | 0  | 0          | 1  | 0  | 0         | 1   | 0  | 0         | 1  | 0  |       |
| 6:15 AM  |            |    |    |            |    |    |           |     |    |           |    |    |       |
| 6:30 AM  |            |    |    |            |    |    |           |     |    |           |    |    |       |
| 6:45 AM  |            |    |    |            |    |    |           |     |    |           |    |    |       |
| 7:00 AM  | 5          | 0  | 5  | 0          | 0  | 0  | 0         | 102 | 4  | 4         | 50 | 1  | 171   |
| 7:15 AM  | 1          | 0  | 3  | 0          | 0  | 0  | 0         | 103 | 0  | 3         | 45 | 0  | 155   |
| 7:30 AM  | 8          | 0  | 3  | 1          | 0  | 1  | 1         | 114 | 6  | 3         | 57 | 0  | 194   |
| 7:45 AM  | 3          | 0  | 1  | 0          | 0  | 1  | 0         | 91  | 5  | 3         | 69 | 0  | 173   |
| 8:00 AM  | 1          | 0  | 2  | 0          | 0  | 1  | 2         | 89  | 3  | 2         | 64 | 0  | 164   |
| 8:15 AM  | 3          | 0  | 2  | 1          | 0  | 1  | 1         | 86  | 4  | 3         | 75 | 0  | 176   |
| 8:30 AM  | 2          | 0  | 2  | 0          | 0  | 3  | 0         | 105 | 3  | 2         | 72 | 0  | 189   |
| 8:45 AM  | 4          | 0  | 6  | 0          | 0  | 1  | 1         | 67  | 0  | 5         | 70 | 0  | 154   |
| 9:00 AM  |            |    |    |            |    |    |           |     |    |           |    |    |       |
| 9:15 AM  |            |    |    |            |    |    |           |     |    |           |    |    |       |
| 9:30 AM  |            |    |    |            |    |    |           |     |    |           |    |    |       |
| 9:45 AM  |            |    |    |            |    |    |           |     |    |           |    |    |       |
| 10:00 AM |            |    |    |            |    |    |           |     |    |           |    |    |       |
| 10:15 AM |            |    |    |            |    |    |           |     |    |           |    |    |       |
| 10:30 AM |            |    |    |            |    |    |           |     |    |           |    |    |       |
| 10:45 AM |            |    |    |            |    |    |           |     |    |           |    |    |       |
| 11:00 AM |            |    |    |            |    |    |           |     |    |           |    |    |       |
| 11:15 AM |            |    |    |            |    |    |           |     |    |           |    |    |       |
| 11:30 AM |            |    |    |            |    |    |           |     |    |           |    |    |       |
| 11:45 AM |            |    |    |            |    |    |           |     |    |           |    |    |       |

| TOTAL      | NL    | NT   | NR    | SL    | ST   | SR    | EL   | ET    | ER   | WL   | WT    | WR   | TOTAL |
|------------|-------|------|-------|-------|------|-------|------|-------|------|------|-------|------|-------|
| Volumes    | 27    | 0    | 24    | 2     | 0    | 8     | 5    | 757   | 25   | 25   | 502   | 1    | 1376  |
| Approach % | 52.94 | 0.00 | 47.06 | 20.00 | 0.00 | 80.00 | 0.64 | 96.19 | 3.18 | 4.73 | 95.08 | 0.19 |       |
| App/Depart | 51    | /    | 6     | 10    | /    | 50    | 787  | /     | 783  | 528  | /     | 537  |       |

AM Peak Hr Begins at: 730 AM

PEAK

|            |       |      |       |       |      |       |      |       |      |      |       |      |     |
|------------|-------|------|-------|-------|------|-------|------|-------|------|------|-------|------|-----|
| Volumes    | 15    | 0    | 8     | 2     | 0    | 4     | 4    | 380   | 18   | 11   | 265   | 0    | 707 |
| Approach % | 65.22 | 0.00 | 34.78 | 33.33 | 0.00 | 66.67 | 1.00 | 94.53 | 4.48 | 3.99 | 96.01 | 0.00 |     |

PEAK HR. FACTOR:

|  |       |       |       |       |       |
|--|-------|-------|-------|-------|-------|
|  | 0.523 | 0.750 | 0.831 | 0.885 | 0.911 |
|--|-------|-------|-------|-------|-------|

CONTROL: 2-Way Stop (NB & SB)  
COMMENT 1:  
GPS: 33.712944, -112.091323

## Intersection Turning Movement



**FIELD DATA SERVICES OF ARIZONA, INC.**  
520.316.6745



N-S STREET: 15th Ave      DATE: 07/15/21      LOCATION: Phoenix  
 E-W STREET: Happy Valley Rd      DAY: THURSDAY      PROJECT# 21-1460-011

| LANES:  | NORTHBOUND |    |    | SOUTHBOUND |    |    | EASTBOUND |     |    | WESTBOUND |     |    | TOTAL |
|---------|------------|----|----|------------|----|----|-----------|-----|----|-----------|-----|----|-------|
|         | NL         | NT | NR | SL         | ST | SR | EL        | ET  | ER | WL        | WT  | WR |       |
| 1:00 PM | 0          | 1  | 0  | 0          | 1  | 0  | 0         | 1   | 0  | 0         | 1   | 0  |       |
| 1:15 PM |            |    |    |            |    |    |           |     |    |           |     |    |       |
| 1:30 PM |            |    |    |            |    |    |           |     |    |           |     |    |       |
| 1:45 PM |            |    |    |            |    |    |           |     |    |           |     |    |       |
| 2:00 PM |            |    |    |            |    |    |           |     |    |           |     |    |       |
| 2:15 PM |            |    |    |            |    |    |           |     |    |           |     |    |       |
| 2:30 PM |            |    |    |            |    |    |           |     |    |           |     |    |       |
| 2:45 PM |            |    |    |            |    |    |           |     |    |           |     |    |       |
| 3:00 PM |            |    |    |            |    |    |           |     |    |           |     |    |       |
| 3:15 PM |            |    |    |            |    |    |           |     |    |           |     |    |       |
| 3:30 PM |            |    |    |            |    |    |           |     |    |           |     |    |       |
| 3:45 PM |            |    |    |            |    |    |           |     |    |           |     |    |       |
| 4:00 PM | 2          | 0  | 3  | 0          | 0  | 1  | 0         | 88  | 1  | 2         | 179 | 2  | 278   |
| 4:15 PM | 3          | 0  | 3  | 0          | 0  | 1  | 2         | 91  | 0  | 1         | 211 | 0  | 312   |
| 4:30 PM | 5          | 0  | 2  | 0          | 0  | 0  | 0         | 110 | 1  | 1         | 153 | 0  | 272   |
| 4:45 PM | 5          | 0  | 4  | 0          | 0  | 0  | 0         | 89  | 1  | 2         | 171 | 0  | 272   |
| 5:00 PM | 3          | 0  | 4  | 0          | 0  | 0  | 0         | 91  | 1  | 2         | 190 | 0  | 291   |
| 5:15 PM | 4          | 0  | 1  | 0          | 0  | 1  | 1         | 84  | 1  | 0         | 155 | 0  | 247   |
| 5:30 PM | 1          | 0  | 3  | 0          | 0  | 0  | 0         | 78  | 0  | 4         | 163 | 0  | 249   |
| 5:45 PM | 1          | 0  | 4  | 0          | 0  | 0  | 1         | 97  | 3  | 4         | 112 | 0  | 222   |
| 6:00 PM |            |    |    |            |    |    |           |     |    |           |     |    |       |
| 6:15 PM |            |    |    |            |    |    |           |     |    |           |     |    |       |
| 6:30 PM |            |    |    |            |    |    |           |     |    |           |     |    |       |
| 6:45 PM |            |    |    |            |    |    |           |     |    |           |     |    |       |

| TOTAL      | NL    | NT   | NR    | SL   | ST   | SR     | EL   | ET    | ER   | WL   | WT    | WR   | TOTAL |
|------------|-------|------|-------|------|------|--------|------|-------|------|------|-------|------|-------|
| Volumes    | 24    | 0    | 24    | 0    | 0    | 3      | 4    | 728   | 8    | 16   | 1334  | 2    | 2143  |
| Approach % | 50.00 | 0.00 | 50.00 | 0.00 | 0.00 | 100.00 | 0.54 | 98.38 | 1.08 | 1.18 | 98.67 | 0.15 |       |
| App/Depart | 48    | /    | 6     | 3    | /    | 24     | 740  | /     | 752  | 1352 | /     | 1361 |       |

PM Peak Hr Begins at: 415 PM

PEAK

|            |       |      |       |      |      |        |      |       |      |      |       |      |      |
|------------|-------|------|-------|------|------|--------|------|-------|------|------|-------|------|------|
| Volumes    | 16    | 0    | 13    | 0    | 0    | 1      | 2    | 381   | 3    | 6    | 725   | 0    | 1147 |
| Approach % | 55.17 | 0.00 | 44.83 | 0.00 | 0.00 | 100.00 | 0.52 | 98.70 | 0.78 | 0.82 | 99.18 | 0.00 |      |

PEAK HR. FACTOR:

|  |       |  |       |  |       |  |       |  |       |
|--|-------|--|-------|--|-------|--|-------|--|-------|
|  | 0.806 |  | 0.250 |  | 0.869 |  | 0.862 |  | 0.919 |
|--|-------|--|-------|--|-------|--|-------|--|-------|

CONTROL: 2-Way Stop (NB & SB)  
 COMMENT 1: 0  
 GPS: 33.712944, -112.091323

## **APPENDIX C**

### **EXISTING PEAK HOUR ANALYSIS**

Deer Valley 30  
1: 19th Ave & Happy Valley Rd

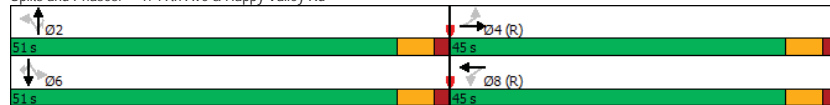
Existing AM  
Timings

| Lane Group           | EBL   | EBT   | WBL   | WBT   | NBL   | NBT   | NBR   | SBL   | SBT   | SBR   |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations  | ↔     | ↔↔    | ↔     | ↔↔    | ↔     | ↔     | ↔     | ↔     | ↔↔    | ↔     |
| Traffic Volume (vph) | 78    | 313   | 135   | 265   | 138   | 231   | 92    | 240   | 367   | 86    |
| Future Volume (vph)  | 78    | 313   | 135   | 265   | 138   | 231   | 92    | 240   | 367   | 86    |
| Turn Type            | Perm  | NA    | Perm  | NA    | Perm  | NA    | Perm  | Perm  | NA    | Perm  |
| Protected Phases     |       | 4     |       | 8     |       | 2     |       | 2     | 6     | 6     |
| Permitted Phases     | 4     |       | 8     |       | 2     |       | 2     | 6     |       | 6     |
| Detector Phase       | 4     | 4     | 8     | 8     | 2     | 2     | 2     | 6     | 6     | 6     |
| Switch Phase         |       |       |       |       |       |       |       |       |       |       |
| Minimum Initial (s)  | 15.0  | 15.0  | 15.0  | 15.0  | 5.0   | 5.0   | 5.0   | 5.0   | 5.0   | 5.0   |
| Minimum Split (s)    | 41.0  | 41.0  | 41.0  | 41.0  | 43.1  | 43.1  | 43.1  | 43.1  | 43.1  | 43.1  |
| Total Split (s)      | 45.0  | 45.0  | 45.0  | 45.0  | 51.0  | 51.0  | 51.0  | 51.0  | 51.0  | 51.0  |
| Total Split (%)      | 46.9% | 46.9% | 46.9% | 46.9% | 53.1% | 53.1% | 53.1% | 53.1% | 53.1% | 53.1% |
| Yellow Time (s)      | 4.3   | 4.3   | 4.3   | 4.3   | 4.3   | 4.3   | 4.3   | 4.3   | 4.3   | 4.3   |
| All-Red Time (s)     | 1.7   | 1.7   | 1.7   | 1.7   | 1.8   | 1.8   | 1.8   | 1.8   | 1.8   | 1.8   |
| Lost Time Adjust (s) | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Lost Time (s)  | 6.0   | 6.0   | 6.0   | 6.0   | 6.1   | 6.1   | 6.1   | 6.1   | 6.1   | 6.1   |
| Lead/Lag             |       |       |       |       |       |       |       |       |       |       |
| Lead-Lag Optimize?   |       |       |       |       |       |       |       |       |       |       |
| Recall Mode          | C-Max | C-Max | C-Max | C-Max | Max   | Max   | Max   | Max   | Max   | Max   |
| Act Effct Green (s)  | 39.0  | 39.0  | 39.0  | 39.0  | 44.9  | 44.9  | 44.9  | 44.9  | 44.9  | 44.9  |
| Actuated g/C Ratio   | 0.41  | 0.41  | 0.41  | 0.41  | 0.47  | 0.47  | 0.47  | 0.47  | 0.47  | 0.47  |
| v/c Ratio            | 0.22  | 0.25  | 0.43  | 0.19  | 0.34  | 0.15  | 0.13  | 0.50  | 0.17  | 0.12  |
| Control Delay        | 20.6  | 13.1  | 25.6  | 13.4  | 18.9  | 15.0  | 3.5   | 22.0  | 15.0  | 3.6   |
| Queue Delay          | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Delay          | 20.6  | 13.1  | 25.6  | 13.4  | 18.9  | 15.0  | 3.5   | 22.0  | 15.0  | 3.6   |
| LOS                  | C     | B     | C     | B     | B     | B     | A     | C     | B     | A     |
| Approach Delay       |       | 14.2  |       | 16.7  |       | 13.9  |       |       | 16.0  |       |
| Approach LOS         |       | B     |       | B     |       | B     |       |       | B     |       |

Intersection Summary

Cycle Length: 96  
 Actuated Cycle Length: 96  
 Offset: 51 (53%), Referenced to phase 4:EBTL and 8:WBTL, Start of Green  
 Natural Cycle: 85  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.50  
 Intersection Signal Delay: 15.3  
 Intersection Capacity Utilization 64.8%  
 Intersection LOS: B  
 ICU Level of Service C  
 Analysis Period (min) 15

Splits and Phases: 1: 19th Ave & Happy Valley Rd



Deer Valley 30  
1: 19th Ave & Happy Valley Rd

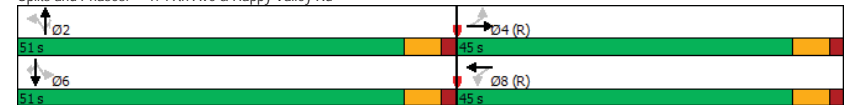
Existing PM  
Timings

| Lane Group           | EBL   | EBT   | WBL   | WBT   | NBL   | NBT   | NBR   | SBL   | SBT   | SBR   |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations  | ↔     | ↔↔    | ↔     | ↔↔    | ↔     | ↔     | ↔     | ↔     | ↔↔    | ↔     |
| Traffic Volume (vph) | 150   | 344   | 148   | 672   | 273   | 433   | 112   | 159   | 205   | 110   |
| Future Volume (vph)  | 150   | 344   | 148   | 672   | 273   | 433   | 112   | 159   | 205   | 110   |
| Turn Type            | Perm  | NA    | Perm  | NA    | Perm  | NA    | Perm  | Perm  | NA    | Perm  |
| Protected Phases     |       | 4     |       | 8     |       | 2     |       | 2     | 6     | 6     |
| Permitted Phases     | 4     |       | 8     |       | 2     |       | 2     | 6     |       | 6     |
| Detector Phase       | 4     | 4     | 8     | 8     | 2     | 2     | 2     | 6     | 6     | 6     |
| Switch Phase         |       |       |       |       |       |       |       |       |       |       |
| Minimum Initial (s)  | 15.0  | 15.0  | 15.0  | 15.0  | 5.0   | 5.0   | 5.0   | 5.0   | 5.0   | 5.0   |
| Minimum Split (s)    | 41.0  | 41.0  | 41.0  | 41.0  | 43.1  | 43.1  | 43.1  | 43.1  | 43.1  | 43.1  |
| Total Split (s)      | 45.0  | 45.0  | 45.0  | 45.0  | 51.0  | 51.0  | 51.0  | 51.0  | 51.0  | 51.0  |
| Total Split (%)      | 46.9% | 46.9% | 46.9% | 46.9% | 53.1% | 53.1% | 53.1% | 53.1% | 53.1% | 53.1% |
| Yellow Time (s)      | 4.3   | 4.3   | 4.3   | 4.3   | 4.3   | 4.3   | 4.3   | 4.3   | 4.3   | 4.3   |
| All-Red Time (s)     | 1.7   | 1.7   | 1.7   | 1.7   | 1.8   | 1.8   | 1.8   | 1.8   | 1.8   | 1.8   |
| Lost Time Adjust (s) | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Lost Time (s)  | 6.0   | 6.0   | 6.0   | 6.0   | 6.1   | 6.1   | 6.1   | 6.1   | 6.1   | 6.1   |
| Lead/Lag             |       |       |       |       |       |       |       |       |       |       |
| Lead-Lag Optimize?   |       |       |       |       |       |       |       |       |       |       |
| Recall Mode          | C-Max | C-Max | C-Max | C-Max | Max   | Max   | Max   | Max   | Max   | Max   |
| Act Effct Green (s)  | 39.0  | 39.0  | 39.0  | 39.0  | 44.9  | 44.9  | 44.9  | 44.9  | 44.9  | 44.9  |
| Actuated g/C Ratio   | 0.41  | 0.41  | 0.41  | 0.41  | 0.47  | 0.47  | 0.47  | 0.47  | 0.47  | 0.47  |
| v/c Ratio            | 1.13  | 0.29  | 0.54  | 0.52  | 0.56  | 0.28  | 0.15  | 0.43  | 0.09  | 0.15  |
| Control Delay        | 145.8 | 13.1  | 30.1  | 19.3  | 23.6  | 16.3  | 3.3   | 21.3  | 14.4  | 4.7   |
| Queue Delay          | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Delay          | 145.8 | 13.1  | 30.1  | 19.3  | 23.6  | 16.3  | 3.3   | 21.3  | 14.4  | 4.7   |
| LOS                  | F     | B     | C     | B     | C     | B     | A     | C     | B     | A     |
| Approach Delay       |       | 41.4  |       | 20.7  |       | 16.9  |       |       | 14.4  |       |
| Approach LOS         |       | D     |       | C     |       | B     |       |       | B     |       |

Intersection Summary

Cycle Length: 96  
 Actuated Cycle Length: 96  
 Offset: 51 (53%), Referenced to phase 4:EBTL and 8:WBTL, Start of Green  
 Natural Cycle: 85  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 1.13  
 Intersection Signal Delay: 23.4  
 Intersection Capacity Utilization 73.4%  
 Intersection LOS: C  
 ICU Level of Service D  
 Analysis Period (min) 15

Splits and Phases: 1: 19th Ave & Happy Valley Rd



Deer Valley 30  
1: 19th Ave & Happy Valley Rd

Existing AM  
HCM 6th Signalized Intersection Summary

| Movement                     | EBL   | EBT  | EBR  | WBL  | WBT   | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
|------------------------------|-------|------|------|------|-------|------|------|------|------|------|------|------|
| Lane Configurations          | ↔     | ↗↘   | ↘    | ↔    | ↗↘    | ↘    | ↔    | ↗↘   | ↘    | ↔    | ↗↘   | ↘    |
| Traffic Volume (veh/h)       | 78    | 313  | 155  | 135  | 265   | 99   | 138  | 231  | 92   | 240  | 367  | 86   |
| Future Volume (veh/h)        | 78    | 313  | 155  | 135  | 265   | 99   | 138  | 231  | 92   | 240  | 367  | 86   |
| Initial Q (Qb), veh          | 0     | 0    | 0    | 0    | 0     | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Ped-Bike Adj(A_pbT)          | 1.00  | 1.00 | 1.00 | 1.00 | 1.00  | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Parking Bus, Adj             | 1.00  | 1.00 | 1.00 | 1.00 | 1.00  | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Work Zone On Approach        | No    | No   | No   | No   | No    | No   | No   | No   | No   | No   | No   | No   |
| Adj Sat Flow, veh/h/ln       | 1870  | 1870 | 1870 | 1870 | 1870  | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 |
| Adj Flow Rate, veh/h         | 85    | 340  | 168  | 147  | 288   | 108  | 150  | 251  | 100  | 261  | 399  | 93   |
| Peak Hour Factor             | 0.92  | 0.92 | 0.92 | 0.92 | 0.92  | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Percent Heavy Veh, %         | 2     | 2    | 2    | 2    | 2     | 2    | 2    | 2    | 2    | 2    | 2    | 2    |
| Cap, veh/h                   | 424   | 1386 | 641  | 374  | 1514  | 533  | 457  | 1662 | 741  | 515  | 2388 | 741  |
| Arrive On Green              | 0.41  | 0.41 | 0.41 | 0.41 | 0.41  | 0.41 | 0.47 | 0.47 | 0.47 | 0.47 | 0.47 | 0.47 |
| Sat Flow, veh/h              | 988   | 3413 | 1578 | 891  | 3726  | 1312 | 905  | 3554 | 1585 | 1030 | 5106 | 1585 |
| Grp Volume(v), veh/h         | 85    | 339  | 169  | 147  | 261   | 135  | 150  | 251  | 100  | 261  | 399  | 93   |
| Grp Sat Flow(s),veh/h/ln     | 988   | 1702 | 1586 | 891  | 1702  | 1634 | 905  | 1777 | 1585 | 1030 | 1702 | 1585 |
| Q Serve(g_s), s              | 5.8   | 6.3  | 6.8  | 12.6 | 4.7   | 5.1  | 11.0 | 3.9  | 3.4  | 18.7 | 4.3  | 3.2  |
| Cycle Q Clear(g_c), s        | 11.0  | 6.3  | 6.8  | 19.4 | 4.7   | 5.1  | 15.3 | 3.9  | 3.4  | 22.5 | 4.3  | 3.2  |
| Prop In Lane                 | 1.00  | 0.99 | 1.00 | 1.00 | 0.80  | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Lane Grp Cap(c), veh/h       | 424   | 1383 | 644  | 374  | 1383  | 664  | 457  | 1662 | 741  | 515  | 2388 | 741  |
| V/C Ratio(X)                 | 0.20  | 0.25 | 0.26 | 0.39 | 0.19  | 0.20 | 0.33 | 0.15 | 0.13 | 0.51 | 0.17 | 0.13 |
| Avail Cap(c_a), veh/h        | 424   | 1383 | 644  | 374  | 1383  | 664  | 457  | 1662 | 741  | 515  | 2388 | 741  |
| HCM Platoon Ratio            | 1.00  | 1.00 | 1.00 | 1.00 | 1.00  | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(I)           | 1.00  | 1.00 | 1.00 | 1.00 | 1.00  | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Uniform Delay (d), s/veh     | 22.0  | 18.8 | 18.9 | 25.4 | 18.3  | 18.4 | 19.2 | 14.6 | 14.5 | 21.1 | 14.8 | 14.4 |
| Incr Delay (d2), s/veh       | 1.1   | 0.4  | 1.0  | 3.1  | 0.3   | 0.7  | 1.9  | 0.2  | 0.4  | 3.5  | 0.2  | 0.3  |
| Initial Q Delay(d3),s/veh    | 0.0   | 0.0  | 0.0  | 0.0  | 0.0   | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| %ile BackOfQ(50%),veh/ln     | 1.5   | 2.5  | 2.6  | 2.9  | 1.9   | 2.0  | 2.5  | 1.6  | 1.3  | 4.8  | 1.7  | 1.2  |
| Unsig. Movement Delay, s/veh |       |      |      |      |       |      |      |      |      |      |      |      |
| LnGrp Delay(d),s/veh         | 23.0  | 19.2 | 19.9 | 28.5 | 18.6  | 19.1 | 21.1 | 14.8 | 14.9 | 24.6 | 14.9 | 14.8 |
| LnGrp LOS                    | C     | B    | B    | C    | B     | B    | C    | B    | B    | C    | B    | B    |
| Approach Vol, veh/h          | 593   |      |      | 543  |       |      | 501  |      |      | 753  |      |      |
| Approach Delay, s/veh        | 20.0  |      |      | 21.4 |       |      | 16.7 |      |      | 18.3 |      |      |
| Approach LOS                 | B     |      |      | C    |       |      | B    |      |      | B    |      |      |
| Timer - Assigned Phs         | 2     |      | 4    |      | 6     |      | 8    |      |      |      |      |      |
| Phs Duration (G+Y+Rc), s     | 51.0  |      | 45.0 |      | 51.0  |      | 45.0 |      |      |      |      |      |
| Change Period (Y+Rc), s      | * 6.1 |      | * 6  |      | * 6.1 |      | * 6  |      |      |      |      |      |
| Max Green Setting (Gmax), s  | * 45  |      | * 39 |      | * 45  |      | * 39 |      |      |      |      |      |
| Max Q Clear Time (g_c+I1), s | 17.3  |      | 13.0 |      | 24.5  |      | 21.4 |      |      |      |      |      |
| Green Ext Time (p_c), s      | 2.9   |      | 4.0  |      | 4.3   |      | 3.2  |      |      |      |      |      |

| Intersection Summary |      |  |
|----------------------|------|--|
| HCM 6th Ctrl Delay   | 19.1 |  |
| HCM 6th LOS          | B    |  |

Notes  
\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Deer Valley 30  
1: 19th Ave & Happy Valley Rd

Existing PM  
HCM 6th Signalized Intersection Summary

| Movement                     | EBL   | EBT  | EBR  | WBL  | WBT   | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
|------------------------------|-------|------|------|------|-------|------|------|------|------|------|------|------|
| Lane Configurations          | ↔     | ↗↘   | ↘    | ↔    | ↗↘    | ↘    | ↔    | ↗↘   | ↘    | ↔    | ↗↘   | ↘    |
| Traffic Volume (veh/h)       | 150   | 344  | 209  | 148  | 672   | 313  | 273  | 433  | 112  | 159  | 205  | 110  |
| Future Volume (veh/h)        | 150   | 344  | 209  | 148  | 672   | 313  | 273  | 433  | 112  | 159  | 205  | 110  |
| Initial Q (Qb), veh          | 0     | 0    | 0    | 0    | 0     | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Ped-Bike Adj(A_pbT)          | 1.00  | 1.00 | 1.00 | 1.00 | 1.00  | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Parking Bus, Adj             | 1.00  | 1.00 | 1.00 | 1.00 | 1.00  | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Work Zone On Approach        | No    | No   | No   | No   | No    | No   | No   | No   | No   | No   | No   | No   |
| Adj Sat Flow, veh/h/ln       | 1870  | 1870 | 1870 | 1870 | 1870  | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 |
| Adj Flow Rate, veh/h         | 163   | 374  | 227  | 161  | 730   | 340  | 297  | 471  | 122  | 173  | 223  | 120  |
| Peak Hour Factor             | 0.92  | 0.92 | 0.92 | 0.92 | 0.92  | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Percent Heavy Veh, %         | 2     | 2    | 2    | 2    | 2     | 2    | 2    | 2    | 2    | 2    | 2    | 2    |
| Cap, veh/h                   | 203   | 1383 | 644  | 326  | 1388  | 640  | 535  | 1662 | 741  | 393  | 2388 | 741  |
| Arrive On Green              | 0.41  | 0.41 | 0.41 | 0.41 | 0.41  | 0.41 | 0.47 | 0.47 | 0.47 | 0.47 | 0.47 | 0.47 |
| Sat Flow, veh/h              | 527   | 3404 | 1585 | 818  | 3417  | 1574 | 1038 | 3554 | 1585 | 824  | 5106 | 1585 |
| Grp Volume(v), veh/h         | 163   | 374  | 227  | 161  | 727   | 343  | 297  | 471  | 122  | 173  | 223  | 120  |
| Grp Sat Flow(s),veh/h/ln     | 527   | 1702 | 1585 | 818  | 1702  | 1587 | 1038 | 1777 | 1585 | 824  | 1702 | 1585 |
| Q Serve(g_s), s              | 23.3  | 7.0  | 9.5  | 16.3 | 15.5  | 15.7 | 21.4 | 7.8  | 4.3  | 15.7 | 2.3  | 4.2  |
| Cycle Q Clear(g_c), s        | 39.0  | 7.0  | 9.5  | 25.8 | 15.5  | 15.7 | 23.8 | 7.8  | 4.3  | 23.5 | 2.3  | 4.2  |
| Prop In Lane                 | 1.00  | 1.00 | 1.00 | 1.00 | 0.99  | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Lane Grp Cap(c), veh/h       | 203   | 1383 | 644  | 326  | 1383  | 645  | 535  | 1662 | 741  | 393  | 2388 | 741  |
| V/C Ratio(X)                 | 0.80  | 0.27 | 0.35 | 0.49 | 0.53  | 0.53 | 0.56 | 0.28 | 0.16 | 0.44 | 0.09 | 0.16 |
| Avail Cap(c_a), veh/h        | 203   | 1383 | 644  | 326  | 1383  | 645  | 535  | 1662 | 741  | 393  | 2388 | 741  |
| HCM Platoon Ratio            | 1.00  | 1.00 | 1.00 | 1.00 | 1.00  | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(I)           | 1.00  | 1.00 | 1.00 | 1.00 | 1.00  | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Uniform Delay (d), s/veh     | 38.9  | 19.0 | 19.8 | 28.7 | 21.5  | 21.6 | 20.8 | 15.7 | 14.7 | 22.9 | 14.2 | 14.7 |
| Incr Delay (d2), s/veh       | 27.6  | 0.5  | 1.5  | 5.3  | 1.4   | 3.1  | 4.1  | 0.4  | 0.5  | 3.5  | 0.1  | 0.5  |
| Initial Q Delay(d3),s/veh    | 0.0   | 0.0  | 0.0  | 0.0  | 0.0   | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| %ile BackOfQ(50%),veh/ln     | 5.4   | 2.8  | 3.7  | 3.6  | 6.3   | 6.2  | 5.6  | 3.2  | 1.6  | 3.3  | 0.9  | 1.6  |
| Unsig. Movement Delay, s/veh |       |      |      |      |       |      |      |      |      |      |      |      |
| LnGrp Delay(d),s/veh         | 66.4  | 19.5 | 21.3 | 34.0 | 23.0  | 24.7 | 24.9 | 16.1 | 15.2 | 26.4 | 14.3 | 15.2 |
| LnGrp LOS                    | E     | B    | C    | C    | C     | C    | C    | B    | B    | C    | B    | B    |
| Approach Vol, veh/h          | 764   |      |      | 1231 |       |      | 890  |      |      | 516  |      |      |
| Approach Delay, s/veh        | 30.0  |      |      | 24.9 |       |      | 18.9 |      |      | 18.6 |      |      |
| Approach LOS                 | C     |      |      | C    |       |      | B    |      |      | B    |      |      |
| Timer - Assigned Phs         | 2     |      | 4    |      | 6     |      | 8    |      |      |      |      |      |
| Phs Duration (G+Y+Rc), s     | 51.0  |      | 45.0 |      | 51.0  |      | 45.0 |      |      |      |      |      |
| Change Period (Y+Rc), s      | * 6.1 |      | * 6  |      | * 6.1 |      | * 6  |      |      |      |      |      |
| Max Green Setting (Gmax), s  | * 45  |      | * 39 |      | * 45  |      | * 39 |      |      |      |      |      |
| Max Q Clear Time (g_c+I1), s | 25.8  |      | 41.0 |      | 25.5  |      | 27.8 |      |      |      |      |      |
| Green Ext Time (p_c), s      | 5.0   |      | 0.0  |      | 2.9   |      | 6.1  |      |      |      |      |      |

| Intersection Summary |      |  |
|----------------------|------|--|
| HCM 6th Ctrl Delay   | 23.5 |  |
| HCM 6th LOS          | C    |  |

Notes  
\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Deer Valley 30  
2: 19th Ave & Optum Drwy

Existing AM  
HCM 6th TWSC

| Intersection             |      |      |       |      |      |      |
|--------------------------|------|------|-------|------|------|------|
| Int Delay, s/veh         | 0.1  |      |       |      |      |      |
| Movement                 | EBL  | EBR  | NBL   | NBT  | SBT  | SBR  |
| Lane Configurations      | ↔    |      | ↔ ↑↑↑ |      | ↔ ↑↑ |      |
| Traffic Vol, veh/h       | 0    | 4    | 6     | 461  | 655  | 2    |
| Future Vol, veh/h        | 0    | 4    | 6     | 461  | 655  | 2    |
| Conflicting Peds, #/hr   | 0    | 0    | 0     | 0    | 0    | 0    |
| Sign Control             | Stop | Stop | Free  | Free | Free | Free |
| RT Channelized           | -    | None | -     | None | -    | None |
| Storage Length           | 0    | -    | 50    | -    | -    | -    |
| Veh in Median Storage, # | 0    | -    | -     | 0    | 0    | -    |
| Grade, %                 | 0    | -    | -     | 0    | 0    | -    |
| Peak Hour Factor         | 92   | 92   | 92    | 92   | 92   | 92   |
| Heavy Vehicles, %        | 2    | 2    | 2     | 2    | 2    | 2    |
| Mvmt Flow                | 0    | 4    | 7     | 501  | 712  | 2    |

| Major/Minor          | Minor2 | Major1 | Major2 |   |     |
|----------------------|--------|--------|--------|---|-----|
| Conflicting Flow All | 927    | 357    | 714    | 0 | - 0 |
| Stage 1              | 713    | -      | -      | - | -   |
| Stage 2              | 214    | -      | -      | - | -   |
| Critical Hdwy        | 6.29   | 6.94   | 4.14   | - | - - |
| Critical Hdwy Stg 1  | 5.84   | -      | -      | - | -   |
| Critical Hdwy Stg 2  | 6.04   | -      | -      | - | -   |
| Follow-up Hdwy       | 3.67   | 3.32   | 2.22   | - | - - |
| Pot Cap-1 Maneuver   | 300    | 639    | 882    | - | - - |
| Stage 1              | 434    | -      | -      | - | -   |
| Stage 2              | 762    | -      | -      | - | -   |
| Platoon blocked, %   |        |        |        | - | - - |
| Mov Cap-1 Maneuver   | 298    | 639    | 882    | - | - - |
| Mov Cap-2 Maneuver   | 366    | -      | -      | - | -   |
| Stage 1              | 431    | -      | -      | - | -   |
| Stage 2              | 762    | -      | -      | - | -   |

| Approach             | EB   | NB  | SB |
|----------------------|------|-----|----|
| HCM Control Delay, s | 10.7 | 0.1 | 0  |
| HCM LOS              | B    |     |    |

| Minor Lane/Major Mvmt | NBL   | NBT | EBLn1 | SBT | SBR |
|-----------------------|-------|-----|-------|-----|-----|
| Capacity (veh/h)      | 882   | -   | 639   | -   | -   |
| HCM Lane V/C Ratio    | 0.007 | -   | 0.007 | -   | -   |
| HCM Control Delay (s) | 9.1   | -   | 10.7  | -   | -   |
| HCM Lane LOS          | A     | -   | B     | -   | -   |
| HCM 95th %tile Q(veh) | 0     | -   | 0     | -   | -   |

Deer Valley 30  
2: 19th Ave & Optum Drwy

Existing PM  
HCM 6th TWSC

| Intersection             |      |      |       |      |      |      |
|--------------------------|------|------|-------|------|------|------|
| Int Delay, s/veh         | 0.1  |      |       |      |      |      |
| Movement                 | EBL  | EBR  | NBL   | NBT  | SBT  | SBR  |
| Lane Configurations      | ↔    |      | ↔ ↑↑↑ |      | ↔ ↑↑ |      |
| Traffic Vol, veh/h       | 0    | 4    | 6     | 818  | 560  | 2    |
| Future Vol, veh/h        | 0    | 4    | 6     | 818  | 560  | 2    |
| Conflicting Peds, #/hr   | 0    | 0    | 0     | 0    | 0    | 0    |
| Sign Control             | Stop | Stop | Free  | Free | Free | Free |
| RT Channelized           | -    | None | -     | None | -    | None |
| Storage Length           | 0    | -    | 50    | -    | -    | -    |
| Veh in Median Storage, # | 0    | -    | -     | 0    | 0    | -    |
| Grade, %                 | 0    | -    | -     | 0    | 0    | -    |
| Peak Hour Factor         | 92   | 92   | 92    | 92   | 92   | 92   |
| Heavy Vehicles, %        | 2    | 2    | 2     | 2    | 2    | 2    |
| Mvmt Flow                | 0    | 4    | 7     | 889  | 609  | 2    |

| Major/Minor          | Minor2 | Major1 | Major2 |   |     |
|----------------------|--------|--------|--------|---|-----|
| Conflicting Flow All | 980    | 306    | 611    | 0 | - 0 |
| Stage 1              | 610    | -      | -      | - | -   |
| Stage 2              | 370    | -      | -      | - | -   |
| Critical Hdwy        | 6.29   | 6.94   | 4.14   | - | - - |
| Critical Hdwy Stg 1  | 5.84   | -      | -      | - | -   |
| Critical Hdwy Stg 2  | 6.04   | -      | -      | - | -   |
| Follow-up Hdwy       | 3.67   | 3.32   | 2.22   | - | - - |
| Pot Cap-1 Maneuver   | 280    | 690    | 964    | - | - - |
| Stage 1              | 490    | -      | -      | - | -   |
| Stage 2              | 633    | -      | -      | - | -   |
| Platoon blocked, %   |        |        |        | - | - - |
| Mov Cap-1 Maneuver   | 278    | 690    | 964    | - | - - |
| Mov Cap-2 Maneuver   | 374    | -      | -      | - | -   |
| Stage 1              | 487    | -      | -      | - | -   |
| Stage 2              | 633    | -      | -      | - | -   |

| Approach             | EB   | NB  | SB |
|----------------------|------|-----|----|
| HCM Control Delay, s | 10.3 | 0.1 | 0  |
| HCM LOS              | B    |     |    |

| Minor Lane/Major Mvmt | NBL   | NBT | EBLn1 | SBT | SBR |
|-----------------------|-------|-----|-------|-----|-----|
| Capacity (veh/h)      | 964   | -   | 690   | -   | -   |
| HCM Lane V/C Ratio    | 0.007 | -   | 0.006 | -   | -   |
| HCM Control Delay (s) | 8.8   | -   | 10.3  | -   | -   |
| HCM Lane LOS          | A     | -   | B     | -   | -   |
| HCM 95th %tile Q(veh) | 0     | -   | 0     | -   | -   |



Deer Valley 30  
3: 19th Ave & Patio Drwy/Parkview Ln

Existing AM  
HCM 6th TWSC

| Intersection             |        |        |        |        |       |       |      |      |      |      |      |      |
|--------------------------|--------|--------|--------|--------|-------|-------|------|------|------|------|------|------|
| Int Delay, s/veh         | 0.8    |        |        |        |       |       |      |      |      |      |      |      |
| Movement                 | EBL    | EBT    | EBR    | WBL    | WBT   | WBR   | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
| Lane Configurations      |        |        | ↗      |        | ↔     |       |      | ↖↗   |      | ↘    | ↖↗   |      |
| Traffic Vol, veh/h       | 0      | 0      | 5      | 23     | 0     | 12    | 1    | 455  | 37   | 23   | 636  | 0    |
| Future Vol, veh/h        | 0      | 0      | 5      | 23     | 0     | 12    | 1    | 455  | 37   | 23   | 636  | 0    |
| Conflicting Peds, #/hr   | 0      | 0      | 0      | 0      | 0     | 0     | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Stop   | Stop   | Stop   | Stop   | Stop  | Stop  | Free | Free | Free | Free | Free | Free |
| RT Channelized           | -      | -      | None   | -      | -     | None  | -    | -    | None | -    | -    | None |
| Storage Length           | -      | -      | 0      | -      | -     | -     | -    | -    | -    | 50   | -    | -    |
| Veh in Median Storage, # | -      | 0      | -      | -      | 0     | -     | -    | 0    | -    | -    | 0    | -    |
| Grade, %                 | -      | 0      | -      | -      | 0     | -     | -    | 0    | -    | -    | 0    | -    |
| Peak Hour Factor         | 92     | 92     | 92     | 92     | 92    | 92    | 92   | 92   | 92   | 92   | 92   | 92   |
| Heavy Vehicles, %        | 2      | 2      | 2      | 2      | 2     | 2     | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 0      | 0      | 5      | 25     | 0     | 13    | 1    | 495  | 40   | 25   | 691  | 0    |
| Major/Minor              | Minor2 | Minor1 | Major1 | Major2 |       |       |      |      |      |      |      |      |
| Conflicting Flow All     | -      | -      | 346    | 913    | 1258  | 268   | 691  | 0    | 0    | 535  | 0    | 0    |
| Stage 1                  | -      | -      | -      | 517    | 517   | -     | -    | -    | -    | -    | -    | -    |
| Stage 2                  | -      | -      | -      | 396    | 741   | -     | -    | -    | -    | -    | -    | -    |
| Critical Hdwy            | -      | -      | 6.94   | 6.99   | 6.54  | 7.14  | 4.14 | -    | -    | 5.34 | -    | -    |
| Critical Hdwy Stg 1      | -      | -      | -      | 7.34   | 5.54  | -     | -    | -    | -    | -    | -    | -    |
| Critical Hdwy Stg 2      | -      | -      | -      | 6.54   | 5.54  | -     | -    | -    | -    | -    | -    | -    |
| Follow-up Hdwy           | -      | -      | 3.32   | 3.67   | 4.02  | 3.92  | 2.22 | -    | -    | 3.12 | -    | -    |
| Pot Cap-1 Maneuver       | 0      | 0      | 650    | 256    | 170   | 622   | 900  | -    | -    | 652  | -    | 0    |
| Stage 1                  | 0      | 0      | -      | 440    | 532   | -     | -    | -    | -    | -    | -    | 0    |
| Stage 2                  | 0      | 0      | -      | 581    | 421   | -     | -    | -    | -    | -    | -    | 0    |
| Platoon blocked, %       | -      | -      | -      | -      | -     | -     | -    | -    | -    | -    | -    | -    |
| Mov Cap-1 Maneuver       | -      | -      | 650    | 246    | 163   | 622   | 900  | -    | -    | 652  | -    | -    |
| Mov Cap-2 Maneuver       | -      | -      | -      | 246    | 163   | -     | -    | -    | -    | -    | -    | -    |
| Stage 1                  | -      | -      | -      | 439    | 531   | -     | -    | -    | -    | -    | -    | -    |
| Stage 2                  | -      | -      | -      | 554    | 405   | -     | -    | -    | -    | -    | -    | -    |
| Approach                 | EB     | WB     | NB     | SB     |       |       |      |      |      |      |      |      |
| HCM Control Delay, s     | 10.6   | 18.2   | 0      | 0.4    |       |       |      |      |      |      |      |      |
| HCM LOS                  | B      | C      |        |        |       |       |      |      |      |      |      |      |
| Minor Lane/Major Mvmt    | NBL    | NBT    | NBR    | EBLn1  | WBLn1 | SBL   | SBT  |      |      |      |      |      |
| Capacity (veh/h)         | 900    | -      | -      | 650    | 310   | 652   | -    |      |      |      |      |      |
| HCM Lane V/C Ratio       | 0.001  | -      | -      | 0.008  | 0.123 | 0.038 | -    |      |      |      |      |      |
| HCM Control Delay (s)    | 9      | -      | -      | 10.6   | 18.2  | 10.7  | -    |      |      |      |      |      |
| HCM Lane LOS             | A      | -      | -      | B      | C     | B     | -    |      |      |      |      |      |
| HCM 95th %tile Q(veh)    | 0      | -      | -      | 0      | 0.4   | 0.1   | -    |      |      |      |      |      |

Deer Valley 30  
3: 19th Ave & Patio Drwy/Parkview Ln

Existing PM  
HCM 6th TWSC

| Intersection             |        |        |        |        |       |      |      |      |      |      |      |      |
|--------------------------|--------|--------|--------|--------|-------|------|------|------|------|------|------|------|
| Int Delay, s/veh         | 0.9    |        |        |        |       |      |      |      |      |      |      |      |
| Movement                 | EBL    | EBT    | EBR    | WBL    | WBT   | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
| Lane Configurations      |        |        | ↗      |        | ↔     |      |      | ↖↗   |      | ↘    | ↖↗   |      |
| Traffic Vol, veh/h       | 0      | 0      | 5      | 23     | 0     | 12   | 1    | 501  | 37   | 23   | 541  | 0    |
| Future Vol, veh/h        | 0      | 0      | 5      | 23     | 0     | 12   | 1    | 501  | 37   | 23   | 541  | 0    |
| Conflicting Peds, #/hr   | 0      | 0      | 0      | 0      | 0     | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Stop   | Stop   | Stop   | Stop   | Stop  | Stop | Free | Free | Free | Free | Free | Free |
| RT Channelized           | -      | -      | None   | -      | -     | None | -    | -    | None | -    | -    | None |
| Storage Length           | -      | -      | 0      | -      | -     | -    | -    | -    | -    | 50   | -    | -    |
| Veh in Median Storage, # | -      | 0      | -      | -      | 0     | -    | -    | 0    | -    | -    | 0    | -    |
| Grade, %                 | -      | 0      | -      | -      | 0     | -    | -    | 0    | -    | -    | 0    | -    |
| Peak Hour Factor         | 92     | 92     | 92     | 92     | 92    | 92   | 92   | 92   | 92   | 92   | 92   | 92   |
| Heavy Vehicles, %        | 2      | 2      | 2      | 2      | 2     | 2    | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 0      | 0      | 5      | 25     | 0     | 13   | 1    | 545  | 40   | 25   | 588  | 0    |
| Major/Minor              | Minor2 | Minor1 | Major1 | Major2 |       |      |      |      |      |      |      |      |
| Conflicting Flow All     | -      | -      | 294    | 911    | 1205  | 293  | 588  | 0    | 0    | 585  | 0    | 0    |
| Stage 1                  | -      | -      | -      | 567    | 567   | -    | -    | -    | -    | -    | -    | -    |
| Stage 2                  | -      | -      | -      | 344    | 638   | -    | -    | -    | -    | -    | -    | -    |
| Critical Hdwy            | -      | -      | 6.94   | 6.99   | 6.54  | 7.14 | 4.14 | -    | -    | 5.34 | -    | -    |
| Critical Hdwy Stg 1      | -      | -      | -      | 7.34   | 5.54  | -    | -    | -    | -    | -    | -    | -    |
| Critical Hdwy Stg 2      | -      | -      | -      | 6.54   | 5.54  | -    | -    | -    | -    | -    | -    | -    |
| Follow-up Hdwy           | -      | -      | 3.32   | 3.67   | 4.02  | 3.92 | 2.22 | -    | -    | 3.12 | -    | -    |
| Pot Cap-1 Maneuver       | 0      | 0      | 702    | 257    | 183   | 600  | 983  | -    | -    | 618  | -    | 0    |
| Stage 1                  | 0      | 0      | -      | 406    | 505   | -    | -    | -    | -    | -    | -    | 0    |
| Stage 2                  | 0      | 0      | -      | 623    | 469   | -    | -    | -    | -    | -    | -    | 0    |
| Platoon blocked, %       | -      | -      | -      | -      | -     | -    | -    | -    | -    | -    | -    | -    |
| Mov Cap-1 Maneuver       | -      | -      | 702    | 247    | 175   | 600  | 983  | -    | -    | 618  | -    | -    |
| Mov Cap-2 Maneuver       | -      | -      | -      | 247    | 175   | -    | -    | -    | -    | -    | -    | -    |
| Stage 1                  | -      | -      | -      | 405    | 504   | -    | -    | -    | -    | -    | -    | -    |
| Stage 2                  | -      | -      | -      | 593    | 450   | -    | -    | -    | -    | -    | -    | -    |
| Approach                 | EB     | WB     | NB     | SB     |       |      |      |      |      |      |      |      |
| HCM Control Delay, s     | 10.2   | 18.3   | 0      | 0.5    |       |      |      |      |      |      |      |      |
| HCM LOS                  | B      | C      |        |        |       |      |      |      |      |      |      |      |
| Minor Lane/Major Mvmt    | NBL    | NBT    | NBR    | EBLn1  | WBLn1 | SBL  | SBT  |      |      |      |      |      |
| Capacity (veh/h)         | 983    | -      | -      | 702    | 309   | 618  | -    |      |      |      |      |      |
| HCM Lane V/C Ratio       | 0.001  | -      | -      | 0.008  | 0.123 | 0.04 | -    |      |      |      |      |      |
| HCM Control Delay (s)    | 8.7    | -      | -      | 10.2   | 18.3  | 11.1 | -    |      |      |      |      |      |
| HCM Lane LOS             | A      | -      | -      | B      | C     | B    | -    |      |      |      |      |      |
| HCM 95th %tile Q(veh)    | 0      | -      | -      | 0      | 0.4   | 0.1  | -    |      |      |      |      |      |

Deer Valley 30  
4: Alameda Rd & 19th Ave

Existing AM  
HCM 6th TWSC

| Intersection             |        |        |        |       |      |      |
|--------------------------|--------|--------|--------|-------|------|------|
| Int Delay, s/veh         | 0.7    |        |        |       |      |      |
| Movement                 | EBL    | EBR    | NBL    | NBT   | SBT  | SBR  |
| Lane Configurations      | ↔      | ↔      | ↔      | ↔↔    | ↔↔   | ↔    |
| Traffic Vol, veh/h       | 8      | 49     | 16     | 493   | 651  | 13   |
| Future Vol, veh/h        | 8      | 49     | 16     | 493   | 651  | 13   |
| Conflicting Peds, #/hr   | 0      | 0      | 0      | 0     | 0    | 0    |
| Sign Control             | Stop   | Stop   | Free   | Free  | Free | Free |
| RT Channelized           | -      | None   | -      | None  | -    | None |
| Storage Length           | 0      | 100    | 150    | -     | -    | -    |
| Veh in Median Storage, # | 0      | -      | -      | 0     | 0    | -    |
| Grade, %                 | 0      | -      | -      | 0     | 0    | -    |
| Peak Hour Factor         | 92     | 92     | 92     | 92    | 92   | 92   |
| Heavy Vehicles, %        | 2      | 2      | 2      | 2     | 2    | 2    |
| Mvmt Flow                | 9      | 53     | 17     | 536   | 708  | 14   |
| Major/Minor              | Minor2 | Major1 | Major2 |       |      |      |
| Conflicting Flow All     | 963    | 361    | 722    | 0     | -    | 0    |
| Stage 1                  | 715    | -      | -      | -     | -    | -    |
| Stage 2                  | 248    | -      | -      | -     | -    | -    |
| Critical Hdwy            | 6.29   | 6.94   | 4.14   | -     | -    | -    |
| Critical Hdwy Stg 1      | 5.84   | -      | -      | -     | -    | -    |
| Critical Hdwy Stg 2      | 6.04   | -      | -      | -     | -    | -    |
| Follow-up Hdwy           | 3.67   | 3.32   | 2.22   | -     | -    | -    |
| Pot Cap-1 Maneuver       | 286    | 636    | 876    | -     | -    | -    |
| Stage 1                  | 433    | -      | -      | -     | -    | -    |
| Stage 2                  | 732    | -      | -      | -     | -    | -    |
| Platoon blocked, %       | -      | -      | -      | -     | -    | -    |
| Mov Cap-1 Maneuver       | 281    | 636    | 876    | -     | -    | -    |
| Mov Cap-2 Maneuver       | 356    | -      | -      | -     | -    | -    |
| Stage 1                  | 425    | -      | -      | -     | -    | -    |
| Stage 2                  | 732    | -      | -      | -     | -    | -    |
| Approach                 | EB     | NB     | SB     |       |      |      |
| HCM Control Delay, s     | 11.8   | 0.3    | 0      |       |      |      |
| HCM LOS                  | B      |        |        |       |      |      |
| Minor Lane/Major Mvmt    | NBL    | NBT    | EBLn1  | EBLn2 | SBT  | SBR  |
| Capacity (veh/h)         | 876    | -      | 356    | 636   | -    | -    |
| HCM Lane V/C Ratio       | 0.02   | -      | 0.024  | 0.084 | -    | -    |
| HCM Control Delay (s)    | 9.2    | -      | 15.4   | 11.2  | -    | -    |
| HCM Lane LOS             | A      | -      | C      | B     | -    | -    |
| HCM 95th %tile Q(veh)    | 0.1    | -      | 0.1    | 0.3   | -    | -    |

Deer Valley 30  
4: Alameda Rd & 19th Ave

Existing PM  
HCM 6th TWSC

| Intersection             |        |        |        |       |      |      |
|--------------------------|--------|--------|--------|-------|------|------|
| Int Delay, s/veh         | 1      |        |        |       |      |      |
| Movement                 | EBL    | EBR    | NBL    | NBT   | SBT  | SBR  |
| Lane Configurations      | ↔      | ↔      | ↔      | ↔↔    | ↔↔   | ↔    |
| Traffic Vol, veh/h       | 13     | 56     | 75     | 797   | 555  | 14   |
| Future Vol, veh/h        | 13     | 56     | 75     | 797   | 555  | 14   |
| Conflicting Peds, #/hr   | 0      | 0      | 0      | 0     | 0    | 0    |
| Sign Control             | Stop   | Stop   | Free   | Free  | Free | Free |
| RT Channelized           | -      | None   | -      | None  | -    | None |
| Storage Length           | 0      | 100    | 150    | -     | -    | -    |
| Veh in Median Storage, # | 0      | -      | -      | 0     | 0    | -    |
| Grade, %                 | 0      | -      | -      | 0     | 0    | -    |
| Peak Hour Factor         | 92     | 92     | 92     | 92    | 92   | 92   |
| Heavy Vehicles, %        | 2      | 2      | 2      | 2     | 2    | 2    |
| Mvmt Flow                | 14     | 61     | 82     | 866   | 603  | 15   |
| Major/Minor              | Minor2 | Major1 | Major2 |       |      |      |
| Conflicting Flow All     | 1121   | 309    | 618    | 0     | -    | 0    |
| Stage 1                  | 611    | -      | -      | -     | -    | -    |
| Stage 2                  | 510    | -      | -      | -     | -    | -    |
| Critical Hdwy            | 6.29   | 6.94   | 4.14   | -     | -    | -    |
| Critical Hdwy Stg 1      | 5.84   | -      | -      | -     | -    | -    |
| Critical Hdwy Stg 2      | 6.04   | -      | -      | -     | -    | -    |
| Follow-up Hdwy           | 3.67   | 3.32   | 2.22   | -     | -    | -    |
| Pot Cap-1 Maneuver       | 232    | 687    | 958    | -     | -    | -    |
| Stage 1                  | 489    | -      | -      | -     | -    | -    |
| Stage 2                  | 535    | -      | -      | -     | -    | -    |
| Platoon blocked, %       | -      | -      | -      | -     | -    | -    |
| Mov Cap-1 Maneuver       | 212    | 687    | 958    | -     | -    | -    |
| Mov Cap-2 Maneuver       | 318    | -      | -      | -     | -    | -    |
| Stage 1                  | 447    | -      | -      | -     | -    | -    |
| Stage 2                  | 535    | -      | -      | -     | -    | -    |
| Approach                 | EB     | NB     | SB     |       |      |      |
| HCM Control Delay, s     | 11.8   | 0.8    | 0      |       |      |      |
| HCM LOS                  | B      |        |        |       |      |      |
| Minor Lane/Major Mvmt    | NBL    | NBT    | EBLn1  | EBLn2 | SBT  | SBR  |
| Capacity (veh/h)         | 958    | -      | 318    | 687   | -    | -    |
| HCM Lane V/C Ratio       | 0.085  | -      | 0.044  | 0.089 | -    | -    |
| HCM Control Delay (s)    | 9.1    | -      | 16.8   | 10.7  | -    | -    |
| HCM Lane LOS             | A      | -      | C      | B     | -    | -    |
| HCM 95th %tile Q(veh)    | 0.3    | -      | 0.1    | 0.3   | -    | -    |

Deer Valley 30  
5: 19th Ave & Sarah Bass PI

Existing AM  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh         | 0.6  |      |      |      |      |      |
| Movement                 | EBL  | EBR  | NBL  | NBT  | SBT  | SBR  |
| Lane Configurations      |      |      |      |      |      |      |
| Traffic Vol, veh/h       | 12   | 32   | 24   | 497  | 692  | 8    |
| Future Vol, veh/h        | 12   | 32   | 24   | 497  | 692  | 8    |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Stop | Stop | Free | Free | Free | Free |
| RT Channelized           | -    | None | -    | None | -    | None |
| Storage Length           | 0    | 0    | 150  | -    | -    | -    |
| Veh in Median Storage, # | 0    | -    | -    | 0    | 0    | -    |
| Grade, %                 | 0    | -    | -    | 0    | 0    | -    |
| Peak Hour Factor         | 92   | 92   | 92   | 92   | 92   | 92   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 13   | 35   | 26   | 540  | 752  | 9    |

| Major/Minor          | Minor2 | Major1 | Major2 |
|----------------------|--------|--------|--------|
| Conflicting Flow All | 1025   | 381    | 761    |
| Stage 1              | 757    | -      | -      |
| Stage 2              | 268    | -      | -      |
| Critical Hdwy        | 6.29   | 6.94   | 4.14   |
| Critical Hdwy Stg 1  | 5.84   | -      | -      |
| Critical Hdwy Stg 2  | 6.04   | -      | -      |
| Follow-up Hdwy       | 3.67   | 3.32   | 2.22   |
| Pot Cap-1 Maneuver   | 264    | 617    | 847    |
| Stage 1              | 412    | -      | -      |
| Stage 2              | 715    | -      | -      |
| Platoon blocked, %   | -      | -      | -      |
| Mov Cap-1 Maneuver   | 256    | 617    | 847    |
| Mov Cap-2 Maneuver   | 333    | -      | -      |
| Stage 1              | 399    | -      | -      |
| Stage 2              | 715    | -      | -      |

| Approach             | EB   | NB  | SB |
|----------------------|------|-----|----|
| HCM Control Delay, s | 12.6 | 0.4 | 0  |
| HCM LOS              | B    |     |    |

| Minor Lane/Major Mvmt | NBL   | NBT | EBLn1 | EBLn2 | SBT | SBR |
|-----------------------|-------|-----|-------|-------|-----|-----|
| Capacity (veh/h)      | 847   | -   | 333   | 617   | -   | -   |
| HCM Lane V/C Ratio    | 0.031 | -   | 0.039 | 0.056 | -   | -   |
| HCM Control Delay (s) | 9.4   | -   | 16.3  | 11.2  | -   | -   |
| HCM Lane LOS          | A     | -   | C     | B     | -   | -   |
| HCM 95th %tile Q(veh) | 0.1   | -   | 0.1   | 0.2   | -   | -   |

Deer Valley 30  
5: 19th Ave & Sarah Bass PI

Existing PM  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh         | 0.4  |      |      |      |      |      |
| Movement                 | EBL  | EBR  | NBL  | NBT  | SBT  | SBR  |
| Lane Configurations      |      |      |      |      |      |      |
| Traffic Vol, veh/h       | 14   | 33   | 9    | 858  | 606  | 5    |
| Future Vol, veh/h        | 14   | 33   | 9    | 858  | 606  | 5    |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Stop | Stop | Free | Free | Free | Free |
| RT Channelized           | -    | None | -    | None | -    | None |
| Storage Length           | 0    | 0    | 150  | -    | -    | -    |
| Veh in Median Storage, # | 0    | -    | -    | 0    | 0    | -    |
| Grade, %                 | 0    | -    | -    | 0    | 0    | -    |
| Peak Hour Factor         | 92   | 92   | 92   | 92   | 92   | 92   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 15   | 36   | 10   | 933  | 659  | 5    |

| Major/Minor          | Minor2 | Major1 | Major2 |
|----------------------|--------|--------|--------|
| Conflicting Flow All | 1055   | 332    | 664    |
| Stage 1              | 662    | -      | -      |
| Stage 2              | 393    | -      | -      |
| Critical Hdwy        | 6.29   | 6.94   | 4.14   |
| Critical Hdwy Stg 1  | 5.84   | -      | -      |
| Critical Hdwy Stg 2  | 6.04   | -      | -      |
| Follow-up Hdwy       | 3.67   | 3.32   | 2.22   |
| Pot Cap-1 Maneuver   | 253    | 664    | 921    |
| Stage 1              | 461    | -      | -      |
| Stage 2              | 616    | -      | -      |
| Platoon blocked, %   | -      | -      | -      |
| Mov Cap-1 Maneuver   | 250    | 664    | 921    |
| Mov Cap-2 Maneuver   | 349    | -      | -      |
| Stage 1              | 456    | -      | -      |
| Stage 2              | 616    | -      | -      |

| Approach             | EB   | NB  | SB |
|----------------------|------|-----|----|
| HCM Control Delay, s | 12.2 | 0.1 | 0  |
| HCM LOS              | B    |     |    |

| Minor Lane/Major Mvmt | NBL   | NBT | EBLn1 | EBLn2 | SBT | SBR |
|-----------------------|-------|-----|-------|-------|-----|-----|
| Capacity (veh/h)      | 921   | -   | 349   | 664   | -   | -   |
| HCM Lane V/C Ratio    | 0.011 | -   | 0.044 | 0.054 | -   | -   |
| HCM Control Delay (s) | 9     | -   | 15.8  | 10.7  | -   | -   |
| HCM Lane LOS          | A     | -   | C     | B     | -   | -   |
| HCM 95th %tile Q(veh) | 0     | -   | 0.1   | 0.2   | -   | -   |

Deer Valley 30  
6: Pinnacle Peak Rd & 19th Ave

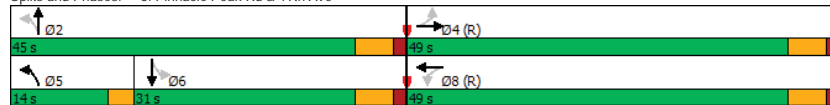
Existing AM  
Timings

| Lane Group           | EBL   | EBT   | WBL   | WBT   | NBL   | NBT   | SBL   | SBT   |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations  | ↖     | ↗     | ↖     | ↗     | ↖     | ↗     | ↖     | ↗     |
| Traffic Volume (vph) | 77    | 348   | 51    | 158   | 152   | 392   | 89    | 583   |
| Future Volume (vph)  | 77    | 348   | 51    | 158   | 152   | 392   | 89    | 583   |
| Turn Type            | Perm  | NA    | Perm  | NA    | pm+pt | NA    | Perm  | NA    |
| Protected Phases     |       | 4     |       | 8     | 5     | 2     |       | 6     |
| Permitted Phases     | 4     |       | 8     |       | 2     |       | 6     |       |
| Detector Phase       | 4     | 4     | 8     | 8     | 5     | 2     | 6     | 6     |
| Switch Phase         |       |       |       |       |       |       |       |       |
| Minimum Initial (s)  | 15.0  | 15.0  | 15.0  | 15.0  | 5.0   | 15.0  | 15.0  | 15.0  |
| Minimum Split (s)    | 34.6  | 34.6  | 34.6  | 34.6  | 9.5   | 30.8  | 30.8  | 30.8  |
| Total Split (s)      | 49.0  | 49.0  | 49.0  | 49.0  | 14.0  | 45.0  | 31.0  | 31.0  |
| Total Split (%)      | 52.1% | 52.1% | 52.1% | 52.1% | 14.9% | 47.9% | 33.0% | 33.0% |
| Yellow Time (s)      | 4.3   | 4.3   | 4.3   | 4.3   | 3.0   | 4.3   | 4.3   | 4.3   |
| All-Red Time (s)     | 1.3   | 1.3   | 1.3   | 1.3   | 0.0   | 1.5   | 1.5   | 1.5   |
| Lost Time Adjust (s) | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Lost Time (s)  | 5.6   | 5.6   | 5.6   | 5.6   | 3.0   | 5.8   | 5.8   | 5.8   |
| Lead/Lag             |       |       |       |       | Lead  |       | Lag   | Lag   |
| Lead-Lag Optimize?   |       |       |       |       | Yes   |       | Yes   | Yes   |
| Recall Mode          | C-Max | C-Max | C-Max | C-Max | None  | Max   | Max   | Max   |
| Act Effct Green (s)  | 43.4  | 43.4  | 43.4  | 43.4  | 42.0  | 39.2  | 26.3  | 26.3  |
| Actuated g/C Ratio   | 0.46  | 0.46  | 0.46  | 0.46  | 0.45  | 0.42  | 0.28  | 0.28  |
| v/c Ratio            | 0.16  | 0.41  | 0.19  | 0.14  | 0.53  | 0.25  | 0.42  | 0.70  |
| Control Delay        | 15.8  | 10.0  | 17.3  | 11.1  | 22.4  | 15.8  | 34.9  | 34.7  |
| Queue Delay          | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Delay          | 15.8  | 10.0  | 17.3  | 11.1  | 22.4  | 15.8  | 34.9  | 34.7  |
| LOS                  | B     | A     | B     | B     | C     | B     | C     | C     |
| Approach Delay       |       | 10.6  |       | 12.3  |       | 17.4  |       | 34.7  |
| Approach LOS         |       | B     |       | B     |       | B     |       | C     |

Intersection Summary

Cycle Length: 94  
 Actuated Cycle Length: 94  
 Offset: 31 (33%), Referenced to phase 4:EBTL and 8:WBTL, Start of Green  
 Natural Cycle: 75  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.70  
 Intersection Signal Delay: 20.2  
 Intersection Capacity Utilization 75.0%  
 Analysis Period (min) 15  
 Intersection LOS: C  
 ICU Level of Service D

Splits and Phases: 6: Pinnacle Peak Rd & 19th Ave



Deer Valley 30  
6: Pinnacle Peak Rd & 19th Ave

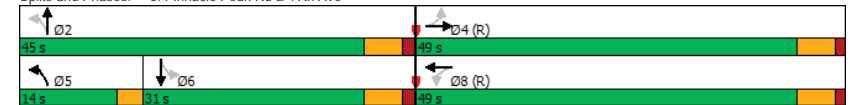
Existing PM  
Timings

| Lane Group           | EBL   | EBT   | WBL   | WBT   | NBL   | NBT   | SBL   | SBT   |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations  | ↖     | ↗     | ↖     | ↗     | ↖     | ↗     | ↖     | ↗     |
| Traffic Volume (vph) | 72    | 130   | 51    | 294   | 367   | 724   | 45    | 513   |
| Future Volume (vph)  | 72    | 130   | 51    | 294   | 367   | 724   | 45    | 513   |
| Turn Type            | Perm  | NA    | Perm  | NA    | pm+pt | NA    | Perm  | NA    |
| Protected Phases     |       | 4     |       | 8     | 5     | 2     |       | 6     |
| Permitted Phases     | 4     |       | 8     |       | 2     |       | 6     |       |
| Detector Phase       | 4     | 4     | 8     | 8     | 5     | 2     | 6     | 6     |
| Switch Phase         |       |       |       |       |       |       |       |       |
| Minimum Initial (s)  | 15.0  | 15.0  | 15.0  | 15.0  | 5.0   | 15.0  | 15.0  | 15.0  |
| Minimum Split (s)    | 34.6  | 34.6  | 34.6  | 34.6  | 9.5   | 30.8  | 30.8  | 30.8  |
| Total Split (s)      | 49.0  | 49.0  | 49.0  | 49.0  | 14.0  | 45.0  | 31.0  | 31.0  |
| Total Split (%)      | 52.1% | 52.1% | 52.1% | 52.1% | 14.9% | 47.9% | 33.0% | 33.0% |
| Yellow Time (s)      | 4.3   | 4.3   | 4.3   | 4.3   | 3.0   | 4.3   | 4.3   | 4.3   |
| All-Red Time (s)     | 1.3   | 1.3   | 1.3   | 1.3   | 0.0   | 1.5   | 1.5   | 1.5   |
| Lost Time Adjust (s) | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Lost Time (s)  | 5.6   | 5.6   | 5.6   | 5.6   | 3.0   | 5.8   | 5.8   | 5.8   |
| Lead/Lag             |       |       |       |       | Lead  |       | Lag   | Lag   |
| Lead-Lag Optimize?   |       |       |       |       | Yes   |       | Yes   | Yes   |
| Recall Mode          | C-Max | C-Max | C-Max | C-Max | None  | Max   | Max   | Max   |
| Act Effct Green (s)  | 43.4  | 43.4  | 43.4  | 43.4  | 42.0  | 39.2  | 25.2  | 25.2  |
| Actuated g/C Ratio   | 0.46  | 0.46  | 0.46  | 0.46  | 0.45  | 0.42  | 0.27  | 0.27  |
| v/c Ratio            | 0.18  | 0.24  | 0.12  | 0.25  | 1.18  | 0.39  | 0.30  | 0.69  |
| Control Delay        | 16.3  | 5.9   | 15.5  | 14.1  | 128.8 | 19.5  | 33.3  | 34.4  |
| Queue Delay          | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Delay          | 16.3  | 5.9   | 15.5  | 14.1  | 128.8 | 19.5  | 33.3  | 34.4  |
| LOS                  | B     | A     | B     | B     | F     | B     | C     | C     |
| Approach Delay       |       | 7.7   |       | 14.3  |       | 55.4  |       | 34.3  |
| Approach LOS         |       | A     |       | B     |       | E     |       | C     |

Intersection Summary

Cycle Length: 94  
 Actuated Cycle Length: 94  
 Offset: 31 (33%), Referenced to phase 4:EBTL and 8:WBTL, Start of Green  
 Natural Cycle: 80  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 1.18  
 Intersection Signal Delay: 35.9  
 Intersection Capacity Utilization 79.6%  
 Analysis Period (min) 15  
 Intersection LOS: D  
 ICU Level of Service D

Splits and Phases: 6: Pinnacle Peak Rd & 19th Ave



Deer Valley 30  
6: Pinnacle Peak Rd & 19th Ave

Existing AM  
HCM 6th Signalized Intersection Summary

| Movement                     | EBL  | EBT  | EBR  | WBL   | WBT  | WBR  | NBL  | NBT   | NBR  | SBL  | SBT   | SBR  |
|------------------------------|------|------|------|-------|------|------|------|-------|------|------|-------|------|
| Lane Configurations          |      | ↔    | ↔    | ↔     | ↔    | ↔    | ↔    | ↔     | ↔    | ↔    | ↔     | ↔    |
| Traffic Volume (veh/h)       | 77   | 348  | 278  | 51    | 158  | 52   | 152  | 392   | 89   | 89   | 583   | 52   |
| Future Volume (veh/h)        | 77   | 348  | 278  | 51    | 158  | 52   | 152  | 392   | 89   | 89   | 583   | 52   |
| Initial Q (Ob), veh          | 0    | 0    | 0    | 0     | 0    | 0    | 0    | 0     | 0    | 0    | 0     | 0    |
| Ped-Bike Adj(A_pbT)          | 1.00 |      | 1.00 | 1.00  |      | 1.00 | 1.00 |       | 1.00 | 1.00 |       | 1.00 |
| Parking Bus, Adj             | 1.00 | 1.00 | 1.00 | 1.00  | 1.00 | 1.00 | 1.00 | 1.00  | 1.00 | 1.00 | 1.00  | 1.00 |
| Work Zone On Approach        | No   |      | No   |       | No   |      | No   |       | No   |      | No    |      |
| Adj Sat Flow, veh/h/ln       | 1870 | 1870 | 1870 | 1870  | 1870 | 1870 | 1870 | 1870  | 1870 | 1870 | 1870  | 1870 |
| Adj Flow Rate, veh/h         | 84   | 378  | 302  | 55    | 172  | 57   | 165  | 426   | 97   | 97   | 634   | 57   |
| Peak Hour Factor             | 0.92 | 0.92 | 0.92 | 0.92  | 0.92 | 0.92 | 0.92 | 0.92  | 0.92 | 0.92 | 0.92  | 0.92 |
| Percent Heavy Veh, %         | 2    | 2    | 2    | 2     | 2    | 2    | 2    | 2     | 2    | 2    | 2     | 2    |
| Cap, veh/h                   | 564  | 872  | 688  | 324   | 1222 | 392  | 326  | 1745  | 385  | 343  | 999   | 90   |
| Arrive On Green              | 0.46 | 0.46 | 0.46 | 0.46  | 0.46 | 0.46 | 0.08 | 0.42  | 0.42 | 0.30 | 0.30  | 0.30 |
| Sat Flow, veh/h              | 1152 | 1889 | 1490 | 760   | 2646 | 849  | 1781 | 4184  | 924  | 879  | 3298  | 296  |
| Grp Volume(v), veh/h         | 84   | 355  | 325  | 55    | 114  | 115  | 165  | 344   | 179  | 97   | 341   | 350  |
| Grp Sat Flow(s), veh/h/ln    | 1152 | 1777 | 1602 | 760   | 1777 | 1718 | 1781 | 1702  | 1704 | 879  | 1777  | 1817 |
| Q Serve(g_s), s              | 4.3  | 12.6 | 12.9 | 4.9   | 3.5  | 3.6  | 5.7  | 6.2   | 6.4  | 8.1  | 15.6  | 15.6 |
| Cycle Q Clear(g_c), s        | 7.9  | 12.6 | 12.9 | 17.8  | 3.5  | 3.6  | 5.7  | 6.2   | 6.4  | 8.1  | 15.6  | 15.6 |
| Prop In Lane                 | 1.00 |      | 0.93 | 1.00  |      | 0.49 | 1.00 |       | 0.54 | 1.00 |       | 0.16 |
| Lane Grp Cap(c), veh/h       | 564  | 820  | 740  | 324   | 820  | 793  | 326  | 1420  | 711  | 343  | 538   | 551  |
| V/C Ratio(X)                 | 0.15 | 0.43 | 0.44 | 0.17  | 0.14 | 0.15 | 0.51 | 0.24  | 0.25 | 0.28 | 0.63  | 0.64 |
| Avail Cap(c_a), veh/h        | 564  | 820  | 740  | 324   | 820  | 793  | 388  | 1420  | 711  | 343  | 538   | 551  |
| HCM Platoon Ratio            | 1.00 | 1.00 | 1.00 | 1.00  | 1.00 | 1.00 | 1.00 | 1.00  | 1.00 | 1.00 | 1.00  | 1.00 |
| Upstream Filter(I)           | 1.00 | 1.00 | 1.00 | 1.00  | 1.00 | 1.00 | 1.00 | 1.00  | 1.00 | 1.00 | 1.00  | 1.00 |
| Uniform Delay (d), s/veh     | 16.9 | 17.0 | 17.1 | 23.1  | 14.5 | 14.6 | 20.4 | 17.8  | 17.8 | 25.7 | 28.3  | 28.3 |
| Incr Delay (d2), s/veh       | 0.6  | 1.7  | 1.9  | 1.1   | 0.4  | 0.4  | 1.2  | 0.4   | 0.8  | 2.1  | 5.6   | 5.5  |
| Initial Q Delay(d3), s/veh   | 0.0  | 0.0  | 0.0  | 0.0   | 0.0  | 0.0  | 0.0  | 0.0   | 0.0  | 0.0  | 0.0   | 0.0  |
| %ile BackOfQ(50%), veh/ln    | 1.2  | 5.3  | 4.9  | 1.0   | 1.4  | 1.5  | 2.4  | 2.4   | 2.6  | 1.9  | 7.3   | 7.5  |
| Unsig. Movement Delay, s/veh |      |      |      |       |      |      |      |       |      |      |       |      |
| LnGrp Delay(d), s/veh        | 17.4 | 18.7 | 19.0 | 24.2  | 14.9 | 15.0 | 21.6 | 18.2  | 18.7 | 27.7 | 33.9  | 33.8 |
| LnGrp LOS                    | B    | B    | B    | C     | B    | B    | C    | B     | B    | C    | C     | C    |
| Approach Vol, veh/h          |      | 764  |      |       | 284  |      |      | 688   |      |      | 788   |      |
| Approach Delay, s/veh        |      | 18.7 |      |       | 16.7 |      |      | 19.1  |      |      | 33.1  |      |
| Approach LOS                 |      | B    |      |       | B    |      |      | B     |      |      | C     |      |
| Timer - Assigned Phs         |      | 2    |      | 4     | 5    | 6    |      | 8     |      |      |       |      |
| Phs Duration (G+Y+Rc), s     |      | 45.0 |      | 49.0  | 10.7 | 34.3 |      | 49.0  |      |      | 49.0  |      |
| Change Period (Y+Rc), s      |      | 5.8  |      | * 5.6 | 3.0  | 5.8  |      | * 5.6 |      |      | * 5.6 |      |
| Max Green Setting (Gmax), s  |      | 39.2 |      | * 43  | 11.0 | 25.2 |      | * 43  |      |      | * 43  |      |
| Max Q Clear Time (g_c+I1), s |      | 8.4  |      | 14.9  | 7.7  | 17.6 |      | 19.8  |      |      | 14.5  |      |
| Green Ext Time (p_c), s      |      | 3.7  |      | 5.2   | 0.1  | 2.9  |      | 1.7   |      |      | 2.8   |      |

| Intersection Summary |      |  |
|----------------------|------|--|
| HCM 6th Ctrl Delay   | 23.1 |  |
| HCM 6th LOS          | C    |  |

Notes  
\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Deer Valley 30  
6: Pinnacle Peak Rd & 19th Ave

Existing PM  
HCM 6th Signalized Intersection Summary

| Movement                     | EBL  | EBT  | EBR  | WBL   | WBT  | WBR  | NBL  | NBT   | NBR  | SBL  | SBT   | SBR  |
|------------------------------|------|------|------|-------|------|------|------|-------|------|------|-------|------|
| Lane Configurations          |      | ↔    | ↔    | ↔     | ↔    | ↔    | ↔    | ↔     | ↔    | ↔    | ↔     | ↔    |
| Traffic Volume (veh/h)       | 72   | 130  | 221  | 51    | 294  | 71   | 367  | 724   | 26   | 45   | 513   | 81   |
| Future Volume (veh/h)        | 72   | 130  | 221  | 51    | 294  | 71   | 367  | 724   | 26   | 45   | 513   | 81   |
| Initial Q (Ob), veh          | 0    | 0    | 0    | 0     | 0    | 0    | 0    | 0     | 0    | 0    | 0     | 0    |
| Ped-Bike Adj(A_pbT)          | 1.00 |      | 1.00 | 1.00  |      | 1.00 | 1.00 |       | 1.00 | 1.00 |       | 1.00 |
| Parking Bus, Adj             | 1.00 | 1.00 | 1.00 | 1.00  | 1.00 | 1.00 | 1.00 | 1.00  | 1.00 | 1.00 | 1.00  | 1.00 |
| Work Zone On Approach        | No   |      | No   |       | No   |      | No   |       | No   |      | No    |      |
| Adj Sat Flow, veh/h/ln       | 1870 | 1870 | 1870 | 1870  | 1870 | 1870 | 1870 | 1870  | 1870 | 1870 | 1870  | 1870 |
| Adj Flow Rate, veh/h         | 78   | 141  | 240  | 55    | 320  | 77   | 399  | 787   | 28   | 49   | 558   | 88   |
| Peak Hour Factor             | 0.92 | 0.92 | 0.92 | 0.92  | 0.92 | 0.92 | 0.92 | 0.92  | 0.92 | 0.92 | 0.92  | 0.92 |
| Percent Heavy Veh, %         | 2    | 2    | 2    | 2     | 2    | 2    | 2    | 2     | 2    | 2    | 2     | 2    |
| Cap, veh/h                   | 464  | 820  | 732  | 443   | 1316 | 312  | 368  | 2111  | 75   | 256  | 825   | 130  |
| Arrive On Green              | 0.46 | 0.46 | 0.46 | 0.46  | 0.46 | 0.46 | 0.12 | 0.42  | 0.42 | 0.27 | 0.27  | 0.27 |
| Sat Flow, veh/h              | 987  | 1777 | 1585 | 1002  | 2850 | 676  | 1781 | 5062  | 180  | 670  | 3076  | 484  |
| Grp Volume(v), veh/h         | 78   | 141  | 240  | 55    | 198  | 199  | 399  | 529   | 286  | 49   | 322   | 324  |
| Grp Sat Flow(s), veh/h/ln    | 987  | 1777 | 1585 | 1002  | 1777 | 1749 | 1781 | 1702  | 1838 | 670  | 1777  | 1783 |
| Q Serve(g_s), s              | 4.9  | 4.4  | 9.0  | 3.5   | 6.3  | 6.5  | 11.0 | 10.1  | 10.1 | 5.4  | 15.2  | 15.3 |
| Cycle Q Clear(g_c), s        | 11.4 | 4.4  | 9.0  | 12.5  | 6.3  | 6.5  | 11.0 | 10.1  | 10.1 | 5.4  | 15.2  | 15.3 |
| Prop In Lane                 | 1.00 |      | 1.00 | 1.00  |      | 0.39 | 1.00 |       | 0.10 | 1.00 |       | 0.27 |
| Lane Grp Cap(c), veh/h       | 464  | 820  | 732  | 443   | 820  | 807  | 368  | 1420  | 766  | 256  | 476   | 478  |
| V/C Ratio(X)                 | 0.17 | 0.17 | 0.33 | 0.12  | 0.24 | 0.25 | 1.09 | 0.37  | 0.37 | 0.19 | 0.68  | 0.68 |
| Avail Cap(c_a), veh/h        | 464  | 820  | 732  | 443   | 820  | 807  | 368  | 1420  | 766  | 256  | 476   | 478  |
| HCM Platoon Ratio            | 1.00 | 1.00 | 1.00 | 1.00  | 1.00 | 1.00 | 1.00 | 1.00  | 1.00 | 1.00 | 1.00  | 1.00 |
| Upstream Filter(I)           | 1.00 | 1.00 | 1.00 | 1.00  | 1.00 | 1.00 | 1.00 | 1.00  | 1.00 | 1.00 | 1.00  | 1.00 |
| Uniform Delay (d), s/veh     | 18.8 | 14.8 | 16.0 | 20.0  | 15.3 | 15.4 | 27.3 | 18.9  | 18.9 | 27.2 | 30.7  | 30.8 |
| Incr Delay (d2), s/veh       | 0.8  | 0.5  | 1.2  | 0.6   | 0.7  | 0.7  | 71.7 | 0.8   | 1.4  | 1.7  | 7.5   | 7.6  |
| Initial Q Delay(d3), s/veh   | 0.0  | 0.0  | 0.0  | 0.0   | 0.0  | 0.0  | 0.0  | 0.0   | 0.0  | 0.0  | 0.0   | 0.0  |
| %ile BackOfQ(50%), veh/ln    | 1.2  | 1.8  | 3.4  | 0.9   | 2.6  | 2.7  | 10.4 | 4.0   | 4.5  | 1.0  | 7.4   | 7.4  |
| Unsig. Movement Delay, s/veh |      |      |      |       |      |      |      |       |      |      |       |      |
| LnGrp Delay(d), s/veh        | 19.6 | 15.2 | 17.2 | 20.6  | 16.0 | 16.1 | 99.0 | 19.7  | 20.3 | 28.8 | 38.2  | 38.3 |
| LnGrp LOS                    | B    | B    | B    | C     | B    | B    | F    | B     | C    | C    | D     | D    |
| Approach Vol, veh/h          |      | 459  |      |       | 452  |      |      | 1214  |      |      | 695   |      |
| Approach Delay, s/veh        |      | 17.0 |      |       | 16.6 |      |      | 45.9  |      |      | 37.6  |      |
| Approach LOS                 |      | B    |      |       | B    |      |      | D     |      |      | D     |      |
| Timer - Assigned Phs         |      | 2    |      | 4     | 5    | 6    |      | 8     |      |      |       |      |
| Phs Duration (G+Y+Rc), s     |      | 45.0 |      | 49.0  | 14.0 | 31.0 |      | 49.0  |      |      | 49.0  |      |
| Change Period (Y+Rc), s      |      | 5.8  |      | * 5.6 | 3.0  | 5.8  |      | * 5.6 |      |      | * 5.6 |      |
| Max Green Setting (Gmax), s  |      | 39.2 |      | * 43  | 11.0 | 25.2 |      | * 43  |      |      | * 43  |      |
| Max Q Clear Time (g_c+I1), s |      | 12.1 |      | 13.4  | 13.0 | 17.3 |      | 14.5  |      |      | 14.5  |      |
| Green Ext Time (p_c), s      |      | 5.9  |      | 3.0   | 0.0  | 2.7  |      | 2.8   |      |      | 2.8   |      |

| Intersection Summary |      |  |
|----------------------|------|--|
| HCM 6th Ctrl Delay   | 34.5 |  |
| HCM 6th LOS          | C    |  |

Notes  
\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Deer Valley 30  
7: 15th Ave & Happy Valley Rd

Existing AM  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Int Delay, s/veh         | 0.8  |      |      |      |      |      |      |      |      |      |      |      |
| Movement                 | EBL  | EBT  | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
| Lane Configurations      | ↕    |      | ↕    |      | ↕    |      | ↕    |      | ↕    |      | ↕    |      |
| Traffic Vol, veh/h       | 5    | 437  | 21   | 13   | 305  | 0    | 17   | 0    | 9    | 2    | 0    | 5    |
| Future Vol, veh/h        | 5    | 437  | 21   | 13   | 305  | 0    | 17   | 0    | 9    | 2    | 0    | 5    |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Free | Free | Free | Free | Free | Free | Stop | Stop | Stop | Stop | Stop | Stop |
| RT Channelized           | -    | -    | None | -    | -    | None | -    | -    | None | -    | -    | None |
| Storage Length           | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    |
| Veh in Median Storage, # | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Grade, %                 | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Peak Hour Factor         | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 5    | 475  | 23   | 14   | 332  | 0    | 18   | 0    | 10   | 2    | 0    | 5    |

| Major/Minor          | Major1 | Major2 | Minor1 | Minor2 |
|----------------------|--------|--------|--------|--------|
| Conflicting Flow All | 332    | 0      | 0      | 498    |
| Stage 1              | -      | -      | -      | -      |
| Stage 2              | -      | -      | -      | -      |
| Critical Hdwy        | 4.12   | -      | 4.12   | -      |
| Critical Hdwy Stg 1  | -      | -      | -      | -      |
| Critical Hdwy Stg 2  | -      | -      | -      | -      |
| Follow-up Hdwy       | 2.218  | -      | 2.218  | -      |
| Pot Cap-1 Maneuver   | 1227   | -      | 1066   | -      |
| Stage 1              | -      | -      | -      | -      |
| Stage 2              | -      | -      | -      | -      |
| Platoon blocked, %   | -      | -      | -      | -      |
| Mov Cap-1 Maneuver   | 1227   | -      | 1066   | -      |
| Mov Cap-2 Maneuver   | -      | -      | -      | -      |
| Stage 1              | -      | -      | -      | -      |
| Stage 2              | -      | -      | -      | -      |

| Approach             | EB  | WB  | NB   | SB   |
|----------------------|-----|-----|------|------|
| HCM Control Delay, s | 0.1 | 0.3 | 16.9 | 12.6 |
| HCM LOS              |     |     | C    | B    |

| Minor Lane/Major Mvmt | NBLn1 | EBL   | EBT | EBR | WBL   | WBT | WBR | SBLn1 |
|-----------------------|-------|-------|-----|-----|-------|-----|-----|-------|
| Capacity (veh/h)      | 330   | 1227  | -   | -   | 1066  | -   | -   | 481   |
| HCM Lane V/C Ratio    | 0.086 | 0.004 | -   | -   | 0.013 | -   | -   | 0.016 |
| HCM Control Delay (s) | 16.9  | 7.9   | 0   | -   | 8.4   | 0   | -   | 12.6  |
| HCM Lane LOS          | C     | A     | A   | -   | A     | A   | -   | B     |
| HCM 95th %tile Q(veh) | 0.3   | 0     | -   | -   | 0     | -   | -   | 0     |

Deer Valley 30  
7: 15th Ave & Happy Valley Rd

Existing PM  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Int Delay, s/veh         | 0.8  |      |      |      |      |      |      |      |      |      |      |      |
| Movement                 | EBL  | EBT  | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
| Lane Configurations      | ↕    |      | ↕    |      | ↕    |      | ↕    |      | ↕    |      | ↕    |      |
| Traffic Vol, veh/h       | 2    | 438  | 3    | 7    | 834  | 0    | 18   | 0    | 15   | 0    | 0    | 1    |
| Future Vol, veh/h        | 2    | 438  | 3    | 7    | 834  | 0    | 18   | 0    | 15   | 0    | 0    | 1    |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Free | Free | Free | Free | Free | Free | Stop | Stop | Stop | Stop | Stop | Stop |
| RT Channelized           | -    | -    | None | -    | -    | None | -    | -    | None | -    | -    | None |
| Storage Length           | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    |
| Veh in Median Storage, # | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Grade, %                 | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Peak Hour Factor         | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 2    | 476  | 3    | 8    | 907  | 0    | 20   | 0    | 16   | 0    | 0    | 1    |

| Major/Minor          | Major1 | Major2 | Minor1 | Minor2 |
|----------------------|--------|--------|--------|--------|
| Conflicting Flow All | 907    | 0      | 0      | 479    |
| Stage 1              | -      | -      | -      | -      |
| Stage 2              | -      | -      | -      | -      |
| Critical Hdwy        | 4.12   | -      | 4.12   | -      |
| Critical Hdwy Stg 1  | -      | -      | -      | -      |
| Critical Hdwy Stg 2  | -      | -      | -      | -      |
| Follow-up Hdwy       | 2.218  | -      | 2.218  | -      |
| Pot Cap-1 Maneuver   | 750    | -      | 1083   | -      |
| Stage 1              | -      | -      | -      | -      |
| Stage 2              | -      | -      | -      | -      |
| Platoon blocked, %   | -      | -      | -      | -      |
| Mov Cap-1 Maneuver   | 750    | -      | 1083   | -      |
| Mov Cap-2 Maneuver   | -      | -      | -      | -      |
| Stage 1              | -      | -      | -      | -      |
| Stage 2              | -      | -      | -      | -      |

| Approach             | EB | WB  | NB   | SB   |
|----------------------|----|-----|------|------|
| HCM Control Delay, s | 0  | 0.1 | 29.7 | 15.8 |
| HCM LOS              |    |     | D    | C    |

| Minor Lane/Major Mvmt | NBLn1 | EBL   | EBT | EBR | WBL   | WBT | WBR | SBLn1 |
|-----------------------|-------|-------|-----|-----|-------|-----|-----|-------|
| Capacity (veh/h)      | 181   | 750   | -   | -   | 1083  | -   | -   | 334   |
| HCM Lane V/C Ratio    | 0.198 | 0.003 | -   | -   | 0.007 | -   | -   | 0.003 |
| HCM Control Delay (s) | 29.7  | 9.8   | 0   | -   | 8.3   | 0   | -   | 15.8  |
| HCM Lane LOS          | D     | A     | A   | -   | A     | A   | -   | C     |
| HCM 95th %tile Q(veh) | 0.7   | 0     | -   | -   | 0     | -   | -   | 0     |

Deer Valley 30  
8: 7th Ave & Happy Valley Rd

Existing AM  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh         | 0.6  |      |      |      |      |      |
| Movement                 | EBT  | EBR  | WBL  | WBT  | NBL  | NBR  |
| Lane Configurations      | ↻    |      |      | ↻    | ↻    | ↻    |
| Traffic Vol, veh/h       | 457  | 22   | 8    | 254  | 15   | 9    |
| Future Vol, veh/h        | 457  | 22   | 8    | 254  | 15   | 9    |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Free | Free | Free | Free | Stop | Stop |
| RT Channelized           | -    | None | -    | None | -    | None |
| Storage Length           | -    | -    | -    | -    | 0    | -    |
| Veh in Median Storage, # | 0    | -    | -    | 0    | 0    | -    |
| Grade, %                 | 0    | -    | -    | 0    | 0    | -    |
| Peak Hour Factor         | 92   | 92   | 92   | 92   | 92   | 92   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 497  | 24   | 9    | 276  | 16   | 10   |

| Major/Minor          | Major1 | Major2 | Minor1 |   |       |
|----------------------|--------|--------|--------|---|-------|
| Conflicting Flow All | 0      | 0      | 521    | 0 | 803   |
| Stage 1              | -      | -      | -      | - | 509   |
| Stage 2              | -      | -      | -      | - | 294   |
| Critical Hdwy        | -      | -      | 4.12   | - | 6.42  |
| Critical Hdwy Stg 1  | -      | -      | -      | - | 5.42  |
| Critical Hdwy Stg 2  | -      | -      | -      | - | 5.42  |
| Follow-up Hdwy       | -      | -      | 2.218  | - | 3.518 |
| Pot Cap-1 Maneuver   | -      | -      | 1045   | - | 353   |
| Stage 1              | -      | -      | -      | - | 604   |
| Stage 2              | -      | -      | -      | - | 756   |
| Platoon blocked, %   | -      | -      | -      | - | -     |
| Mov Cap-1 Maneuver   | -      | -      | 1045   | - | 349   |
| Mov Cap-2 Maneuver   | -      | -      | -      | - | 349   |
| Stage 1              | -      | -      | -      | - | 604   |
| Stage 2              | -      | -      | -      | - | 748   |

| Approach             | EB | WB  | NB   |
|----------------------|----|-----|------|
| HCM Control Delay, s | 0  | 0.3 | 14.5 |
| HCM LOS              |    |     | B    |

| Minor Lane/Major Mvmt | NBLn1 | EBT | EBR | WBL   | WBT |
|-----------------------|-------|-----|-----|-------|-----|
| Capacity (veh/h)      | 407   | -   | -   | 1045  | -   |
| HCM Lane V/C Ratio    | 0.064 | -   | -   | 0.008 | -   |
| HCM Control Delay (s) | 14.5  | -   | -   | 8.5   | 0   |
| HCM Lane LOS          | B     | -   | -   | A     | A   |
| HCM 95th %tile Q(veh) | 0.2   | -   | -   | 0     | -   |

Deer Valley 30  
8: 7th Ave & Happy Valley Rd

Existing PM  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh         | 1.2  |      |      |      |      |      |
| Movement                 | EBT  | EBR  | WBL  | WBT  | NBL  | NBR  |
| Lane Configurations      | ↻    |      |      | ↻    | ↻    | ↻    |
| Traffic Vol, veh/h       | 431  | 33   | 17   | 768  | 37   | 10   |
| Future Vol, veh/h        | 431  | 33   | 17   | 768  | 37   | 10   |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Free | Free | Free | Free | Stop | Stop |
| RT Channelized           | -    | None | -    | None | -    | None |
| Storage Length           | -    | -    | -    | -    | 0    | -    |
| Veh in Median Storage, # | 0    | -    | -    | 0    | 0    | -    |
| Grade, %                 | 0    | -    | -    | 0    | 0    | -    |
| Peak Hour Factor         | 92   | 92   | 92   | 92   | 92   | 92   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 468  | 36   | 18   | 835  | 40   | 11   |

| Major/Minor          | Major1 | Major2 | Minor1 |   |       |
|----------------------|--------|--------|--------|---|-------|
| Conflicting Flow All | 0      | 0      | 504    | 0 | 1357  |
| Stage 1              | -      | -      | -      | - | 486   |
| Stage 2              | -      | -      | -      | - | 871   |
| Critical Hdwy        | -      | -      | 4.12   | - | 6.42  |
| Critical Hdwy Stg 1  | -      | -      | -      | - | 5.42  |
| Critical Hdwy Stg 2  | -      | -      | -      | - | 5.42  |
| Follow-up Hdwy       | -      | -      | 2.218  | - | 3.518 |
| Pot Cap-1 Maneuver   | -      | -      | 1061   | - | 164   |
| Stage 1              | -      | -      | -      | - | 618   |
| Stage 2              | -      | -      | -      | - | 410   |
| Platoon blocked, %   | -      | -      | -      | - | -     |
| Mov Cap-1 Maneuver   | -      | -      | 1061   | - | 159   |
| Mov Cap-2 Maneuver   | -      | -      | -      | - | 159   |
| Stage 1              | -      | -      | -      | - | 618   |
| Stage 2              | -      | -      | -      | - | 397   |

| Approach             | EB | WB  | NB   |
|----------------------|----|-----|------|
| HCM Control Delay, s | 0  | 0.2 | 31.1 |
| HCM LOS              |    |     | D    |

| Minor Lane/Major Mvmt | NBLn1 | EBT | EBR | WBL   | WBT |
|-----------------------|-------|-----|-----|-------|-----|
| Capacity (veh/h)      | 188   | -   | -   | 1061  | -   |
| HCM Lane V/C Ratio    | 0.272 | -   | -   | 0.017 | -   |
| HCM Control Delay (s) | 31.1  | -   | -   | 8.5   | 0   |
| HCM Lane LOS          | D     | -   | -   | A     | A   |
| HCM 95th %tile Q(veh) | 1.1   | -   | -   | 0.1   | -   |

Deer Valley 30  
9: 7th Ave & Pinnacle Peak Rd

Existing AM  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh         | 1.8  |      |      |      |      |      |
| Movement                 | EBT  | EBR  | WBL  | WBT  | NBL  | NBR  |
| Lane Configurations      | ↑    | ↑    |      | ↑    | ↑    |      |
| Traffic Vol, veh/h       | 173  | 107  | 30   | 204  | 49   | 22   |
| Future Vol, veh/h        | 173  | 107  | 30   | 204  | 49   | 22   |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Free | Free | Free | Free | Stop | Stop |
| RT Channelized           | -    | None | -    | None | -    | None |
| Storage Length           | -    | 170  | -    | -    | 0    | -    |
| Veh in Median Storage, # | 0    | -    | -    | 0    | 0    | -    |
| Grade, %                 | 0    | -    | -    | 0    | 0    | -    |
| Peak Hour Factor         | 92   | 92   | 92   | 92   | 92   | 92   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 188  | 116  | 33   | 222  | 53   | 24   |

| Major/Minor          | Major1 | Major2 | Minor1 |   |             |
|----------------------|--------|--------|--------|---|-------------|
| Conflicting Flow All | 0      | 0      | 304    | 0 | 476 188     |
| Stage 1              | -      | -      | -      | - | 188 -       |
| Stage 2              | -      | -      | -      | - | 288 -       |
| Critical Hdwy        | -      | -      | 4.12   | - | 6.42 6.22   |
| Critical Hdwy Stg 1  | -      | -      | -      | - | 5.42 -      |
| Critical Hdwy Stg 2  | -      | -      | -      | - | 5.42 -      |
| Follow-up Hdwy       | -      | -      | 2.218  | - | 3.518 3.318 |
| Pot Cap-1 Maneuver   | -      | -      | 1257   | - | 548 854     |
| Stage 1              | -      | -      | -      | - | 844 -       |
| Stage 2              | -      | -      | -      | - | 761 -       |
| Platoon blocked, %   | -      | -      | -      | - | - -         |
| Mov Cap-1 Maneuver   | -      | -      | 1257   | - | 532 854     |
| Mov Cap-2 Maneuver   | -      | -      | -      | - | 532 -       |
| Stage 1              | -      | -      | -      | - | 844 -       |
| Stage 2              | -      | -      | -      | - | 738 -       |

| Approach             | EB | WB | NB   |
|----------------------|----|----|------|
| HCM Control Delay, s | 0  | 1  | 11.9 |
| HCM LOS              |    |    | B    |

| Minor Lane/Major Mvmt | NBLn1 | EBT | EBR | WBL   | WBT |
|-----------------------|-------|-----|-----|-------|-----|
| Capacity (veh/h)      | 602   | -   | -   | 1257  | -   |
| HCM Lane V/C Ratio    | 0.128 | -   | -   | 0.026 | -   |
| HCM Control Delay (s) | 11.9  | -   | -   | 7.9   | 0   |
| HCM Lane LOS          | B     | -   | -   | A     | A   |
| HCM 95th %tile Q(veh) | 0.4   | -   | -   | 0.1   | -   |

Deer Valley 30  
9: 7th Ave & Pinnacle Peak Rd

Existing PM  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh         | 2.1  |      |      |      |      |      |
| Movement                 | EBT  | EBR  | WBL  | WBT  | NBL  | NBR  |
| Lane Configurations      | ↑    | ↑    |      | ↑    | ↑    |      |
| Traffic Vol, veh/h       | 227  | 43   | 25   | 175  | 52   | 25   |
| Future Vol, veh/h        | 227  | 43   | 25   | 175  | 52   | 25   |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Free | Free | Free | Free | Stop | Stop |
| RT Channelized           | -    | None | -    | None | -    | None |
| Storage Length           | -    | 170  | -    | -    | 0    | -    |
| Veh in Median Storage, # | 0    | -    | -    | 0    | 0    | -    |
| Grade, %                 | 0    | -    | -    | 0    | 0    | -    |
| Peak Hour Factor         | 92   | 92   | 92   | 92   | 92   | 92   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 247  | 47   | 27   | 190  | 57   | 27   |

| Major/Minor          | Major1 | Major2 | Minor1 |   |             |
|----------------------|--------|--------|--------|---|-------------|
| Conflicting Flow All | 0      | 0      | 294    | 0 | 491 247     |
| Stage 1              | -      | -      | -      | - | 247 -       |
| Stage 2              | -      | -      | -      | - | 244 -       |
| Critical Hdwy        | -      | -      | 4.12   | - | 6.42 6.22   |
| Critical Hdwy Stg 1  | -      | -      | -      | - | 5.42 -      |
| Critical Hdwy Stg 2  | -      | -      | -      | - | 5.42 -      |
| Follow-up Hdwy       | -      | -      | 2.218  | - | 3.518 3.318 |
| Pot Cap-1 Maneuver   | -      | -      | 1268   | - | 537 792     |
| Stage 1              | -      | -      | -      | - | 794 -       |
| Stage 2              | -      | -      | -      | - | 797 -       |
| Platoon blocked, %   | -      | -      | -      | - | - -         |
| Mov Cap-1 Maneuver   | -      | -      | 1268   | - | 524 792     |
| Mov Cap-2 Maneuver   | -      | -      | -      | - | 524 -       |
| Stage 1              | -      | -      | -      | - | 794 -       |
| Stage 2              | -      | -      | -      | - | 778 -       |

| Approach             | EB | WB | NB   |
|----------------------|----|----|------|
| HCM Control Delay, s | 0  | 1  | 12.1 |
| HCM LOS              |    |    | B    |

| Minor Lane/Major Mvmt | NBLn1 | EBT | EBR | WBL   | WBT |
|-----------------------|-------|-----|-----|-------|-----|
| Capacity (veh/h)      | 589   | -   | -   | 1268  | -   |
| HCM Lane V/C Ratio    | 0.142 | -   | -   | 0.021 | -   |
| HCM Control Delay (s) | 12.1  | -   | -   | 7.9   | 0   |
| HCM Lane LOS          | B     | -   | -   | A     | A   |
| HCM 95th %tile Q(veh) | 0.5   | -   | -   | 0.1   | -   |



## **APPENDIX D**

### **TRIP GENERATION CALCULATIONS**

# Deer Valley 30 - West Site

# Trip Generation

Proposed

October 2021

## Land Use Types and Size

| Proposed Use             | Amount | Units             |  | ITE LUC | ITE Land Use Name        |
|--------------------------|--------|-------------------|--|---------|--------------------------|
| General Office Building  | 7.020  | 1,000 square feet |  | 710     | General Office Building  |
| General Light Industrial | 63.180 | 1,000 square feet |  | 110     | General Light Industrial |

## Equation Type: Equation Used [Equated Rate] (Type Abbreviations: Weighted Average Rate ("WA"), Fitted Curve ("FC"), or Custom ("C") )

| Proposed Use             | ADT                              | AM Peak Hour                     | PM Peak Hour                     |
|--------------------------|----------------------------------|----------------------------------|----------------------------------|
| General Office Building  | FC: LN(T)=0.97*LN(X)+2.5 [11.49] | FC: T=0.94*X+26.49 [4.71]        | FC: LN(T)=0.95*LN(X)+0.36 [1.30] |
| General Light Industrial | FC: T=3.79*X+57.96 [4.71]        | FC: LN(T)=0.74*LN(X)+0.39 [0.50] | FC: LN(T)=0.69*LN(X)+0.43 [0.43] |

## Baseline Vehicular Trips

| Proposed Use             | ADT  |     |     |       | AM Peak Hour |    |     |       | PM Peak Hour |    |     |       | % In | In | Out | Total |
|--------------------------|------|-----|-----|-------|--------------|----|-----|-------|--------------|----|-----|-------|------|----|-----|-------|
|                          | % In | In  | Out | Total | % In         | In | Out | Total | % In         | In | Out | Total |      |    |     |       |
| General Office Building  | 50%  | 40  | 40  | 80    | 86%          | 28 | 5   | 33    | 16%          | 1  | 8   | 9     |      |    |     |       |
| General Light Industrial | 50%  | 149 | 149 | 298   | 88%          | 28 | 4   | 32    | 13%          | 4  | 23  | 27    |      |    |     |       |

## Truck Trips

| Proposed Use             | ADT     |           |           |           | AM Peak Hour |          |          |          | PM Peak Hour |          |          |          | Percent | In | Out | Total |
|--------------------------|---------|-----------|-----------|-----------|--------------|----------|----------|----------|--------------|----------|----------|----------|---------|----|-----|-------|
|                          | Percent | In        | Out       | Total     | Percent      | In       | Out      | Total    | Percent      | In       | Out      | Total    |         |    |     |       |
| General Office Building  |         | 0         | 0         | 0         |              | 0        | 0        | 0        |              | 0        | 0        | 0        |         |    |     |       |
| General Light Industrial | 8%      | 12        | 12        | 24        | 8%           | 2        | 1        | 3        | 8%           | 0        | 2        | 2        |         |    |     |       |
| <b>Totals</b>            |         | <b>12</b> | <b>12</b> | <b>24</b> |              | <b>2</b> | <b>1</b> | <b>3</b> |              | <b>0</b> | <b>2</b> | <b>2</b> |         |    |     |       |

## Trip Generation Summary

| Proposed Use                        | ITE LUC | Size  | Units | Weekday Trips |              |          |           |              |           |           |
|-------------------------------------|---------|-------|-------|---------------|--------------|----------|-----------|--------------|-----------|-----------|
|                                     |         |       |       | Daily Total   | AM Peak Hour |          |           | PM Peak Hour |           |           |
|                                     |         |       |       |               | In           | Out      | Total     | In           | Out       | Total     |
| General Office Building             | 710     | 7.02  | KSF   | 80            | 28           | 5        | 33        | 1            | 8         | 9         |
| General Light Industrial            | 110     | 63.18 | KSF   | 298           | 28           | 4        | 32        | 4            | 23        | 27        |
| Subtotals                           |         |       |       | 378           | 56           | 9        | 65        | 5            | 31        | 36        |
| <b>Total External Vehicle Trips</b> |         |       |       | <b>378</b>    | <b>56</b>    | <b>9</b> | <b>65</b> | <b>5</b>     | <b>31</b> | <b>36</b> |
| Truck Trips                         |         |       |       | 24            | 2            | 1        | 3         | 0            | 2         | 2         |
| Other Trips                         |         |       |       | 354           | 54           | 8        | 62        | 5            | 29        | 34        |

# Deer Valley 30 - East Site

# Trip Generation

Proposed

10/11/2021

## Land Use Types and Size

| Proposed Use             | Amount  | Units             | ITE LUC | ITE Land Use Name        |
|--------------------------|---------|-------------------|---------|--------------------------|
| General Office Building  | 29.060  | 1,000 square feet | 710     | General Office Building  |
| General Light Industrial | 261.540 | 1,000 square feet | 110     | General Light Industrial |

**Equation Type: Equation Used [Equated Rate]** (Type Abbreviations: Weighted Average Rate ("WA"), Fitted Curve ("FC"), or Custom ("C"))

| Proposed Use             | ADT                              | AM Peak Hour                     | PM Peak Hour                     |
|--------------------------|----------------------------------|----------------------------------|----------------------------------|
| General Office Building  | FC: LN(T)=0.97*LN(X)+2.5 [11.01] | FC: T=0.94*X+26.49 [1.85]        | FC: LN(T)=0.95*LN(X)+0.36 [1.21] |
| General Light Industrial | FC: T=3.79*X+57.96 [4.01]        | FC: LN(T)=0.74*LN(X)+0.39 [0.35] | FC: LN(T)=0.69*LN(X)+0.43 [0.27] |

## Baseline Vehicular Trips

| Proposed Use             | ADT  |     |     |       | AM Peak Hour |    |     |       | PM Peak Hour |    |     |       | % In | In | Out | Total |
|--------------------------|------|-----|-----|-------|--------------|----|-----|-------|--------------|----|-----|-------|------|----|-----|-------|
|                          | % In | In  | Out | Total | % In         | In | Out | Total | % In         | In | Out | Total |      |    |     |       |
| General Office Building  | 50%  | 160 | 160 | 320   | 86%          | 46 | 8   | 54    | 16%          | 6  | 29  | 35    |      |    |     |       |
| General Light Industrial | 50%  | 525 | 525 | 1,050 | 88%          | 80 | 11  | 91    | 13%          | 9  | 63  | 72    |      |    |     |       |

## Truck Trips

| Proposed Use             | ADT     |           |           |           | AM Peak Hour |          |          |          | PM Peak Hour |          |          |          | Percent | In | Out | Total |
|--------------------------|---------|-----------|-----------|-----------|--------------|----------|----------|----------|--------------|----------|----------|----------|---------|----|-----|-------|
|                          | Percent | In        | Out       | Total     | Percent      | In       | Out      | Total    | Percent      | In       | Out      | Total    |         |    |     |       |
| General Office Building  |         | 0         | 0         | 0         |              | 0        | 0        | 0        |              | 0        | 0        | 0        |         |    |     |       |
| General Light Industrial | 8%      | 42        | 42        | 84        | 8%           | 6        | 1        | 7        | 8%           | 1        | 5        | 6        |         |    |     |       |
| <b>Totals</b>            |         | <b>42</b> | <b>42</b> | <b>84</b> |              | <b>6</b> | <b>1</b> | <b>7</b> |              | <b>1</b> | <b>5</b> | <b>6</b> |         |    |     |       |

## Trip Generation Summary

| Proposed Use                        | ITE LUC | Size   | Units | Weekday Trips |              |           |            |              |           |            |
|-------------------------------------|---------|--------|-------|---------------|--------------|-----------|------------|--------------|-----------|------------|
|                                     |         |        |       | Daily Total   | AM Peak Hour |           |            | PM Peak Hour |           |            |
|                                     |         |        |       |               | In           | Out       | Total      | In           | Out       | Total      |
| General Office Building             | 710     | 29.06  | KSF   | 320           | 46           | 8         | 54         | 6            | 29        | 35         |
| General Light Industrial            | 110     | 261.54 | KSF   | 1,050         | 80           | 11        | 91         | 9            | 63        | 72         |
| Subtotals                           |         |        |       | 1,370         | 126          | 19        | 145        | 15           | 92        | 107        |
| <b>Total External Vehicle Trips</b> |         |        |       | <b>1,370</b>  | <b>126</b>   | <b>19</b> | <b>145</b> | <b>15</b>    | <b>92</b> | <b>107</b> |
| Truck Trips                         |         |        |       | 84            | 6            | 1         | 7          | 1            | 5         | 6          |
| Other Trips                         |         |        |       | 1,286         | 120          | 18        | 138        | 14           | 87        | 101        |

## **APPENDIX E**

### **TRIP DISTRIBUTION CALCULATIONS**

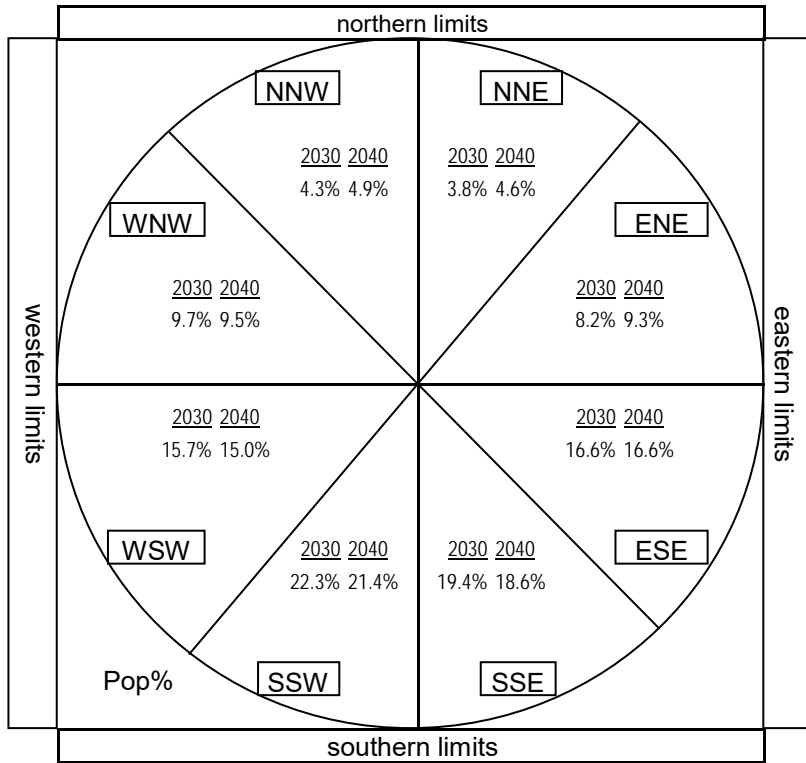
| Quadrant        | 2030       |         | 2040       |              |
|-----------------|------------|---------|------------|--------------|
|                 | Population | Percent | Population | Percent      |
| North Northwest | 20,943     | 4.3%    | 25,024     | 4.9%         |
| North Northeast | 18,562     | 3.8%    | 23,800     | 4.6%         |
| North           | 39,505     | 8.1%    | 48,824     | <b>9.5%</b>  |
| East Northeast  | 39,822     | 8.2%    | 47,809     | 9.3%         |
| East Southeast  | 80,448     | 16.6%   | 85,260     | 16.6%        |
| East            | 120,270    | 24.8%   | 133,069    | <b>25.9%</b> |
| South Southeast | 94,048     | 19.4%   | 95,246     | 18.6%        |
| South Southwest | 108,129    | 22.3%   | 109,769    | 21.4%        |
| South           | 202,177    | 41.7%   | 205,015    | <b>40.0%</b> |
| West Southwest  | 76,275     | 15.7%   | 77,020     | 15.0%        |
| West Northwest  | 47,126     | 9.7%    | 48,891     | 9.5%         |
| West            | 123,401    | 25.4%   | 125,911    | <b>24.5%</b> |
| Totals          | 485,353    | 100.0%  | 512,819    | 99.9%        |

**Radius**

Population radius: 7 miles

**Select Analysis Year (2030, 2040, 2050)**

2030













## **APPENDIX F**

### **BACKGROUND GROWTH CALCULATIONS**

**Location of counts:** I-17 at  
Pinnacle  
Peak Road

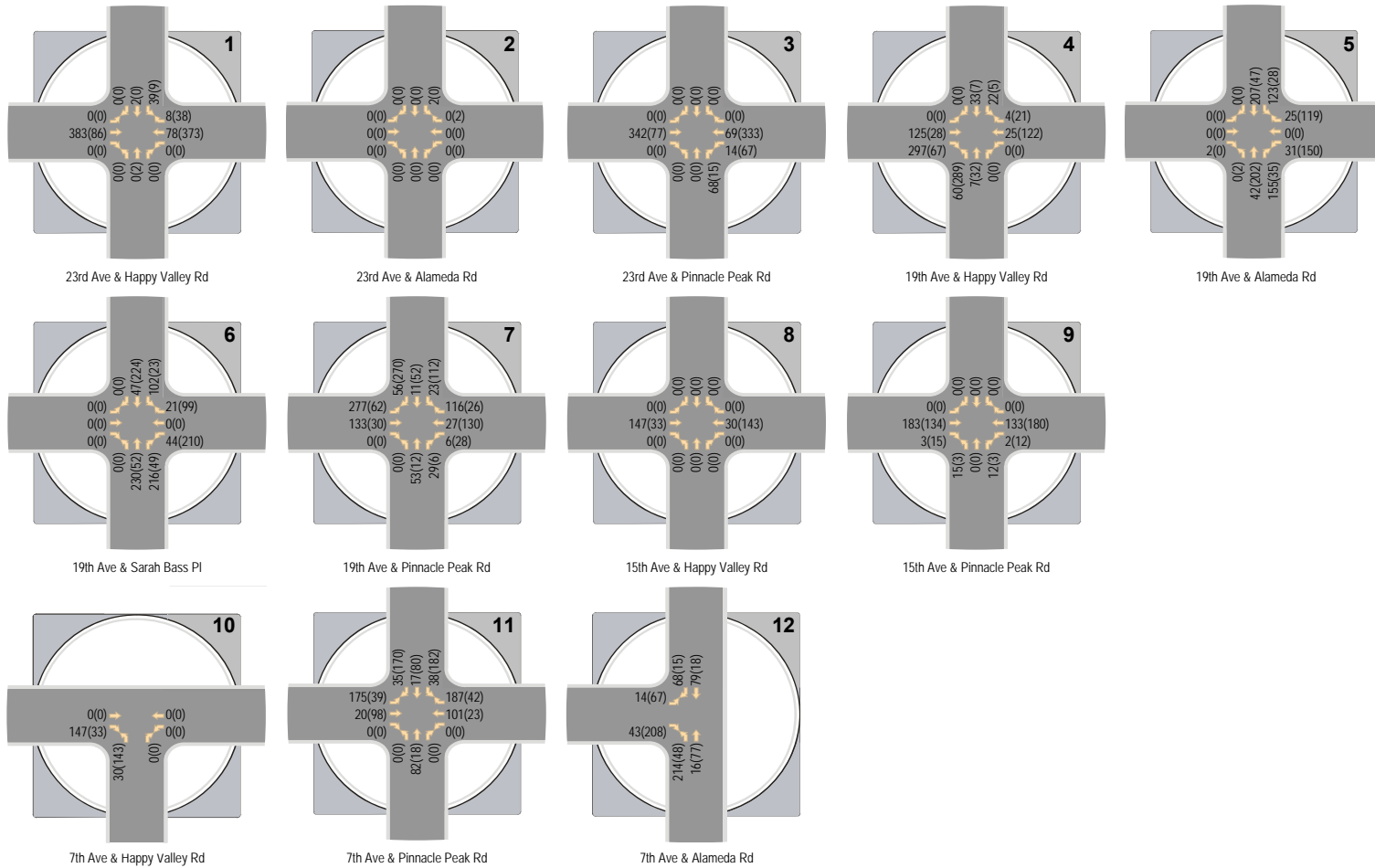
*Source(s):* ADOT AADT Publications

|            | Year | Volume  |
|------------|------|---------|
| Start      | 2016 | 136,254 |
| End        | 2017 | 141,159 |
| AAGR       |      | 3.6%    |
| Exp Factor |      | 1.036   |

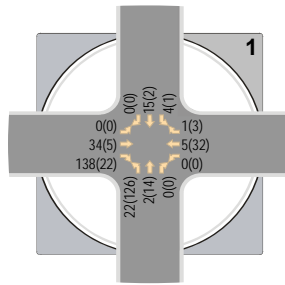
Growth Rate Used 3.6%  
Per-Year Multiplier 1.036

| Year        | Expansion Factor(s) |                |
|-------------|---------------------|----------------|
| 2021        | 1.000               |                |
| 2022        | 1.036               |                |
| 2023        | 1.073               |                |
| <b>2024</b> | <b>1.112</b>        | <b>Opening</b> |
| 2025        | 1.152               |                |
| 2026        | 1.193               |                |
| 2027        | 1.236               |                |
| 2028        | 1.281               |                |
| 2029        | 1.327               |                |
| 2030        | 1.375               |                |
| 2031        | 1.424               |                |
| 2032        | 1.476               |                |
| 2033        | 1.529               |                |
| 2034        | 1.584               |                |
| 2035        | 1.641               |                |
| 2036        | 1.700               |                |
| 2037        | 1.761               |                |
| 2038        | 1.824               |                |
| 2039        | 1.890               |                |
| 2040        | 1.958               |                |
| 2041        | 2.029               |                |
| 2042        | 2.102               |                |
| 2043        | 2.177               |                |
| 2044        | 2.256               |                |
| 2045        | 2.337               |                |
| 2046        | 2.421               |                |
| 2047        | 2.508               |                |
| 2048        | 2.598               |                |
| 2049        | 2.692               |                |
| 2050        | 2.789               |                |
| 2051        | 2.889               |                |
| 2052        | 2.993               |                |
| 2053        | 3.101               |                |

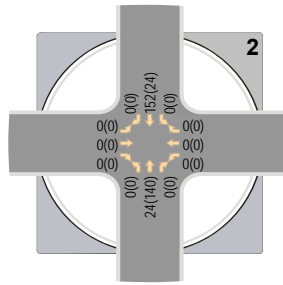
Supplier Site A Volumes



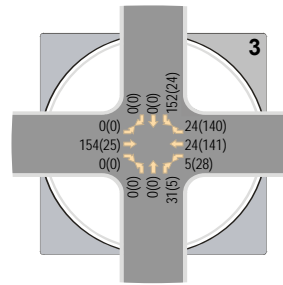
Supplier Site B and C Volumes



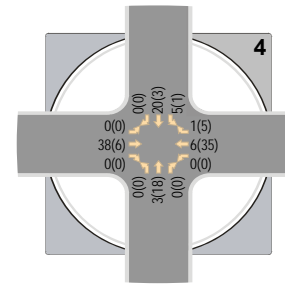
23rd Ave & Happy Valley Rd



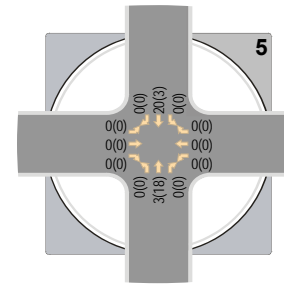
23rd Ave & Alameda Rd



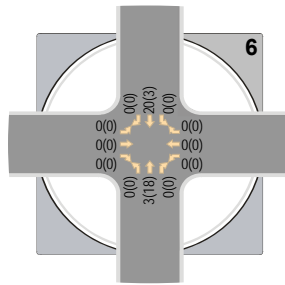
23rd Ave & Pinnacle Peak Rd



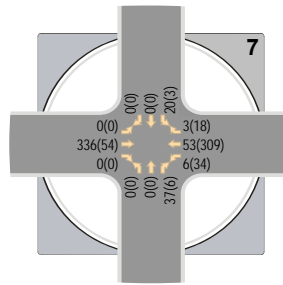
19th Ave & Happy Valley Rd



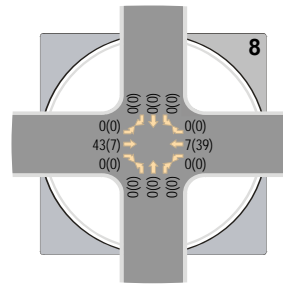
19th Ave & Alameda Rd



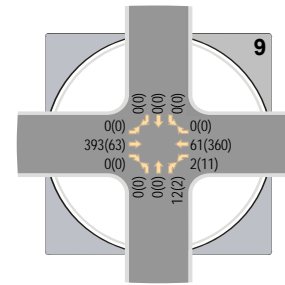
19th Ave & Sarah Bass Pl



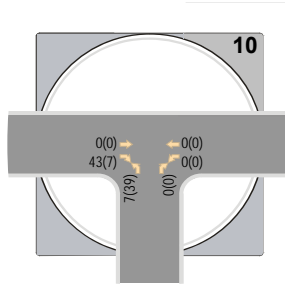
19th Ave & Pinnacle Peak Rd



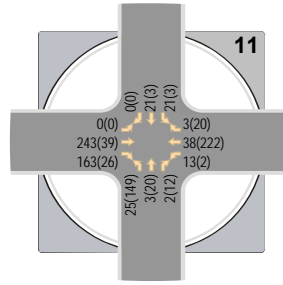
15th Ave & Happy Valley Rd



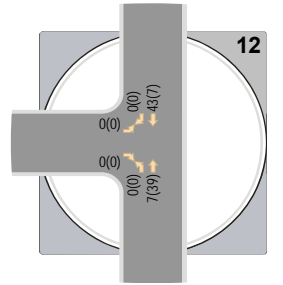
15th Ave & Pinnacle Peak Rd



7th Ave & Happy Valley Rd



7th Ave & Pinnacle Peak Rd



7th Ave & Alameda Rd

## **APPENDIX G**

### **2024 NO BUILD PEAK HOUR ANALYSIS**

Deer Valley 30  
1: 19th Ave & Happy Valley Rd

2024 Background AM  
Timings

| Lane Group           | EBL  | EBT   | WBL   | WBT   | NBL   | NBT   | NBR   | SBL   | SBT   | SBR   |
|----------------------|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations  | ↔    | ↔     | ↔     | ↔     | ↔     | ↔     | ↔     | ↔     | ↔     | ↔     |
| Traffic Volume (vph) | 87   | 511   | 150   | 326   | 213   | 267   | 102   | 294   | 461   | 96    |
| Future Volume (vph)  | 87   | 511   | 150   | 326   | 213   | 267   | 102   | 294   | 461   | 96    |
| Turn Type            | Prot | NA    | Prot  | NA    | Prot  | NA    | Perm  | Prot  | NA    | Perm  |
| Protected Phases     | 7    | 4     | 3     | 8     | 5     | 2     |       | 1     | 6     |       |
| Permitted Phases     |      |       |       |       |       |       | 2     |       |       | 6     |
| Detector Phase       | 7    | 4     | 3     | 8     | 5     | 2     | 2     | 1     | 6     | 6     |
| Switch Phase         |      |       |       |       |       |       |       |       |       |       |
| Minimum Initial (s)  | 5.0  | 15.0  | 5.0   | 15.0  | 5.0   | 5.0   | 5.0   | 5.0   | 5.0   | 5.0   |
| Minimum Split (s)    | 9.5  | 41.0  | 9.5   | 41.0  | 9.5   | 43.1  | 43.1  | 9.5   | 43.1  | 43.1  |
| Total Split (s)      | 9.5  | 41.4  | 9.5   | 41.4  | 15.0  | 39.1  | 39.1  | 15.0  | 39.1  | 39.1  |
| Total Split (%)      | 9.0% | 39.4% | 9.0%  | 39.4% | 14.3% | 37.2% | 37.2% | 14.3% | 37.2% | 37.2% |
| Yellow Time (s)      | 3.5  | 4.3   | 3.5   | 4.3   | 3.5   | 4.3   | 4.3   | 3.5   | 4.3   | 4.3   |
| All-Red Time (s)     | 1.0  | 1.7   | 1.0   | 1.7   | 1.0   | 1.8   | 1.8   | 1.0   | 1.8   | 1.8   |
| Lost Time Adjust (s) | 0.0  | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Lost Time (s)  | 4.5  | 6.0   | 4.5   | 6.0   | 4.5   | 6.1   | 6.1   | 4.5   | 6.1   | 6.1   |
| Lead/Lag             | Lead | Lag   | Lead  | Lag   | Lead  | Lag   | Lead  | Lag   | Lag   | Lag   |
| Lead-Lag Optimize?   | Yes  | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   |
| Recall Mode          | None | C-Max | None  | C-Max | None  | Max   | Max   | None  | Max   | Max   |
| Act Effct Green (s)  | 5.0  | 35.4  | 5.0   | 35.4  | 10.3  | 33.0  | 33.0  | 10.5  | 33.2  | 33.2  |
| Actuated g/C Ratio   | 0.05 | 0.34  | 0.05  | 0.34  | 0.10  | 0.31  | 0.31  | 0.10  | 0.32  | 0.32  |
| v/c Ratio            | 0.62 | 0.64  | 1.06  | 0.30  | 0.73  | 0.28  | 0.20  | 0.99  | 0.33  | 0.19  |
| Control Delay        | 66.8 | 24.5  | 137.8 | 21.0  | 60.4  | 27.9  | 4.7   | 95.2  | 28.2  | 4.0   |
| Queue Delay          | 0.0  | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Delay          | 66.8 | 24.5  | 137.8 | 21.0  | 60.4  | 27.9  | 4.7   | 95.2  | 28.2  | 4.0   |
| LOS                  | E    | C     | F     | C     | E     | C     | A     | F     | C     | A     |
| Approach Delay       |      | 27.9  |       | 50.7  |       | 35.8  |       |       | 48.7  |       |
| Approach LOS         |      | C     |       | D     |       | D     |       |       | D     |       |

Intersection Summary

Cycle Length: 105

Actuated Cycle Length: 105

Offset: 0 (0%), Referenced to phase 4:EBT and 8:WBT, Start of Green

Natural Cycle: 105

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 1.06

Intersection Signal Delay: 39.5

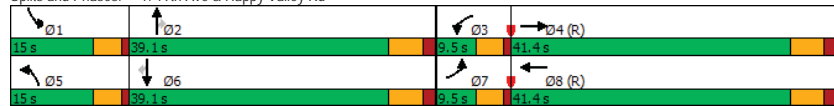
Intersection LOS: D

Intersection Capacity Utilization 58.0%

ICU Level of Service B

Analysis Period (min) 15

Splits and Phases: 1: 19th Ave & Happy Valley Rd



Deer Valley 30  
1: 19th Ave & Happy Valley Rd

2024 Background PM  
Timings

| Lane Group           | EBL   | EBT   | WBL   | WBT   | NBL   | NBT   | NBR   | SBL   | SBT   | SBR   |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations  | ↔     | ↔     | ↔     | ↔     | ↔     | ↔     | ↔     | ↔     | ↔     | ↔     |
| Traffic Volume (vph) | 167   | 417   | 165   | 904   | 593   | 531   | 125   | 183   | 238   | 122   |
| Future Volume (vph)  | 167   | 417   | 165   | 904   | 593   | 531   | 125   | 183   | 238   | 122   |
| Turn Type            | Prot  | NA    | Prot  | NA    | Prot  | NA    | Perm  | Prot  | NA    | Perm  |
| Protected Phases     | 7     | 4     | 3     | 8     | 5     | 2     |       | 1     | 6     |       |
| Permitted Phases     |       |       |       |       |       |       | 2     |       |       | 6     |
| Detector Phase       | 7     | 4     | 3     | 8     | 5     | 2     | 2     | 1     | 6     | 6     |
| Switch Phase         |       |       |       |       |       |       |       |       |       |       |
| Minimum Initial (s)  | 5.0   | 15.0  | 5.0   | 15.0  | 5.0   | 5.0   | 5.0   | 5.0   | 5.0   | 5.0   |
| Minimum Split (s)    | 9.5   | 41.0  | 9.5   | 41.0  | 9.5   | 43.1  | 43.1  | 9.5   | 43.1  | 43.1  |
| Total Split (s)      | 18.1  | 31.9  | 18.1  | 31.9  | 26.0  | 44.0  | 44.0  | 11.0  | 29.0  | 29.0  |
| Total Split (%)      | 17.2% | 30.4% | 17.2% | 30.4% | 24.8% | 41.9% | 41.9% | 10.5% | 27.6% | 27.6% |
| Yellow Time (s)      | 3.5   | 4.3   | 3.5   | 4.3   | 3.5   | 4.3   | 4.3   | 3.5   | 4.3   | 4.3   |
| All-Red Time (s)     | 1.0   | 1.7   | 1.0   | 1.7   | 1.0   | 1.8   | 1.8   | 1.0   | 1.8   | 1.8   |
| Lost Time Adjust (s) | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Lost Time (s)  | 4.5   | 6.0   | 4.5   | 6.0   | 4.5   | 6.1   | 6.1   | 4.5   | 6.1   | 6.1   |
| Lead/Lag             | Lead  | Lag   | Lead  | Lag   | Lead  | Lag   | Lead  | Lag   | Lag   | Lag   |
| Lead-Lag Optimize?   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   |
| Recall Mode          | None  | C-Max | None  | C-Max | None  | Max   | Max   | None  | Max   | Max   |
| Act Effct Green (s)  | 11.0  | 28.5  | 11.0  | 28.5  | 21.5  | 37.9  | 37.9  | 6.5   | 22.9  | 22.9  |
| Actuated g/C Ratio   | 0.10  | 0.27  | 0.10  | 0.27  | 0.20  | 0.36  | 0.36  | 0.06  | 0.22  | 0.22  |
| v/c Ratio            | 0.54  | 0.58  | 0.53  | 1.06  | 0.97  | 0.48  | 0.22  | 0.99  | 0.25  | 0.29  |
| Control Delay        | 50.1  | 28.1  | 50.1  | 77.3  | 71.2  | 27.6  | 4.9   | 112.9 | 34.7  | 4.0   |
| Queue Delay          | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Delay          | 50.1  | 28.1  | 50.1  | 77.3  | 71.2  | 27.6  | 4.9   | 112.9 | 34.7  | 4.0   |
| LOS                  | D     | C     | D     | E     | E     | C     | A     | F     | C     | A     |
| Approach Delay       |       | 32.2  |       | 74.2  |       | 46.0  |       |       | 54.1  |       |
| Approach LOS         |       | C     |       | E     |       | D     |       |       | D     |       |

Intersection Summary

Cycle Length: 105

Actuated Cycle Length: 105

Offset: 0 (0%), Referenced to phase 4:EBT and 8:WBT, Start of Green

Natural Cycle: 125

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 1.06

Intersection Signal Delay: 54.0

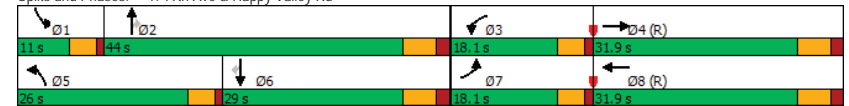
Intersection LOS: D

Intersection Capacity Utilization 69.7%

ICU Level of Service C

Analysis Period (min) 15

Splits and Phases: 1: 19th Ave & Happy Valley Rd



Deer Valley 30  
1: 19th Ave & Happy Valley Rd

2024 Background AM  
HCM 6th Signalized Intersection Summary

| Movement                     | EBL  | EBT  | EBR  | WBL   | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
|------------------------------|------|------|------|-------|------|------|------|------|------|------|------|------|
| Lane Configurations          | ↔    | ↔    | ↔    | ↔     | ↔    | ↔    | ↔    | ↔    | ↔    | ↔    | ↔    | ↔    |
| Traffic Volume (veh/h)       | 87   | 511  | 469  | 150   | 326  | 115  | 213  | 267  | 102  | 294  | 461  | 96   |
| Future Volume (veh/h)        | 87   | 511  | 469  | 150   | 326  | 115  | 213  | 267  | 102  | 294  | 461  | 96   |
| Initial Q (Ob), veh          | 0    | 0    | 0    | 0     | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Ped-Bike Adj(A_pbT)          | 1.00 | 1.00 | 1.00 | 1.00  | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Parking Bus, Adj             | 1.00 | 1.00 | 1.00 | 1.00  | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Work Zone On Approach        | No   | No   | No   | No    | No   | No   | No   | No   | No   | No   | No   | No   |
| Adj Sat Flow, veh/h/ln       | 1781 | 1781 | 1781 | 1781  | 1781 | 1781 | 1781 | 1781 | 1781 | 1781 | 1781 | 1781 |
| Adj Flow Rate, veh/h         | 95   | 555  | 510  | 163   | 354  | 125  | 232  | 290  | 111  | 320  | 501  | 104  |
| Peak Hour Factor             | 0.92 | 0.92 | 0.92 | 0.92  | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Percent Heavy Veh, %         | 8    | 8    | 8    | 8     | 8    | 8    | 8    | 8    | 8    | 8    | 8    | 8    |
| Cap, veh/h                   | 147  | 1093 | 509  | 157   | 1224 | 411  | 293  | 1064 | 474  | 329  | 1582 | 491  |
| Arrive On Green              | 0.04 | 0.34 | 0.34 | 0.05  | 0.34 | 0.34 | 0.09 | 0.31 | 0.31 | 0.10 | 0.33 | 0.33 |
| Sat Flow, veh/h              | 3291 | 3242 | 1510 | 3291  | 3599 | 1208 | 3291 | 3385 | 1510 | 3291 | 4863 | 1510 |
| Grp Volume(v), veh/h         | 95   | 555  | 510  | 163   | 317  | 162  | 232  | 290  | 111  | 320  | 501  | 104  |
| Grp Sat Flow(s),veh/h/ln     | 1646 | 1621 | 1510 | 1646  | 1621 | 1564 | 1646 | 1692 | 1510 | 1646 | 1621 | 1510 |
| Q Serve(g_s), s              | 3.0  | 14.4 | 35.4 | 5.0   | 7.5  | 8.0  | 7.3  | 6.7  | 5.7  | 10.2 | 8.1  | 5.2  |
| Cycle Q Clear(g_c), s        | 3.0  | 14.4 | 35.4 | 5.0   | 7.5  | 8.0  | 7.3  | 6.7  | 5.7  | 10.2 | 8.1  | 5.2  |
| Prop In Lane                 | 1.00 | 1.00 | 1.00 | 1.00  | 0.77 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Lane Grp Cap(c), veh/h       | 147  | 1093 | 509  | 157   | 1103 | 532  | 293  | 1064 | 474  | 329  | 1582 | 491  |
| V/C Ratio(X)                 | 0.65 | 0.51 | 1.00 | 1.04  | 0.29 | 0.30 | 0.79 | 0.27 | 0.23 | 0.97 | 0.32 | 0.21 |
| Avail Cap(c_a), veh/h        | 157  | 1093 | 509  | 157   | 1103 | 532  | 329  | 1064 | 474  | 329  | 1582 | 491  |
| HCM Platoon Ratio            | 1.00 | 1.00 | 1.00 | 1.00  | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(I)           | 1.00 | 1.00 | 1.00 | 1.00  | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Uniform Delay (d), s/veh     | 49.3 | 27.8 | 34.8 | 50.0  | 25.3 | 25.5 | 46.9 | 27.0 | 26.6 | 47.1 | 26.6 | 25.7 |
| Incr Delay (d2), s/veh       | 8.2  | 1.7  | 40.4 | 82.9  | 0.7  | 1.5  | 11.2 | 0.6  | 1.2  | 42.0 | 0.5  | 1.0  |
| Initial Q Delay(d3),s/veh    | 0.0  | 0.0  | 0.0  | 0.0   | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| %ile BackOfQ(50%),veh/ln     | 1.4  | 5.8  | 18.3 | 3.8   | 3.0  | 3.2  | 3.4  | 2.8  | 2.2  | 6.1  | 3.2  | 2.0  |
| Unsig. Movement Delay, s/veh |      |      |      |       |      |      |      |      |      |      |      |      |
| LnGrp Delay(d),s/veh         | 57.5 | 29.5 | 75.2 | 132.9 | 26.0 | 27.0 | 58.1 | 27.6 | 27.8 | 89.1 | 27.2 | 26.6 |
| LnGrp LOS                    | E    | C    | F    | F     | C    | C    | E    | C    | C    | F    | C    | C    |
| Approach Vol, veh/h          |      | 1160 |      |       | 642  |      |      | 633  |      |      | 925  |      |
| Approach Delay, s/veh        |      | 51.9 |      |       | 53.4 |      |      | 38.8 |      |      | 48.5 |      |
| Approach LOS                 |      | D    |      |       | D    |      |      | D    |      |      | D    |      |

| Timer - Assigned Phs         | 1    | 2     | 3   | 4    | 5    | 6     | 7   | 8    |
|------------------------------|------|-------|-----|------|------|-------|-----|------|
| Phs Duration (G+Y+Rc), s     | 15.0 | 39.1  | 9.5 | 41.4 | 13.8 | 40.3  | 9.2 | 41.7 |
| Change Period (Y+Rc), s      | 4.5  | * 6.1 | 4.5 | * 6  | 4.5  | * 6.1 | 4.5 | * 6  |
| Max Green Setting (Gmax), s  | 10.5 | * 33  | 5.0 | * 35 | 10.5 | * 33  | 5.0 | * 35 |
| Max Q Clear Time (g_c+I1), s | 12.2 | 8.7   | 7.0 | 37.4 | 9.3  | 10.1  | 5.0 | 10.0 |
| Green Ext Time (p_c), s      | 0.0  | 2.3   | 0.0 | 0.0  | 0.1  | 3.9   | 0.0 | 3.3  |

| Intersection Summary |      |
|----------------------|------|
| HCM 6th Ctrl Delay   | 48.8 |
| HCM 6th LOS          | D    |

Notes  
User approved pedestrian interval to be less than phase max green.  
\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Deer Valley 30  
1: 19th Ave & Happy Valley Rd

2024 Background PM  
HCM 6th Signalized Intersection Summary

| Movement                     | EBL  | EBT  | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL   | SBT  | SBR  |
|------------------------------|------|------|------|------|------|------|------|------|------|-------|------|------|
| Lane Configurations          | ↔    | ↔    | ↔    | ↔    | ↔    | ↔    | ↔    | ↔    | ↔    | ↔     | ↔    | ↔    |
| Traffic Volume (veh/h)       | 167  | 417  | 299  | 165  | 904  | 374  | 593  | 531  | 125  | 183   | 238  | 122  |
| Future Volume (veh/h)        | 167  | 417  | 299  | 165  | 904  | 374  | 593  | 531  | 125  | 183   | 238  | 122  |
| Initial Q (Ob), veh          | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0     | 0    | 0    |
| Ped-Bike Adj(A_pbT)          | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00  | 1.00 | 1.00 |
| Parking Bus, Adj             | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00  | 1.00 | 1.00 |
| Work Zone On Approach        | No   | No   | No   | No   | No   | No   | No   | No   | No   | No    | No   | No   |
| Adj Sat Flow, veh/h/ln       | 1781 | 1781 | 1781 | 1781 | 1781 | 1781 | 1781 | 1781 | 1781 | 1781  | 1781 | 1781 |
| Adj Flow Rate, veh/h         | 182  | 453  | 325  | 179  | 983  | 407  | 645  | 577  | 136  | 199   | 259  | 133  |
| Peak Hour Factor             | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92  | 0.92 | 0.92 |
| Percent Heavy Veh, %         | 8    | 8    | 8    | 8    | 8    | 8    | 8    | 8    | 8    | 8     | 8    | 8    |
| Cap, veh/h                   | 248  | 978  | 456  | 245  | 1015 | 420  | 674  | 1222 | 545  | 204   | 1061 | 329  |
| Arrive On Green              | 0.08 | 0.30 | 0.30 | 0.07 | 0.30 | 0.30 | 0.20 | 0.36 | 0.36 | 0.06  | 0.22 | 0.22 |
| Sat Flow, veh/h              | 3291 | 3242 | 1510 | 3291 | 3375 | 1397 | 3291 | 3385 | 1510 | 3291  | 4863 | 1510 |
| Grp Volume(v), veh/h         | 182  | 453  | 325  | 179  | 944  | 446  | 645  | 577  | 136  | 199   | 259  | 133  |
| Grp Sat Flow(s),veh/h/ln     | 1646 | 1621 | 1510 | 1646 | 1621 | 1530 | 1646 | 1692 | 1510 | 1646  | 1621 | 1510 |
| Q Serve(g_s), s              | 5.7  | 11.9 | 20.1 | 5.6  | 30.2 | 30.2 | 20.4 | 13.8 | 6.6  | 6.3   | 4.6  | 7.9  |
| Cycle Q Clear(g_c), s        | 5.7  | 11.9 | 20.1 | 5.6  | 30.2 | 30.2 | 20.4 | 13.8 | 6.6  | 6.3   | 4.6  | 7.9  |
| Prop In Lane                 | 1.00 | 1.00 | 1.00 | 1.00 | 0.91 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00  | 1.00 | 1.00 |
| Lane Grp Cap(c), veh/h       | 248  | 978  | 456  | 245  | 975  | 460  | 674  | 1222 | 545  | 204   | 1061 | 329  |
| V/C Ratio(X)                 | 0.73 | 0.46 | 0.71 | 0.73 | 0.97 | 0.97 | 0.96 | 0.47 | 0.25 | 0.98  | 0.24 | 0.40 |
| Avail Cap(c_a), veh/h        | 426  | 978  | 456  | 426  | 975  | 460  | 674  | 1222 | 545  | 204   | 1061 | 329  |
| HCM Platoon Ratio            | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00  | 1.00 | 1.00 |
| Upstream Filter(I)           | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00  | 1.00 | 1.00 |
| Uniform Delay (d), s/veh     | 47.5 | 29.8 | 32.6 | 47.6 | 36.2 | 36.2 | 41.3 | 25.8 | 23.6 | 49.2  | 33.9 | 35.2 |
| Incr Delay (d2), s/veh       | 4.2  | 1.6  | 9.2  | 4.2  | 22.1 | 34.8 | 24.5 | 1.3  | 1.1  | 56.1  | 0.5  | 3.7  |
| Initial Q Delay(d3),s/veh    | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0   | 0.0  | 0.0  |
| %ile BackOfQ(50%),veh/ln     | 2.5  | 4.8  | 8.4  | 2.4  | 14.7 | 15.5 | 10.4 | 5.7  | 2.5  | 4.2   | 1.9  | 3.2  |
| Unsig. Movement Delay, s/veh |      |      |      |      |      |      |      |      |      |       |      |      |
| LnGrp Delay(d),s/veh         | 51.7 | 31.3 | 41.8 | 51.7 | 58.3 | 71.0 | 65.8 | 27.2 | 24.7 | 105.3 | 34.5 | 38.9 |
| LnGrp LOS                    | D    | C    | D    | D    | E    | E    | E    | C    | C    | F     | C    | D    |
| Approach Vol, veh/h          |      | 960  |      |      | 1569 |      |      | 1358 |      |       | 591  |      |
| Approach Delay, s/veh        |      | 38.7 |      |      | 61.2 |      |      | 45.2 |      |       | 59.3 |      |
| Approach LOS                 |      | D    |      |      | E    |      |      | D    |      |       | E    |      |

| Timer - Assigned Phs         | 1    | 2     | 3    | 4    | 5    | 6     | 7    | 8    |
|------------------------------|------|-------|------|------|------|-------|------|------|
| Phs Duration (G+Y+Rc), s     | 11.0 | 44.0  | 12.3 | 37.7 | 26.0 | 29.0  | 12.4 | 37.6 |
| Change Period (Y+Rc), s      | 4.5  | * 6.1 | 4.5  | * 6  | 4.5  | * 6.1 | 4.5  | * 6  |
| Max Green Setting (Gmax), s  | 6.5  | * 38  | 13.6 | * 26 | 21.5 | * 23  | 13.6 | * 26 |
| Max Q Clear Time (g_c+I1), s | 8.3  | 15.8  | 7.6  | 22.1 | 22.4 | 9.9   | 7.7  | 32.2 |
| Green Ext Time (p_c), s      | 0.0  | 4.5   | 0.3  | 1.8  | 0.0  | 1.7   | 0.3  | 0.0  |

| Intersection Summary |      |
|----------------------|------|
| HCM 6th Ctrl Delay   | 51.3 |
| HCM 6th LOS          | D    |

Notes  
User approved pedestrian interval to be less than phase max green.  
\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Deer Valley 30  
2: 19th Ave & Optum Drwy

2024 Background AM  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh         | 0.1  |      |      |      |      |      |
| Movement                 | EBL  | EBR  | NBL  | NBT  | SBT  | SBR  |
| Lane Configurations      | W    |      | T    | T    | T    | T    |
| Traffic Vol, veh/h       | 0    | 4    | 7    | 583  | 1078 | 2    |
| Future Vol, veh/h        | 0    | 4    | 7    | 583  | 1078 | 2    |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Stop | Stop | Free | Free | Free | Free |
| RT Channelized           | -    | None | -    | None | -    | None |
| Storage Length           | 0    | -    | 50   | -    | -    | -    |
| Veh in Median Storage, # | 0    | -    | -    | 0    | 0    | -    |
| Grade, %                 | 0    | -    | -    | 0    | 0    | -    |
| Peak Hour Factor         | 92   | 92   | 92   | 92   | 92   | 92   |
| Heavy Vehicles, %        | 8    | 8    | 8    | 8    | 8    | 8    |
| Mvmt Flow                | 0    | 4    | 8    | 634  | 1172 | 2    |

| Major/Minor          | Minor2 | Major1 | Major2 |
|----------------------|--------|--------|--------|
| Conflicting Flow All | 1443   | 587    | 1174   |
| Stage 1              | 1173   | -      | -      |
| Stage 2              | 270    | -      | -      |
| Critical Hdwy        | 6.41   | 7.06   | 4.26   |
| Critical Hdwy Stg 1  | 5.96   | -      | -      |
| Critical Hdwy Stg 2  | 6.16   | -      | -      |
| Follow-up Hdwy       | 3.73   | 3.38   | 2.28   |
| Pot Cap-1 Maneuver   | 142    | 438    | 558    |
| Stage 1              | 239    | -      | -      |
| Stage 2              | 697    | -      | -      |
| Platoon blocked, %   | -      | -      | -      |
| Mov Cap-1 Maneuver   | 140    | 438    | 558    |
| Mov Cap-2 Maneuver   | 203    | -      | -      |
| Stage 1              | 236    | -      | -      |
| Stage 2              | 697    | -      | -      |

| Approach             | EB   | NB  | SB |
|----------------------|------|-----|----|
| HCM Control Delay, s | 13.3 | 0.1 | 0  |
| HCM LOS              | B    |     |    |

| Minor Lane/Major Mvmt | NBL   | NBT | EBLn1 | SBT | SBR |
|-----------------------|-------|-----|-------|-----|-----|
| Capacity (veh/h)      | 558   | -   | 438   | -   | -   |
| HCM Lane V/C Ratio    | 0.014 | -   | 0.01  | -   | -   |
| HCM Control Delay (s) | 11.5  | -   | 13.3  | -   | -   |
| HCM Lane LOS          | B     | -   | B     | -   | -   |
| HCM 95th %tile Q(veh) | 0     | -   | 0     | -   | -   |

Deer Valley 30  
2: 19th Ave & Optum Drwy

2024 Background PM  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh         | 0.1  |      |      |      |      |      |
| Movement                 | EBL  | EBR  | NBL  | NBT  | SBT  | SBR  |
| Lane Configurations      | W    |      | T    | T    | T    | T    |
| Traffic Vol, veh/h       | 0    | 4    | 7    | 1249 | 700  | 2    |
| Future Vol, veh/h        | 0    | 4    | 7    | 1249 | 700  | 2    |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Stop | Stop | Free | Free | Free | Free |
| RT Channelized           | -    | None | -    | None | -    | None |
| Storage Length           | 0    | -    | 50   | -    | -    | -    |
| Veh in Median Storage, # | 0    | -    | -    | 0    | 0    | -    |
| Grade, %                 | 0    | -    | -    | 0    | 0    | -    |
| Peak Hour Factor         | 92   | 92   | 92   | 92   | 92   | 92   |
| Heavy Vehicles, %        | 8    | 8    | 8    | 8    | 8    | 8    |
| Mvmt Flow                | 0    | 4    | 8    | 1358 | 761  | 2    |

| Major/Minor          | Minor2 | Major1 | Major2 |
|----------------------|--------|--------|--------|
| Conflicting Flow All | 1321   | 382    | 763    |
| Stage 1              | 762    | -      | -      |
| Stage 2              | 559    | -      | -      |
| Critical Hdwy        | 6.41   | 7.06   | 4.26   |
| Critical Hdwy Stg 1  | 5.96   | -      | -      |
| Critical Hdwy Stg 2  | 6.16   | -      | -      |
| Follow-up Hdwy       | 3.73   | 3.38   | 2.28   |
| Pot Cap-1 Maneuver   | 169    | 599    | 807    |
| Stage 1              | 395    | -      | -      |
| Stage 2              | 489    | -      | -      |
| Platoon blocked, %   | -      | -      | -      |
| Mov Cap-1 Maneuver   | 167    | 599    | 807    |
| Mov Cap-2 Maneuver   | 273    | -      | -      |
| Stage 1              | 391    | -      | -      |
| Stage 2              | 489    | -      | -      |

| Approach             | EB   | NB  | SB |
|----------------------|------|-----|----|
| HCM Control Delay, s | 11.1 | 0.1 | 0  |
| HCM LOS              | B    |     |    |

| Minor Lane/Major Mvmt | NBL   | NBT | EBLn1 | SBT | SBR |
|-----------------------|-------|-----|-------|-----|-----|
| Capacity (veh/h)      | 807   | -   | 599   | -   | -   |
| HCM Lane V/C Ratio    | 0.009 | -   | 0.007 | -   | -   |
| HCM Control Delay (s) | 9.5   | -   | 11.1  | -   | -   |
| HCM Lane LOS          | A     | -   | B     | -   | -   |
| HCM 95th %tile Q(veh) | 0     | -   | 0     | -   | -   |

Deer Valley 30  
3: 19th Ave & Patio Drwy/Parkview Ln

2024 Background AM  
HCM 6th TWSC

| Intersection             |        |        |        |        |       |       |      |      |      |      |      |      |
|--------------------------|--------|--------|--------|--------|-------|-------|------|------|------|------|------|------|
| Int Delay, s/veh         | 0.9    |        |        |        |       |       |      |      |      |      |      |      |
| Movement                 | EBL    | EBT    | EBR    | WBL    | WBT   | WBR   | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
| Lane Configurations      |        |        | ↗      |        | ↔     |       |      | ↖↗   |      | ↘    | ↖    |      |
| Traffic Vol, veh/h       | 0      | 0      | 6      | 26     | 0     | 13    | 1    | 576  | 41   | 26   | 1057 | 0    |
| Future Vol, veh/h        | 0      | 0      | 6      | 26     | 0     | 13    | 1    | 576  | 41   | 26   | 1057 | 0    |
| Conflicting Peds, #/hr   | 0      | 0      | 0      | 0      | 0     | 0     | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Stop   | Stop   | Stop   | Stop   | Stop  | Stop  | Free | Free | Free | Free | Free | Free |
| RT Channelized           | -      | -      | None   | -      | -     | None  | -    | -    | None | -    | -    | None |
| Storage Length           | -      | -      | 0      | -      | -     | -     | -    | -    | -    | 50   | -    | -    |
| Veh in Median Storage, # | -      | 0      | -      | -      | 0     | -     | -    | 0    | -    | -    | 0    | -    |
| Grade, %                 | -      | 0      | -      | -      | 0     | -     | -    | 0    | -    | -    | 0    | -    |
| Peak Hour Factor         | 92     | 92     | 92     | 92     | 92    | 92    | 92   | 92   | 92   | 92   | 92   | 92   |
| Heavy Vehicles, %        | 8      | 8      | 8      | 8      | 8     | 8     | 8    | 8    | 8    | 8    | 8    | 8    |
| Mvmt Flow                | 0      | 0      | 7      | 28     | 0     | 14    | 1    | 626  | 45   | 28   | 1149 | 0    |
| Major/Minor              | Minor2 | Minor1 | Major1 | Major2 |       |       |      |      |      |      |      |      |
| Conflicting Flow All     | -      | -      | 575    | 1282   | 1856  | 336   | 1149 | 0    | 0    | 671  | 0    | 0    |
| Stage 1                  | -      | -      | 651    | 651    | -     | -     | -    | -    | -    | -    | -    | -    |
| Stage 2                  | -      | -      | 631    | 1205   | -     | -     | -    | -    | -    | -    | -    | -    |
| Critical Hdwy            | -      | -      | 7.06   | 7.11   | 6.66  | 7.26  | 4.26 | -    | -    | 5.46 | -    | -    |
| Critical Hdwy Stg 1      | -      | -      | 7.46   | 5.66   | -     | -     | -    | -    | -    | -    | -    | -    |
| Critical Hdwy Stg 2      | -      | -      | 6.66   | 5.66   | -     | -     | -    | -    | -    | -    | -    | -    |
| Follow-up Hdwy           | -      | -      | 3.38   | 3.73   | 4.08  | 3.98  | 2.28 | -    | -    | 3.18 | -    | -    |
| Pot Cap-1 Maneuver       | 0      | 0      | 446    | 139    | 68    | 550   | 571  | -    | -    | 542  | -    | 0    |
| Stage 1                  | 0      | 0      | 344    | 448    | -     | -     | -    | -    | -    | -    | -    | 0    |
| Stage 2                  | 0      | 0      | 409    | 243    | -     | -     | -    | -    | -    | -    | -    | 0    |
| Platoon blocked, %       | -      | -      | -      | -      | -     | -     | -    | -    | -    | -    | -    | -    |
| Mov Cap-1 Maneuver       | -      | -      | 446    | 131    | 64    | 550   | 571  | -    | -    | 542  | -    | -    |
| Mov Cap-2 Maneuver       | -      | -      | 131    | 64     | -     | -     | -    | -    | -    | -    | -    | -    |
| Stage 1                  | -      | -      | 343    | 447    | -     | -     | -    | -    | -    | -    | -    | -    |
| Stage 2                  | -      | -      | 382    | 230    | -     | -     | -    | -    | -    | -    | -    | -    |
| Approach                 | EB     | WB     | NB     | SB     |       |       |      |      |      |      |      |      |
| HCM Control Delay, s     | 13.2   | 31.8   | 0      | 0.3    |       |       |      |      |      |      |      |      |
| HCM LOS                  | B      | D      |        |        |       |       |      |      |      |      |      |      |
| Minor Lane/Major Mvmt    | NBL    | NBT    | NBR    | EBLn1  | WBLn1 | SBL   | SBT  |      |      |      |      |      |
| Capacity (veh/h)         | 571    | -      | -      | 446    | 176   | 542   | -    |      |      |      |      |      |
| HCM Lane V/C Ratio       | 0.002  | -      | -      | 0.015  | 0.241 | 0.052 | -    |      |      |      |      |      |
| HCM Control Delay (s)    | 11.3   | -      | -      | 13.2   | 31.8  | 12    | -    |      |      |      |      |      |
| HCM Lane LOS             | B      | -      | -      | B      | D     | B     | -    |      |      |      |      |      |
| HCM 95th %tile Q(veh)    | 0      | -      | -      | 0      | 0.9   | 0.2   | -    |      |      |      |      |      |

Deer Valley 30  
3: 19th Ave & Patio Drwy/Parkview Ln

2024 Background PM  
HCM 6th TWSC

| Intersection             |        |        |        |        |       |       |      |      |      |      |      |      |
|--------------------------|--------|--------|--------|--------|-------|-------|------|------|------|------|------|------|
| Int Delay, s/veh         | 1.3    |        |        |        |       |       |      |      |      |      |      |      |
| Movement                 | EBL    | EBT    | EBR    | WBL    | WBT   | WBR   | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
| Lane Configurations      |        |        | ↗      |        | ↔     |       |      | ↖↗   |      | ↘    | ↖    |      |
| Traffic Vol, veh/h       | 0      | 0      | 6      | 26     | 0     | 13    | 1    | 896  | 41   | 26   | 679  | 0    |
| Future Vol, veh/h        | 0      | 0      | 6      | 26     | 0     | 13    | 1    | 896  | 41   | 26   | 679  | 0    |
| Conflicting Peds, #/hr   | 0      | 0      | 0      | 0      | 0     | 0     | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Stop   | Stop   | Stop   | Stop   | Stop  | Stop  | Free | Free | Free | Free | Free | Free |
| RT Channelized           | -      | -      | None   | -      | -     | None  | -    | -    | None | -    | -    | None |
| Storage Length           | -      | -      | 0      | -      | -     | -     | -    | -    | -    | 50   | -    | -    |
| Veh in Median Storage, # | -      | 0      | -      | -      | 0     | -     | -    | 0    | -    | -    | 0    | -    |
| Grade, %                 | -      | 0      | -      | -      | 0     | -     | -    | 0    | -    | -    | 0    | -    |
| Peak Hour Factor         | 92     | 92     | 92     | 92     | 92    | 92    | 92   | 92   | 92   | 92   | 92   | 92   |
| Heavy Vehicles, %        | 8      | 8      | 8      | 8      | 8     | 8     | 8    | 8    | 8    | 8    | 8    | 8    |
| Mvmt Flow                | 0      | 0      | 7      | 28     | 0     | 14    | 1    | 974  | 45   | 28   | 738  | 0    |
| Major/Minor              | Minor2 | Minor1 | Major1 | Major2 |       |       |      |      |      |      |      |      |
| Conflicting Flow All     | -      | -      | 369    | 1424   | 1793  | 510   | 738  | 0    | 0    | 1019 | 0    | 0    |
| Stage 1                  | -      | -      | 999    | 999    | -     | -     | -    | -    | -    | -    | -    | -    |
| Stage 2                  | -      | -      | 425    | 794    | -     | -     | -    | -    | -    | -    | -    | -    |
| Critical Hdwy            | -      | -      | 7.06   | 7.11   | 6.66  | 7.26  | 4.26 | -    | -    | 5.46 | -    | -    |
| Critical Hdwy Stg 1      | -      | -      | 7.46   | 5.66   | -     | -     | -    | -    | -    | -    | -    | -    |
| Critical Hdwy Stg 2      | -      | -      | 6.66   | 5.66   | -     | -     | -    | -    | -    | -    | -    | -    |
| Follow-up Hdwy           | -      | -      | 3.38   | 3.73   | 4.08  | 3.98  | 2.28 | -    | -    | 3.18 | -    | -    |
| Pot Cap-1 Maneuver       | 0      | 0      | 611    | 111    | 75    | 423   | 825  | -    | -    | 366  | -    | 0    |
| Stage 1                  | 0      | 0      | 195    | 306    | -     | -     | -    | -    | -    | -    | -    | 0    |
| Stage 2                  | 0      | 0      | 544    | 384    | -     | -     | -    | -    | -    | -    | -    | 0    |
| Platoon blocked, %       | -      | -      | -      | -      | -     | -     | -    | -    | -    | -    | -    | -    |
| Mov Cap-1 Maneuver       | -      | -      | 611    | 103    | 69    | 423   | 825  | -    | -    | 366  | -    | -    |
| Mov Cap-2 Maneuver       | -      | -      | 103    | 69     | -     | -     | -    | -    | -    | -    | -    | -    |
| Stage 1                  | -      | -      | 194    | 305    | -     | -     | -    | -    | -    | -    | -    | -    |
| Stage 2                  | -      | -      | 497    | 354    | -     | -     | -    | -    | -    | -    | -    | -    |
| Approach                 | EB     | WB     | NB     | SB     |       |       |      |      |      |      |      |      |
| HCM Control Delay, s     | 11     | 42.3   | 0      | 0.6    |       |       |      |      |      |      |      |      |
| HCM LOS                  | B      | E      |        |        |       |       |      |      |      |      |      |      |
| Minor Lane/Major Mvmt    | NBL    | NBT    | NBR    | EBLn1  | WBLn1 | SBL   | SBT  |      |      |      |      |      |
| Capacity (veh/h)         | 825    | -      | -      | 611    | 138   | 366   | -    |      |      |      |      |      |
| HCM Lane V/C Ratio       | 0.001  | -      | -      | 0.011  | 0.307 | 0.077 | -    |      |      |      |      |      |
| HCM Control Delay (s)    | 9.4    | -      | -      | 11     | 42.3  | 15.7  | -    |      |      |      |      |      |
| HCM Lane LOS             | A      | -      | -      | B      | E     | C     | -    |      |      |      |      |      |
| HCM 95th %tile Q(veh)    | 0      | -      | -      | 0      | 1.2   | 0.2   | -    |      |      |      |      |      |

Deer Valley 30  
4: Alameda Rd & 19th Ave

2024 Background AM  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Int Delay, s/veh         | 4    |      |      |      |      |      |      |      |      |      |      |      |
| Movement                 | EBL  | EBT  | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
| Lane Configurations      | ↔    |      | ↔    |      | ↔    |      | ↔    |      | ↔    |      | ↔    |      |
| Traffic Vol, veh/h       | 9    | 0    | 56   | 31   | 0    | 25   | 18   | 593  | 155  | 123  | 951  | 14   |
| Future Vol, veh/h        | 9    | 0    | 56   | 31   | 0    | 25   | 18   | 593  | 155  | 123  | 951  | 14   |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Stop | Stop | Stop | Stop | Stop | Stop | Free | Free | Free | Free | Free | Free |
| RT Channelized           | -    | -    | None | -    | -    | None | -    | -    | None | -    | -    | None |
| Storage Length           | 0    | -    | -    | 150  | -    | -    | 150  | -    | -    | 0    | -    | -    |
| Veh in Median Storage, # | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Grade, %                 | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Peak Hour Factor         | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   |
| Heavy Vehicles, %        | 8    | 8    | 8    | 8    | 8    | 8    | 8    | 8    | 8    | 8    | 8    | 8    |
| Mvmt Flow                | 10   | 0    | 61   | 34   | 0    | 27   | 20   | 645  | 168  | 134  | 1034 | 15   |

| Major/Minor          | Minor2 | Minor1 | Major1 | Major2 |      |      |      |   |   |      |   |   |  |  |
|----------------------|--------|--------|--------|--------|------|------|------|---|---|------|---|---|--|--|
| Conflicting Flow All | 1608   | 2163   | 525    | 1554   | 2086 | 407  | 1049 | 0 | 0 | 813  | 0 | 0 |  |  |
| Stage 1              | 1310   | 1310   | -      | 769    | 769  | -    | -    | - | - | -    | - | - |  |  |
| Stage 2              | 298    | 853    | -      | 785    | 1317 | -    | -    | - | - | -    | - | - |  |  |
| Critical Hdwy        | 7.11   | 6.66   | 7.06   | 7.11   | 6.66 | 7.26 | 4.26 | - | - | 5.46 | - | - |  |  |
| Critical Hdwy Stg 1  | 6.66   | 5.66   | -      | 7.46   | 5.66 | -    | -    | - | - | -    | - | - |  |  |
| Critical Hdwy Stg 2  | 6.86   | 5.66   | -      | 6.66   | 5.66 | -    | -    | - | - | -    | - | - |  |  |
| Follow-up Hdwy       | 3.73   | 4.08   | 3.38   | 3.73   | 4.08 | 3.98 | 2.28 | - | - | 3.18 | - | - |  |  |
| Pot Cap-1 Maneuver   | 83     | 43     | 482    | 90     | 49   | 494  | 625  | - | - | 462  | - | - |  |  |
| Stage 1              | 156    | 216    | -      | 285    | 395  | -    | -    | - | - | -    | - | - |  |  |
| Stage 2              | 636    | 360    | -      | 330    | 214  | -    | -    | - | - | -    | - | - |  |  |
| Platoon blocked, %   | -      | -      | -      | -      | -    | -    | -    | - | - | -    | - | - |  |  |
| Mov Cap-1 Maneuver   | 59     | 30     | 482    | 60     | 34   | 494  | 625  | - | - | 462  | - | - |  |  |
| Mov Cap-2 Maneuver   | 59     | 30     | -      | 60     | 34   | -    | -    | - | - | -    | - | - |  |  |
| Stage 1              | 151    | 153    | -      | 276    | 382  | -    | -    | - | - | -    | - | - |  |  |
| Stage 2              | 582    | 348    | -      | 205    | 152  | -    | -    | - | - | -    | - | - |  |  |

| Approach             | EB   | WB   | NB  | SB  |
|----------------------|------|------|-----|-----|
| HCM Control Delay, s | 22.4 | 74.4 | 0.3 | 1.8 |
| HCM LOS              | C    | F    |     |     |

| Minor Lane/Major Mvmt | NBL   | NBT | NBR | EBLn1 | EBLn2 | WBLn1 | WBLn2 | SBL   | SBT | SBR |
|-----------------------|-------|-----|-----|-------|-------|-------|-------|-------|-----|-----|
| Capacity (veh/h)      | 625   | -   | -   | 59    | 482   | 60    | 494   | 462   | -   | -   |
| HCM Lane V/C Ratio    | 0.031 | -   | -   | 0.166 | 0.126 | 0.562 | 0.055 | 0.289 | -   | -   |
| HCM Control Delay (s) | 10.9  | -   | -   | 77.8  | 13.5  | 124.1 | 12.7  | 15.9  | -   | -   |
| HCM Lane LOS          | B     | -   | -   | F     | B     | F     | B     | C     | -   | -   |
| HCM 95th %tile Q(veh) | 0.1   | -   | -   | 0.5   | 0.4   | 2.3   | 0.2   | 1.2   | -   | -   |

Deer Valley 30  
4: Alameda Rd & 19th Ave

2024 Background PM  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Int Delay, s/veh         | 97.9 |      |      |      |      |      |      |      |      |      |      |      |
| Movement                 | EBL  | EBT  | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
| Lane Configurations      | ↔    |      | ↔    |      | ↔    |      | ↔    |      | ↔    |      | ↔    |      |
| Traffic Vol, veh/h       | 14   | 0    | 62   | 150  | 0    | 119  | 85   | 1106 | 35   | 28   | 667  | 16   |
| Future Vol, veh/h        | 14   | 0    | 62   | 150  | 0    | 119  | 85   | 1106 | 35   | 28   | 667  | 16   |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Stop | Stop | Stop | Stop | Stop | Stop | Free | Free | Free | Free | Free | Free |
| RT Channelized           | -    | -    | None | -    | -    | None | -    | -    | None | -    | -    | None |
| Storage Length           | 0    | -    | -    | 150  | -    | -    | 150  | -    | -    | 0    | -    | -    |
| Veh in Median Storage, # | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Grade, %                 | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Peak Hour Factor         | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   |
| Heavy Vehicles, %        | 8    | 8    | 8    | 8    | 8    | 8    | 8    | 8    | 8    | 8    | 8    | 8    |
| Mvmt Flow                | 15   | 0    | 67   | 163  | 0    | 129  | 92   | 1202 | 38   | 30   | 725  | 17   |

| Major/Minor          | Minor2 | Minor1 | Major1 | Major2 |      |      |      |     |   |      |     |   |  |  |
|----------------------|--------|--------|--------|--------|------|------|------|-----|---|------|-----|---|--|--|
| Conflicting Flow All | 1459   | 2218   | 371    | 1828   | 2207 | 620  | 742  | 0   | 0 | 1240 | 0   | 0 |  |  |
| Stage 1              | 794    | 794    | -      | 1405   | 1405 | -    | -    | -   | - | -    | -   | - |  |  |
| Stage 2              | 665    | 1424   | -      | 423    | 802  | -    | -    | -   | - | -    | -   | - |  |  |
| Critical Hdwy        | 7.11   | 6.66   | 7.06   | 7.11   | 6.66 | 7.26 | 4.26 | -   | - | 5.46 | -   | - |  |  |
| Critical Hdwy Stg 1  | 6.66   | 5.66   | -      | 7.46   | 5.66 | -    | -    | -   | - | -    | -   | - |  |  |
| Critical Hdwy Stg 2  | 6.86   | 5.66   | -      | 6.66   | 5.66 | -    | -    | -   | - | -    | -   | - |  |  |
| Follow-up Hdwy       | 3.73   | 4.08   | 3.38   | 3.73   | 4.08 | 3.98 | 2.28 | -   | - | 3.18 | -   | - |  |  |
| Pot Cap-1 Maneuver   | 105    | 40     | 609    | -      | 58   | 41   | 358  | 822 | - | -    | 284 | - |  |  |
| Stage 1              | 326    | 384    | -      | 100    | 194  | -    | -    | -   | - | -    | -   | - |  |  |
| Stage 2              | 376    | 190    | -      | 545    | 381  | -    | -    | -   | - | -    | -   | - |  |  |
| Platoon blocked, %   | -      | -      | -      | -      | -    | -    | -    | -   | - | -    | -   | - |  |  |
| Mov Cap-1 Maneuver   | 56     | 32     | 609    | -      | 43   | 33   | 358  | 822 | - | -    | 284 | - |  |  |
| Mov Cap-2 Maneuver   | 56     | 32     | -      | 43     | 33   | -    | -    | -   | - | -    | -   | - |  |  |
| Stage 1              | 289    | 343    | -      | 89     | 172  | -    | -    | -   | - | -    | -   | - |  |  |
| Stage 2              | 213    | 169    | -      | 433    | 341  | -    | -    | -   | - | -    | -   | - |  |  |

| Approach             | EB   | WB       | NB  | SB  |
|----------------------|------|----------|-----|-----|
| HCM Control Delay, s | 26.4 | \$ 817.6 | 0.7 | 0.8 |
| HCM LOS              | D    | F        |     |     |

| Minor Lane/Major Mvmt | NBL   | NBT | NBR | EBLn1 | EBLn2 | WBLn1  | WBLn2 | SBL   | SBT | SBR |
|-----------------------|-------|-----|-----|-------|-------|--------|-------|-------|-----|-----|
| Capacity (veh/h)      | 822   | -   | -   | 56    | 609   | 43     | 358   | 284   | -   | -   |
| HCM Lane V/C Ratio    | 0.112 | -   | -   | 0.272 | 0.111 | 3.792  | 0.361 | 0.107 | -   | -   |
| HCM Control Delay (s) | 9.9   | -   | -   | 91.7  | 11.8  | 1449.9 | 20.6  | 19.2  | -   | -   |
| HCM Lane LOS          | A     | -   | -   | F     | B     | F      | C     | C     | -   | -   |
| HCM 95th %tile Q(veh) | 0.4   | -   | -   | 0.9   | 0.4   | 18.3   | 1.6   | 0.4   | -   | -   |

Notes  
 -: Volume exceeds capacity    \$: Delay exceeds 300s    +: Computation Not Defined    \*: All major volume in platoon

Deer Valley 30  
5: 19th Ave & Sarah Bass PI

2024 Background AM  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh         | 0.6  |      |      |      |      |      |
| Movement                 | EBL  | EBR  | NBL  | NBT  | SBT  | SBR  |
| Lane Configurations      | ↔    | ↔    | ↔    | ↔↔   | ↔↔   | ↔↔   |
| Traffic Vol, veh/h       | 13   | 36   | 27   | 786  | 837  | 9    |
| Future Vol, veh/h        | 13   | 36   | 27   | 786  | 837  | 9    |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Stop | Stop | Free | Free | Free | Free |
| RT Channelized           | -    | None | -    | None | -    | None |
| Storage Length           | 0    | 0    | 150  | -    | -    | -    |
| Veh in Median Storage, # | 0    | -    | -    | 0    | 0    | -    |
| Grade, %                 | 0    | -    | -    | 0    | 0    | -    |
| Peak Hour Factor         | 92   | 92   | 92   | 92   | 92   | 92   |
| Heavy Vehicles, %        | 8    | 8    | 8    | 8    | 8    | 8    |
| Mvmt Flow                | 14   | 39   | 29   | 854  | 910  | 10   |

| Major/Minor          | Minor2 | Major1 | Major2 |
|----------------------|--------|--------|--------|
| Conflicting Flow All | 1315   | 460    | 920    |
| Stage 1              | 915    | -      | -      |
| Stage 2              | 400    | -      | -      |
| Critical Hdwy        | 6.41   | 7.06   | 4.26   |
| Critical Hdwy Stg 1  | 5.96   | -      | -      |
| Critical Hdwy Stg 2  | 6.16   | -      | -      |
| Follow-up Hdwy       | 3.73   | 3.38   | 2.28   |
| Pot Cap-1 Maneuver   | 170    | 532    | 701    |
| Stage 1              | 328    | -      | -      |
| Stage 2              | 595    | -      | -      |
| Platoon blocked, %   | -      | -      | -      |
| Mov Cap-1 Maneuver   | 163    | 532    | 701    |
| Mov Cap-2 Maneuver   | 251    | -      | -      |
| Stage 1              | 315    | -      | -      |
| Stage 2              | 595    | -      | -      |

| Approach             | EB   | NB  | SB |
|----------------------|------|-----|----|
| HCM Control Delay, s | 14.4 | 0.3 | 0  |
| HCM LOS              | B    |     |    |

| Minor Lane/Major Mvmt | NBL   | NBT | EBLn1 | EBLn2 | SBT | SBR |
|-----------------------|-------|-----|-------|-------|-----|-----|
| Capacity (veh/h)      | 701   | -   | 251   | 532   | -   | -   |
| HCM Lane V/C Ratio    | 0.042 | -   | 0.056 | 0.074 | -   | -   |
| HCM Control Delay (s) | 10.4  | -   | 20.2  | 12.3  | -   | -   |
| HCM Lane LOS          | B     | -   | C     | B     | -   | -   |
| HCM 95th %tile Q(veh) | 0.1   | -   | 0.2   | 0.2   | -   | -   |

Deer Valley 30  
5: 19th Ave & Sarah Bass PI

2024 Background PM  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh         | 0.5  |      |      |      |      |      |
| Movement                 | EBL  | EBR  | NBL  | NBT  | SBT  | SBR  |
| Lane Configurations      | ↔    | ↔    | ↔    | ↔↔   | ↔↔   | ↔↔   |
| Traffic Vol, veh/h       | 16   | 37   | 10   | 1024 | 901  | 6    |
| Future Vol, veh/h        | 16   | 37   | 10   | 1024 | 901  | 6    |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Stop | Stop | Free | Free | Free | Free |
| RT Channelized           | -    | None | -    | None | -    | None |
| Storage Length           | 0    | 0    | 150  | -    | -    | -    |
| Veh in Median Storage, # | 0    | -    | -    | 0    | 0    | -    |
| Grade, %                 | 0    | -    | -    | 0    | 0    | -    |
| Peak Hour Factor         | 92   | 92   | 92   | 92   | 92   | 92   |
| Heavy Vehicles, %        | 8    | 8    | 8    | 8    | 8    | 8    |
| Mvmt Flow                | 17   | 40   | 11   | 1113 | 979  | 7    |

| Major/Minor          | Minor2 | Major1 | Major2 |
|----------------------|--------|--------|--------|
| Conflicting Flow All | 1450   | 493    | 986    |
| Stage 1              | 983    | -      | -      |
| Stage 2              | 467    | -      | -      |
| Critical Hdwy        | 6.41   | 7.06   | 4.26   |
| Critical Hdwy Stg 1  | 5.96   | -      | -      |
| Critical Hdwy Stg 2  | 6.16   | -      | -      |
| Follow-up Hdwy       | 3.73   | 3.38   | 2.28   |
| Pot Cap-1 Maneuver   | 141    | 506    | 661    |
| Stage 1              | 302    | -      | -      |
| Stage 2              | 548    | -      | -      |
| Platoon blocked, %   | -      | -      | -      |
| Mov Cap-1 Maneuver   | 139    | 506    | 661    |
| Mov Cap-2 Maneuver   | 231    | -      | -      |
| Stage 1              | 297    | -      | -      |
| Stage 2              | 548    | -      | -      |

| Approach             | EB   | NB  | SB |
|----------------------|------|-----|----|
| HCM Control Delay, s | 15.4 | 0.1 | 0  |
| HCM LOS              | C    |     |    |

| Minor Lane/Major Mvmt | NBL   | NBT | EBLn1 | EBLn2 | SBT | SBR |
|-----------------------|-------|-----|-------|-------|-----|-----|
| Capacity (veh/h)      | 661   | -   | 231   | 506   | -   | -   |
| HCM Lane V/C Ratio    | 0.016 | -   | 0.075 | 0.079 | -   | -   |
| HCM Control Delay (s) | 10.5  | -   | 21.8  | 12.7  | -   | -   |
| HCM Lane LOS          | B     | -   | C     | B     | -   | -   |
| HCM 95th %tile Q(veh) | 0.1   | -   | 0.2   | 0.3   | -   | -   |

Deer Valley 30  
6: Pinnacle Peak Rd & 19th Ave

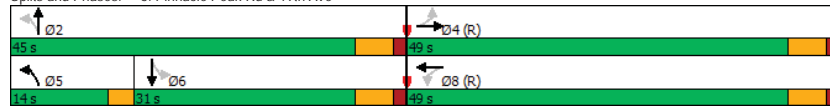
2024 Background AM  
Timings

| Lane Group           | EBL   | EBT   | WBL   | WBT   | NBL   | NBT   | SBL   | SBT   |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations  | ↔     | ↕↔    | ↔     | ↕↔    | ↔     | ↕↔    | ↔     | ↕↔    |
| Traffic Volume (vph) | 363   | 856   | 69    | 256   | 169   | 489   | 142   | 659   |
| Future Volume (vph)  | 363   | 856   | 69    | 256   | 169   | 489   | 142   | 659   |
| Turn Type            | Perm  | NA    | Perm  | NA    | pm+pt | NA    | Perm  | NA    |
| Protected Phases     |       | 4     |       | 8     | 5     | 2     |       | 6     |
| Permitted Phases     | 4     |       | 8     |       | 2     |       | 6     |       |
| Detector Phase       | 4     | 4     | 8     | 8     | 5     | 2     | 6     | 6     |
| Switch Phase         |       |       |       |       |       |       |       |       |
| Minimum Initial (s)  | 15.0  | 15.0  | 15.0  | 15.0  | 5.0   | 15.0  | 15.0  | 15.0  |
| Minimum Split (s)    | 34.6  | 34.6  | 34.6  | 34.6  | 9.5   | 30.8  | 30.8  | 30.8  |
| Total Split (s)      | 49.0  | 49.0  | 49.0  | 49.0  | 14.0  | 45.0  | 31.0  | 31.0  |
| Total Split (%)      | 52.1% | 52.1% | 52.1% | 52.1% | 14.9% | 47.9% | 33.0% | 33.0% |
| Yellow Time (s)      | 4.3   | 4.3   | 4.3   | 4.3   | 3.0   | 4.3   | 4.3   | 4.3   |
| All-Red Time (s)     | 1.3   | 1.3   | 1.3   | 1.3   | 0.0   | 1.5   | 1.5   | 1.5   |
| Lost Time Adjust (s) | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Lost Time (s)  | 5.6   | 5.6   | 5.6   | 5.6   | 3.0   | 5.8   | 5.8   | 5.8   |
| Lead/Lag             |       |       |       |       | Lead  |       | Lag   | Lag   |
| Lead-Lag Optimize?   |       |       |       |       | Yes   |       | Yes   | Yes   |
| Recall Mode          | C-Max | C-Max | C-Max | C-Max | None  | Max   | Max   | Max   |
| Act Effct Green (s)  | 43.4  | 43.4  | 43.4  | 43.4  | 42.0  | 39.2  | 25.9  | 25.9  |
| Actuated g/C Ratio   | 0.46  | 0.46  | 0.46  | 0.46  | 0.45  | 0.42  | 0.28  | 0.28  |
| v/c Ratio            | 1.07  | 0.83  | 0.96  | 0.30  | 0.70  | 0.36  | 0.86  | 0.92  |
| Control Delay        | 94.4  | 26.8  | 124.0 | 9.6   | 32.3  | 17.3  | 74.6  | 49.0  |
| Queue Delay          | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Delay          | 94.4  | 26.8  | 124.0 | 9.6   | 32.3  | 17.3  | 74.6  | 49.0  |
| LOS                  | F     | C     | F     | A     | C     | B     | E     | D     |
| Approach Delay       |       | 42.9  |       | 25.3  |       | 20.4  |       | 53.0  |
| Approach LOS         |       | D     |       | C     |       | C     |       | D     |

Intersection Summary

Cycle Length: 94  
 Actuated Cycle Length: 94  
 Offset: 31 (33%), Referenced to phase 4:EBTL and 8:WBTL, Start of Green  
 Natural Cycle: 90  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 1.07  
 Intersection Signal Delay: 38.1  
 Intersection Capacity Utilization 94.8%  
 Intersection LOS: D  
 ICU Level of Service F  
 Analysis Period (min) 15

Splits and Phases: 6: Pinnacle Peak Rd & 19th Ave



Deer Valley 30  
6: Pinnacle Peak Rd & 19th Ave

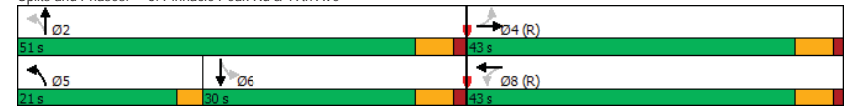
2024 Background PM  
Timings

| Lane Group           | EBL   | EBT   | WBL   | WBT   | NBL   | NBT   | SBL   | SBT   |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations  | ↔     | ↕↔    | ↔     | ↕↔    | ↔     | ↕↔    | ↔     | ↕↔    |
| Traffic Volume (vph) | 142   | 229   | 119   | 766   | 408   | 817   | 165   | 622   |
| Future Volume (vph)  | 142   | 229   | 119   | 766   | 408   | 817   | 165   | 622   |
| Turn Type            | Perm  | NA    | Perm  | NA    | pm+pt | NA    | Perm  | NA    |
| Protected Phases     |       | 4     |       | 8     | 5     | 2     |       | 6     |
| Permitted Phases     | 4     |       | 8     |       | 2     |       | 6     |       |
| Detector Phase       | 4     | 4     | 8     | 8     | 5     | 2     | 6     | 6     |
| Switch Phase         |       |       |       |       |       |       |       |       |
| Minimum Initial (s)  | 15.0  | 15.0  | 15.0  | 15.0  | 5.0   | 15.0  | 15.0  | 15.0  |
| Minimum Split (s)    | 34.6  | 34.6  | 34.6  | 34.6  | 9.5   | 30.8  | 30.8  | 30.8  |
| Total Split (s)      | 43.0  | 43.0  | 43.0  | 43.0  | 21.0  | 51.0  | 30.0  | 30.0  |
| Total Split (%)      | 45.7% | 45.7% | 45.7% | 45.7% | 22.3% | 54.3% | 31.9% | 31.9% |
| Yellow Time (s)      | 4.3   | 4.3   | 4.3   | 4.3   | 3.0   | 4.3   | 4.3   | 4.3   |
| All-Red Time (s)     | 1.3   | 1.3   | 1.3   | 1.3   | 0.0   | 1.5   | 1.5   | 1.5   |
| Lost Time Adjust (s) | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Lost Time (s)  | 5.6   | 5.6   | 5.6   | 5.6   | 3.0   | 5.8   | 5.8   | 5.8   |
| Lead/Lag             |       |       |       |       | Lead  |       | Lag   | Lag   |
| Lead-Lag Optimize?   |       |       |       |       | Yes   |       | Yes   | Yes   |
| Recall Mode          | C-Max | C-Max | C-Max | C-Max | None  | Max   | Max   | Max   |
| Act Effct Green (s)  | 37.4  | 37.4  | 37.4  | 37.4  | 48.0  | 45.2  | 24.2  | 24.2  |
| Actuated g/C Ratio   | 0.40  | 0.40  | 0.40  | 0.40  | 0.51  | 0.48  | 0.26  | 0.26  |
| v/c Ratio            | 1.35  | 0.37  | 0.45  | 0.74  | 1.10  | 0.41  | 1.35  | 1.23  |
| Control Delay        | 233.1 | 10.0  | 27.3  | 27.6  | 100.9 | 16.2  | 228.9 | 143.0 |
| Queue Delay          | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Delay          | 233.1 | 10.0  | 27.3  | 27.6  | 100.9 | 16.2  | 228.9 | 143.0 |
| LOS                  | F     | B     | C     | C     | F     | B     | F     | F     |
| Approach Delay       |       | 61.3  |       | 27.5  |       | 43.5  |       | 155.3 |
| Approach LOS         |       | E     |       | C     |       | D     |       | F     |

Intersection Summary

Cycle Length: 94  
 Actuated Cycle Length: 94  
 Offset: 31 (33%), Referenced to phase 4:EBTL and 8:WBTL, Start of Green  
 Natural Cycle: 90  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 1.35  
 Intersection Signal Delay: 74.0  
 Intersection Capacity Utilization 106.4%  
 Intersection LOS: E  
 ICU Level of Service G  
 Analysis Period (min) 15

Splits and Phases: 6: Pinnacle Peak Rd & 19th Ave



Deer Valley 30  
6: Pinnacle Peak Rd & 19th Ave

2024 Background AM  
HCM 6th Signalized Intersection Summary

| Movement   | EBL  | EBT  | EBR  | WBL   | WBT  | WBR  | NBL  | NBT   | NBR  | SBL  | SBT  | SBR  |
|--|------|------|------|-------|------|------|------|-------|------|------|------|------|
| Lane Configurations  | ↔    | ↕    | ↔    | ↔     | ↕    | ↔    | ↔    | ↕     | ↔    | ↔    | ↕    | ↔    |
| Traffic Volume (veh/h)   | 363  | 856  | 309  | 69    | 256  | 177  | 169  | 489   | 165  | 142  | 659  | 114  |
| Future Volume (veh/h)  | 363  | 856  | 309  | 69    | 256  | 177  | 169  | 489   | 165  | 142  | 659  | 114  |
| Initial Q (Ob), veh  | 0    | 0    | 0    | 0     | 0    | 0    | 0    | 0     | 0    | 0    | 0    | 0    |
| Ped-Bike Adj(A_pbT)  | 1.00 |      | 1.00 | 1.00  |      | 1.00 | 1.00 |       | 1.00 | 1.00 |      | 1.00 |
| Parking Bus, Adj   | 1.00 | 1.00 | 1.00 | 1.00  | 1.00 | 1.00 | 1.00 | 1.00  | 1.00 | 1.00 | 1.00 | 1.00 |
| Work Zone On Approach  | No   |      | No   |       | No   |      | No   |       | No   |      | No   |      |
| Adj Sat Flow, veh/h/ln   | 1781 | 1781 | 1781 | 1781  | 1781 | 1781 | 1781 | 1781  | 1781 | 1781 | 1781 | 1781 |
| Adj Flow Rate, veh/h   | 395  | 930  | 336  | 75    | 278  | 192  | 184  | 532   | 179  | 154  | 716  | 124  |
| Peak Hour Factor   | 0.92 | 0.92 | 0.92 | 0.92  | 0.92 | 0.92 | 0.92 | 0.92  | 0.92 | 0.92 | 0.92 | 0.92 |
| Percent Heavy Veh, %   | 8    | 8    | 8    | 8     | 8    | 8    | 8    | 8     | 8    | 8    | 8    | 8    |
| Cap, veh/h   | 401  | 1126 | 405  | 130   | 896  | 600  | 271  | 1512  | 494  | 281  | 840  | 145  |
| Arrive On Green  | 0.46 | 0.46 | 0.46 | 0.46  | 0.46 | 0.46 | 0.09 | 0.42  | 0.42 | 0.29 | 0.29 | 0.29 |
| Sat Flow, veh/h  | 879  | 2440 | 876  | 417   | 1941 | 1299 | 1697 | 3625  | 1185 | 703  | 2885 | 499  |
| Grp Volume(v), veh/h   | 395  | 644  | 622  | 75    | 241  | 229  | 184  | 474   | 237  | 154  | 420  | 420  |
| Grp Sat Flow(s), veh/h/ln  | 879  | 1692 | 1624 | 417   | 1692 | 1548 | 1697 | 1621  | 1568 | 703  | 1692 | 1692 |
| Q Serve(g_s), s  | 34.6 | 31.0 | 31.5 | 11.9  | 8.4  | 8.8  | 6.8  | 9.4   | 9.7  | 18.7 | 22.0 | 22.0 |
| Cycle Q Clear(g_c), s  | 43.4 | 31.0 | 31.5 | 43.4  | 8.4  | 8.8  | 6.8  | 9.4   | 9.7  | 18.7 | 22.0 | 22.0 |
| Prop In Lane   | 1.00 |      | 0.54 | 1.00  |      | 0.84 | 1.00 |       | 0.76 | 1.00 |      | 0.30 |
| Lane Grp Cap(c), veh/h   | 401  | 781  | 750  | 130   | 781  | 715  | 271  | 1352  | 654  | 281  | 493  | 493  |
| V/C Ratio(X)   | 0.99 | 0.82 | 0.83 | 0.58  | 0.31 | 0.32 | 0.68 | 0.35  | 0.36 | 0.55 | 0.85 | 0.85 |
| Avail Cap(c_a), veh/h  | 401  | 781  | 750  | 130   | 781  | 715  | 311  | 1352  | 654  | 281  | 493  | 493  |
| HCM Platoon Ratio  | 1.00 | 1.00 | 1.00 | 1.00  | 1.00 | 1.00 | 1.00 | 1.00  | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(I)   | 1.00 | 1.00 | 1.00 | 1.00  | 1.00 | 1.00 | 1.00 | 1.00  | 1.00 | 1.00 | 1.00 | 1.00 |
| Uniform Delay (d), s/veh   | 32.8 | 22.0 | 22.1 | 42.8  | 15.9 | 16.0 | 22.6 | 18.7  | 18.8 | 30.2 | 31.4 | 31.4 |
| Incr Delay (d2), s/veh   | 41.7 | 9.6  | 10.3 | 17.5  | 1.0  | 1.2  | 4.9  | 0.7   | 1.6  | 7.5  | 16.8 | 16.9 |
| Initial Q Delay(d3), s/veh   | 0.0  | 0.0  | 0.0  | 0.0   | 0.0  | 0.0  | 0.0  | 0.0   | 0.0  | 0.0  | 0.0  | 0.0  |
| %ile BackOfQ(50%), veh/ln  | 13.8 | 13.7 | 13.4 | 2.4   | 3.4  | 3.2  | 3.0  | 3.6   | 3.7  | 3.7  | 11.0 | 11.0 |
| Unsig. Movement Delay, s/veh   |      |      |      |       |      |      |      |       |      |      |      |      |
| LnGrp Delay(d), s/veh  | 74.5 | 31.6 | 32.4 | 60.3  | 16.9 | 17.2 | 27.5 | 19.4  | 20.4 | 37.7 | 48.2 | 48.3 |
| LnGrp LOS  | E    | C    | C    | E     | B    | B    | C    | B     | C    | D    | D    | D    |
| Approach Vol, veh/h  |      | 1661 |      |       | 545  |      |      | 895   |      |      | 994  |      |
| Approach Delay, s/veh  |      | 42.1 |      |       | 23.0 |      |      | 21.3  |      |      | 46.6 |      |
| Approach LOS   |      | D    |      |       | C    |      |      | C     |      |      | D    |      |
| Timer - Assigned Phs   |      | 2    |      | 4     | 5    | 6    |      | 8     |      |      |      |      |
| Phs Duration (G+Y+Rc), s   |      | 45.0 |      | 49.0  | 11.8 | 33.2 |      | 49.0  |      |      | 43.0 |      |
| Change Period (Y+Rc), s  |      | 5.8  |      | * 5.6 | 3.0  | 5.8  |      | * 5.6 |      |      | 5.8  |      |
| Max Green Setting (Gmax), s  |      | 39.2 |      | * 43  | 11.0 | 25.2 |      | * 43  |      |      | 37   |      |
| Max Q Clear Time (g_c+I1), s   |      | 11.7 |      | 45.4  | 8.8  | 24.0 |      | 45.4  |      |      | 26.6 |      |
| Green Ext Time (p_c), s  |      | 5.2  |      | 0.0   | 0.1  | 0.8  |      | 0.0   |      |      | 5.3  |      |
| Intersection Summary   |      |      |      |       |      |      |      |       |      |      |      |      |
| HCM 6th Ctrl Delay   | 36.1 |      |      |       |      |      |      |       |      |      |      |      |
| HCM 6th LOS  | D    |      |      |       |      |      |      |       |      |      |      |      |
| Notes  |      |      |      |       |      |      |      |       |      |      |      |      |
| * HCM 6th computational engine requires equal clearance times for the phases crossing the barrier. |      |      |      |       |      |      |      |       |      |      |      |      |

Deer Valley 30  
6: Pinnacle Peak Rd & 19th Ave

2024 Background PM  
HCM 6th Signalized Intersection Summary

| Movement   | EBL  | EBT  | EBR  | WBL   | WBT  | WBR  | NBL   | NBT   | NBR  | SBL  | SBT   | SBR   |
|--|------|------|------|-------|------|------|-------|-------|------|------|-------|-------|
| Lane Configurations  | ↔    | ↕    | ↔    | ↔     | ↕    | ↔    | ↔     | ↕     | ↔    | ↔    | ↕     | ↔     |
| Traffic Volume (veh/h)   | 142  | 229  | 246  | 119   | 766  | 123  | 408   | 817   | 41   | 165  | 622   | 360   |
| Future Volume (veh/h)  | 142  | 229  | 246  | 119   | 766  | 123  | 408   | 817   | 41   | 165  | 622   | 360   |
| Initial Q (Ob), veh  | 0    | 0    | 0    | 0     | 0    | 0    | 0     | 0     | 0    | 0    | 0     | 0     |
| Ped-Bike Adj(A_pbT)  | 1.00 |      | 1.00 | 1.00  |      | 1.00 | 1.00  |       | 1.00 | 1.00 |       | 1.00  |
| Parking Bus, Adj   | 1.00 | 1.00 | 1.00 | 1.00  | 1.00 | 1.00 | 1.00  | 1.00  | 1.00 | 1.00 | 1.00  | 1.00  |
| Work Zone On Approach  | No   |      | No   |       | No   |      | No    |       | No   |      | No    |       |
| Adj Sat Flow, veh/h/ln   | 1781 | 1781 | 1781 | 1781  | 1781 | 1781 | 1781  | 1781  | 1781 | 1781 | 1781  | 1781  |
| Adj Flow Rate, veh/h   | 154  | 249  | 267  | 129   | 833  | 134  | 443   | 888   | 45   | 179  | 676   | 282   |
| Peak Hour Factor   | 0.92 | 0.92 | 0.92 | 0.92  | 0.92 | 0.92 | 0.92  | 0.92  | 0.92 | 0.92 | 0.92  | 0.92  |
| Percent Heavy Veh, %   | 8    | 8    | 8    | 8     | 8    | 8    | 8     | 8     | 8    | 8    | 8     | 8     |
| Cap, veh/h   | 164  | 673  | 601  | 303   | 1162 | 187  | 401   | 2280  | 115  | 224  | 599   | 250   |
| Arrive On Green  | 0.40 | 0.40 | 0.40 | 0.40  | 0.40 | 0.40 | 0.19  | 0.48  | 0.48 | 0.26 | 0.26  | 0.26  |
| Sat Flow, veh/h  | 553  | 1692 | 1510 | 843   | 2920 | 470  | 1697  | 4741  | 240  | 571  | 2328  | 971   |
| Grp Volume(v), veh/h   | 154  | 249  | 267  | 129   | 483  | 484  | 443   | 607   | 326  | 179  | 491   | 467   |
| Grp Sat Flow(s), veh/h/ln  | 553  | 1692 | 1510 | 843   | 1692 | 1697 | 1697  | 1621  | 1738 | 571  | 1692  | 1607  |
| Q Serve(g_s), s  | 14.8 | 9.8  | 12.2 | 12.4  | 22.6 | 22.6 | 18.0  | 11.2  | 11.3 | 24.2 | 24.2  | 24.2  |
| Cycle Q Clear(g_c), s  | 37.4 | 9.8  | 12.2 | 24.6  | 22.6 | 22.6 | 18.0  | 11.2  | 11.3 | 24.2 | 24.2  | 24.2  |
| Prop In Lane   | 1.00 |      | 1.00 | 1.00  |      | 0.28 | 1.00  |       | 0.14 | 1.00 |       | 0.60  |
| Lane Grp Cap(c), veh/h   | 164  | 673  | 601  | 303   | 673  | 675  | 401   | 1559  | 836  | 224  | 436   | 414   |
| V/C Ratio(X)   | 0.94 | 0.37 | 0.44 | 0.43  | 0.72 | 0.72 | 1.10  | 0.39  | 0.39 | 0.80 | 1.13  | 1.13  |
| Avail Cap(c_a), veh/h  | 164  | 673  | 601  | 303   | 673  | 675  | 401   | 1559  | 836  | 224  | 436   | 414   |
| HCM Platoon Ratio  | 1.00 | 1.00 | 1.00 | 1.00  | 1.00 | 1.00 | 1.00  | 1.00  | 1.00 | 1.00 | 1.00  | 1.00  |
| Upstream Filter(I)   | 1.00 | 1.00 | 1.00 | 1.00  | 1.00 | 1.00 | 1.00  | 1.00  | 1.00 | 1.00 | 1.00  | 1.00  |
| Uniform Delay (d), s/veh   | 42.8 | 20.0 | 20.7 | 29.7  | 23.8 | 23.8 | 26.8  | 15.6  | 15.6 | 37.1 | 34.9  | 34.9  |
| Incr Delay (d2), s/veh   | 56.1 | 1.6  | 2.4  | 4.3   | 6.4  | 6.4  | 75.9  | 0.7   | 1.4  | 25.2 | 82.9  | 83.9  |
| Initial Q Delay(d3), s/veh   | 0.0  | 0.0  | 0.0  | 0.0   | 0.0  | 0.0  | 0.0   | 0.0   | 0.0  | 0.0  | 0.0   | 0.0   |
| %ile BackOfQ(50%), veh/ln  | 6.1  | 4.0  | 4.6  | 2.8   | 9.9  | 9.9  | 14.2  | 4.1   | 4.6  | 5.7  | 19.7  | 18.8  |
| Unsig. Movement Delay, s/veh   |      |      |      |       |      |      |       |       |      |      |       |       |
| LnGrp Delay(d), s/veh  | 98.9 | 21.5 | 23.1 | 34.0  | 30.3 | 30.3 | 102.7 | 16.3  | 17.0 | 62.2 | 117.8 | 118.8 |
| LnGrp LOS  | F    | C    | C    | C     | C    | C    | F     | B     | B    | E    | F     | F     |
| Approach Vol, veh/h  |      | 670  |      |       | 1096 |      |       | 1376  |      |      | 1137  |       |
| Approach Delay, s/veh  |      | 39.9 |      |       | 30.7 |      |       | 44.3  |      |      | 109.5 |       |
| Approach LOS   |      | D    |      |       | C    |      |       | D     |      |      | F     |       |
| Timer - Assigned Phs   |      | 2    |      | 4     | 5    | 6    |       | 8     |      |      |       |       |
| Phs Duration (G+Y+Rc), s   |      | 51.0 |      | 43.0  | 21.0 | 30.0 |       | 43.0  |      |      | 5.8   |       |
| Change Period (Y+Rc), s  |      | 5.8  |      | * 5.6 | 3.0  | 5.8  |       | * 5.6 |      |      | 5.8   |       |
| Max Green Setting (Gmax), s  |      | 45.2 |      | * 37  | 18.0 | 24.2 |       | * 37  |      |      | 26.6  |       |
| Max Q Clear Time (g_c+I1), s   |      | 13.3 |      | 39.4  | 20.0 | 26.2 |       | 26.6  |      |      | 5.3   |       |
| Green Ext Time (p_c), s  |      | 7.3  |      | 0.0   | 0.0  | 0.0  |       | 5.3   |      |      |       |       |
| Intersection Summary   |      |      |      |       |      |      |       |       |      |      |       |       |
| HCM 6th Ctrl Delay   | 57.4 |      |      |       |      |      |       |       |      |      |       |       |
| HCM 6th LOS  | E    |      |      |       |      |      |       |       |      |      |       |       |
| Notes  |      |      |      |       |      |      |       |       |      |      |       |       |
| User approved pedestrian interval to be less than phase max green.                                 |      |      |      |       |      |      |       |       |      |      |       |       |
| * HCM 6th computational engine requires equal clearance times for the phases crossing the barrier. |      |      |      |       |      |      |       |       |      |      |       |       |

Deer Valley 30  
7: 15th Ave & Happy Valley Rd

2024 Background AM  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Int Delay, s/veh         | 1    |      |      |      |      |      |      |      |      |      |      |      |
| Movement                 | EBL  | EBT  | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
| Lane Configurations      | ↕    |      | ↕    |      | ↕    |      | ↕    |      | ↕    |      | ↕    |      |
| Traffic Vol, veh/h       | 6    | 676  | 23   | 14   | 376  | 0    | 19   | 0    | 10   | 2    | 0    | 6    |
| Future Vol, veh/h        | 6    | 676  | 23   | 14   | 376  | 0    | 19   | 0    | 10   | 2    | 0    | 6    |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Free | Free | Free | Free | Free | Free | Stop | Stop | Stop | Stop | Stop | Stop |
| RT Channelized           | -    | -    | None | -    | -    | None | -    | -    | None | -    | -    | None |
| Storage Length           | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    |
| Veh in Median Storage, # | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Grade, %                 | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Peak Hour Factor         | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   |
| Heavy Vehicles, %        | 8    | 8    | 8    | 8    | 8    | 8    | 8    | 8    | 8    | 8    | 8    | 8    |
| Mvmt Flow                | 7    | 735  | 25   | 15   | 409  | 0    | 21   | 0    | 11   | 2    | 0    | 7    |

| Major/Minor          | Major1 | Major2 | Minor1 | Minor2 |
|----------------------|--------|--------|--------|--------|
| Conflicting Flow All | 409    | 0      | 760    | 0      |
| Stage 1              | -      | -      | -      | -      |
| Stage 2              | -      | -      | -      | -      |
| Critical Hdwy        | 4.18   | -      | 4.18   | -      |
| Critical Hdwy Stg 1  | -      | -      | -      | -      |
| Critical Hdwy Stg 2  | -      | -      | -      | -      |
| Follow-up Hdwy       | 2.272  | -      | 2.272  | -      |
| Pot Cap-1 Maneuver   | 1118   | -      | 825    | -      |
| Stage 1              | -      | -      | -      | -      |
| Stage 2              | -      | -      | -      | -      |
| Platoon blocked, %   | -      | -      | -      | -      |
| Mov Cap-1 Maneuver   | 1118   | -      | 825    | -      |
| Mov Cap-2 Maneuver   | -      | -      | -      | -      |
| Stage 1              | -      | -      | -      | -      |
| Stage 2              | -      | -      | -      | -      |

| Approach             | EB  | WB  | NB   | SB   |
|----------------------|-----|-----|------|------|
| HCM Control Delay, s | 0.1 | 0.3 | 27.5 | 15.6 |
| HCM LOS              |     |     | D    | C    |

| Minor Lane/Major Mvmt | NBLn1 | EBL   | EBT | EBR | WBL   | WBT | WBR | SBLn1 |
|-----------------------|-------|-------|-----|-----|-------|-----|-----|-------|
| Capacity (veh/h)      | 191   | 1118  | -   | -   | 825   | -   | -   | 347   |
| HCM Lane V/C Ratio    | 0.165 | 0.006 | -   | -   | 0.018 | -   | -   | 0.025 |
| HCM Control Delay (s) | 27.5  | 8.2   | 0   | -   | 9.4   | 0   | -   | 15.6  |
| HCM Lane LOS          | D     | A     | A   | -   | A     | A   | -   | C     |
| HCM 95th %tile Q(veh) | 0.6   | 0     | -   | -   | 0.1   | -   | -   | 0.1   |

Deer Valley 30  
7: 15th Ave & Happy Valley Rd

2024 Background PM  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Int Delay, s/veh         | 1.6  |      |      |      |      |      |      |      |      |      |      |      |
| Movement                 | EBL  | EBT  | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
| Lane Configurations      | ↕    |      | ↕    |      | ↕    |      | ↕    |      | ↕    |      | ↕    |      |
| Traffic Vol, veh/h       | 2    | 527  | 3    | 8    | 1109 | 0    | 20   | 0    | 17   | 0    | 0    | 1    |
| Future Vol, veh/h        | 2    | 527  | 3    | 8    | 1109 | 0    | 20   | 0    | 17   | 0    | 0    | 1    |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Free | Free | Free | Free | Free | Free | Stop | Stop | Stop | Stop | Stop | Stop |
| RT Channelized           | -    | -    | None | -    | -    | None | -    | -    | None | -    | -    | None |
| Storage Length           | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    |
| Veh in Median Storage, # | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Grade, %                 | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Peak Hour Factor         | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   |
| Heavy Vehicles, %        | 8    | 8    | 8    | 8    | 8    | 8    | 8    | 8    | 8    | 8    | 8    | 8    |
| Mvmt Flow                | 2    | 573  | 3    | 9    | 1205 | 0    | 22   | 0    | 18   | 0    | 0    | 1    |

| Major/Minor          | Major1 | Major2 | Minor1 | Minor2 |
|----------------------|--------|--------|--------|--------|
| Conflicting Flow All | 1205   | 0      | 576    | 0      |
| Stage 1              | -      | -      | -      | -      |
| Stage 2              | -      | -      | -      | -      |
| Critical Hdwy        | 4.18   | -      | 4.18   | -      |
| Critical Hdwy Stg 1  | -      | -      | -      | -      |
| Critical Hdwy Stg 2  | -      | -      | -      | -      |
| Follow-up Hdwy       | 2.272  | -      | 2.272  | -      |
| Pot Cap-1 Maneuver   | 558    | -      | 968    | -      |
| Stage 1              | -      | -      | -      | -      |
| Stage 2              | -      | -      | -      | -      |
| Platoon blocked, %   | -      | -      | -      | -      |
| Mov Cap-1 Maneuver   | 558    | -      | 968    | -      |
| Mov Cap-2 Maneuver   | -      | -      | -      | -      |
| Stage 1              | -      | -      | -      | -      |
| Stage 2              | -      | -      | -      | -      |

| Approach             | EB | WB  | NB   | SB   |
|----------------------|----|-----|------|------|
| HCM Control Delay, s | 0  | 0.1 | 67.2 | 21.6 |
| HCM LOS              |    |     | F    | C    |

| Minor Lane/Major Mvmt | NBLn1 | EBL   | EBT | EBR | WBL   | WBT | WBR | SBLn1 |
|-----------------------|-------|-------|-----|-----|-------|-----|-----|-------|
| Capacity (veh/h)      | 96    | 558   | -   | -   | 968   | -   | -   | 218   |
| HCM Lane V/C Ratio    | 0.419 | 0.004 | -   | -   | 0.009 | -   | -   | 0.005 |
| HCM Control Delay (s) | 67.2  | 11.5  | 0   | -   | 8.8   | 0   | -   | 21.6  |
| HCM Lane LOS          | F     | B     | A   | -   | A     | A   | -   | C     |
| HCM 95th %tile Q(veh) | 1.7   | 0     | -   | -   | 0     | -   | -   | 0     |

Deer Valley 30  
8: 7th Ave & Happy Valley Rd

2024 Background AM  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh         | 1.4  |      |      |      |      |      |
| Movement                 | EBT  | EBR  | WBL  | WBT  | NBL  | NBR  |
| Lane Configurations      | ↻    |      |      | ↻    | ↻    | ↻    |
| Traffic Vol, veh/h       | 508  | 214  | 9    | 282  | 54   | 10   |
| Future Vol, veh/h        | 508  | 214  | 9    | 282  | 54   | 10   |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Free | Free | Free | Free | Stop | Stop |
| RT Channelized           | -    | None | -    | None | -    | None |
| Storage Length           | -    | -    | -    | -    | -    | -    |
| Veh in Median Storage, # | 0    | -    | -    | 0    | 0    | -    |
| Grade, %                 | 0    | -    | -    | 0    | 0    | -    |
| Peak Hour Factor         | 92   | 92   | 92   | 92   | 92   | 92   |
| Heavy Vehicles, %        | 8    | 8    | 8    | 8    | 8    | 8    |
| Mvmt Flow                | 552  | 233  | 10   | 307  | 59   | 11   |

| Major/Minor          | Major1 | Major2 | Minor1 |   |       |
|----------------------|--------|--------|--------|---|-------|
| Conflicting Flow All | 0      | 0      | 785    | 0 | 996   |
| Stage 1              | -      | -      | -      | - | 669   |
| Stage 2              | -      | -      | -      | - | 327   |
| Critical Hdwy        | -      | -      | 4.18   | - | 6.48  |
| Critical Hdwy Stg 1  | -      | -      | -      | - | 5.48  |
| Critical Hdwy Stg 2  | -      | -      | -      | - | 5.48  |
| Follow-up Hdwy       | -      | -      | 2.272  | - | 3.572 |
| Pot Cap-1 Maneuver   | -      | -      | 808    | - | 264   |
| Stage 1              | -      | -      | -      | - | 498   |
| Stage 2              | -      | -      | -      | - | 717   |
| Platoon blocked, %   | -      | -      | -      | - | -     |
| Mov Cap-1 Maneuver   | -      | -      | 808    | - | 260   |
| Mov Cap-2 Maneuver   | -      | -      | -      | - | 260   |
| Stage 1              | -      | -      | -      | - | 498   |
| Stage 2              | -      | -      | -      | - | 706   |

| Approach             | EB | WB  | NB   |
|----------------------|----|-----|------|
| HCM Control Delay, s | 0  | 0.3 | 22.2 |
| HCM LOS              |    |     | C    |

| Minor Lane/Major Mvmt | NBLn1 | EBT | EBR | WBL   | WBT |
|-----------------------|-------|-----|-----|-------|-----|
| Capacity (veh/h)      | 278   | -   | -   | 808   | -   |
| HCM Lane V/C Ratio    | 0.25  | -   | -   | 0.012 | -   |
| HCM Control Delay (s) | 22.2  | -   | -   | 9.5   | 0   |
| HCM Lane LOS          | C     | -   | -   | A     | A   |
| HCM 95th %tile Q(veh) | 1     | -   | -   | 0     | -   |

Deer Valley 30  
8: 7th Ave & Happy Valley Rd

2024 Background PM  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh         | 80.9 |      |      |      |      |      |
| Movement                 | EBT  | EBR  | WBL  | WBT  | NBL  | NBR  |
| Lane Configurations      | ↻    |      |      | ↻    | ↻    | ↻    |
| Traffic Vol, veh/h       | 479  | 77   | 19   | 854  | 223  | 11   |
| Future Vol, veh/h        | 479  | 77   | 19   | 854  | 223  | 11   |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Free | Free | Free | Free | Stop | Stop |
| RT Channelized           | -    | None | -    | None | -    | None |
| Storage Length           | -    | -    | -    | -    | -    | -    |
| Veh in Median Storage, # | 0    | -    | -    | 0    | 0    | -    |
| Grade, %                 | 0    | -    | -    | 0    | 0    | -    |
| Peak Hour Factor         | 92   | 92   | 92   | 92   | 92   | 92   |
| Heavy Vehicles, %        | 8    | 8    | 8    | 8    | 8    | 8    |
| Mvmt Flow                | 521  | 84   | 21   | 928  | 242  | 12   |

| Major/Minor          | Major1 | Major2 | Minor1 |   |       |
|----------------------|--------|--------|--------|---|-------|
| Conflicting Flow All | 0      | 0      | 605    | 0 | 1533  |
| Stage 1              | -      | -      | -      | - | 563   |
| Stage 2              | -      | -      | -      | - | 970   |
| Critical Hdwy        | -      | -      | 4.18   | - | 6.48  |
| Critical Hdwy Stg 1  | -      | -      | -      | - | 5.48  |
| Critical Hdwy Stg 2  | -      | -      | -      | - | 5.48  |
| Follow-up Hdwy       | -      | -      | 2.272  | - | 3.572 |
| Pot Cap-1 Maneuver   | -      | -      | 944    | - | 124   |
| Stage 1              | -      | -      | -      | - | 558   |
| Stage 2              | -      | -      | -      | - | 359   |
| Platoon blocked, %   | -      | -      | -      | - | -     |
| Mov Cap-1 Maneuver   | -      | -      | 944    | - | 118   |
| Mov Cap-2 Maneuver   | -      | -      | -      | - | 118   |
| Stage 1              | -      | -      | -      | - | 558   |
| Stage 2              | -      | -      | -      | - | 342   |

| Approach             | EB | WB  | NB     |
|----------------------|----|-----|--------|
| HCM Control Delay, s | 0  | 0.2 | \$ 574 |
| HCM LOS              |    |     | F      |

| Minor Lane/Major Mvmt | NBLn1  | EBT | EBR | WBL   | WBT |
|-----------------------|--------|-----|-----|-------|-----|
| Capacity (veh/h)      | 122    | -   | -   | 944   | -   |
| HCM Lane V/C Ratio    | 2.085  | -   | -   | 0.022 | -   |
| HCM Control Delay (s) | \$ 574 | -   | -   | 8.9   | 0   |
| HCM Lane LOS          | F      | -   | -   | A     | A   |
| HCM 95th %tile Q(veh) | 21.1   | -   | -   | 0.1   | -   |

Notes  
 -: Volume exceeds capacity    \$: Delay exceeds 300s    +: Computation Not Defined    \*: All major volume in platoon



Deer Valley 30  
9: 7th Ave & Pinnacle Peak Rd

2024 Background AM  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Int Delay, s/veh         | 59.8 |      |      |      |      |      |      |      |      |      |      |      |
| Movement                 | EBL  | EBT  | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
| Lane Configurations      | ↔    | ↑    | ↔    | ↔    | ↔    | ↔    | ↔    | ↔    | ↔    | ↔    | ↔    | ↔    |
| Traffic Vol, veh/h       | 175  | 455  | 282  | 46   | 366  | 190  | 79   | 85   | 26   | 59   | 38   | 35   |
| Future Vol, veh/h        | 175  | 455  | 282  | 46   | 366  | 190  | 79   | 85   | 26   | 59   | 38   | 35   |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Free | Free | Free | Free | Free | Free | Stop | Stop | Stop | Stop | Stop | Stop |
| RT Channelized           | -    | -    | None | -    | -    | None | -    | -    | None | -    | -    | None |
| Storage Length           | 150  | -    | 170  | 150  | -    | -    | 150  | -    | -    | 150  | -    | -    |
| Veh in Median Storage, # | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Grade, %                 | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Peak Hour Factor         | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   |
| Heavy Vehicles, %        | 8    | 8    | 8    | 8    | 8    | 8    | 8    | 8    | 8    | 8    | 8    | 8    |
| Mvmt Flow                | 190  | 495  | 307  | 50   | 398  | 207  | 86   | 92   | 28   | 64   | 41   | 38   |

| Major/Minor          | Major1 | Major2 | Minor1 | Minor2 |
|----------------------|--------|--------|--------|--------|
| Conflicting Flow All | 605    | 0      | 802    | 0      |
| Stage 1              | -      | -      | -      | -      |
| Stage 2              | -      | -      | -      | -      |
| Critical Hdwy        | 4.18   | -      | 4.18   | -      |
| Critical Hdwy Stg 1  | -      | -      | -      | -      |
| Critical Hdwy Stg 2  | -      | -      | -      | -      |
| Follow-up Hdwy       | 2.272  | -      | 2.272  | -      |
| Pot Cap-1 Maneuver   | 944    | -      | 796    | -      |
| Stage 1              | -      | -      | -      | -      |
| Stage 2              | -      | -      | -      | -      |
| Platoon blocked, %   | -      | -      | -      | -      |
| Mov Cap-1 Maneuver   | 944    | -      | 796    | -      |
| Mov Cap-2 Maneuver   | -      | -      | -      | -      |
| Stage 1              | -      | -      | -      | -      |
| Stage 2              | -      | -      | -      | -      |

| Approach             | EB  | WB  | NB       | SB |
|----------------------|-----|-----|----------|----|
| HCM Control Delay, s | 1.9 | 0.8 | \$ 566.4 |    |
| HCM LOS              |     |     | F        | -  |

| Minor Lane/Major Mvmt | NBLn1     | NBLn2 | EBL   | EBT | EBR | WBL   | WBT | WBR | SBLn1 | SBLn2 |
|-----------------------|-----------|-------|-------|-----|-----|-------|-----|-----|-------|-------|
| Capacity (veh/h)      | 32        | 99    | 944   | -   | -   | 796   | -   | -   | -     | 103   |
| HCM Lane V/C Ratio    | 2.683     | 1.219 | 0.202 | -   | -   | 0.063 | -   | -   | -     | 0.77  |
| HCM Control Delay (s) | \$ 1024.8 | 240.1 | 9.8   | -   | -   | 9.8   | -   | -   | -     | 109.9 |
| HCM Lane LOS          | F         | F     | A     | -   | -   | A     | -   | -   | -     | F     |
| HCM 95th %tile Q(veh) | 10        | 8.2   | 0.8   | -   | -   | 0.2   | -   | -   | -     | 4.2   |

Notes  
 -: Volume exceeds capacity    \$: Delay exceeds 300s    +: Computation Not Defined    \*: All major volume in platoon

Deer Valley 30  
9: 7th Ave & Pinnacle Peak Rd

2024 Background PM  
HCM 6th TWSC

| Intersection             |       |      |      |      |      |      |      |      |      |      |      |      |
|--------------------------|-------|------|------|------|------|------|------|------|------|------|------|------|
| Int Delay, s/veh         | 224.6 |      |      |      |      |      |      |      |      |      |      |      |
| Movement                 | EBL   | EBT  | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
| Lane Configurations      | ↔     | ↑    | ↔    | ↔    | ↔    | ↔    | ↔    | ↔    | ↔    | ↔    | ↔    | ↔    |
| Traffic Vol, veh/h       | 39    | 389  | 74   | 30   | 440  | 62   | 207  | 38   | 40   | 185  | 83   | 170  |
| Future Vol, veh/h        | 39    | 389  | 74   | 30   | 440  | 62   | 207  | 38   | 40   | 185  | 83   | 170  |
| Conflicting Peds, #/hr   | 0     | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Free  | Free | Free | Free | Free | Free | Stop | Stop | Stop | Stop | Stop | Stop |
| RT Channelized           | -     | -    | None | -    | -    | None | -    | -    | None | -    | -    | None |
| Storage Length           | 150   | -    | 170  | 150  | -    | -    | 150  | -    | -    | 150  | -    | -    |
| Veh in Median Storage, # | -     | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Grade, %                 | -     | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Peak Hour Factor         | 92    | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   |
| Heavy Vehicles, %        | 8     | 8    | 8    | 8    | 8    | 8    | 8    | 8    | 8    | 8    | 8    | 8    |
| Mvmt Flow                | 42    | 423  | 80   | 33   | 478  | 67   | 225  | 41   | 43   | 201  | 90   | 185  |

| Major/Minor          | Major1 | Major2 | Minor1 | Minor2 |
|----------------------|--------|--------|--------|--------|
| Conflicting Flow All | 545    | 0      | 503    | 0      |
| Stage 1              | -      | -      | -      | -      |
| Stage 2              | -      | -      | -      | -      |
| Critical Hdwy        | 4.18   | -      | 4.18   | -      |
| Critical Hdwy Stg 1  | -      | -      | -      | -      |
| Critical Hdwy Stg 2  | -      | -      | -      | -      |
| Follow-up Hdwy       | 2.272  | -      | 2.272  | -      |
| Pot Cap-1 Maneuver   | 995    | -      | 1031   | -      |
| Stage 1              | -      | -      | -      | -      |
| Stage 2              | -      | -      | -      | -      |
| Platoon blocked, %   | -      | -      | -      | -      |
| Mov Cap-1 Maneuver   | 995    | -      | 1031   | -      |
| Mov Cap-2 Maneuver   | -      | -      | -      | -      |
| Stage 1              | -      | -      | -      | -      |
| Stage 2              | -      | -      | -      | -      |

| Approach             | EB  | WB  | NB        | SB  |
|----------------------|-----|-----|-----------|-----|
| HCM Control Delay, s | 0.7 | 0.5 | \$ 1076.9 | 199 |
| HCM LOS              |     |     | F         | F   |

| Minor Lane/Major Mvmt | NBLn1     | NBLn2 | EBL   | EBT | EBR | WBL   | WBT | WBR | SBLn1 | SBLn2    |
|-----------------------|-----------|-------|-------|-----|-----|-------|-----|-----|-------|----------|
| Capacity (veh/h)      | 57        | 291   | 995   | -   | -   | 1031  | -   | -   | -     | 121      |
| HCM Lane V/C Ratio    | 3.947     | 0.291 | 0.043 | -   | -   | 0.032 | -   | -   | -     | 1.662    |
| HCM Control Delay (s) | \$ 1474.3 | 22.4  | 8.8   | -   | -   | 8.6   | -   | -   | -     | \$ 394.5 |
| HCM Lane LOS          | F         | C     | A     | -   | -   | A     | -   | -   | -     | F        |
| HCM 95th %tile Q(veh) | 24.5      | 1.2   | 0.1   | -   | -   | 0.1   | -   | -   | -     | 15       |

Notes  
 -: Volume exceeds capacity    \$: Delay exceeds 300s    +: Computation Not Defined    \*: All major volume in platoon

Deer Valley 30  
10: 7th Ave & Alameda Rd

2024 Background AM  
HCM 6th TWSC

| Intersection             |        |        |        |      |      |      |
|--------------------------|--------|--------|--------|------|------|------|
| Int Delay, s/veh         | 4.5    |        |        |      |      |      |
| Movement                 | EBL    | EBR    | NBL    | NBT  | SBT  | SBR  |
| Lane Configurations      | ↔      |        | ↔      | ↔    | ↔    |      |
| Traffic Vol, veh/h       | 14     | 43     | 214    | 50   | 155  | 68   |
| Future Vol, veh/h        | 14     | 43     | 214    | 50   | 155  | 68   |
| Conflicting Peds, #/hr   | 0      | 0      | 0      | 0    | 0    | 0    |
| Sign Control             | Stop   | Stop   | Free   | Free | Free | Free |
| RT Channelized           | -      | None   | -      | None | -    | None |
| Storage Length           | 0      | -      | 150    | -    | -    | -    |
| Veh in Median Storage, # | 0      | -      | -      | 0    | 0    | -    |
| Grade, %                 | 0      | -      | -      | 0    | 0    | -    |
| Peak Hour Factor         | 92     | 92     | 92     | 92   | 92   | 92   |
| Heavy Vehicles, %        | 8      | 8      | 8      | 8    | 8    | 8    |
| Mvmt Flow                | 15     | 47     | 233    | 54   | 168  | 74   |
| Major/Minor              | Minor2 | Major1 | Major2 |      |      |      |
| Conflicting Flow All     | 725    | 205    | 242    | 0    | -    | 0    |
| Stage 1                  | 205    | -      | -      | -    | -    | -    |
| Stage 2                  | 520    | -      | -      | -    | -    | -    |
| Critical Hdwy            | 6.48   | 6.28   | 4.18   | -    | -    | -    |
| Critical Hdwy Stg 1      | 5.48   | -      | -      | -    | -    | -    |
| Critical Hdwy Stg 2      | 5.48   | -      | -      | -    | -    | -    |
| Follow-up Hdwy           | 3.572  | 3.372  | 2.272  | -    | -    | -    |
| Pot Cap-1 Maneuver       | 383    | 821    | 1290   | -    | -    | -    |
| Stage 1                  | 815    | -      | -      | -    | -    | -    |
| Stage 2                  | 585    | -      | -      | -    | -    | -    |
| Platoon blocked, %       | -      | -      | -      | -    | -    | -    |
| Mov Cap-1 Maneuver       | 314    | 821    | 1290   | -    | -    | -    |
| Mov Cap-2 Maneuver       | 314    | -      | -      | -    | -    | -    |
| Stage 1                  | 667    | -      | -      | -    | -    | -    |
| Stage 2                  | 585    | -      | -      | -    | -    | -    |
| Approach                 | EB     | NB     | SB     |      |      |      |
| HCM Control Delay, s     | 11.8   | 6.8    | 0      |      |      |      |
| HCM LOS                  | B      |        |        |      |      |      |
| Minor Lane/Major Mvmt    | NBL    | NBT    | EBLn1  | SBT  | SBR  |      |
| Capacity (veh/h)         | 1290   | -      | 588    | -    | -    |      |
| HCM Lane V/C Ratio       | 0.18   | -      | 0.105  | -    | -    |      |
| HCM Control Delay (s)    | 8.4    | -      | 11.8   | -    | -    |      |
| HCM Lane LOS             | A      | -      | B      | -    | -    |      |
| HCM 95th %tile Q(veh)    | 0.7    | -      | 0.4    | -    | -    |      |

Deer Valley 30  
10: 7th Ave & Alameda Rd

2024 Background PM  
HCM 6th TWSC

| Intersection             |        |        |        |      |      |      |
|--------------------------|--------|--------|--------|------|------|------|
| Int Delay, s/veh         | 6.2    |        |        |      |      |      |
| Movement                 | EBL    | EBR    | NBL    | NBT  | SBT  | SBR  |
| Lane Configurations      | ↔      |        | ↔      | ↔    | ↔    |      |
| Traffic Vol, veh/h       | 67     | 208    | 48     | 168  | 81   | 15   |
| Future Vol, veh/h        | 67     | 208    | 48     | 168  | 81   | 15   |
| Conflicting Peds, #/hr   | 0      | 0      | 0      | 0    | 0    | 0    |
| Sign Control             | Stop   | Stop   | Free   | Free | Free | Free |
| RT Channelized           | -      | None   | -      | None | -    | None |
| Storage Length           | 0      | -      | 150    | -    | -    | -    |
| Veh in Median Storage, # | 0      | -      | -      | 0    | 0    | -    |
| Grade, %                 | 0      | -      | -      | 0    | 0    | -    |
| Peak Hour Factor         | 92     | 92     | 92     | 92   | 92   | 92   |
| Heavy Vehicles, %        | 8      | 8      | 8      | 8    | 8    | 8    |
| Mvmt Flow                | 73     | 226    | 52     | 183  | 88   | 16   |
| Major/Minor              | Minor2 | Major1 | Major2 |      |      |      |
| Conflicting Flow All     | 383    | 96     | 104    | 0    | -    | 0    |
| Stage 1                  | 96     | -      | -      | -    | -    | -    |
| Stage 2                  | 287    | -      | -      | -    | -    | -    |
| Critical Hdwy            | 6.48   | 6.28   | 4.18   | -    | -    | -    |
| Critical Hdwy Stg 1      | 5.48   | -      | -      | -    | -    | -    |
| Critical Hdwy Stg 2      | 5.48   | -      | -      | -    | -    | -    |
| Follow-up Hdwy           | 3.572  | 3.372  | 2.272  | -    | -    | -    |
| Pot Cap-1 Maneuver       | 608    | 944    | 1451   | -    | -    | -    |
| Stage 1                  | 913    | -      | -      | -    | -    | -    |
| Stage 2                  | 748    | -      | -      | -    | -    | -    |
| Platoon blocked, %       | -      | -      | -      | -    | -    | -    |
| Mov Cap-1 Maneuver       | 586    | 944    | 1451   | -    | -    | -    |
| Mov Cap-2 Maneuver       | 586    | -      | -      | -    | -    | -    |
| Stage 1                  | 880    | -      | -      | -    | -    | -    |
| Stage 2                  | 748    | -      | -      | -    | -    | -    |
| Approach                 | EB     | NB     | SB     |      |      |      |
| HCM Control Delay, s     | 11.9   | 1.7    | 0      |      |      |      |
| HCM LOS                  | B      |        |        |      |      |      |
| Minor Lane/Major Mvmt    | NBL    | NBT    | EBLn1  | SBT  | SBR  |      |
| Capacity (veh/h)         | 1451   | -      | 822    | -    | -    |      |
| HCM Lane V/C Ratio       | 0.036  | -      | 0.364  | -    | -    |      |
| HCM Control Delay (s)    | 7.6    | -      | 11.9   | -    | -    |      |
| HCM Lane LOS             | A      | -      | B      | -    | -    |      |
| HCM 95th %tile Q(veh)    | 0.1    | -      | 1.7    | -    | -    |      |

Deer Valley 30  
11: 15th Ave & Parkview Ln

2024 Background AM  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh         | 0    |      |      |      |      |      |
| Movement                 | EBT  | EBR  | WBL  | WBT  | NBL  | NBR  |
| Lane Configurations      | ↻    |      |      | ↻    | ↻    |      |
| Traffic Vol, veh/h       | 0    | 0    | 0    | 0    | 0    | 0    |
| Future Vol, veh/h        | 0    | 0    | 0    | 0    | 0    | 0    |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Free | Free | Free | Free | Stop | Stop |
| RT Channelized           | -    | None | -    | None | -    | None |
| Storage Length           | -    | -    | -    | -    | 0    | -    |
| Veh in Median Storage, # | 0    | -    | -    | 0    | 0    | -    |
| Grade, %                 | 0    | -    | -    | 0    | 0    | -    |
| Peak Hour Factor         | 92   | 92   | 92   | 92   | 92   | 92   |
| Heavy Vehicles, %        | 8    | 8    | 8    | 8    | 8    | 8    |
| Mvmt Flow                | 0    | 0    | 0    | 0    | 0    | 0    |

| Major/Minor          | Major1 | Major2 | Minor1 |   |       |
|----------------------|--------|--------|--------|---|-------|
| Conflicting Flow All | 0      | 0      | 1      | 0 | 2     |
| Stage 1              | -      | -      | -      | - | 1     |
| Stage 2              | -      | -      | -      | - | 1     |
| Critical Hdwy        | -      | -      | 4.18   | - | 6.48  |
| Critical Hdwy Stg 1  | -      | -      | -      | - | 5.48  |
| Critical Hdwy Stg 2  | -      | -      | -      | - | 5.48  |
| Follow-up Hdwy       | -      | -      | 2.272  | - | 3.572 |
| Pot Cap-1 Maneuver   | -      | -      | 1583   | - | 1005  |
| Stage 1              | -      | -      | -      | - | 1007  |
| Stage 2              | -      | -      | -      | - | 1007  |
| Platoon blocked, %   | -      | -      | -      | - | -     |
| Mov Cap-1 Maneuver   | -      | -      | 1583   | - | 1005  |
| Mov Cap-2 Maneuver   | -      | -      | -      | - | 1005  |
| Stage 1              | -      | -      | -      | - | 1007  |
| Stage 2              | -      | -      | -      | - | 1007  |

| Approach             | EB | WB | NB |
|----------------------|----|----|----|
| HCM Control Delay, s | 0  | 0  | 0  |
| HCM LOS              |    |    | A  |

| Minor Lane/Major Mvmt | NBLn1 | EBT | EBR | WBL  | WBT |
|-----------------------|-------|-----|-----|------|-----|
| Capacity (veh/h)      | -     | -   | -   | 1583 | -   |
| HCM Lane V/C Ratio    | -     | -   | -   | -    | -   |
| HCM Control Delay (s) | 0     | -   | -   | 0    | -   |
| HCM Lane LOS          | A     | -   | -   | A    | -   |
| HCM 95th %tile Q(veh) | -     | -   | -   | 0    | -   |

Deer Valley 30  
11: 15th Ave & Parkview Ln

2024 Background PM  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh         | 0    |      |      |      |      |      |
| Movement                 | EBT  | EBR  | WBL  | WBT  | NBL  | NBR  |
| Lane Configurations      | ↻    |      |      | ↻    | ↻    |      |
| Traffic Vol, veh/h       | 0    | 0    | 0    | 0    | 0    | 0    |
| Future Vol, veh/h        | 0    | 0    | 0    | 0    | 0    | 0    |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Free | Free | Free | Free | Stop | Stop |
| RT Channelized           | -    | None | -    | None | -    | None |
| Storage Length           | -    | -    | -    | -    | 0    | -    |
| Veh in Median Storage, # | 0    | -    | -    | 0    | 0    | -    |
| Grade, %                 | 0    | -    | -    | 0    | 0    | -    |
| Peak Hour Factor         | 92   | 92   | 92   | 92   | 92   | 92   |
| Heavy Vehicles, %        | 8    | 8    | 8    | 8    | 8    | 8    |
| Mvmt Flow                | 0    | 0    | 0    | 0    | 0    | 0    |

| Major/Minor          | Major1 | Major2 | Minor1 |   |       |
|----------------------|--------|--------|--------|---|-------|
| Conflicting Flow All | 0      | 0      | 1      | 0 | 2     |
| Stage 1              | -      | -      | -      | - | 1     |
| Stage 2              | -      | -      | -      | - | 1     |
| Critical Hdwy        | -      | -      | 4.18   | - | 6.48  |
| Critical Hdwy Stg 1  | -      | -      | -      | - | 5.48  |
| Critical Hdwy Stg 2  | -      | -      | -      | - | 5.48  |
| Follow-up Hdwy       | -      | -      | 2.272  | - | 3.572 |
| Pot Cap-1 Maneuver   | -      | -      | 1583   | - | 1005  |
| Stage 1              | -      | -      | -      | - | 1007  |
| Stage 2              | -      | -      | -      | - | 1007  |
| Platoon blocked, %   | -      | -      | -      | - | -     |
| Mov Cap-1 Maneuver   | -      | -      | 1583   | - | 1005  |
| Mov Cap-2 Maneuver   | -      | -      | -      | - | 1005  |
| Stage 1              | -      | -      | -      | - | 1007  |
| Stage 2              | -      | -      | -      | - | 1007  |

| Approach             | EB | WB | NB |
|----------------------|----|----|----|
| HCM Control Delay, s | 0  | 0  | 0  |
| HCM LOS              |    |    | A  |

| Minor Lane/Major Mvmt | NBLn1 | EBT | EBR | WBL  | WBT |
|-----------------------|-------|-----|-----|------|-----|
| Capacity (veh/h)      | -     | -   | -   | 1583 | -   |
| HCM Lane V/C Ratio    | -     | -   | -   | -    | -   |
| HCM Control Delay (s) | 0     | -   | -   | 0    | -   |
| HCM Lane LOS          | A     | -   | -   | A    | -   |
| HCM 95th %tile Q(veh) | -     | -   | -   | 0    | -   |

Deer Valley 30  
12: Alameda Rd & Access A

2024 Background AM  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh         | 0    |      |      |      |      |      |
| Movement                 | EBL  | EBT  | WBT  | WBR  | SBL  | SBR  |
| Lane Configurations      |      | ↕    | ↕    |      | ↕    |      |
| Traffic Vol, veh/h       | 0    | 278  | 56   | 0    | 0    | 0    |
| Future Vol, veh/h        | 0    | 278  | 56   | 0    | 0    | 0    |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Free | Free | Free | Free | Stop | Stop |
| RT Channelized           | -    | None | -    | None | -    | None |
| Storage Length           | -    | -    | -    | -    | 0    | -    |
| Veh in Median Storage, # | -    | 0    | 0    | -    | 0    | -    |
| Grade, %                 | -    | 0    | 0    | -    | 0    | -    |
| Peak Hour Factor         | 92   | 92   | 92   | 92   | 92   | 92   |
| Heavy Vehicles, %        | 8    | 8    | 8    | 8    | 8    | 8    |
| Mvmt Flow                | 0    | 302  | 61   | 0    | 0    | 0    |

| Major/Minor          | Major1 | Major2 | Minor2 |       |       |
|----------------------|--------|--------|--------|-------|-------|
| Conflicting Flow All | 61     | 0      | 0      | 363   | 61    |
| Stage 1              | -      | -      | -      | 61    | -     |
| Stage 2              | -      | -      | -      | 302   | -     |
| Critical Hdwy        | 4.18   | -      | -      | 6.48  | 6.28  |
| Critical Hdwy Stg 1  | -      | -      | -      | 5.48  | -     |
| Critical Hdwy Stg 2  | -      | -      | -      | 5.48  | -     |
| Follow-up Hdwy       | 2.272  | -      | -      | 3.572 | 3.372 |
| Pot Cap-1 Maneuver   | 1505   | -      | -      | 624   | 988   |
| Stage 1              | -      | -      | -      | 947   | -     |
| Stage 2              | -      | -      | -      | 737   | -     |
| Platoon blocked, %   | -      | -      | -      | -     | -     |
| Mov Cap-1 Maneuver   | 1505   | -      | -      | 624   | 988   |
| Mov Cap-2 Maneuver   | -      | -      | -      | 624   | -     |
| Stage 1              | -      | -      | -      | 947   | -     |
| Stage 2              | -      | -      | -      | 737   | -     |

| Approach             | EB | WB | SB |
|----------------------|----|----|----|
| HCM Control Delay, s | 0  | 0  | 0  |
| HCM LOS              |    |    | A  |

| Minor Lane/Major Mvmt | EBL  | EBT | WBT | WBR | SBLn1 |
|-----------------------|------|-----|-----|-----|-------|
| Capacity (veh/h)      | 1505 | -   | -   | -   | -     |
| HCM Lane V/C Ratio    | -    | -   | -   | -   | -     |
| HCM Control Delay (s) | 0    | -   | -   | -   | 0     |
| HCM Lane LOS          | A    | -   | -   | -   | A     |
| HCM 95th %tile Q(veh) | 0    | -   | -   | -   | -     |

Deer Valley 30  
12: Alameda Rd & Access A

2024 Background PM  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh         | 0    |      |      |      |      |      |
| Movement                 | EBL  | EBT  | WBT  | WBR  | SBL  | SBR  |
| Lane Configurations      |      | ↕    | ↕    |      | ↕    |      |
| Traffic Vol, veh/h       | 0    | 63   | 269  | 0    | 0    | 0    |
| Future Vol, veh/h        | 0    | 63   | 269  | 0    | 0    | 0    |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Free | Free | Free | Free | Stop | Stop |
| RT Channelized           | -    | None | -    | None | -    | None |
| Storage Length           | -    | -    | -    | -    | 0    | -    |
| Veh in Median Storage, # | -    | 0    | 0    | -    | 0    | -    |
| Grade, %                 | -    | 0    | 0    | -    | 0    | -    |
| Peak Hour Factor         | 92   | 92   | 92   | 92   | 92   | 92   |
| Heavy Vehicles, %        | 8    | 8    | 8    | 8    | 8    | 8    |
| Mvmt Flow                | 0    | 68   | 292  | 0    | 0    | 0    |

| Major/Minor          | Major1 | Major2 | Minor2 |       |       |
|----------------------|--------|--------|--------|-------|-------|
| Conflicting Flow All | 292    | 0      | 0      | 360   | 292   |
| Stage 1              | -      | -      | -      | 292   | -     |
| Stage 2              | -      | -      | -      | 68    | -     |
| Critical Hdwy        | 4.18   | -      | -      | 6.48  | 6.28  |
| Critical Hdwy Stg 1  | -      | -      | -      | 5.48  | -     |
| Critical Hdwy Stg 2  | -      | -      | -      | 5.48  | -     |
| Follow-up Hdwy       | 2.272  | -      | -      | 3.572 | 3.372 |
| Pot Cap-1 Maneuver   | 1236   | -      | -      | 627   | 733   |
| Stage 1              | -      | -      | -      | 744   | -     |
| Stage 2              | -      | -      | -      | 940   | -     |
| Platoon blocked, %   | -      | -      | -      | -     | -     |
| Mov Cap-1 Maneuver   | 1236   | -      | -      | 627   | 733   |
| Mov Cap-2 Maneuver   | -      | -      | -      | 627   | -     |
| Stage 1              | -      | -      | -      | 744   | -     |
| Stage 2              | -      | -      | -      | 940   | -     |

| Approach             | EB | WB | SB |
|----------------------|----|----|----|
| HCM Control Delay, s | 0  | 0  | 0  |
| HCM LOS              |    |    | A  |

| Minor Lane/Major Mvmt | EBL  | EBT | WBT | WBR | SBLn1 |
|-----------------------|------|-----|-----|-----|-------|
| Capacity (veh/h)      | 1236 | -   | -   | -   | -     |
| HCM Lane V/C Ratio    | -    | -   | -   | -   | -     |
| HCM Control Delay (s) | 0    | -   | -   | -   | 0     |
| HCM Lane LOS          | A    | -   | -   | -   | A     |
| HCM 95th %tile Q(veh) | 0    | -   | -   | -   | -     |

Deer Valley 30  
13: Alameda Rd & Access B

2024 Background AM  
HCM 6th TWSC

| Intersection             |        |        |        |       |       |      |
|--------------------------|--------|--------|--------|-------|-------|------|
| Int Delay, s/veh         | 0      |        |        |       |       |      |
| Movement                 | EBL    | EBT    | WBT    | WBR   | SBL   | SBR  |
| Lane Configurations      |        | ↕      | ↕      |       | ↕     | ↕    |
| Traffic Vol, veh/h       | 0      | 278    | 56     | 0     | 0     | 0    |
| Future Vol, veh/h        | 0      | 278    | 56     | 0     | 0     | 0    |
| Conflicting Peds, #/hr   | 0      | 0      | 0      | 0     | 0     | 0    |
| Sign Control             | Free   | Free   | Free   | Free  | Stop  | Stop |
| RT Channelized           | -      | None   | -      | None  | -     | None |
| Storage Length           | -      | -      | -      | -     | 0     | -    |
| Veh in Median Storage, # | -      | 0      | 0      | -     | 0     | -    |
| Grade, %                 | -      | 0      | 0      | -     | 0     | -    |
| Peak Hour Factor         | 92     | 92     | 92     | 92    | 92    | 92   |
| Heavy Vehicles, %        | 8      | 8      | 8      | 8     | 8     | 8    |
| Mvmt Flow                | 0      | 302    | 61     | 0     | 0     | 0    |
| Major/Minor              | Major1 | Major2 | Minor2 |       |       |      |
| Conflicting Flow All     | 61     | 0      | 0      | 363   | 61    |      |
| Stage 1                  | -      | -      | -      | 61    | -     |      |
| Stage 2                  | -      | -      | -      | 302   | -     |      |
| Critical Hdwy            | 4.18   | -      | -      | 6.48  | 6.28  |      |
| Critical Hdwy Stg 1      | -      | -      | -      | 5.48  | -     |      |
| Critical Hdwy Stg 2      | -      | -      | -      | 5.48  | -     |      |
| Follow-up Hdwy           | 2.272  | -      | -      | 3.572 | 3.372 |      |
| Pot Cap-1 Maneuver       | 1505   | -      | -      | 624   | 988   |      |
| Stage 1                  | -      | -      | -      | 947   | -     |      |
| Stage 2                  | -      | -      | -      | 737   | -     |      |
| Platoon blocked, %       | -      | -      | -      | -     | -     |      |
| Mov Cap-1 Maneuver       | 1505   | -      | -      | 624   | 988   |      |
| Mov Cap-2 Maneuver       | -      | -      | -      | 624   | -     |      |
| Stage 1                  | -      | -      | -      | 947   | -     |      |
| Stage 2                  | -      | -      | -      | 737   | -     |      |
| Approach                 | EB     | WB     | SB     |       |       |      |
| HCM Control Delay, s     | 0      | 0      | 0      |       |       |      |
| HCM LOS                  |        |        |        | A     |       |      |
| Minor Lane/Major Mvmt    | EBL    | EBT    | WBT    | WBR   | SBLn1 | SBR  |
| Capacity (veh/h)         | 1505   | -      | -      | -     | -     | -    |
| HCM Lane V/C Ratio       | -      | -      | -      | -     | -     | -    |
| HCM Control Delay (s)    | 0      | -      | -      | -     | 0     | -    |
| HCM Lane LOS             | A      | -      | -      | -     | A     | -    |
| HCM 95th %tile Q(veh)    | 0      | -      | -      | -     | -     | -    |

Deer Valley 30  
13: Alameda Rd & Access B

2024 Background PM  
HCM 6th TWSC

| Intersection             |        |        |        |       |       |      |
|--------------------------|--------|--------|--------|-------|-------|------|
| Int Delay, s/veh         | 0      |        |        |       |       |      |
| Movement                 | EBL    | EBT    | WBT    | WBR   | SBL   | SBR  |
| Lane Configurations      |        | ↕      | ↕      |       | ↕     | ↕    |
| Traffic Vol, veh/h       | 0      | 63     | 269    | 0     | 0     | 0    |
| Future Vol, veh/h        | 0      | 63     | 269    | 0     | 0     | 0    |
| Conflicting Peds, #/hr   | 0      | 0      | 0      | 0     | 0     | 0    |
| Sign Control             | Free   | Free   | Free   | Free  | Stop  | Stop |
| RT Channelized           | -      | None   | -      | None  | -     | None |
| Storage Length           | -      | -      | -      | -     | 0     | -    |
| Veh in Median Storage, # | -      | 0      | 0      | -     | 0     | -    |
| Grade, %                 | -      | 0      | 0      | -     | 0     | -    |
| Peak Hour Factor         | 92     | 92     | 92     | 92    | 92    | 92   |
| Heavy Vehicles, %        | 8      | 8      | 8      | 8     | 8     | 8    |
| Mvmt Flow                | 0      | 68     | 292    | 0     | 0     | 0    |
| Major/Minor              | Major1 | Major2 | Minor2 |       |       |      |
| Conflicting Flow All     | 292    | 0      | 0      | 360   | 292   |      |
| Stage 1                  | -      | -      | -      | 292   | -     |      |
| Stage 2                  | -      | -      | -      | 68    | -     |      |
| Critical Hdwy            | 4.18   | -      | -      | 6.48  | 6.28  |      |
| Critical Hdwy Stg 1      | -      | -      | -      | 5.48  | -     |      |
| Critical Hdwy Stg 2      | -      | -      | -      | 5.48  | -     |      |
| Follow-up Hdwy           | 2.272  | -      | -      | 3.572 | 3.372 |      |
| Pot Cap-1 Maneuver       | 1236   | -      | -      | 627   | 733   |      |
| Stage 1                  | -      | -      | -      | 744   | -     |      |
| Stage 2                  | -      | -      | -      | 940   | -     |      |
| Platoon blocked, %       | -      | -      | -      | -     | -     |      |
| Mov Cap-1 Maneuver       | 1236   | -      | -      | 627   | 733   |      |
| Mov Cap-2 Maneuver       | -      | -      | -      | 627   | -     |      |
| Stage 1                  | -      | -      | -      | 744   | -     |      |
| Stage 2                  | -      | -      | -      | 940   | -     |      |
| Approach                 | EB     | WB     | SB     |       |       |      |
| HCM Control Delay, s     | 0      | 0      | 0      |       |       |      |
| HCM LOS                  |        |        |        | A     |       |      |
| Minor Lane/Major Mvmt    | EBL    | EBT    | WBT    | WBR   | SBLn1 | SBR  |
| Capacity (veh/h)         | 1236   | -      | -      | -     | -     | -    |
| HCM Lane V/C Ratio       | -      | -      | -      | -     | -     | -    |
| HCM Control Delay (s)    | 0      | -      | -      | -     | 0     | -    |
| HCM Lane LOS             | A      | -      | -      | -     | A     | -    |
| HCM 95th %tile Q(veh)    | 0      | -      | -      | -     | -     | -    |

Deer Valley 30  
14: Alameda Rd & Access C

2024 Background AM  
HCM 6th TWSC

| Intersection             |        |        |        |       |       |      |
|--------------------------|--------|--------|--------|-------|-------|------|
| Int Delay, s/veh         | 0      |        |        |       |       |      |
| Movement                 | EBL    | EBT    | WBT    | WBR   | SBL   | SBR  |
| Lane Configurations      |        | ↕      | ↕      |       | ↕     | ↕    |
| Traffic Vol, veh/h       | 0      | 278    | 56     | 0     | 0     | 0    |
| Future Vol, veh/h        | 0      | 278    | 56     | 0     | 0     | 0    |
| Conflicting Peds, #/hr   | 0      | 0      | 0      | 0     | 0     | 0    |
| Sign Control             | Free   | Free   | Free   | Free  | Stop  | Stop |
| RT Channelized           | -      | None   | -      | None  | -     | None |
| Storage Length           | -      | -      | -      | -     | 0     | -    |
| Veh in Median Storage, # | -      | 0      | 0      | -     | 0     | -    |
| Grade, %                 | -      | 0      | 0      | -     | 0     | -    |
| Peak Hour Factor         | 92     | 92     | 92     | 92    | 92    | 92   |
| Heavy Vehicles, %        | 8      | 8      | 8      | 8     | 8     | 8    |
| Mvmt Flow                | 0      | 302    | 61     | 0     | 0     | 0    |
| Major/Minor              | Major1 | Major2 | Minor2 |       |       |      |
| Conflicting Flow All     | 61     | 0      | 0      | 363   | 61    |      |
| Stage 1                  | -      | -      | -      | 61    | -     |      |
| Stage 2                  | -      | -      | -      | 302   | -     |      |
| Critical Hdwy            | 4.18   | -      | -      | 6.48  | 6.28  |      |
| Critical Hdwy Stg 1      | -      | -      | -      | 5.48  | -     |      |
| Critical Hdwy Stg 2      | -      | -      | -      | 5.48  | -     |      |
| Follow-up Hdwy           | 2.272  | -      | -      | 3.572 | 3.372 |      |
| Pot Cap-1 Maneuver       | 1505   | -      | -      | 624   | 988   |      |
| Stage 1                  | -      | -      | -      | 947   | -     |      |
| Stage 2                  | -      | -      | -      | 737   | -     |      |
| Platoon blocked, %       | -      | -      | -      | -     | -     |      |
| Mov Cap-1 Maneuver       | 1505   | -      | -      | 624   | 988   |      |
| Mov Cap-2 Maneuver       | -      | -      | -      | 624   | -     |      |
| Stage 1                  | -      | -      | -      | 947   | -     |      |
| Stage 2                  | -      | -      | -      | 737   | -     |      |
| Approach                 | EB     | WB     | SB     |       |       |      |
| HCM Control Delay, s     | 0      | 0      | 0      |       |       |      |
| HCM LOS                  |        |        |        | A     |       |      |
| Minor Lane/Major Mvmt    | EBL    | EBT    | WBT    | WBR   | SBLn1 | SBR  |
| Capacity (veh/h)         | 1505   | -      | -      | -     | -     | -    |
| HCM Lane V/C Ratio       | -      | -      | -      | -     | -     | -    |
| HCM Control Delay (s)    | 0      | -      | -      | -     | 0     | -    |
| HCM Lane LOS             | A      | -      | -      | -     | A     | -    |
| HCM 95th %tile Q(veh)    | 0      | -      | -      | -     | -     | -    |

Deer Valley 30  
14: Alameda Rd & Access C

2024 Background PM  
HCM 6th TWSC

| Intersection             |        |        |        |       |       |      |
|--------------------------|--------|--------|--------|-------|-------|------|
| Int Delay, s/veh         | 0      |        |        |       |       |      |
| Movement                 | EBL    | EBT    | WBT    | WBR   | SBL   | SBR  |
| Lane Configurations      |        | ↕      | ↕      |       | ↕     | ↕    |
| Traffic Vol, veh/h       | 0      | 63     | 269    | 0     | 0     | 0    |
| Future Vol, veh/h        | 0      | 63     | 269    | 0     | 0     | 0    |
| Conflicting Peds, #/hr   | 0      | 0      | 0      | 0     | 0     | 0    |
| Sign Control             | Free   | Free   | Free   | Free  | Stop  | Stop |
| RT Channelized           | -      | None   | -      | None  | -     | None |
| Storage Length           | -      | -      | -      | -     | 0     | -    |
| Veh in Median Storage, # | -      | 0      | 0      | -     | 0     | -    |
| Grade, %                 | -      | 0      | 0      | -     | 0     | -    |
| Peak Hour Factor         | 92     | 92     | 92     | 92    | 92    | 92   |
| Heavy Vehicles, %        | 8      | 8      | 8      | 8     | 8     | 8    |
| Mvmt Flow                | 0      | 68     | 292    | 0     | 0     | 0    |
| Major/Minor              | Major1 | Major2 | Minor2 |       |       |      |
| Conflicting Flow All     | 292    | 0      | 0      | 360   | 292   |      |
| Stage 1                  | -      | -      | -      | 292   | -     |      |
| Stage 2                  | -      | -      | -      | 68    | -     |      |
| Critical Hdwy            | 4.18   | -      | -      | 6.48  | 6.28  |      |
| Critical Hdwy Stg 1      | -      | -      | -      | 5.48  | -     |      |
| Critical Hdwy Stg 2      | -      | -      | -      | 5.48  | -     |      |
| Follow-up Hdwy           | 2.272  | -      | -      | 3.572 | 3.372 |      |
| Pot Cap-1 Maneuver       | 1236   | -      | -      | 627   | 733   |      |
| Stage 1                  | -      | -      | -      | 744   | -     |      |
| Stage 2                  | -      | -      | -      | 940   | -     |      |
| Platoon blocked, %       | -      | -      | -      | -     | -     |      |
| Mov Cap-1 Maneuver       | 1236   | -      | -      | 627   | 733   |      |
| Mov Cap-2 Maneuver       | -      | -      | -      | 627   | -     |      |
| Stage 1                  | -      | -      | -      | 744   | -     |      |
| Stage 2                  | -      | -      | -      | 940   | -     |      |
| Approach                 | EB     | WB     | SB     |       |       |      |
| HCM Control Delay, s     | 0      | 0      | 0      |       |       |      |
| HCM LOS                  |        |        |        | A     |       |      |
| Minor Lane/Major Mvmt    | EBL    | EBT    | WBT    | WBR   | SBLn1 | SBR  |
| Capacity (veh/h)         | 1236   | -      | -      | -     | -     | -    |
| HCM Lane V/C Ratio       | -      | -      | -      | -     | -     | -    |
| HCM Control Delay (s)    | 0      | -      | -      | -     | 0     | -    |
| HCM Lane LOS             | A      | -      | -      | -     | A     | -    |
| HCM 95th %tile Q(veh)    | 0      | -      | -      | -     | -     | -    |

Deer Valley 30  
15: Alameda Rd & 15th Ave

2024 Background AM  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh         | 0    |      |      |      |      |      |
| Movement                 | EBL  | EBT  | WBT  | WBR  | SBL  | SBR  |
| Lane Configurations      |      | ↕    | ↕    |      | ↕    |      |
| Traffic Vol, veh/h       | 0    | 278  | 56   | 0    | 0    | 0    |
| Future Vol, veh/h        | 0    | 278  | 56   | 0    | 0    | 0    |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Free | Free | Free | Free | Stop | Stop |
| RT Channelized           | -    | None | -    | None | -    | None |
| Storage Length           | -    | -    | -    | -    | 0    | -    |
| Veh in Median Storage, # | -    | 0    | 0    | -    | 0    | -    |
| Grade, %                 | -    | 0    | 0    | -    | 0    | -    |
| Peak Hour Factor         | 92   | 92   | 92   | 92   | 92   | 92   |
| Heavy Vehicles, %        | 8    | 8    | 8    | 8    | 8    | 8    |
| Mvmt Flow                | 0    | 302  | 61   | 0    | 0    | 0    |

| Major/Minor          | Major1 | Major2 | Minor2 |       |       |
|----------------------|--------|--------|--------|-------|-------|
| Conflicting Flow All | 61     | 0      | 0      | 363   | 61    |
| Stage 1              | -      | -      | -      | 61    | -     |
| Stage 2              | -      | -      | -      | 302   | -     |
| Critical Hdwy        | 4.18   | -      | -      | 6.48  | 6.28  |
| Critical Hdwy Stg 1  | -      | -      | -      | 5.48  | -     |
| Critical Hdwy Stg 2  | -      | -      | -      | 5.48  | -     |
| Follow-up Hdwy       | 2.272  | -      | -      | 3.572 | 3.372 |
| Pot Cap-1 Maneuver   | 1505   | -      | -      | 624   | 988   |
| Stage 1              | -      | -      | -      | 947   | -     |
| Stage 2              | -      | -      | -      | 737   | -     |
| Platoon blocked, %   | -      | -      | -      | -     | -     |
| Mov Cap-1 Maneuver   | 1505   | -      | -      | 624   | 988   |
| Mov Cap-2 Maneuver   | -      | -      | -      | 624   | -     |
| Stage 1              | -      | -      | -      | 947   | -     |
| Stage 2              | -      | -      | -      | 737   | -     |

| Approach             | EB | WB | SB |
|----------------------|----|----|----|
| HCM Control Delay, s | 0  | 0  | 0  |
| HCM LOS              |    |    | A  |

| Minor Lane/Major Mvmt | EBL  | EBT | WBT | WBR | SBLn1 |
|-----------------------|------|-----|-----|-----|-------|
| Capacity (veh/h)      | 1505 | -   | -   | -   | -     |
| HCM Lane V/C Ratio    | -    | -   | -   | -   | -     |
| HCM Control Delay (s) | 0    | -   | -   | -   | 0     |
| HCM Lane LOS          | A    | -   | -   | -   | A     |
| HCM 95th %tile Q(veh) | 0    | -   | -   | -   | -     |

Deer Valley 30  
15: Alameda Rd & 15th Ave

2024 Background PM  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh         | 0    |      |      |      |      |      |
| Movement                 | EBL  | EBT  | WBT  | WBR  | SBL  | SBR  |
| Lane Configurations      |      | ↕    | ↕    |      | ↕    |      |
| Traffic Vol, veh/h       | 0    | 63   | 269  | 0    | 0    | 0    |
| Future Vol, veh/h        | 0    | 63   | 269  | 0    | 0    | 0    |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Free | Free | Free | Free | Stop | Stop |
| RT Channelized           | -    | None | -    | None | -    | None |
| Storage Length           | -    | -    | -    | -    | 0    | -    |
| Veh in Median Storage, # | -    | 0    | 0    | -    | 0    | -    |
| Grade, %                 | -    | 0    | 0    | -    | 0    | -    |
| Peak Hour Factor         | 92   | 92   | 92   | 92   | 92   | 92   |
| Heavy Vehicles, %        | 8    | 8    | 8    | 8    | 8    | 8    |
| Mvmt Flow                | 0    | 68   | 292  | 0    | 0    | 0    |

| Major/Minor          | Major1 | Major2 | Minor2 |       |       |
|----------------------|--------|--------|--------|-------|-------|
| Conflicting Flow All | 292    | 0      | 0      | 360   | 292   |
| Stage 1              | -      | -      | -      | 292   | -     |
| Stage 2              | -      | -      | -      | 68    | -     |
| Critical Hdwy        | 4.18   | -      | -      | 6.48  | 6.28  |
| Critical Hdwy Stg 1  | -      | -      | -      | 5.48  | -     |
| Critical Hdwy Stg 2  | -      | -      | -      | 5.48  | -     |
| Follow-up Hdwy       | 2.272  | -      | -      | 3.572 | 3.372 |
| Pot Cap-1 Maneuver   | 1236   | -      | -      | 627   | 733   |
| Stage 1              | -      | -      | -      | 744   | -     |
| Stage 2              | -      | -      | -      | 940   | -     |
| Platoon blocked, %   | -      | -      | -      | -     | -     |
| Mov Cap-1 Maneuver   | 1236   | -      | -      | 627   | 733   |
| Mov Cap-2 Maneuver   | -      | -      | -      | 627   | -     |
| Stage 1              | -      | -      | -      | 744   | -     |
| Stage 2              | -      | -      | -      | 940   | -     |

| Approach             | EB | WB | SB |
|----------------------|----|----|----|
| HCM Control Delay, s | 0  | 0  | 0  |
| HCM LOS              |    |    | A  |

| Minor Lane/Major Mvmt | EBL  | EBT | WBT | WBR | SBLn1 |
|-----------------------|------|-----|-----|-----|-------|
| Capacity (veh/h)      | 1236 | -   | -   | -   | -     |
| HCM Lane V/C Ratio    | -    | -   | -   | -   | -     |
| HCM Control Delay (s) | 0    | -   | -   | -   | 0     |
| HCM Lane LOS          | A    | -   | -   | -   | A     |
| HCM 95th %tile Q(veh) | 0    | -   | -   | -   | -     |

Deer Valley 30  
16: Alameda Rd & Access D

2024 Background AM  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh         | 0    |      |      |      |      |      |
| Movement                 | EBL  | EBT  | WBT  | WBR  | SBL  | SBR  |
| Lane Configurations      |      | ↕    | ↕    |      | ↕    | ↕    |
| Traffic Vol, veh/h       | 0    | 278  | 56   | 0    | 0    | 0    |
| Future Vol, veh/h        | 0    | 278  | 56   | 0    | 0    | 0    |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Free | Free | Free | Free | Stop | Stop |
| RT Channelized           | -    | None | -    | None | -    | None |
| Storage Length           | -    | -    | -    | -    | 0    | -    |
| Veh in Median Storage, # | -    | 0    | 0    | -    | 0    | -    |
| Grade, %                 | -    | 0    | 0    | -    | 0    | -    |
| Peak Hour Factor         | 92   | 92   | 92   | 92   | 92   | 92   |
| Heavy Vehicles, %        | 8    | 8    | 8    | 8    | 8    | 8    |
| Mvmt Flow                | 0    | 302  | 61   | 0    | 0    | 0    |

| Major/Minor          | Major1 | Major2 | Minor2 |       |       |
|----------------------|--------|--------|--------|-------|-------|
| Conflicting Flow All | 61     | 0      | 0      | 363   | 61    |
| Stage 1              | -      | -      | -      | 61    | -     |
| Stage 2              | -      | -      | -      | 302   | -     |
| Critical Hdwy        | 4.18   | -      | -      | 6.48  | 6.28  |
| Critical Hdwy Stg 1  | -      | -      | -      | 5.48  | -     |
| Critical Hdwy Stg 2  | -      | -      | -      | 5.48  | -     |
| Follow-up Hdwy       | 2.272  | -      | -      | 3.572 | 3.372 |
| Pot Cap-1 Maneuver   | 1505   | -      | -      | 624   | 988   |
| Stage 1              | -      | -      | -      | 947   | -     |
| Stage 2              | -      | -      | -      | 737   | -     |
| Platoon blocked, %   | -      | -      | -      | -     | -     |
| Mov Cap-1 Maneuver   | 1505   | -      | -      | 624   | 988   |
| Mov Cap-2 Maneuver   | -      | -      | -      | 624   | -     |
| Stage 1              | -      | -      | -      | 947   | -     |
| Stage 2              | -      | -      | -      | 737   | -     |

| Approach             | EB | WB | SB |
|----------------------|----|----|----|
| HCM Control Delay, s | 0  | 0  | 0  |
| HCM LOS              |    |    | A  |

| Minor Lane/Major Mvmt | EBL  | EBT | WBT | WBR | SBLn1 |
|-----------------------|------|-----|-----|-----|-------|
| Capacity (veh/h)      | 1505 | -   | -   | -   | -     |
| HCM Lane V/C Ratio    | -    | -   | -   | -   | -     |
| HCM Control Delay (s) | 0    | -   | -   | -   | 0     |
| HCM Lane LOS          | A    | -   | -   | -   | A     |
| HCM 95th %tile Q(veh) | 0    | -   | -   | -   | -     |

Deer Valley 30  
16: Alameda Rd & Access D

2024 Background PM  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh         | 0    |      |      |      |      |      |
| Movement                 | EBL  | EBT  | WBT  | WBR  | SBL  | SBR  |
| Lane Configurations      |      | ↕    | ↕    |      | ↕    | ↕    |
| Traffic Vol, veh/h       | 0    | 63   | 269  | 0    | 0    | 0    |
| Future Vol, veh/h        | 0    | 63   | 269  | 0    | 0    | 0    |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Free | Free | Free | Free | Stop | Stop |
| RT Channelized           | -    | None | -    | None | -    | None |
| Storage Length           | -    | -    | -    | -    | 0    | -    |
| Veh in Median Storage, # | -    | 0    | 0    | -    | 0    | -    |
| Grade, %                 | -    | 0    | 0    | -    | 0    | -    |
| Peak Hour Factor         | 92   | 92   | 92   | 92   | 92   | 92   |
| Heavy Vehicles, %        | 8    | 8    | 8    | 8    | 8    | 8    |
| Mvmt Flow                | 0    | 68   | 292  | 0    | 0    | 0    |

| Major/Minor          | Major1 | Major2 | Minor2 |       |       |
|----------------------|--------|--------|--------|-------|-------|
| Conflicting Flow All | 292    | 0      | 0      | 360   | 292   |
| Stage 1              | -      | -      | -      | 292   | -     |
| Stage 2              | -      | -      | -      | 68    | -     |
| Critical Hdwy        | 4.18   | -      | -      | 6.48  | 6.28  |
| Critical Hdwy Stg 1  | -      | -      | -      | 5.48  | -     |
| Critical Hdwy Stg 2  | -      | -      | -      | 5.48  | -     |
| Follow-up Hdwy       | 2.272  | -      | -      | 3.572 | 3.372 |
| Pot Cap-1 Maneuver   | 1236   | -      | -      | 627   | 733   |
| Stage 1              | -      | -      | -      | 744   | -     |
| Stage 2              | -      | -      | -      | 940   | -     |
| Platoon blocked, %   | -      | -      | -      | -     | -     |
| Mov Cap-1 Maneuver   | 1236   | -      | -      | 627   | 733   |
| Mov Cap-2 Maneuver   | -      | -      | -      | 627   | -     |
| Stage 1              | -      | -      | -      | 744   | -     |
| Stage 2              | -      | -      | -      | 940   | -     |

| Approach             | EB | WB | SB |
|----------------------|----|----|----|
| HCM Control Delay, s | 0  | 0  | 0  |
| HCM LOS              |    |    | A  |

| Minor Lane/Major Mvmt | EBL  | EBT | WBT | WBR | SBLn1 |
|-----------------------|------|-----|-----|-----|-------|
| Capacity (veh/h)      | 1236 | -   | -   | -   | -     |
| HCM Lane V/C Ratio    | -    | -   | -   | -   | -     |
| HCM Control Delay (s) | 0    | -   | -   | -   | 0     |
| HCM Lane LOS          | A    | -   | -   | -   | A     |
| HCM 95th %tile Q(veh) | 0    | -   | -   | -   | -     |



Deer Valley 30  
1: 19th Ave & Happy Valley Rd

2024 Background AM Mitigated  
Timings

| Lane Group           | EBL  | EBT   | WBL   | WBT   | NBL   | NBT   | NBR   | SBL   | SBT   | SBR   |  |
|----------------------|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|--|
| Lane Configurations  | ↔    | ↔     | ↔     | ↔     | ↔     | ↔     | ↔     | ↔     | ↔     | ↔     |  |
| Traffic Volume (vph) | 87   | 511   | 150   | 326   | 213   | 267   | 102   | 294   | 461   | 96    |  |
| Future Volume (vph)  | 87   | 511   | 150   | 326   | 213   | 267   | 102   | 294   | 461   | 96    |  |
| Turn Type            | Prot | NA    | Prot  | NA    | Prot  | NA    | Perm  | Prot  | NA    | Perm  |  |
| Protected Phases     | 7    | 4     | 3     | 8     | 5     | 2     |       | 1     | 6     |       |  |
| Permitted Phases     |      |       |       |       |       |       | 2     |       |       | 6     |  |
| Detector Phase       | 7    | 4     | 3     | 8     | 5     | 2     | 2     | 1     | 6     | 6     |  |
| Switch Phase         |      |       |       |       |       |       |       |       |       |       |  |
| Minimum Initial (s)  | 5.0  | 15.0  | 5.0   | 15.0  | 5.0   | 5.0   | 5.0   | 5.0   | 5.0   | 5.0   |  |
| Minimum Split (s)    | 9.5  | 41.0  | 9.5   | 41.0  | 9.5   | 43.1  | 43.1  | 9.5   | 43.1  | 43.1  |  |
| Total Split (s)      | 9.5  | 41.4  | 9.5   | 41.4  | 15.0  | 39.1  | 39.1  | 15.0  | 39.1  | 39.1  |  |
| Total Split (%)      | 9.0% | 39.4% | 9.0%  | 39.4% | 14.3% | 37.2% | 37.2% | 14.3% | 37.2% | 37.2% |  |
| Yellow Time (s)      | 3.5  | 4.3   | 3.5   | 4.3   | 3.5   | 4.3   | 4.3   | 3.5   | 4.3   | 4.3   |  |
| All-Red Time (s)     | 1.0  | 1.7   | 1.0   | 1.7   | 1.0   | 1.8   | 1.8   | 1.0   | 1.8   | 1.8   |  |
| Lost Time Adjust (s) | 0.0  | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |  |
| Total Lost Time (s)  | 4.5  | 6.0   | 4.5   | 6.0   | 4.5   | 6.1   | 6.1   | 4.5   | 6.1   | 6.1   |  |
| Lead/Lag             | Lead | Lag   | Lead  | Lag   | Lead  | Lag   | Lead  | Lag   | Lag   | Lag   |  |
| Lead-Lag Optimize?   | Yes  | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   |  |
| Recall Mode          | None | C-Max | None  | C-Max | None  | Max   | Max   | None  | Max   | Max   |  |
| Act Effct Green (s)  | 5.0  | 35.4  | 5.0   | 35.4  | 10.3  | 33.0  | 33.0  | 10.5  | 33.2  | 33.2  |  |
| Actuated g/C Ratio   | 0.05 | 0.34  | 0.05  | 0.34  | 0.10  | 0.31  | 0.31  | 0.10  | 0.32  | 0.32  |  |
| v/c Ratio            | 0.62 | 0.64  | 1.06  | 0.30  | 0.73  | 0.28  | 0.20  | 0.99  | 0.33  | 0.19  |  |
| Control Delay        | 66.8 | 24.5  | 137.8 | 21.0  | 60.4  | 27.9  | 4.7   | 95.2  | 28.2  | 4.0   |  |
| Queue Delay          | 0.0  | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |  |
| Total Delay          | 66.8 | 24.5  | 137.8 | 21.0  | 60.4  | 27.9  | 4.7   | 95.2  | 28.2  | 4.0   |  |
| LOS                  | E    | C     | F     | C     | E     | C     | A     | F     | C     | A     |  |
| Approach Delay       | 27.9 |       |       | 50.7  |       |       | 35.8  |       |       | 48.7  |  |
| Approach LOS         | C    |       |       | D     |       |       | D     |       |       | D     |  |

Intersection Summary

Cycle Length: 105

Actuated Cycle Length: 105

Offset: 0 (0%), Referenced to phase 4:EBT and 8:WBT, Start of Green

Natural Cycle: 105

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 1.06

Intersection Signal Delay: 39.5

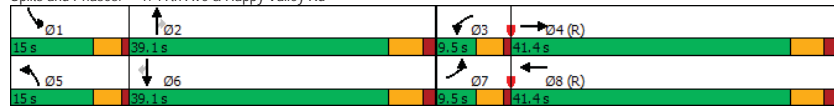
Intersection LOS: D

Intersection Capacity Utilization 58.0%

ICU Level of Service B

Analysis Period (min) 15

Splits and Phases: 1: 19th Ave & Happy Valley Rd



Deer Valley 30  
1: 19th Ave & Happy Valley Rd

2024 Background PM Mitigated  
Timings

| Lane Group           | EBL   | EBT   | WBL   | WBT   | NBL   | NBT   | NBR   | SBL   | SBT   | SBR   |  |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|--|
| Lane Configurations  | ↔     | ↔     | ↔     | ↔     | ↔     | ↔     | ↔     | ↔     | ↔     | ↔     |  |
| Traffic Volume (vph) | 167   | 417   | 165   | 904   | 593   | 531   | 125   | 183   | 238   | 122   |  |
| Future Volume (vph)  | 167   | 417   | 165   | 904   | 593   | 531   | 125   | 183   | 238   | 122   |  |
| Turn Type            | Prot  | NA    | Prot  | NA    | Prot  | NA    | Perm  | Prot  | NA    | Perm  |  |
| Protected Phases     | 7     | 4     | 3     | 8     | 5     | 2     |       | 1     | 6     |       |  |
| Permitted Phases     |       |       |       |       |       |       | 2     |       |       | 6     |  |
| Detector Phase       | 7     | 4     | 3     | 8     | 5     | 2     | 2     | 1     | 6     | 6     |  |
| Switch Phase         |       |       |       |       |       |       |       |       |       |       |  |
| Minimum Initial (s)  | 5.0   | 15.0  | 5.0   | 15.0  | 5.0   | 5.0   | 5.0   | 5.0   | 5.0   | 5.0   |  |
| Minimum Split (s)    | 9.5   | 41.0  | 9.5   | 41.0  | 9.5   | 43.1  | 43.1  | 9.5   | 43.1  | 43.1  |  |
| Total Split (s)      | 20.1  | 31.9  | 20.1  | 31.9  | 26.0  | 40.0  | 40.0  | 13.0  | 27.0  | 27.0  |  |
| Total Split (%)      | 19.1% | 30.4% | 19.1% | 30.4% | 24.8% | 38.1% | 38.1% | 12.4% | 25.7% | 25.7% |  |
| Yellow Time (s)      | 3.5   | 4.3   | 3.5   | 4.3   | 3.5   | 4.3   | 4.3   | 3.5   | 4.3   | 4.3   |  |
| All-Red Time (s)     | 1.0   | 1.7   | 1.0   | 1.7   | 1.0   | 1.8   | 1.8   | 1.0   | 1.8   | 1.8   |  |
| Lost Time Adjust (s) | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |  |
| Total Lost Time (s)  | 4.5   | 6.0   | 4.5   | 6.0   | 4.5   | 6.1   | 6.1   | 4.5   | 6.1   | 6.1   |  |
| Lead/Lag             | Lead  | Lag   | Lead  | Lag   | Lead  | Lag   | Lead  | Lag   | Lag   | Lag   |  |
| Lead-Lag Optimize?   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   |  |
| Recall Mode          | None  | C-Max | None  | C-Max | None  | Max   | Max   | None  | Max   | Max   |  |
| Act Effct Green (s)  | 11.2  | 30.4  | 11.1  | 30.3  | 21.5  | 33.9  | 33.9  | 8.5   | 20.9  | 20.9  |  |
| Actuated g/C Ratio   | 0.11  | 0.29  | 0.11  | 0.29  | 0.20  | 0.32  | 0.32  | 0.08  | 0.20  | 0.20  |  |
| v/c Ratio            | 0.53  | 0.55  | 0.52  | 1.00  | 0.97  | 0.53  | 0.24  | 0.76  | 0.27  | 0.31  |  |
| Control Delay        | 49.6  | 26.5  | 49.7  | 59.5  | 71.2  | 31.3  | 5.6   | 66.5  | 36.5  | 4.4   |  |
| Queue Delay          | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |  |
| Total Delay          | 49.6  | 26.5  | 49.7  | 59.5  | 71.2  | 31.3  | 5.6   | 66.5  | 36.5  | 4.4   |  |
| LOS                  | D     | C     | D     | E     | E     | C     | A     | E     | D     | A     |  |
| Approach Delay       | 30.9  |       |       | 58.4  |       |       | 47.7  |       |       | 39.4  |  |
| Approach LOS         | C     |       |       | E     |       |       | D     |       |       | D     |  |

Intersection Summary

Cycle Length: 105

Actuated Cycle Length: 105

Offset: 0 (0%), Referenced to phase 4:EBT and 8:WBT, Start of Green

Natural Cycle: 125

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 1.00

Intersection Signal Delay: 46.7

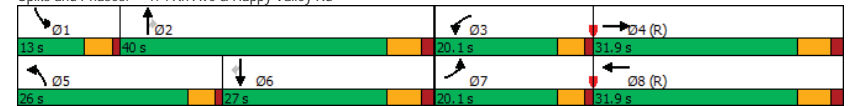
Intersection LOS: D

Intersection Capacity Utilization 69.7%

ICU Level of Service C


Analysis Period (min) 15

Splits and Phases: 1: 19th Ave & Happy Valley Rd



Deer Valley 30  
1: 19th Ave & Happy Valley Rd

2024 Background AM Mitigated  
HCM 6th Signalized Intersection Summary



| Movement                     | EBL  | EBT   | EBR  | WBL   | WBT  | WBR   | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
|------------------------------|------|-------|------|-------|------|-------|------|------|------|------|------|------|
| Lane Configurations          | ↔    | ↔     | ↔    | ↔     | ↔    | ↔     | ↔    | ↔    | ↔    | ↔    | ↔    | ↔    |
| Traffic Volume (veh/h)       | 87   | 511   | 469  | 150   | 326  | 115   | 213  | 267  | 102  | 294  | 461  | 96   |
| Future Volume (veh/h)        | 87   | 511   | 469  | 150   | 326  | 115   | 213  | 267  | 102  | 294  | 461  | 96   |
| Initial Q (Ob), veh          | 0    | 0     | 0    | 0     | 0    | 0     | 0    | 0    | 0    | 0    | 0    | 0    |
| Ped-Bike Adj(A_pbT)          | 1.00 | 1.00  | 1.00 | 1.00  | 1.00 | 1.00  | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Parking Bus, Adj             | 1.00 | 1.00  | 1.00 | 1.00  | 1.00 | 1.00  | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Work Zone On Approach        | No   | No    | No   | No    | No   | No    | No   | No   | No   | No   | No   | No   |
| Adj Sat Flow, veh/h/ln       | 1781 | 1781  | 1781 | 1781  | 1781 | 1781  | 1781 | 1781 | 1781 | 1781 | 1781 | 1781 |
| Adj Flow Rate, veh/h         | 95   | 555   | 510  | 163   | 354  | 125   | 232  | 290  | 111  | 320  | 501  | 104  |
| Peak Hour Factor             | 0.92 | 0.92  | 0.92 | 0.92  | 0.92 | 0.92  | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Percent Heavy Veh, %         | 8    | 8     | 8    | 8     | 8    | 8     | 8    | 8    | 8    | 8    | 8    | 8    |
| Cap, veh/h                   | 147  | 1093  | 509  | 157   | 1224 | 411   | 293  | 1064 | 474  | 329  | 1582 | 491  |
| Arrive On Green              | 0.04 | 0.34  | 0.34 | 0.05  | 0.34 | 0.34  | 0.09 | 0.31 | 0.31 | 0.10 | 0.33 | 0.33 |
| Sat Flow, veh/h              | 3291 | 3242  | 1510 | 3291  | 3599 | 1208  | 3291 | 3385 | 1510 | 3291 | 4863 | 1510 |
| Grp Volume(v), veh/h         | 95   | 555   | 510  | 163   | 317  | 162   | 232  | 290  | 111  | 320  | 501  | 104  |
| Grp Sat Flow(s), veh/h/ln    | 1646 | 1621  | 1510 | 1646  | 1621 | 1564  | 1646 | 1692 | 1510 | 1646 | 1621 | 1510 |
| Q Serve(g_s), s              | 3.0  | 14.4  | 35.4 | 5.0   | 7.5  | 8.0   | 7.3  | 6.7  | 5.7  | 10.2 | 8.1  | 5.2  |
| Cycle Q Clear(g_c), s        | 3.0  | 14.4  | 35.4 | 5.0   | 7.5  | 8.0   | 7.3  | 6.7  | 5.7  | 10.2 | 8.1  | 5.2  |
| Prop In Lane                 | 1.00 | 1.00  | 1.00 | 1.00  | 0.77 | 1.00  | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Lane Grp Cap(c), veh/h       | 147  | 1093  | 509  | 157   | 1103 | 532   | 293  | 1064 | 474  | 329  | 1582 | 491  |
| V/C Ratio(X)                 | 0.65 | 0.51  | 1.00 | 1.04  | 0.29 | 0.30  | 0.79 | 0.27 | 0.23 | 0.97 | 0.32 | 0.21 |
| Avail Cap(c_a), veh/h        | 157  | 1093  | 509  | 157   | 1103 | 532   | 329  | 1064 | 474  | 329  | 1582 | 491  |
| HCM Platoon Ratio            | 1.00 | 1.00  | 1.00 | 1.00  | 1.00 | 1.00  | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(I)           | 1.00 | 1.00  | 1.00 | 1.00  | 1.00 | 1.00  | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Uniform Delay (d), s/veh     | 49.3 | 27.8  | 34.8 | 50.0  | 25.3 | 25.5  | 46.9 | 27.0 | 26.6 | 47.1 | 26.6 | 25.7 |
| Incr Delay (d2), s/veh       | 8.2  | 1.7   | 40.4 | 82.9  | 0.7  | 1.5   | 11.2 | 0.6  | 1.2  | 42.0 | 0.5  | 1.0  |
| Initial Q Delay(d3), s/veh   | 0.0  | 0.0   | 0.0  | 0.0   | 0.0  | 0.0   | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| %ile BackOfQ(50%), veh/ln    | 1.4  | 5.8   | 18.3 | 3.8   | 3.0  | 3.2   | 3.4  | 2.8  | 2.2  | 6.1  | 3.2  | 2.0  |
| Unsig. Movement Delay, s/veh |      |       |      |       |      |       |      |      |      |      |      |      |
| LnGrp Delay(d), s/veh        | 57.5 | 29.5  | 75.2 | 132.9 | 26.0 | 27.0  | 58.1 | 27.6 | 27.8 | 89.1 | 27.2 | 26.6 |
| LnGrp LOS                    | E    | C     | F    | F     | C    | C     | E    | C    | C    | F    | C    | C    |
| Approach Vol, veh/h          |      | 1160  |      |       | 642  |       |      | 633  |      |      | 925  |      |
| Approach Delay, s/veh        |      | 51.9  |      |       | 53.4 |       |      | 38.8 |      |      | 48.5 |      |
| Approach LOS                 |      | D     |      |       | D    |       |      | D    |      |      | D    |      |
| Timer - Assigned Phs         | 1    | 2     | 3    | 4     | 5    | 6     | 7    | 8    |      |      |      |      |
| Phs Duration (G+Y+Rc), s     | 15.0 | 39.1  | 9.5  | 41.4  | 13.8 | 40.3  | 9.2  | 41.7 |      |      |      |      |
| Change Period (Y+Rc), s      | 4.5  | * 6.1 | 4.5  | * 6   | 4.5  | * 6.1 | 4.5  | * 6  |      |      |      |      |
| Max Green Setting (Gmax), s  | 10.5 | * 33  | 5.0  | * 35  | 10.5 | * 33  | 5.0  | * 35 |      |      |      |      |
| Max Q Clear Time (g_c+I1), s | 12.2 | 8.7   | 7.0  | 37.4  | 9.3  | 10.1  | 5.0  | 10.0 |      |      |      |      |
| Green Ext Time (p_c), s      | 0.0  | 2.3   | 0.0  | 0.0   | 0.1  | 3.9   | 0.0  | 3.3  |      |      |      |      |

**Intersection Summary**


|                    |      |
|--------------------|------|
| HCM 6th Ctrl Delay | 48.8 |
| HCM 6th LOS        | D    |

**Notes**

User approved pedestrian interval to be less than phase max green.  
\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Deer Valley 30  
1: 19th Ave & Happy Valley Rd

2024 Background PM Mitigated  
HCM 6th Signalized Intersection Summary



| Movement                     | EBL  | EBT   | EBR  | WBL  | WBT  | WBR   | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
|------------------------------|------|-------|------|------|------|-------|------|------|------|------|------|------|
| Lane Configurations          | ↔    | ↔     | ↔    | ↔    | ↔    | ↔     | ↔    | ↔    | ↔    | ↔    | ↔    | ↔    |
| Traffic Volume (veh/h)       | 167  | 417   | 299  | 165  | 904  | 374   | 593  | 531  | 125  | 183  | 238  | 122  |
| Future Volume (veh/h)        | 167  | 417   | 299  | 165  | 904  | 374   | 593  | 531  | 125  | 183  | 238  | 122  |
| Initial Q (Ob), veh          | 0    | 0     | 0    | 0    | 0    | 0     | 0    | 0    | 0    | 0    | 0    | 0    |
| Ped-Bike Adj(A_pbT)          | 1.00 | 1.00  | 1.00 | 1.00 | 1.00 | 1.00  | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Parking Bus, Adj             | 1.00 | 1.00  | 1.00 | 1.00 | 1.00 | 1.00  | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Work Zone On Approach        | No   | No    | No   | No   | No   | No    | No   | No   | No   | No   | No   | No   |
| Adj Sat Flow, veh/h/ln       | 1781 | 1781  | 1781 | 1781 | 1781 | 1781  | 1781 | 1781 | 1781 | 1781 | 1781 | 1781 |
| Adj Flow Rate, veh/h         | 182  | 453   | 325  | 179  | 983  | 407   | 645  | 577  | 136  | 199  | 259  | 133  |
| Peak Hour Factor             | 0.92 | 0.92  | 0.92 | 0.92 | 0.92 | 0.92  | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Percent Heavy Veh, %         | 8    | 8     | 8    | 8    | 8    | 8     | 8    | 8    | 8    | 8    | 8    | 8    |
| Cap, veh/h                   | 250  | 1038  | 483  | 247  | 1077 | 446   | 674  | 1102 | 491  | 258  | 968  | 301  |
| Arrive On Green              | 0.08 | 0.32  | 0.32 | 0.08 | 0.32 | 0.32  | 0.20 | 0.33 | 0.33 | 0.08 | 0.20 | 0.20 |
| Sat Flow, veh/h              | 3291 | 3242  | 1510 | 3291 | 3375 | 1397  | 3291 | 3385 | 1510 | 3291 | 4863 | 1510 |
| Grp Volume(v), veh/h         | 182  | 453   | 325  | 179  | 944  | 446   | 645  | 577  | 136  | 199  | 259  | 133  |
| Grp Sat Flow(s), veh/h/ln    | 1646 | 1621  | 1510 | 1646 | 1621 | 1530  | 1646 | 1692 | 1510 | 1646 | 1621 | 1510 |
| Q Serve(g_s), s              | 5.7  | 11.6  | 19.6 | 5.6  | 29.4 | 29.4  | 20.4 | 14.6 | 7.0  | 6.2  | 4.7  | 8.1  |
| Cycle Q Clear(g_c), s        | 5.7  | 11.6  | 19.6 | 5.6  | 29.4 | 29.4  | 20.4 | 14.6 | 7.0  | 6.2  | 4.7  | 8.1  |
| Prop In Lane                 | 1.00 | 1.00  | 1.00 | 1.00 | 0.91 | 1.00  | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Lane Grp Cap(c), veh/h       | 250  | 1038  | 483  | 247  | 1035 | 488   | 674  | 1102 | 491  | 258  | 968  | 301  |
| V/C Ratio(X)                 | 0.73 | 0.44  | 0.67 | 0.72 | 0.91 | 0.91  | 0.96 | 0.52 | 0.28 | 0.77 | 0.27 | 0.44 |
| Avail Cap(c_a), veh/h        | 489  | 1038  | 483  | 489  | 1035 | 488   | 674  | 1102 | 491  | 266  | 968  | 301  |
| HCM Platoon Ratio            | 1.00 | 1.00  | 1.00 | 1.00 | 1.00 | 1.00  | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(I)           | 1.00 | 1.00  | 1.00 | 1.00 | 1.00 | 1.00  | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Uniform Delay (d), s/veh     | 47.4 | 28.2  | 30.9 | 47.5 | 34.3 | 34.3  | 41.3 | 28.8 | 26.2 | 47.5 | 35.6 | 36.9 |
| Incr Delay (d2), s/veh       | 4.0  | 1.3   | 7.3  | 4.0  | 13.5 | 23.9  | 24.5 | 1.8  | 1.4  | 12.7 | 0.7  | 4.7  |
| Initial Q Delay(d3), s/veh   | 0.0  | 0.0   | 0.0  | 0.0  | 0.0  | 0.0   | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| %ile BackOfQ(50%), veh/ln    | 2.5  | 4.7   | 8.0  | 2.4  | 13.2 | 13.9  | 10.4 | 6.1  | 2.7  | 3.0  | 1.9  | 3.4  |
| Unsig. Movement Delay, s/veh |      |       |      |      |      |       |      |      |      |      |      |      |
| LnGrp Delay(d), s/veh        | 51.5 | 29.5  | 38.2 | 51.5 | 47.8 | 58.3  | 65.8 | 30.6 | 27.6 | 60.2 | 36.3 | 41.6 |
| LnGrp LOS                    | D    | C     | D    | D    | D    | E     | E    | C    | C    | E    | D    | D    |
| Approach Vol, veh/h          |      | 960   |      |      | 1569 |       |      | 1358 |      |      | 591  |      |
| Approach Delay, s/veh        |      | 36.6  |      |      | 51.2 |       |      | 47.0 |      |      | 45.5 |      |
| Approach LOS                 |      | D     |      |      | D    |       |      | D    |      |      | D    |      |
| Timer - Assigned Phs         | 1    | 2     | 3    | 4    | 5    | 6     | 7    | 8    |      |      |      |      |
| Phs Duration (G+Y+Rc), s     | 12.7 | 40.3  | 12.4 | 39.6 | 26.0 | 27.0  | 12.5 | 39.5 |      |      |      |      |
| Change Period (Y+Rc), s      | 4.5  | * 6.1 | 4.5  | * 6  | 4.5  | * 6.1 | 4.5  | * 6  |      |      |      |      |
| Max Green Setting (Gmax), s  | 8.5  | * 34  | 15.6 | * 26 | 21.5 | * 21  | 15.6 | * 26 |      |      |      |      |
| Max Q Clear Time (g_c+I1), s | 8.2  | 16.6  | 7.6  | 21.6 | 22.4 | 10.1  | 7.7  | 31.4 |      |      |      |      |
| Green Ext Time (p_c), s      | 0.0  | 4.1   | 0.3  | 2.0  | 0.0  | 1.6   | 0.3  | 0.0  |      |      |      |      |

**Intersection Summary**

|                    |      |
|--------------------|------|
| HCM 6th Ctrl Delay | 46.1 |
| HCM 6th LOS        | D    |

**Notes**

User approved pedestrian interval to be less than phase max green.  
\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Deer Valley 30  
2: 19th Ave & Optum Drwy

2024 Background AM Mitigated  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh         | 0.1  |      |      |      |      |      |
| Movement                 | EBL  | EBR  | NBL  | NBT  | SBT  | SBR  |
| Lane Configurations      | W    |      | ↑↑↑  | ↑↑↑  | ↑↑   |      |
| Traffic Vol, veh/h       | 0    | 4    | 7    | 583  | 1078 | 2    |
| Future Vol, veh/h        | 0    | 4    | 7    | 583  | 1078 | 2    |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Stop | Stop | Free | Free | Free | Free |
| RT Channelized           | -    | None | -    | None | -    | None |
| Storage Length           | 0    | -    | 50   | -    | -    | -    |
| Veh in Median Storage, # | 0    | -    | -    | 0    | 0    | -    |
| Grade, %                 | 0    | -    | -    | 0    | 0    | -    |
| Peak Hour Factor         | 92   | 92   | 92   | 92   | 92   | 92   |
| Heavy Vehicles, %        | 8    | 8    | 8    | 8    | 8    | 8    |
| Mvmt Flow                | 0    | 4    | 8    | 634  | 1172 | 2    |

| Major/Minor          | Minor2 | Major1 | Major2 |   |     |
|----------------------|--------|--------|--------|---|-----|
| Conflicting Flow All | 1443   | 587    | 1174   | 0 | - 0 |
| Stage 1              | 1173   | -      | -      | - | -   |
| Stage 2              | 270    | -      | -      | - | -   |
| Critical Hdwy        | 6.41   | 7.06   | 4.26   | - | - - |
| Critical Hdwy Stg 1  | 5.96   | -      | -      | - | -   |
| Critical Hdwy Stg 2  | 6.16   | -      | -      | - | -   |
| Follow-up Hdwy       | 3.73   | 3.38   | 2.28   | - | - - |
| Pot Cap-1 Maneuver   | *242   | 438    | 558    | - | - - |
| Stage 1              | *239   | -      | -      | - | -   |
| Stage 2              | *828   | -      | -      | - | -   |
| Platoon blocked, %   | 1      | -      | -      | - | -   |
| Mov Cap-1 Maneuver   | *239   | 438    | 558    | - | - - |
| Mov Cap-2 Maneuver   | *215   | -      | -      | - | -   |
| Stage 1              | *236   | -      | -      | - | -   |
| Stage 2              | *828   | -      | -      | - | -   |

| Approach             | EB   | NB  | SB |
|----------------------|------|-----|----|
| HCM Control Delay, s | 13.3 | 0.1 | 0  |
| HCM LOS              | B    |     |    |

| Minor Lane/Major Mvmt | NBL   | NBT | EBLn1 | SBT | SBR |
|-----------------------|-------|-----|-------|-----|-----|
| Capacity (veh/h)      | 558   | -   | 438   | -   | -   |
| HCM Lane V/C Ratio    | 0.014 | -   | 0.01  | -   | -   |
| HCM Control Delay (s) | 11.5  | -   | 13.3  | -   | -   |
| HCM Lane LOS          | B     | -   | B     | -   | -   |
| HCM 95th %tile Q(veh) | 0     | -   | 0     | -   | -   |

Notes  
 -: Volume exceeds capacity    \$: Delay exceeds 300s    +: Computation Not Defined    \*: All major volume in platoon

Deer Valley 30  
2: 19th Ave & Optum Drwy

2024 Background PM Mitigated  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh         | 0.1  |      |      |      |      |      |
| Movement                 | EBL  | EBR  | NBL  | NBT  | SBT  | SBR  |
| Lane Configurations      | W    |      | ↑↑↑  | ↑↑↑  | ↑↑   |      |
| Traffic Vol, veh/h       | 0    | 4    | 7    | 1249 | 700  | 2    |
| Future Vol, veh/h        | 0    | 4    | 7    | 1249 | 700  | 2    |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Stop | Stop | Free | Free | Free | Free |
| RT Channelized           | -    | None | -    | None | -    | None |
| Storage Length           | 0    | -    | 50   | -    | -    | -    |
| Veh in Median Storage, # | 0    | -    | -    | 0    | 0    | -    |
| Grade, %                 | 0    | -    | -    | 0    | 0    | -    |
| Peak Hour Factor         | 92   | 92   | 92   | 92   | 92   | 92   |
| Heavy Vehicles, %        | 8    | 8    | 8    | 8    | 8    | 8    |
| Mvmt Flow                | 0    | 4    | 8    | 1358 | 761  | 2    |

| Major/Minor          | Minor2 | Major1 | Major2 |   |     |
|----------------------|--------|--------|--------|---|-----|
| Conflicting Flow All | 1321   | 382    | 763    | 0 | - 0 |
| Stage 1              | 762    | -      | -      | - | -   |
| Stage 2              | 559    | -      | -      | - | -   |
| Critical Hdwy        | 6.41   | 7.06   | 4.26   | - | - - |
| Critical Hdwy Stg 1  | 5.96   | -      | -      | - | -   |
| Critical Hdwy Stg 2  | 6.16   | -      | -      | - | -   |
| Follow-up Hdwy       | 3.73   | 3.38   | 2.28   | - | - - |
| Pot Cap-1 Maneuver   | *650   | 599    | 807    | - | - - |
| Stage 1              | *395   | -      | -      | - | -   |
| Stage 2              | *650   | -      | -      | - | -   |
| Platoon blocked, %   | 1      | -      | -      | - | -   |
| Mov Cap-1 Maneuver   | *643   | 599    | 807    | - | - - |
| Mov Cap-2 Maneuver   | *593   | -      | -      | - | -   |
| Stage 1              | *391   | -      | -      | - | -   |
| Stage 2              | *650   | -      | -      | - | -   |

| Approach             | EB   | NB  | SB |
|----------------------|------|-----|----|
| HCM Control Delay, s | 11.1 | 0.1 | 0  |
| HCM LOS              | B    |     |    |

| Minor Lane/Major Mvmt | NBL   | NBT | EBLn1 | SBT | SBR |
|-----------------------|-------|-----|-------|-----|-----|
| Capacity (veh/h)      | 807   | -   | 599   | -   | -   |
| HCM Lane V/C Ratio    | 0.009 | -   | 0.007 | -   | -   |
| HCM Control Delay (s) | 9.5   | -   | 11.1  | -   | -   |
| HCM Lane LOS          | A     | -   | B     | -   | -   |
| HCM 95th %tile Q(veh) | 0     | -   | 0     | -   | -   |

Notes  
 -: Volume exceeds capacity    \$: Delay exceeds 300s    +: Computation Not Defined    \*: All major volume in platoon

Deer Valley 30  
3: 19th Ave & Patio Drwy/Parkview Ln

2024 Background AM Mitigated  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Int Delay, s/veh         | 0.6  |      |      |      |      |      |      |      |      |      |      |      |
| Movement                 | EBL  | EBT  | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
| Lane Configurations      |      |      | ↕    |      | ↕    |      |      | ↕↕↕  |      | ↕    | ↕↕   |      |
| Traffic Vol, veh/h       | 0    | 0    | 6    | 26   | 0    | 13   | 1    | 576  | 41   | 26   | 1057 | 0    |
| Future Vol, veh/h        | 0    | 0    | 6    | 26   | 0    | 13   | 1    | 576  | 41   | 26   | 1057 | 0    |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Stop | Stop | Stop | Stop | Stop | Stop | Free | Free | Free | Free | Free | Free |
| RT Channelized           | -    | -    | None | -    | -    | None | -    | -    | None | -    | -    | None |
| Storage Length           | -    | -    | 0    | -    | -    | -    | -    | -    | -    | 50   | -    | -    |
| Veh in Median Storage, # | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Grade, %                 | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Peak Hour Factor         | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   |
| Heavy Vehicles, %        | 8    | 8    | 8    | 8    | 8    | 8    | 8    | 8    | 8    | 8    | 8    | 8    |
| Mvmt Flow                | 0    | 0    | 7    | 28   | 0    | 14   | 1    | 626  | 45   | 28   | 1149 | 0    |

| Major/Minor          | Minor2 | Minor1 | Major1 | Major2 |
|----------------------|--------|--------|--------|--------|
| Conflicting Flow All | -      | -      | 575    | 1282   |
| Stage 1              | -      | -      | 651    | 651    |
| Stage 2              | -      | -      | 631    | 1205   |
| Critical Hdwy        | -      | -      | 7.06   | 7.11   |
| Critical Hdwy Stg 1  | -      | -      | 7.46   | 5.66   |
| Critical Hdwy Stg 2  | -      | -      | 6.66   | 5.66   |
| Follow-up Hdwy       | -      | -      | 3.38   | 3.73   |
| Pot Cap-1 Maneuver   | 0      | 0      | 446    | 269    |
| Stage 1              | 0      | 0      | 803    | 742    |
| Stage 2              | 0      | 0      | 409    | 243    |
| Platoon blocked, %   | -      | -      | 1      | 1      |
| Mov Cap-1 Maneuver   | -      | -      | 446    | 258    |
| Mov Cap-2 Maneuver   | -      | -      | 258    | 106    |
| Stage 1              | -      | -      | 800    | 740    |
| Stage 2              | -      | -      | 391    | 236    |

| Approach             | EB   | WB   | NB | SB  |
|----------------------|------|------|----|-----|
| HCM Control Delay, s | 13.2 | 17.4 | 0  | 0.2 |
| HCM LOS              | B    | C    |    |     |

| Minor Lane/Major Mvmt | NBL   | NBT | NBR | EBLn1 | WBLn1 | SBL  | SBT |
|-----------------------|-------|-----|-----|-------|-------|------|-----|
| Capacity (veh/h)      | 571   | -   | -   | 446   | 332   | 927  | -   |
| HCM Lane V/C Ratio    | 0.002 | -   | -   | 0.015 | 0.128 | 0.03 | -   |
| HCM Control Delay (s) | 11.3  | -   | -   | 13.2  | 17.4  | 9    | -   |
| HCM Lane LOS          | B     | -   | -   | B     | C     | A    | -   |
| HCM 95th %tile Q(veh) | 0     | -   | -   | 0     | 0.4   | 0.1  | -   |

Notes  
 -: Volume exceeds capacity    \$: Delay exceeds 300s    +: Computation Not Defined    \*: All major volume in platoon

Deer Valley 30  
3: 19th Ave & Patio Drwy/Parkview Ln

2024 Background PM Mitigated  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Int Delay, s/veh         | 0.6  |      |      |      |      |      |      |      |      |      |      |      |
| Movement                 | EBL  | EBT  | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
| Lane Configurations      |      |      | ↕    |      | ↕    |      |      | ↕↕↕  |      | ↕    | ↕↕   |      |
| Traffic Vol, veh/h       | 0    | 0    | 6    | 26   | 0    | 13   | 1    | 896  | 41   | 26   | 679  | 0    |
| Future Vol, veh/h        | 0    | 0    | 6    | 26   | 0    | 13   | 1    | 896  | 41   | 26   | 679  | 0    |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Stop | Stop | Stop | Stop | Stop | Stop | Free | Free | Free | Free | Free | Free |
| RT Channelized           | -    | -    | None | -    | -    | None | -    | -    | None | -    | -    | None |
| Storage Length           | -    | -    | 0    | -    | -    | -    | -    | -    | -    | 50   | -    | -    |
| Veh in Median Storage, # | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Grade, %                 | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Peak Hour Factor         | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   |
| Heavy Vehicles, %        | 8    | 8    | 8    | 8    | 8    | 8    | 8    | 8    | 8    | 8    | 8    | 8    |
| Mvmt Flow                | 0    | 0    | 7    | 28   | 0    | 14   | 1    | 974  | 45   | 28   | 738  | 0    |

| Major/Minor          | Minor2 | Minor1 | Major1 | Major2 |
|----------------------|--------|--------|--------|--------|
| Conflicting Flow All | -      | -      | 369    | 1424   |
| Stage 1              | -      | -      | 999    | 999    |
| Stage 2              | -      | -      | 425    | 794    |
| Critical Hdwy        | -      | -      | 7.06   | 7.11   |
| Critical Hdwy Stg 1  | -      | -      | 7.46   | 5.66   |
| Critical Hdwy Stg 2  | -      | -      | 6.66   | 5.66   |
| Follow-up Hdwy       | -      | -      | 3.38   | 3.73   |
| Pot Cap-1 Maneuver   | 0      | 0      | 611    | 311    |
| Stage 1              | 0      | 0      | 688    | 651    |
| Stage 2              | 0      | 0      | 544    | 384    |
| Platoon blocked, %   | -      | -      | 1      | 1      |
| Mov Cap-1 Maneuver   | -      | -      | 611    | 299    |
| Mov Cap-2 Maneuver   | -      | -      | 299    | 160    |
| Stage 1              | -      | -      | 686    | 649    |
| Stage 2              | -      | -      | 520    | 371    |

| Approach             | EB | WB | NB | SB  |
|----------------------|----|----|----|-----|
| HCM Control Delay, s | 11 | 16 | 0  | 0.4 |
| HCM LOS              | B  | C  |    |     |

| Minor Lane/Major Mvmt | NBL   | NBT | NBR | EBLn1 | WBLn1 | SBL   | SBT |
|-----------------------|-------|-----|-----|-------|-------|-------|-----|
| Capacity (veh/h)      | 825   | -   | -   | 611   | 371   | 810   | -   |
| HCM Lane V/C Ratio    | 0.001 | -   | -   | 0.011 | 0.114 | 0.035 | -   |
| HCM Control Delay (s) | 9.4   | -   | -   | 11    | 16    | 9.6   | -   |
| HCM Lane LOS          | A     | -   | -   | B     | C     | A     | -   |
| HCM 95th %tile Q(veh) | 0     | -   | -   | 0     | 0.4   | 0.1   | -   |

Notes  
 -: Volume exceeds capacity    \$: Delay exceeds 300s    +: Computation Not Defined    \*: All major volume in platoon

Deer Valley 30  
4: Alameda Rd & 19th Ave

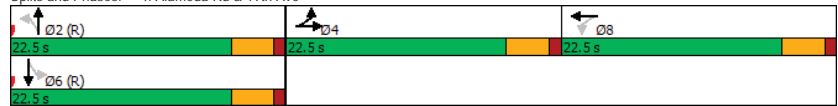
2024 Background AM Mitigated  
Timings

| Lane Group           | EBL   | EBT   | WBL   | WBT   | NBL   | NBT   | SBL   | SBT   |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations  | ↔     | ↔     | ↔     | ↔     | ↔     | ↔     | ↔     | ↔     |
| Traffic Volume (vph) | 9     | 0     | 31    | 0     | 18    | 593   | 123   | 951   |
| Future Volume (vph)  | 9     | 0     | 31    | 0     | 18    | 593   | 123   | 951   |
| Turn Type            | Split | NA    | Perm  | NA    | Perm  | NA    | Perm  | NA    |
| Protected Phases     | 4     | 4     |       | 8     |       | 2     |       | 6     |
| Permitted Phases     |       |       | 8     |       | 2     |       | 6     |       |
| Detector Phase       | 4     | 4     | 8     | 8     | 2     | 2     | 6     | 6     |
| Switch Phase         |       |       |       |       |       |       |       |       |
| Minimum Initial (s)  | 5.0   | 5.0   | 5.0   | 5.0   | 5.0   | 5.0   | 5.0   | 5.0   |
| Minimum Split (s)    | 22.5  | 22.5  | 22.5  | 22.5  | 22.5  | 22.5  | 22.5  | 22.5  |
| Total Split (s)      | 22.5  | 22.5  | 22.5  | 22.5  | 22.5  | 22.5  | 22.5  | 22.5  |
| Total Split (%)      | 33.3% | 33.3% | 33.3% | 33.3% | 33.3% | 33.3% | 33.3% | 33.3% |
| Yellow Time (s)      | 3.5   | 3.5   | 3.5   | 3.5   | 3.5   | 3.5   | 3.5   | 3.5   |
| All-Red Time (s)     | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   |
| Lost Time Adjust (s) | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Lost Time (s)  | 4.5   | 4.5   | 4.5   | 4.5   | 4.5   | 4.5   | 4.5   | 4.5   |
| Lead/Lag             |       |       |       |       |       |       |       |       |
| Lead-Lag Optimize?   |       |       |       |       |       |       |       |       |
| Recall Mode          | None  | None  | None  | None  | C-Max | C-Max | C-Max | C-Max |
| Act Effct Green (s)  | 6.0   | 6.0   | 7.4   | 7.4   | 50.5  | 50.5  | 50.5  | 50.5  |
| Actuated g/C Ratio   | 0.09  | 0.09  | 0.11  | 0.11  | 0.75  | 0.75  | 0.75  | 0.75  |
| v/c Ratio            | 0.07  | 0.11  | 0.22  | 0.04  | 0.06  | 0.23  | 0.31  | 0.42  |
| Control Delay        | 28.8  | 0.4   | 30.2  | 0.1   | 7.3   | 4.8   | 9.6   | 7.0   |
| Queue Delay          | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Delay          | 28.8  | 0.4   | 30.2  | 0.1   | 7.3   | 4.8   | 9.6   | 7.0   |
| LOS                  | C     | A     | C     | A     | A     | A     | A     | A     |
| Approach Delay       |       | 4.4   |       | 16.9  |       | 4.9   |       | 7.3   |
| Approach LOS         |       | A     |       | B     |       | A     |       | A     |

Intersection Summary

Cycle Length: 67.5  
 Actuated Cycle Length: 67.5  
 Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green  
 Natural Cycle: 80  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.42  
 Intersection Signal Delay: 6.6  
 Intersection Capacity Utilization 50.5%  
 Intersection LOS: A  
 ICU Level of Service A  
 Analysis Period (min) 15

Splits and Phases: 4: Alameda Rd & 19th Ave



Deer Valley 30  
4: Alameda Rd & 19th Ave

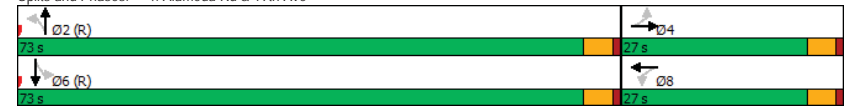
2024 Background PM Mitigated  
Timings

| Lane Group           | EBL   | EBT   | WBL   | WBT   | NBL   | NBT   | SBL   | SBT   |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations  | ↔     | ↔     | ↔     | ↔     | ↔     | ↔     | ↔     | ↔     |
| Traffic Volume (vph) | 14    | 0     | 150   | 0     | 85    | 1106  | 28    | 667   |
| Future Volume (vph)  | 14    | 0     | 150   | 0     | 85    | 1106  | 28    | 667   |
| Turn Type            | Perm  | NA    | Perm  | NA    | Perm  | NA    | Perm  | NA    |
| Protected Phases     |       | 4     |       | 8     |       | 2     |       | 6     |
| Permitted Phases     | 4     |       | 8     |       | 2     |       | 6     |       |
| Detector Phase       | 4     | 4     | 8     | 8     | 2     | 2     | 6     | 6     |
| Switch Phase         |       |       |       |       |       |       |       |       |
| Minimum Initial (s)  | 5.0   | 5.0   | 5.0   | 5.0   | 5.0   | 5.0   | 5.0   | 5.0   |
| Minimum Split (s)    | 22.5  | 22.5  | 22.5  | 22.5  | 22.5  | 22.5  | 22.5  | 22.5  |
| Total Split (s)      | 27.0  | 27.0  | 27.0  | 27.0  | 73.0  | 73.0  | 73.0  | 73.0  |
| Total Split (%)      | 27.0% | 27.0% | 27.0% | 27.0% | 73.0% | 73.0% | 73.0% | 73.0% |
| Yellow Time (s)      | 3.5   | 3.5   | 3.5   | 3.5   | 3.5   | 3.5   | 3.5   | 3.5   |
| All-Red Time (s)     | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   |
| Lost Time Adjust (s) | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Lost Time (s)  | 4.5   | 4.5   | 4.5   | 4.5   | 4.5   | 4.5   | 4.5   | 4.5   |
| Lead/Lag             |       |       |       |       |       |       |       |       |
| Lead-Lag Optimize?   |       |       |       |       |       |       |       |       |
| Recall Mode          | None  | None  | None  | None  | C-Max | C-Max | C-Max | C-Max |
| Act Effct Green (s)  | 17.5  | 17.5  | 17.5  | 17.5  | 73.5  | 73.5  | 73.5  | 73.5  |
| Actuated g/C Ratio   | 0.18  | 0.18  | 0.18  | 0.18  | 0.74  | 0.74  | 0.74  | 0.74  |
| v/c Ratio            | 0.08  | 0.14  | 0.74  | 0.37  | 0.20  | 0.35  | 0.12  | 0.30  |
| Control Delay        | 32.9  | 0.6   | 58.8  | 12.6  | 6.3   | 5.4   | 6.2   | 5.3   |
| Queue Delay          | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Delay          | 32.9  | 0.6   | 58.8  | 12.6  | 6.3   | 5.4   | 6.2   | 5.3   |
| LOS                  | C     | A     | E     | B     | A     | A     | A     | A     |
| Approach Delay       |       | 6.5   |       | 38.4  |       | 5.5   |       | 5.4   |
| Approach LOS         |       | A     |       | D     |       | A     |       | A     |

Intersection Summary

Cycle Length: 100  
 Actuated Cycle Length: 100  
 Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green  
 Natural Cycle: 45  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.74  
 Intersection Signal Delay: 9.4  
 Intersection Capacity Utilization 52.5%  
 Intersection LOS: A  
 ICU Level of Service A  
 Analysis Period (min) 15

Splits and Phases: 4: Alameda Rd & 19th Ave



Deer Valley 30  
4: Alameda Rd & 19th Ave

2024 Background AM Mitigated  
HCM 6th Signalized Intersection Summary

| Movement                     | EBL  | EBT  | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
|------------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Lane Configurations          | ↔    | ↔    | ↔    | ↔    | ↔    | ↔    | ↔    | ↔    | ↔    | ↔    | ↔    | ↔    |
| Traffic Volume (veh/h)       | 9    | 0    | 56   | 31   | 0    | 25   | 18   | 593  | 155  | 123  | 951  | 14   |
| Future Volume (veh/h)        | 9    | 0    | 56   | 31   | 0    | 25   | 18   | 593  | 155  | 123  | 951  | 14   |
| Initial Q (Ob), veh          | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Ped-Bike Adj(A_pbT)          | 1.00 |      | 1.00 | 1.00 |      | 1.00 | 1.00 |      | 1.00 | 1.00 |      | 1.00 |
| Parking Bus, Adj             | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Work Zone On Approach        | No   |      | No   |      | No   |      | No   |      | No   |      | No   |      |
| Adj Sat Flow, veh/h/ln       | 1781 | 1781 | 1781 | 1781 | 1781 | 1781 | 1781 | 1781 | 1781 | 1781 | 1781 | 1781 |
| Adj Flow Rate, veh/h         | 10   | 0    | 61   | 34   | 0    | 27   | 20   | 645  | 168  | 134  | 1034 | 15   |
| Peak Hour Factor             | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Percent Heavy Veh, %         | 8    | 8    | 8    | 8    | 8    | 8    | 8    | 8    | 8    | 8    | 8    | 8    |
| Cap, veh/h                   | 92   | 0    | 82   | 85   | 0    | 76   | 395  | 2688 | 689  | 512  | 2380 | 35   |
| Arrive On Green              | 0.05 | 0.00 | 0.05 | 0.05 | 0.00 | 0.05 | 0.70 | 0.70 | 0.70 | 0.70 | 0.70 | 0.70 |
| Sat Flow, veh/h              | 1697 | 0    | 1510 | 1697 | 0    | 1510 | 512  | 3858 | 988  | 640  | 3415 | 50   |
| Grp Volume(v), veh/h         | 10   | 0    | 61   | 34   | 0    | 27   | 20   | 540  | 273  | 134  | 512  | 537  |
| Grp Sat Flow(s),veh/h/ln     | 1697 | 0    | 1510 | 1697 | 0    | 1510 | 512  | 1621 | 1604 | 640  | 1692 | 1773 |
| Q Serve(g_s), s              | 0.4  | 0.0  | 2.7  | 1.3  | 0.0  | 1.2  | 1.2  | 4.1  | 4.2  | 6.6  | 8.9  | 9.0  |
| Cycle Q Clear(g_c), s        | 0.4  | 0.0  | 2.7  | 1.3  | 0.0  | 1.2  | 10.2 | 4.1  | 4.2  | 10.8 | 8.9  | 9.0  |
| Prop In Lane                 | 1.00 |      | 1.00 | 1.00 |      | 1.00 | 1.00 |      | 0.62 | 1.00 |      | 0.03 |
| Lane Grp Cap(c), veh/h       | 92   | 0    | 82   | 85   | 0    | 76   | 395  | 2259 | 1117 | 512  | 1179 | 1235 |
| V/C Ratio(X)                 | 0.11 | 0.00 | 0.74 | 0.40 | 0.00 | 0.36 | 0.05 | 0.24 | 0.24 | 0.26 | 0.43 | 0.43 |
| Avail Cap(c_a), veh/h        | 449  | 0    | 400  | 449  | 0    | 400  | 395  | 2259 | 1117 | 512  | 1179 | 1235 |
| HCM Platoon Ratio            | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(I)           | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Uniform Delay (d), s/veh     | 30.6 | 0.0  | 31.7 | 31.3 | 0.0  | 31.2 | 6.7  | 3.7  | 3.8  | 5.7  | 4.5  | 4.5  |
| Incr Delay (d2), s/veh       | 0.5  | 0.0  | 12.5 | 3.0  | 0.0  | 2.8  | 0.2  | 0.3  | 0.5  | 1.2  | 1.2  | 1.1  |
| Initial Q Delay(d3),s/veh    | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| %ile BackOfQ(50%),veh/ln     | 0.2  | 0.0  | 1.2  | 0.6  | 0.0  | 0.5  | 0.1  | 1.0  | 1.1  | 0.9  | 2.5  | 2.6  |
| Unsig. Movement Delay, s/veh |      |      |      |      |      |      |      |      |      |      |      |      |
| LnGrp Delay(d),s/veh         | 31.1 | 0.0  | 44.1 | 34.3 | 0.0  | 34.0 | 6.9  | 4.0  | 4.3  | 7.0  | 5.6  | 5.6  |
| LnGrp LOS                    | C    | A    | D    | C    | A    | C    | A    | A    | A    | A    | A    | A    |
| Approach Vol, veh/h          | 71   |      |      | 61   |      |      | 833  |      |      | 1183 |      |      |
| Approach Delay, s/veh        | 42.3 |      |      | 34.2 |      |      | 4.2  |      |      | 5.8  |      |      |
| Approach LOS                 | D    |      |      | C    |      |      | A    |      |      | A    |      |      |
| Timer - Assigned Phs         | 2    |      | 4    |      | 6    |      | 8    |      |      |      |      |      |
| Phs Duration (G+Y+Rc), s     | 51.9 |      | 8.2  |      | 51.9 |      | 7.9  |      |      |      |      |      |
| Change Period (Y+Rc), s      | 4.5  |      | 4.5  |      | 4.5  |      | 4.5  |      |      |      |      |      |
| Max Green Setting (Gmax), s  | 18.0 |      | 18.0 |      | 18.0 |      | 18.0 |      |      |      |      |      |
| Max Q Clear Time (g_c+I1), s | 12.2 |      | 4.7  |      | 12.8 |      | 3.3  |      |      |      |      |      |
| Green Ext Time (p_c), s      | 2.7  |      | 0.2  |      | 3.3  |      | 0.1  |      |      |      |      |      |
| <b>Intersection Summary</b>  |      |      |      |      |      |      |      |      |      |      |      |      |
| HCM 6th Ctrl Delay           |      |      |      | 7.2  |      |      |      |      |      |      |      |      |
| HCM 6th LOS                  |      |      |      | A    |      |      |      |      |      |      |      |      |

Deer Valley 30  
4: Alameda Rd & 19th Ave

2024 Background PM Mitigated  
HCM 6th Signalized Intersection Summary

| Movement                     | EBL  | EBT  | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
|------------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Lane Configurations          | ↔    | ↔    | ↔    | ↔    | ↔    | ↔    | ↔    | ↔    | ↔    | ↔    | ↔    | ↔    |
| Traffic Volume (veh/h)       | 14   | 0    | 62   | 150  | 0    | 119  | 85   | 1106 | 35   | 28   | 667  | 16   |
| Future Volume (veh/h)        | 14   | 0    | 62   | 150  | 0    | 119  | 85   | 1106 | 35   | 28   | 667  | 16   |
| Initial Q (Ob), veh          | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Ped-Bike Adj(A_pbT)          | 1.00 |      | 1.00 | 1.00 |      | 1.00 | 1.00 |      | 1.00 | 1.00 |      | 1.00 |
| Parking Bus, Adj             | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Work Zone On Approach        | No   |      | No   |      | No   |      | No   |      | No   |      | No   |      |
| Adj Sat Flow, veh/h/ln       | 1781 | 1781 | 1781 | 1781 | 1781 | 1781 | 1781 | 1781 | 1781 | 1781 | 1781 | 1781 |
| Adj Flow Rate, veh/h         | 15   | 0    | 67   | 163  | 0    | 129  | 92   | 1202 | 38   | 30   | 725  | 17   |
| Peak Hour Factor             | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Percent Heavy Veh, %         | 8    | 8    | 8    | 8    | 8    | 8    | 8    | 8    | 8    | 8    | 8    | 8    |
| Cap, veh/h                   | 206  | 0    | 284  | 263  | 0    | 284  | 514  | 3497 | 111  | 341  | 2441 | 57   |
| Arrive On Green              | 0.19 | 0.00 | 0.19 | 0.19 | 0.00 | 0.19 | 0.72 | 0.72 | 0.72 | 0.72 | 0.72 | 0.72 |
| Sat Flow, veh/h              | 1201 | 0    | 1510 | 1271 | 0    | 1510 | 683  | 4843 | 153  | 427  | 3380 | 79   |
| Grp Volume(v), veh/h         | 15   | 0    | 67   | 163  | 0    | 129  | 92   | 805  | 435  | 30   | 363  | 379  |
| Grp Sat Flow(s),veh/h/ln     | 1201 | 0    | 1510 | 1271 | 0    | 1510 | 683  | 1621 | 1754 | 427  | 1692 | 1767 |
| Q Serve(g_s), s              | 1.1  | 0.0  | 3.8  | 12.5 | 0.0  | 7.6  | 5.5  | 9.2  | 9.2  | 2.8  | 7.6  | 7.6  |
| Cycle Q Clear(g_c), s        | 8.7  | 0.0  | 3.8  | 16.3 | 0.0  | 7.6  | 13.1 | 9.2  | 9.2  | 12.0 | 7.6  | 7.6  |
| Prop In Lane                 | 1.00 |      | 1.00 | 1.00 |      | 1.00 | 1.00 |      | 0.09 | 1.00 |      | 0.04 |
| Lane Grp Cap(c), veh/h       | 206  | 0    | 284  | 263  | 0    | 284  | 514  | 2341 | 1267 | 341  | 1222 | 1276 |
| V/C Ratio(X)                 | 0.07 | 0.00 | 0.24 | 0.62 | 0.00 | 0.45 | 0.18 | 0.34 | 0.34 | 0.09 | 0.30 | 0.30 |
| Avail Cap(c_a), veh/h        | 251  | 0    | 340  | 310  | 0    | 340  | 514  | 2341 | 1267 | 341  | 1222 | 1276 |
| HCM Platoon Ratio            | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(I)           | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Uniform Delay (d), s/veh     | 39.9 | 0.0  | 34.5 | 41.4 | 0.0  | 36.1 | 7.2  | 5.1  | 5.1  | 7.3  | 4.9  | 4.9  |
| Incr Delay (d2), s/veh       | 0.1  | 0.0  | 0.4  | 2.8  | 0.0  | 1.1  | 0.8  | 0.4  | 0.7  | 0.5  | 0.6  | 0.6  |
| Initial Q Delay(d3),s/veh    | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| %ile BackOfQ(50%),veh/ln     | 0.3  | 0.0  | 1.4  | 4.1  | 0.0  | 2.9  | 0.8  | 2.7  | 3.1  | 0.3  | 2.4  | 2.5  |
| Unsig. Movement Delay, s/veh |      |      |      |      |      |      |      |      |      |      |      |      |
| LnGrp Delay(d),s/veh         | 40.1 | 0.0  | 34.9 | 44.3 | 0.0  | 37.2 | 8.0  | 5.5  | 5.9  | 7.9  | 5.5  | 5.5  |
| LnGrp LOS                    | D    | A    | C    | D    | A    | D    | A    | A    | A    | A    | A    | A    |
| Approach Vol, veh/h          | 82   |      |      | 292  |      |      | 1332 |      |      | 772  |      |      |
| Approach Delay, s/veh        | 35.9 |      |      | 41.1 |      |      | 5.8  |      |      | 5.6  |      |      |
| Approach LOS                 | D    |      |      | D    |      |      | A    |      |      | A    |      |      |
| Timer - Assigned Phs         | 2    |      | 4    |      | 6    |      | 8    |      |      |      |      |      |
| Phs Duration (G+Y+Rc), s     | 76.7 |      | 23.3 |      | 76.7 |      | 23.3 |      |      |      |      |      |
| Change Period (Y+Rc), s      | 4.5  |      | 4.5  |      | 4.5  |      | 4.5  |      |      |      |      |      |
| Max Green Setting (Gmax), s  | 68.5 |      | 22.5 |      | 68.5 |      | 22.5 |      |      |      |      |      |
| Max Q Clear Time (g_c+I1), s | 15.1 |      | 10.7 |      | 14.0 |      | 18.3 |      |      |      |      |      |
| Green Ext Time (p_c), s      | 13.4 |      | 0.2  |      | 6.2  |      | 0.5  |      |      |      |      |      |
| <b>Intersection Summary</b>  |      |      |      |      |      |      |      |      |      |      |      |      |
| HCM 6th Ctrl Delay           |      |      |      | 10.9 |      |      |      |      |      |      |      |      |
| HCM 6th LOS                  |      |      |      | B    |      |      |      |      |      |      |      |      |

Deer Valley 30  
5: 19th Ave & Sarah Bass PI

2024 Background AM Mitigated  
HCM 6th TWSC

| Intersection             |        |        |        |       |      |      |
|--------------------------|--------|--------|--------|-------|------|------|
| Int Delay, s/veh         | 0.6    |        |        |       |      |      |
| Movement                 | EBL    | EBR    | NBL    | NBT   | SBT  | SBR  |
| Lane Configurations      |        |        |        |       |      |      |
| Traffic Vol, veh/h       | 13     | 36     | 27     | 786   | 837  | 9    |
| Future Vol, veh/h        | 13     | 36     | 27     | 786   | 837  | 9    |
| Conflicting Peds, #/hr   | 0      | 0      | 0      | 0     | 0    | 0    |
| Sign Control             | Stop   | Stop   | Free   | Free  | Free | Free |
| RT Channelized           | -      | None   | -      | None  | -    | None |
| Storage Length           | 0      | 0      | 150    | -     | -    | -    |
| Veh in Median Storage, # | 0      | -      | -      | 0     | 0    | -    |
| Grade, %                 | 0      | -      | -      | 0     | 0    | -    |
| Peak Hour Factor         | 92     | 92     | 92     | 92    | 92   | 92   |
| Heavy Vehicles, %        | 8      | 8      | 8      | 8     | 8    | 8    |
| Mvmt Flow                | 14     | 39     | 29     | 854   | 910  | 10   |
| Major/Minor              | Minor2 | Major1 | Major2 |       |      |      |
| Conflicting Flow All     | 1315   | 460    | 920    | 0     | -    | 0    |
| Stage 1                  | 915    | -      | -      | -     | -    | -    |
| Stage 2                  | 400    | -      | -      | -     | -    | -    |
| Critical Hdwy            | 6.41   | 7.06   | 4.26   | -     | -    | -    |
| Critical Hdwy Stg 1      | 5.96   | -      | -      | -     | -    | -    |
| Critical Hdwy Stg 2      | 6.16   | -      | -      | -     | -    | -    |
| Follow-up Hdwy           | 3.73   | 3.38   | 2.28   | -     | -    | -    |
| Pot Cap-1 Maneuver       | 170    | 532    | 701    | -     | -    | -    |
| Stage 1                  | 328    | -      | -      | -     | -    | -    |
| Stage 2                  | 595    | -      | -      | -     | -    | -    |
| Platoon blocked, %       | -      | -      | -      | -     | -    | -    |
| Mov Cap-1 Maneuver       | 163    | 532    | 701    | -     | -    | -    |
| Mov Cap-2 Maneuver       | 251    | -      | -      | -     | -    | -    |
| Stage 1                  | 315    | -      | -      | -     | -    | -    |
| Stage 2                  | 595    | -      | -      | -     | -    | -    |
| Approach                 | EB     | NB     | SB     |       |      |      |
| HCM Control Delay, s     | 14.4   | 0.3    | 0      |       |      |      |
| HCM LOS                  | B      |        |        |       |      |      |
| Minor Lane/Major Mvmt    | NBL    | NBT    | EBLn1  | EBLn2 | SBT  | SBR  |
| Capacity (veh/h)         | 701    | -      | 251    | 532   | -    | -    |
| HCM Lane V/C Ratio       | 0.042  | -      | 0.056  | 0.074 | -    | -    |
| HCM Control Delay (s)    | 10.4   | -      | 20.2   | 12.3  | -    | -    |
| HCM Lane LOS             | B      | -      | C      | B     | -    | -    |
| HCM 95th %tile Q(veh)    | 0.1    | -      | 0.2    | 0.2   | -    | -    |

Deer Valley 30  
5: 19th Ave & Sarah Bass PI

2024 Background PM Mitigated  
HCM 6th TWSC

| Intersection             |        |        |        |       |      |      |
|--------------------------|--------|--------|--------|-------|------|------|
| Int Delay, s/veh         | 0.5    |        |        |       |      |      |
| Movement                 | EBL    | EBR    | NBL    | NBT   | SBT  | SBR  |
| Lane Configurations      |        |        |        |       |      |      |
| Traffic Vol, veh/h       | 16     | 37     | 10     | 1024  | 901  | 6    |
| Future Vol, veh/h        | 16     | 37     | 10     | 1024  | 901  | 6    |
| Conflicting Peds, #/hr   | 0      | 0      | 0      | 0     | 0    | 0    |
| Sign Control             | Stop   | Stop   | Free   | Free  | Free | Free |
| RT Channelized           | -      | None   | -      | None  | -    | None |
| Storage Length           | 0      | 0      | 150    | -     | -    | -    |
| Veh in Median Storage, # | 0      | -      | -      | 0     | 0    | -    |
| Grade, %                 | 0      | -      | -      | 0     | 0    | -    |
| Peak Hour Factor         | 92     | 92     | 92     | 92    | 92   | 92   |
| Heavy Vehicles, %        | 8      | 8      | 8      | 8     | 8    | 8    |
| Mvmt Flow                | 17     | 40     | 11     | 1113  | 979  | 7    |
| Major/Minor              | Minor2 | Major1 | Major2 |       |      |      |
| Conflicting Flow All     | 1450   | 493    | 986    | 0     | -    | 0    |
| Stage 1                  | 983    | -      | -      | -     | -    | -    |
| Stage 2                  | 467    | -      | -      | -     | -    | -    |
| Critical Hdwy            | 6.41   | 7.06   | 4.26   | -     | -    | -    |
| Critical Hdwy Stg 1      | 5.96   | -      | -      | -     | -    | -    |
| Critical Hdwy Stg 2      | 6.16   | -      | -      | -     | -    | -    |
| Follow-up Hdwy           | 3.73   | 3.38   | 2.28   | -     | -    | -    |
| Pot Cap-1 Maneuver       | 141    | 506    | 661    | -     | -    | -    |
| Stage 1                  | 302    | -      | -      | -     | -    | -    |
| Stage 2                  | 548    | -      | -      | -     | -    | -    |
| Platoon blocked, %       | -      | -      | -      | -     | -    | -    |
| Mov Cap-1 Maneuver       | 139    | 506    | 661    | -     | -    | -    |
| Mov Cap-2 Maneuver       | 231    | -      | -      | -     | -    | -    |
| Stage 1                  | 297    | -      | -      | -     | -    | -    |
| Stage 2                  | 548    | -      | -      | -     | -    | -    |
| Approach                 | EB     | NB     | SB     |       |      |      |
| HCM Control Delay, s     | 15.4   | 0.1    | 0      |       |      |      |
| HCM LOS                  | C      |        |        |       |      |      |
| Minor Lane/Major Mvmt    | NBL    | NBT    | EBLn1  | EBLn2 | SBT  | SBR  |
| Capacity (veh/h)         | 661    | -      | 231    | 506   | -    | -    |
| HCM Lane V/C Ratio       | 0.016  | -      | 0.075  | 0.079 | -    | -    |
| HCM Control Delay (s)    | 10.5   | -      | 21.8   | 12.7  | -    | -    |
| HCM Lane LOS             | B      | -      | C      | B     | -    | -    |
| HCM 95th %tile Q(veh)    | 0.1    | -      | 0.2    | 0.3   | -    | -    |

Deer Valley 30  
6: Pinnacle Peak Rd & 19th Ave

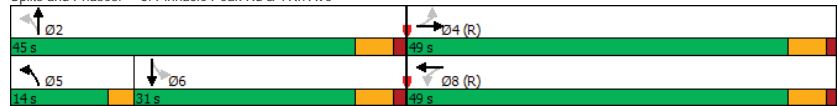
2024 Background AM Mitigated  
Timings

| Lane Group           | EBL   | EBT   | WBL   | WBT   | NBL   | NBT   | SBL   | SBT   |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations  | ↔     | ↕↔    | ↔     | ↕↔    | ↔     | ↕↔    | ↔     | ↕↔    |
| Traffic Volume (vph) | 363   | 856   | 69    | 256   | 169   | 489   | 142   | 659   |
| Future Volume (vph)  | 363   | 856   | 69    | 256   | 169   | 489   | 142   | 659   |
| Turn Type            | Perm  | NA    | Perm  | NA    | pm+pt | NA    | Perm  | NA    |
| Protected Phases     |       | 4     |       | 8     | 5     | 2     |       | 6     |
| Permitted Phases     | 4     |       | 8     |       | 2     |       | 6     |       |
| Detector Phase       | 4     | 4     | 8     | 8     | 5     | 2     | 6     | 6     |
| Switch Phase         |       |       |       |       |       |       |       |       |
| Minimum Initial (s)  | 15.0  | 15.0  | 15.0  | 15.0  | 5.0   | 15.0  | 15.0  | 15.0  |
| Minimum Split (s)    | 34.6  | 34.6  | 34.6  | 34.6  | 9.5   | 30.8  | 30.8  | 30.8  |
| Total Split (s)      | 49.0  | 49.0  | 49.0  | 49.0  | 14.0  | 45.0  | 31.0  | 31.0  |
| Total Split (%)      | 52.1% | 52.1% | 52.1% | 52.1% | 14.9% | 47.9% | 33.0% | 33.0% |
| Yellow Time (s)      | 4.3   | 4.3   | 4.3   | 4.3   | 3.0   | 4.3   | 4.3   | 4.3   |
| All-Red Time (s)     | 1.3   | 1.3   | 1.3   | 1.3   | 0.0   | 1.5   | 1.5   | 1.5   |
| Lost Time Adjust (s) | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Lost Time (s)  | 5.6   | 5.6   | 5.6   | 5.6   | 3.0   | 5.8   | 5.8   | 5.8   |
| Lead/Lag             |       |       |       |       | Lead  |       | Lag   | Lag   |
| Lead-Lag Optimize?   |       |       |       |       | Yes   |       | Yes   | Yes   |
| Recall Mode          | C-Max | C-Max | C-Max | C-Max | None  | Max   | Max   | Max   |
| Act Effct Green (s)  | 43.4  | 43.4  | 43.4  | 43.4  | 42.0  | 39.2  | 25.9  | 25.9  |
| Actuated g/C Ratio   | 0.46  | 0.46  | 0.46  | 0.46  | 0.45  | 0.42  | 0.28  | 0.28  |
| v/c Ratio            | 1.07  | 0.83  | 0.96  | 0.30  | 0.70  | 0.36  | 0.86  | 0.92  |
| Control Delay        | 94.4  | 26.8  | 124.0 | 9.6   | 32.3  | 17.3  | 74.6  | 49.0  |
| Queue Delay          | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Delay          | 94.4  | 26.8  | 124.0 | 9.6   | 32.3  | 17.3  | 74.6  | 49.0  |
| LOS                  | F     | C     | F     | A     | C     | B     | E     | D     |
| Approach Delay       |       | 42.9  |       | 25.3  |       | 20.4  |       | 53.0  |
| Approach LOS         |       | D     |       | C     |       | C     |       | D     |

Intersection Summary

Cycle Length: 94  
 Actuated Cycle Length: 94  
 Offset: 31 (33%), Referenced to phase 4:EBTL and 8:WBTL, Start of Green  
 Natural Cycle: 90  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 1.07  
 Intersection Signal Delay: 38.1  
 Intersection Capacity Utilization 94.8%  
 Intersection LOS: D  
 ICU Level of Service F  
 Analysis Period (min) 15

Splits and Phases: 6: Pinnacle Peak Rd & 19th Ave



Deer Valley 30  
6: Pinnacle Peak Rd & 19th Ave

2024 Background PM Mitigated  
Timings

| Lane Group           | EBL   | EBT   | WBL   | WBT   | NBL   | NBT   | SBL   | SBT   |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations  | ↔     | ↕↔    | ↔     | ↕↔    | ↔     | ↕↔    | ↔     | ↕↔    |
| Traffic Volume (vph) | 142   | 229   | 119   | 766   | 408   | 817   | 165   | 622   |
| Future Volume (vph)  | 142   | 229   | 119   | 766   | 408   | 817   | 165   | 622   |
| Turn Type            | Perm  | NA    | Perm  | NA    | pm+pt | NA    | Perm  | NA    |
| Protected Phases     |       | 4     |       | 8     | 5     | 2     |       | 6     |
| Permitted Phases     | 4     |       | 8     |       | 2     |       | 6     |       |
| Detector Phase       | 4     | 4     | 8     | 8     | 5     | 2     | 6     | 6     |
| Switch Phase         |       |       |       |       |       |       |       |       |
| Minimum Initial (s)  | 15.0  | 15.0  | 15.0  | 15.0  | 5.0   | 15.0  | 15.0  | 15.0  |
| Minimum Split (s)    | 34.6  | 34.6  | 34.6  | 34.6  | 9.5   | 30.8  | 30.8  | 30.8  |
| Total Split (s)      | 40.0  | 40.0  | 40.0  | 40.0  | 18.0  | 54.0  | 36.0  | 36.0  |
| Total Split (%)      | 42.6% | 42.6% | 42.6% | 42.6% | 19.1% | 57.4% | 38.3% | 38.3% |
| Yellow Time (s)      | 4.3   | 4.3   | 4.3   | 4.3   | 3.0   | 4.3   | 4.3   | 4.3   |
| All-Red Time (s)     | 1.3   | 1.3   | 1.3   | 1.3   | 0.0   | 1.5   | 1.5   | 1.5   |
| Lost Time Adjust (s) | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Lost Time (s)  | 5.6   | 5.6   | 5.6   | 5.6   | 3.0   | 5.8   | 5.8   | 5.8   |
| Lead/Lag             |       |       |       |       | Lead  |       | Lag   | Lag   |
| Lead-Lag Optimize?   |       |       |       |       | Yes   |       | Yes   | Yes   |
| Recall Mode          | C-Max | C-Max | C-Max | C-Max | None  | Max   | Max   | Max   |
| Act Effct Green (s)  | 34.4  | 34.4  | 34.4  | 34.4  | 51.0  | 48.2  | 30.2  | 30.2  |
| Actuated g/C Ratio   | 0.37  | 0.37  | 0.37  | 0.37  | 0.54  | 0.51  | 0.32  | 0.32  |
| v/c Ratio            | 1.69  | 0.40  | 0.51  | 0.80  | 1.28  | 0.38  | 1.08  | 1.01  |
| Control Delay        | 379.5 | 11.2  | 31.9  | 32.1  | 170.0 | 14.2  | 126.4 | 62.6  |
| Queue Delay          | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Delay          | 379.5 | 11.2  | 31.9  | 32.1  | 170.0 | 14.2  | 126.4 | 62.6  |
| LOS                  | F     | B     | C     | C     | F     | B     | F     | E     |
| Approach Delay       |       | 95.8  |       | 32.0  |       | 64.4  |       | 71.8  |
| Approach LOS         |       | F     |       | C     |       | E     |       | E     |

Intersection Summary

Cycle Length: 94  
 Actuated Cycle Length: 94  
 Offset: 31 (33%), Referenced to phase 4:EBTL and 8:WBTL, Start of Green  
 Natural Cycle: 90  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 1.69  
 Intersection Signal Delay: 63.2  
 Intersection Capacity Utilization 106.4%  
 Intersection LOS: E  
 ICU Level of Service G  
 Analysis Period (min) 15

Splits and Phases: 6: Pinnacle Peak Rd & 19th Ave





Deer Valley 30  
6: Pinnacle Peak Rd & 19th Ave

2024 Background AM Mitigated  
HCM 6th Signalized Intersection Summary

| Movement                     | EBL  | EBT  | EBR  | WBL   | WBT  | WBR  | NBL  | NBT   | NBR  | SBL  | SBT  | SBR  |
|------------------------------|------|------|------|-------|------|------|------|-------|------|------|------|------|
| Lane Configurations          | ↔    | ↕    | ↔    | ↔     | ↕    | ↔    | ↔    | ↕     | ↔    | ↔    | ↕    | ↔    |
| Traffic Volume (veh/h)       | 363  | 856  | 309  | 69    | 256  | 177  | 169  | 489   | 165  | 142  | 659  | 114  |
| Future Volume (veh/h)        | 363  | 856  | 309  | 69    | 256  | 177  | 169  | 489   | 165  | 142  | 659  | 114  |
| Initial Q (Ob), veh          | 0    | 0    | 0    | 0     | 0    | 0    | 0    | 0     | 0    | 0    | 0    | 0    |
| Ped-Bike Adj(A_pbT)          | 1.00 |      | 1.00 | 1.00  |      | 1.00 | 1.00 |       | 1.00 | 1.00 |      | 1.00 |
| Parking Bus, Adj             | 1.00 | 1.00 | 1.00 | 1.00  | 1.00 | 1.00 | 1.00 | 1.00  | 1.00 | 1.00 | 1.00 | 1.00 |
| Work Zone On Approach        | No   |      | No   |       | No   |      | No   |       | No   |      | No   |      |
| Adj Sat Flow, veh/h/ln       | 1781 | 1781 | 1781 | 1781  | 1781 | 1781 | 1781 | 1781  | 1781 | 1781 | 1781 | 1781 |
| Adj Flow Rate, veh/h         | 395  | 930  | 336  | 75    | 278  | 192  | 184  | 532   | 179  | 154  | 716  | 124  |
| Peak Hour Factor             | 0.92 | 0.92 | 0.92 | 0.92  | 0.92 | 0.92 | 0.92 | 0.92  | 0.92 | 0.92 | 0.92 | 0.92 |
| Percent Heavy Veh, %         | 8    | 8    | 8    | 8     | 8    | 8    | 8    | 8     | 8    | 8    | 8    | 8    |
| Cap, veh/h                   | 401  | 1126 | 405  | 130   | 896  | 600  | 271  | 1512  | 494  | 281  | 840  | 145  |
| Arrive On Green              | 0.46 | 0.46 | 0.46 | 0.46  | 0.46 | 0.46 | 0.09 | 0.42  | 0.42 | 0.29 | 0.29 | 0.29 |
| Sat Flow, veh/h              | 879  | 2440 | 876  | 417   | 1941 | 1299 | 1697 | 3625  | 1185 | 703  | 2885 | 499  |
| Grp Volume(v), veh/h         | 395  | 644  | 622  | 75    | 241  | 229  | 184  | 474   | 237  | 154  | 420  | 420  |
| Grp Sat Flow(s), veh/h/ln    | 879  | 1692 | 1624 | 417   | 1692 | 1548 | 1697 | 1621  | 1568 | 703  | 1692 | 1692 |
| Q Serve(g_s), s              | 34.6 | 31.0 | 31.5 | 11.9  | 8.4  | 8.8  | 6.8  | 9.4   | 9.7  | 18.7 | 22.0 | 22.0 |
| Cycle Q Clear(g_c), s        | 43.4 | 31.0 | 31.5 | 43.4  | 8.4  | 8.8  | 6.8  | 9.4   | 9.7  | 18.7 | 22.0 | 22.0 |
| Prop In Lane                 | 1.00 |      | 0.54 | 1.00  |      | 0.84 | 1.00 |       | 0.76 | 1.00 |      | 0.30 |
| Lane Grp Cap(c), veh/h       | 401  | 781  | 750  | 130   | 781  | 715  | 271  | 1352  | 654  | 281  | 493  | 493  |
| V/C Ratio(X)                 | 0.99 | 0.82 | 0.83 | 0.58  | 0.31 | 0.32 | 0.68 | 0.35  | 0.36 | 0.55 | 0.85 | 0.85 |
| Avail Cap(c_a), veh/h        | 401  | 781  | 750  | 130   | 781  | 715  | 311  | 1352  | 654  | 281  | 493  | 493  |
| HCM Platoon Ratio            | 1.00 | 1.00 | 1.00 | 1.00  | 1.00 | 1.00 | 1.00 | 1.00  | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(I)           | 1.00 | 1.00 | 1.00 | 0.58  | 0.58 | 0.58 | 1.00 | 1.00  | 1.00 | 1.00 | 1.00 | 1.00 |
| Uniform Delay (d), s/veh     | 32.8 | 22.0 | 22.1 | 42.8  | 15.9 | 16.0 | 22.6 | 18.7  | 18.8 | 30.2 | 31.4 | 31.4 |
| Incr Delay (d2), s/veh       | 41.7 | 9.6  | 10.3 | 10.5  | 0.6  | 0.7  | 4.9  | 0.7   | 1.6  | 7.5  | 16.8 | 16.9 |
| Initial Q Delay(d3), s/veh   | 0.0  | 0.0  | 0.0  | 0.0   | 0.0  | 0.0  | 0.0  | 0.0   | 0.0  | 0.0  | 0.0  | 0.0  |
| %ile BackOfQ(50%), veh/ln    | 13.8 | 13.7 | 13.4 | 2.1   | 3.3  | 3.1  | 3.0  | 3.6   | 3.7  | 3.7  | 11.0 | 11.0 |
| Unsig. Movement Delay, s/veh |      |      |      |       |      |      |      |       |      |      |      |      |
| LnGrp Delay(d), s/veh        | 74.5 | 31.6 | 32.4 | 53.3  | 16.5 | 16.7 | 27.5 | 19.4  | 20.4 | 37.7 | 48.2 | 48.3 |
| LnGrp LOS                    | E    | C    | C    | D     | B    | B    | C    | B     | C    | D    | D    | D    |
| Approach Vol, veh/h          |      | 1661 |      |       | 545  |      |      | 895   |      |      | 994  |      |
| Approach Delay, s/veh        |      | 42.1 |      |       | 21.6 |      |      | 21.3  |      |      | 46.6 |      |
| Approach LOS                 |      | D    |      |       | C    |      |      | C     |      |      | D    |      |
| Timer - Assigned Phs         |      | 2    |      | 4     | 5    | 6    |      | 8     |      |      |      |      |
| Phs Duration (G+Y+Rc), s     |      | 45.0 |      | 49.0  | 11.8 | 33.2 |      | 49.0  |      |      | 40.0 |      |
| Change Period (Y+Rc), s      |      | 5.8  |      | * 5.6 | 3.0  | 5.8  |      | * 5.6 |      |      | 5.8  |      |
| Max Green Setting (Gmax), s  |      | 39.2 |      | * 43  | 11.0 | 25.2 |      | * 43  |      |      | 34   |      |
| Max Q Clear Time (g_c+I1), s |      | 11.7 |      | 45.4  | 8.8  | 24.0 |      | 45.4  |      |      | 24.5 |      |
| Green Ext Time (p_c), s      |      | 5.2  |      | 0.0   | 0.1  | 0.8  |      | 0.0   |      |      | 4.8  |      |

Intersection Summary

|                    |      |
|--------------------|------|
| HCM 6th Ctrl Delay | 35.9 |
| HCM 6th LOS        | D    |

Notes

\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Deer Valley 30  
6: Pinnacle Peak Rd & 19th Ave

2024 Background PM Mitigated  
HCM 6th Signalized Intersection Summary

| Movement                     | EBL   | EBT  | EBR  | WBL   | WBT  | WBR  | NBL   | NBT   | NBR  | SBL  | SBT  | SBR  |
|------------------------------|-------|------|------|-------|------|------|-------|-------|------|------|------|------|
| Lane Configurations          | ↔     | ↕    | ↔    | ↔     | ↕    | ↔    | ↔     | ↕     | ↔    | ↔    | ↕    | ↔    |
| Traffic Volume (veh/h)       | 142   | 229  | 246  | 119   | 766  | 123  | 408   | 817   | 41   | 165  | 622  | 360  |
| Future Volume (veh/h)        | 142   | 229  | 246  | 119   | 766  | 123  | 408   | 817   | 41   | 165  | 622  | 360  |
| Initial Q (Ob), veh          | 0     | 0    | 0    | 0     | 0    | 0    | 0     | 0     | 0    | 0    | 0    | 0    |
| Ped-Bike Adj(A_pbT)          | 1.00  |      | 1.00 | 1.00  |      | 1.00 | 1.00  |       | 1.00 | 1.00 |      | 1.00 |
| Parking Bus, Adj             | 1.00  | 1.00 | 1.00 | 1.00  | 1.00 | 1.00 | 1.00  | 1.00  | 1.00 | 1.00 | 1.00 | 1.00 |
| Work Zone On Approach        | No    |      | No   |       | No   |      | No    |       | No   |      | No   |      |
| Adj Sat Flow, veh/h/ln       | 1781  | 1781 | 1781 | 1781  | 1781 | 1781 | 1781  | 1781  | 1781 | 1781 | 1781 | 1781 |
| Adj Flow Rate, veh/h         | 154   | 249  | 213  | 129   | 833  | 101  | 443   | 888   | 34   | 179  | 676  | 282  |
| Peak Hour Factor             | 0.92  | 0.92 | 0.92 | 0.92  | 0.92 | 0.92 | 0.92  | 0.92  | 0.92 | 0.92 | 0.92 | 0.92 |
| Percent Heavy Veh, %         | 8     | 8    | 8    | 8     | 8    | 8    | 8     | 8     | 8    | 8    | 8    | 8    |
| Cap, veh/h                   | 149   | 645  | 531  | 304   | 1112 | 135  | 372   | 2465  | 94   | 262  | 748  | 312  |
| Arrive On Green              | 0.37  | 0.37 | 0.37 | 0.37  | 0.37 | 0.37 | 0.16  | 0.51  | 0.51 | 0.32 | 0.32 | 0.32 |
| Sat Flow, veh/h              | 571   | 1763 | 1450 | 886   | 3039 | 368  | 1697  | 4807  | 184  | 577  | 2328 | 971  |
| Grp Volume(v), veh/h         | 154   | 239  | 223  | 129   | 464  | 470  | 443   | 598   | 324  | 179  | 491  | 467  |
| Grp Sat Flow(s), veh/h/ln    | 571   | 1692 | 1520 | 886   | 1692 | 1715 | 1697  | 1621  | 1748 | 577  | 1692 | 1607 |
| Q Serve(g_s), s              | 11.9  | 9.8  | 10.3 | 11.9  | 22.5 | 22.5 | 15.0  | 10.4  | 10.4 | 28.7 | 26.1 | 26.1 |
| Cycle Q Clear(g_c), s        | 34.4  | 9.8  | 10.3 | 22.2  | 22.5 | 22.5 | 15.0  | 10.4  | 10.4 | 28.7 | 26.1 | 26.1 |
| Prop In Lane                 | 1.00  |      | 0.95 | 1.00  |      | 0.21 | 1.00  |       | 0.11 | 1.00 |      | 0.60 |
| Lane Grp Cap(c), veh/h       | 149   | 619  | 556  | 304   | 619  | 628  | 372   | 1663  | 897  | 262  | 544  | 516  |
| V/C Ratio(X)                 | 1.03  | 0.39 | 0.40 | 0.42  | 0.75 | 0.75 | 1.19  | 0.36  | 0.36 | 0.68 | 0.90 | 0.90 |
| Avail Cap(c_a), veh/h        | 149   | 619  | 556  | 304   | 619  | 628  | 372   | 1663  | 897  | 262  | 544  | 516  |
| HCM Platoon Ratio            | 1.00  | 1.00 | 1.00 | 1.00  | 1.00 | 1.00 | 1.00  | 1.00  | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(I)           | 1.00  | 1.00 | 1.00 | 0.61  | 0.61 | 0.61 | 1.00  | 1.00  | 1.00 | 1.00 | 1.00 | 1.00 |
| Uniform Delay (d), s/veh     | 44.1  | 22.0 | 22.1 | 30.4  | 26.0 | 26.0 | 24.6  | 13.7  | 13.7 | 31.4 | 30.5 | 30.5 |
| Incr Delay (d2), s/veh       | 83.2  | 1.8  | 2.2  | 2.6   | 5.1  | 5.0  | 110.0 | 0.6   | 1.1  | 13.5 | 21.0 | 21.8 |
| Initial Q Delay(d3), s/veh   | 0.0   | 0.0  | 0.0  | 0.0   | 0.0  | 0.0  | 0.0   | 0.0   | 0.0  | 0.0  | 0.0  | 0.0  |
| %ile BackOfQ(50%), veh/ln    | 6.9   | 4.1  | 3.9  | 2.7   | 9.6  | 9.7  | 16.1  | 3.7   | 4.2  | 4.8  | 13.4 | 12.9 |
| Unsig. Movement Delay, s/veh |       |      |      |       |      |      |       |       |      |      |      |      |
| LnGrp Delay(d), s/veh        | 127.4 | 23.8 | 24.3 | 33.0  | 31.1 | 31.0 | 134.7 | 14.3  | 14.8 | 44.9 | 51.5 | 52.3 |
| LnGrp LOS                    | F     | C    | C    | C     | C    | C    | F     | B     | B    | D    | D    | D    |
| Approach Vol, veh/h          |       | 616  |      |       | 1063 |      |       | 1365  |      |      | 1137 |      |
| Approach Delay, s/veh        |       | 49.9 |      |       | 31.3 |      |       | 53.5  |      |      | 50.8 |      |
| Approach LOS                 |       | D    |      |       | C    |      |       | D     |      |      | D    |      |
| Timer - Assigned Phs         |       | 2    |      | 4     | 5    | 6    |       | 8     |      |      |      |      |
| Phs Duration (G+Y+Rc), s     |       | 54.0 |      | 40.0  | 18.0 | 36.0 |       | 40.0  |      |      | 40.0 |      |
| Change Period (Y+Rc), s      |       | 5.8  |      | * 5.6 | 3.0  | 5.8  |       | * 5.6 |      |      | 5.8  |      |
| Max Green Setting (Gmax), s  |       | 48.2 |      | * 34  | 15.0 | 30.2 |       | * 34  |      |      | 34   |      |
| Max Q Clear Time (g_c+I1), s |       | 12.4 |      | 36.4  | 17.0 | 30.7 |       | 24.5  |      |      | 24.5 |      |
| Green Ext Time (p_c), s      |       | 7.3  |      | 0.0   | 0.0  | 0.0  |       | 4.8   |      |      | 4.8  |      |

Intersection Summary

|                    |      |
|--------------------|------|
| HCM 6th Ctrl Delay | 46.6 |
| HCM 6th LOS        | D    |

Notes

User approved pedestrian interval to be less than phase max green.  
\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Deer Valley 30  
7: 15th Ave & Happy Valley Rd

2024 Background AM Mitigated  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Int Delay, s/veh         | 1.1  |      |      |      |      |      |      |      |      |      |      |      |
| Movement                 | EBL  | EBT  | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
| Lane Configurations      | ↕    |      | ↕    |      | ↕    |      | ↕    |      | ↕    |      | ↕    |      |
| Traffic Vol, veh/h       | 6    | 676  | 23   | 14   | 376  | 0    | 19   | 0    | 10   | 2    | 0    | 6    |
| Future Vol, veh/h        | 6    | 676  | 23   | 14   | 376  | 0    | 19   | 0    | 10   | 2    | 0    | 6    |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Free | Free | Free | Free | Free | Free | Stop | Stop | Stop | Stop | Stop | Stop |
| RT Channelized           | -    | -    | None | -    | -    | None | -    | -    | None | -    | -    | None |
| Storage Length           | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    |
| Veh in Median Storage, # | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Grade, %                 | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Peak Hour Factor         | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   |
| Heavy Vehicles, %        | 8    | 8    | 8    | 8    | 8    | 8    | 8    | 8    | 8    | 8    | 8    | 8    |
| Mvmt Flow                | 7    | 735  | 25   | 15   | 409  | 0    | 21   | 0    | 11   | 2    | 0    | 7    |

| Major/Minor          | Major1 | Major2 | Minor1 | Minor2 |
|----------------------|--------|--------|--------|--------|
| Conflicting Flow All | 409    | 0      | 0      | 760    |
| Stage 1              | -      | -      | -      | -      |
| Stage 2              | -      | -      | -      | -      |
| Critical Hdwy        | 4.18   | -      | -      | 4.18   |
| Critical Hdwy Stg 1  | -      | -      | -      | -      |
| Critical Hdwy Stg 2  | -      | -      | -      | -      |
| Follow-up Hdwy       | 2.272  | -      | -      | 2.272  |
| Pot Cap-1 Maneuver   | 1150   | -      | -      | 825    |
| Stage 1              | -      | -      | -      | -      |
| Stage 2              | -      | -      | -      | -      |
| Platoon blocked, %   | 1      | -      | -      | -      |
| Mov Cap-1 Maneuver   | 1150   | -      | -      | 825    |
| Mov Cap-2 Maneuver   | -      | -      | -      | -      |
| Stage 1              | -      | -      | -      | -      |
| Stage 2              | -      | -      | -      | -      |

| Approach             | EB  | WB  | NB   | SB   |
|----------------------|-----|-----|------|------|
| HCM Control Delay, s | 0.1 | 0.3 | 30.8 | 15.8 |
| HCM LOS              |     |     | D    | C    |

| Minor Lane/Major Mvmt | NBLn1 | EBL   | EBT | EBR | WBL   | WBT | WBR | SBLn1 |
|-----------------------|-------|-------|-----|-----|-------|-----|-----|-------|
| Capacity (veh/h)      | 171   | 1150  | -   | -   | 825   | -   | -   | 342   |
| HCM Lane V/C Ratio    | 0.184 | 0.006 | -   | -   | 0.018 | -   | -   | 0.025 |
| HCM Control Delay (s) | 30.8  | 8.1   | 0   | -   | 9.4   | 0   | -   | 15.8  |
| HCM Lane LOS          | D     | A     | A   | -   | A     | A   | -   | C     |
| HCM 95th %tile Q(veh) | 0.7   | 0     | -   | -   | 0.1   | -   | -   | 0.1   |

Deer Valley 30  
7: 15th Ave & Happy Valley Rd

2024 Background PM Mitigated  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Int Delay, s/veh         | 0.4  |      |      |      |      |      |      |      |      |      |      |      |
| Movement                 | EBL  | EBT  | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
| Lane Configurations      | ↕    |      | ↕    |      | ↕    |      | ↕    |      | ↕    |      | ↕    |      |
| Traffic Vol, veh/h       | 2    | 527  | 3    | 8    | 1109 | 0    | 20   | 0    | 17   | 0    | 0    | 1    |
| Future Vol, veh/h        | 2    | 527  | 3    | 8    | 1109 | 0    | 20   | 0    | 17   | 0    | 0    | 1    |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Free | Free | Free | Free | Free | Free | Stop | Stop | Stop | Stop | Stop | Stop |
| RT Channelized           | -    | -    | None | -    | -    | None | -    | -    | None | -    | -    | None |
| Storage Length           | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    |
| Veh in Median Storage, # | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Grade, %                 | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Peak Hour Factor         | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   |
| Heavy Vehicles, %        | 8    | 8    | 8    | 8    | 8    | 8    | 8    | 8    | 8    | 8    | 8    | 8    |
| Mvmt Flow                | 2    | 573  | 3    | 9    | 1205 | 0    | 22   | 0    | 18   | 0    | 0    | 1    |

| Major/Minor          | Major1 | Major2 | Minor1 | Minor2 |
|----------------------|--------|--------|--------|--------|
| Conflicting Flow All | 1205   | 0      | 0      | 576    |
| Stage 1              | -      | -      | -      | -      |
| Stage 2              | -      | -      | -      | -      |
| Critical Hdwy        | 4.18   | -      | -      | 4.18   |
| Critical Hdwy Stg 1  | -      | -      | -      | -      |
| Critical Hdwy Stg 2  | -      | -      | -      | -      |
| Follow-up Hdwy       | 2.272  | -      | -      | 2.272  |
| Pot Cap-1 Maneuver   | *199   | -      | -      | 968    |
| Stage 1              | -      | -      | -      | -      |
| Stage 2              | -      | -      | -      | -      |
| Platoon blocked, %   | 1      | -      | -      | -      |
| Mov Cap-1 Maneuver   | *199   | -      | -      | 968    |
| Mov Cap-2 Maneuver   | -      | -      | -      | -      |
| Stage 1              | -      | -      | -      | -      |
| Stage 2              | -      | -      | -      | -      |

| Approach             | EB  | WB  | NB   | SB   |
|----------------------|-----|-----|------|------|
| HCM Control Delay, s | 0.1 | 0.1 | 12.7 | 32.1 |
| HCM LOS              |     |     | B    | D    |

| Minor Lane/Major Mvmt | NBLn1 | EBL   | EBT | EBR | WBL   | WBT | WBR | SBLn1 |
|-----------------------|-------|-------|-----|-----|-------|-----|-----|-------|
| Capacity (veh/h)      | 506   | *199  | -   | -   | 968   | -   | -   | 134   |
| HCM Lane V/C Ratio    | 0.079 | 0.011 | -   | -   | 0.009 | -   | -   | 0.008 |
| HCM Control Delay (s) | 12.7  | 23.3  | 0   | -   | 8.8   | 0   | -   | 32.1  |
| HCM Lane LOS          | B     | C     | A   | -   | A     | A   | -   | D     |
| HCM 95th %tile Q(veh) | 0.3   | 0     | -   | -   | 0     | -   | -   | 0     |

Notes  
 -: Volume exceeds capacity    \$: Delay exceeds 300s    +: Computation Not Defined    \*: All major volume in platoon

Deer Valley 30  
8: 7th Ave & Happy Valley Rd

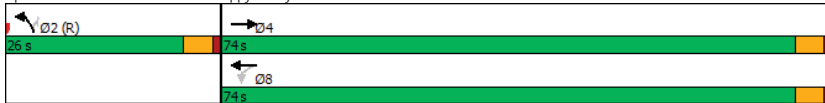
2024 Background AM Mitigated  
Timings

| Lane Group           | EBT   | WBL   | WBT   | NBL   | NBR   |
|----------------------|-------|-------|-------|-------|-------|
| Lane Configurations  | ↔     | ↔     | ↔     | ↔     | ↔     |
| Traffic Volume (vph) | 508   | 9     | 282   | 54    | 10    |
| Future Volume (vph)  | 508   | 9     | 282   | 54    | 10    |
| Turn Type            | NA    | Perm  | NA    | Prot  | Perm  |
| Protected Phases     | 4     |       | 8     | 2     |       |
| Permitted Phases     |       | 8     |       |       | 2     |
| Detector Phase       | 4     | 8     | 8     | 2     | 2     |
| Switch Phase         |       |       |       |       |       |
| Minimum Initial (s)  | 5.0   | 5.0   | 5.0   | 5.0   | 5.0   |
| Minimum Split (s)    | 22.5  | 22.5  | 22.5  | 22.5  | 22.5  |
| Total Split (s)      | 74.0  | 74.0  | 74.0  | 26.0  | 26.0  |
| Total Split (%)      | 74.0% | 74.0% | 74.0% | 26.0% | 26.0% |
| Yellow Time (s)      | 3.5   | 3.5   | 3.5   | 3.5   | 3.5   |
| All-Red Time (s)     | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   |
| Lost Time Adjust (s) | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Lost Time (s)  | 4.5   | 4.5   | 4.5   | 4.5   | 4.5   |
| Lead/Lag             |       |       |       |       |       |
| Lead-Lag Optimize?   |       |       |       |       |       |
| Recall Mode          | None  | None  | None  | C-Max | C-Max |
| Act Effct Green (s)  | 60.3  | 60.3  | 60.3  | 30.7  | 30.7  |
| Actuated g/C Ratio   | 0.60  | 0.60  | 0.60  | 0.31  | 0.31  |
| v/c Ratio            | 0.76  | 0.05  | 0.29  | 0.12  | 0.02  |
| Control Delay        | 17.8  | 5.8   | 9.4   | 21.6  | 9.4   |
| Queue Delay          | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Delay          | 17.8  | 5.8   | 9.4   | 21.6  | 9.4   |
| LOS                  | B     | A     | A     | C     | A     |
| Approach Delay       | 17.8  |       | 9.3   | 19.7  |       |
| Approach LOS         | B     |       | A     | B     |       |

Intersection Summary

Cycle Length: 100  
 Actuated Cycle Length: 100  
 Offset: 0 (0%), Referenced to phase 2:NBL and 6.: Start of Green  
 Natural Cycle: 60  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.76  
 Intersection Signal Delay: 15.6  
 Intersection Capacity Utilization 51.4%  
 Analysis Period (min) 15  
 Intersection LOS: B  
 ICU Level of Service A

Splits and Phases: 8: 7th Ave & Happy Valley Rd



Deer Valley 30  
8: 7th Ave & Happy Valley Rd

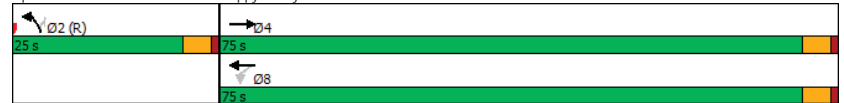
2024 Background PM Mitigated  
Timings

| Lane Group           | EBT   | WBL   | WBT   | NBL   | NBR   |
|----------------------|-------|-------|-------|-------|-------|
| Lane Configurations  | ↔     | ↔     | ↔     | ↔     | ↔     |
| Traffic Volume (vph) | 479   | 19    | 854   | 223   | 11    |
| Future Volume (vph)  | 479   | 19    | 854   | 223   | 11    |
| Turn Type            | NA    | Perm  | NA    | Prot  | Perm  |
| Protected Phases     | 4     |       | 8     | 2     |       |
| Permitted Phases     |       | 8     |       |       | 2     |
| Detector Phase       | 4     | 8     | 8     | 2     | 2     |
| Switch Phase         |       |       |       |       |       |
| Minimum Initial (s)  | 5.0   | 5.0   | 5.0   | 5.0   | 5.0   |
| Minimum Split (s)    | 22.5  | 22.5  | 22.5  | 22.5  | 22.5  |
| Total Split (s)      | 75.0  | 75.0  | 75.0  | 25.0  | 25.0  |
| Total Split (%)      | 75.0% | 75.0% | 75.0% | 25.0% | 25.0% |
| Yellow Time (s)      | 3.5   | 3.5   | 3.5   | 3.5   | 3.5   |
| All-Red Time (s)     | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   |
| Lost Time Adjust (s) | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Lost Time (s)  | 4.5   | 4.5   | 4.5   | 4.5   | 4.5   |
| Lead/Lag             |       |       |       |       |       |
| Lead-Lag Optimize?   |       |       |       |       |       |
| Recall Mode          | None  | None  | None  | C-Max | C-Max |
| Act Effct Green (s)  | 66.9  | 66.9  | 66.9  | 24.1  | 24.1  |
| Actuated g/C Ratio   | 0.67  | 0.67  | 0.67  | 0.24  | 0.24  |
| v/c Ratio            | 0.52  | 0.05  | 0.79  | 0.60  | 0.03  |
| Control Delay        | 9.5   | 4.9   | 17.0  | 38.7  | 14.2  |
| Queue Delay          | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Delay          | 9.5   | 4.9   | 17.0  | 38.7  | 14.2  |
| LOS                  | A     | A     | B     | D     | B     |
| Approach Delay       | 9.5   |       | 16.7  | 37.5  |       |
| Approach LOS         | A     |       | B     | D     |       |

Intersection Summary

Cycle Length: 100  
 Actuated Cycle Length: 100  
 Offset: 0 (0%), Referenced to phase 2:NBL and 6.: Start of Green  
 Natural Cycle: 70  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.79  
 Intersection Signal Delay: 17.2  
 Intersection Capacity Utilization 64.8%  
 Analysis Period (min) 15  
 Intersection LOS: B  
 ICU Level of Service C

Splits and Phases: 8: 7th Ave & Happy Valley Rd



Deer Valley 30  
8: 7th Ave & Happy Valley Rd

2024 Background AM Mitigated  
HCM 6th Signalized Intersection Summary

|                              | →    | ↘    | ↙    | ←    | ↖    | ↗    |
|------------------------------|------|------|------|------|------|------|
| Movement                     | EBT  | EBR  | WBL  | WBT  | NBL  | NBR  |
| Lane Configurations          | ↔    | ↔    | ↔    | ↔    | ↔    | ↔    |
| Traffic Volume (veh/h)       | 508  | 214  | 9    | 282  | 54   | 10   |
| Future Volume (veh/h)        | 508  | 214  | 9    | 282  | 54   | 10   |
| Initial Q (Qb), veh          | 0    | 0    | 0    | 0    | 0    | 0    |
| Ped-Bike Adj(A_pbT)          |      | 1.00 | 1.00 |      | 1.00 | 1.00 |
| Parking Bus, Adj             | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Work Zone On Approach        | No   |      | No   |      | No   |      |
| Adj Sat Flow, veh/h/ln       | 1781 | 1781 | 1781 | 1781 | 1781 | 1781 |
| Adj Flow Rate, veh/h         | 552  | 233  | 10   | 307  | 59   | 11   |
| Peak Hour Factor             | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Percent Heavy Veh, %         | 8    | 8    | 8    | 8    | 8    | 8    |
| Cap, veh/h                   | 607  | 256  | 129  | 909  | 678  | 603  |
| Arrive On Green              | 0.51 | 0.51 | 0.51 | 0.51 | 0.40 | 0.40 |
| Sat Flow, veh/h              | 1189 | 502  | 657  | 1781 | 1697 | 1510 |
| Grp Volume(v), veh/h         | 0    | 785  | 10   | 307  | 59   | 11   |
| Grp Sat Flow(s),veh/h/ln     | 0    | 1691 | 657  | 1781 | 1697 | 1510 |
| Q Serve(g_s), s              | 0.0  | 42.4 | 1.4  | 10.2 | 2.2  | 0.4  |
| Cycle Q Clear(g_c), s        | 0.0  | 42.4 | 43.8 | 10.2 | 2.2  | 0.4  |
| Prop In Lane                 |      | 0.30 | 1.00 |      | 1.00 | 1.00 |
| Lane Grp Cap(c), veh/h       | 0    | 863  | 129  | 909  | 678  | 603  |
| V/C Ratio(X)                 | 0.00 | 0.91 | 0.08 | 0.34 | 0.09 | 0.02 |
| Avail Cap(c_a), veh/h        | 0    | 1175 | 250  | 1238 | 678  | 603  |
| HCM Platoon Ratio            | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(I)           | 0.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Uniform Delay (d), s/veh     | 0.0  | 22.4 | 42.4 | 14.5 | 18.7 | 18.2 |
| Incr Delay (d2), s/veh       | 0.0  | 8.3  | 0.3  | 0.2  | 0.3  | 0.1  |
| Initial Q Delay(d3),s/veh    | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| %ile BackOfQ(50%),veh/ln     | 0.0  | 17.7 | 0.2  | 4.0  | 0.9  | 0.2  |
| Unsig. Movement Delay, s/veh |      |      |      |      |      |      |
| LnGrp Delay(d),s/veh         | 0.0  | 30.7 | 42.6 | 14.7 | 18.9 | 18.2 |
| LnGrp LOS                    | A    | C    | D    | B    | B    | B    |
| Approach Vol, veh/h          | 785  |      |      | 317  | 70   |      |
| Approach Delay, s/veh        | 30.7 |      |      | 15.6 | 18.8 |      |
| Approach LOS                 | C    |      |      | B    | B    |      |
| Timer - Assigned Phs         |      | 2    |      | 4    |      | 8    |
| Phs Duration (G+Y+Rc), s     |      | 44.5 |      | 55.5 |      | 55.5 |
| Change Period (Y+Rc), s      |      | 4.5  |      | 4.5  |      | 4.5  |
| Max Green Setting (Gmax), s  |      | 21.5 |      | 69.5 |      | 69.5 |
| Max Q Clear Time (g_c+I1), s |      | 4.2  |      | 44.4 |      | 45.8 |
| Green Ext Time (p_c), s      |      | 0.1  |      | 6.6  |      | 1.9  |
| <b>Intersection Summary</b>  |      |      |      |      |      |      |
| HCM 6th Ctrl Delay           |      |      | 25.9 |      |      |      |
| HCM 6th LOS                  |      |      | C    |      |      |      |

Deer Valley 30  
8: 7th Ave & Happy Valley Rd

2024 Background PM Mitigated  
HCM 6th Signalized Intersection Summary

|                              | →    | ↘    | ↙    | ←    | ↖    | ↗    |
|------------------------------|------|------|------|------|------|------|
| Movement                     | EBT  | EBR  | WBL  | WBT  | NBL  | NBR  |
| Lane Configurations          | ↔    | ↔    | ↔    | ↔    | ↔    | ↔    |
| Traffic Volume (veh/h)       | 479  | 77   | 19   | 854  | 223  | 11   |
| Future Volume (veh/h)        | 479  | 77   | 19   | 854  | 223  | 11   |
| Initial Q (Qb), veh          | 0    | 0    | 0    | 0    | 0    | 0    |
| Ped-Bike Adj(A_pbT)          |      | 1.00 | 1.00 |      | 1.00 | 1.00 |
| Parking Bus, Adj             | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Work Zone On Approach        | No   |      | No   |      | No   |      |
| Adj Sat Flow, veh/h/ln       | 1781 | 1781 | 1781 | 1781 | 1781 | 1781 |
| Adj Flow Rate, veh/h         | 521  | 84   | 21   | 928  | 242  | 12   |
| Peak Hour Factor             | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Percent Heavy Veh, %         | 8    | 8    | 8    | 8    | 8    | 8    |
| Cap, veh/h                   | 851  | 137  | 335  | 1013 | 579  | 515  |
| Arrive On Green              | 0.57 | 0.57 | 0.57 | 0.57 | 0.34 | 0.34 |
| Sat Flow, veh/h              | 1497 | 241  | 776  | 1781 | 1697 | 1510 |
| Grp Volume(v), veh/h         | 0    | 605  | 21   | 928  | 242  | 12   |
| Grp Sat Flow(s),veh/h/ln     | 0    | 1738 | 776  | 1781 | 1697 | 1510 |
| Q Serve(g_s), s              | 0.0  | 23.0 | 1.8  | 46.9 | 11.0 | 0.5  |
| Cycle Q Clear(g_c), s        | 0.0  | 23.0 | 24.9 | 46.9 | 11.0 | 0.5  |
| Prop In Lane                 |      | 0.14 | 1.00 |      | 1.00 | 1.00 |
| Lane Grp Cap(c), veh/h       | 0    | 988  | 335  | 1013 | 579  | 515  |
| V/C Ratio(X)                 | 0.00 | 0.61 | 0.06 | 0.92 | 0.42 | 0.02 |
| Avail Cap(c_a), veh/h        | 0    | 1225 | 440  | 1256 | 579  | 515  |
| HCM Platoon Ratio            | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(I)           | 0.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Uniform Delay (d), s/veh     | 0.0  | 14.3 | 22.5 | 19.4 | 25.3 | 21.9 |
| Incr Delay (d2), s/veh       | 0.0  | 0.6  | 0.1  | 9.2  | 2.2  | 0.1  |
| Initial Q Delay(d3),s/veh    | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| %ile BackOfQ(50%),veh/ln     | 0.0  | 8.6  | 0.3  | 20.2 | 4.7  | 0.2  |
| Unsig. Movement Delay, s/veh |      |      |      |      |      |      |
| LnGrp Delay(d),s/veh         | 0.0  | 14.9 | 22.6 | 28.6 | 27.5 | 21.9 |
| LnGrp LOS                    | A    | B    | C    | C    | C    | C    |
| Approach Vol, veh/h          | 605  |      |      | 949  | 254  |      |
| Approach Delay, s/veh        | 14.9 |      |      | 28.5 | 27.3 |      |
| Approach LOS                 | B    |      |      | C    | C    |      |
| Timer - Assigned Phs         |      | 2    |      | 4    |      | 8    |
| Phs Duration (G+Y+Rc), s     |      | 38.6 |      | 61.4 |      | 61.4 |
| Change Period (Y+Rc), s      |      | 4.5  |      | 4.5  |      | 4.5  |
| Max Green Setting (Gmax), s  |      | 20.5 |      | 70.5 |      | 70.5 |
| Max Q Clear Time (g_c+I1), s |      | 13.0 |      | 25.0 |      | 48.9 |
| Green Ext Time (p_c), s      |      | 0.4  |      | 4.9  |      | 8.0  |
| <b>Intersection Summary</b>  |      |      |      |      |      |      |
| HCM 6th Ctrl Delay           |      |      | 23.8 |      |      |      |
| HCM 6th LOS                  |      |      | C    |      |      |      |

Deer Valley 30  
9: 7th Ave & Pinnacle Peak Rd

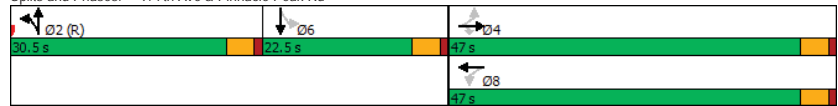
2024 Background AM Mitigated  
Timings

| Lane Group           | EBL   | EBT   | EBR   | WBL   | WBT   | NBL   | NBT   | SBL   | SBT   |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations  | ↔     | ↔     | ↔     | ↔     | ↔     | ↔     | ↔     | ↔     | ↔     |
| Traffic Volume (vph) | 175   | 455   | 282   | 46    | 366   | 79    | 85    | 59    | 38    |
| Future Volume (vph)  | 175   | 455   | 282   | 46    | 366   | 79    | 85    | 59    | 38    |
| Turn Type            | Perm  | NA    | Perm  | Perm  | NA    | Split | NA    | Perm  | NA    |
| Protected Phases     |       | 4     |       |       |       | 8     | 2     |       | 6     |
| Permitted Phases     | 4     |       | 4     | 8     |       |       |       | 6     |       |
| Detector Phase       | 4     | 4     | 4     | 8     | 8     | 2     | 2     | 6     | 6     |
| Switch Phase         |       |       |       |       |       |       |       |       |       |
| Minimum Initial (s)  | 5.0   | 5.0   | 5.0   | 5.0   | 5.0   | 5.0   | 5.0   | 5.0   | 5.0   |
| Minimum Split (s)    | 22.5  | 22.5  | 22.5  | 22.5  | 22.5  | 22.5  | 22.5  | 22.5  | 22.5  |
| Total Split (s)      | 47.0  | 47.0  | 47.0  | 47.0  | 47.0  | 30.5  | 30.5  | 22.5  | 22.5  |
| Total Split (%)      | 47.0% | 47.0% | 47.0% | 47.0% | 47.0% | 30.5% | 30.5% | 22.5% | 22.5% |
| Yellow Time (s)      | 3.5   | 3.5   | 3.5   | 3.5   | 3.5   | 3.5   | 3.5   | 3.5   | 3.5   |
| All-Red Time (s)     | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   |
| Lost Time Adjust (s) | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Lost Time (s)  | 4.5   | 4.5   | 4.5   | 4.5   | 4.5   | 4.5   | 4.5   | 4.5   | 4.5   |
| Lead/Lag             |       |       |       |       |       |       |       |       |       |
| Lead-Lag Optimize?   |       |       |       |       |       |       |       |       |       |
| Recall Mode          | None  | None  | None  | None  | None  | C-Max | C-Max | Max   | Max   |
| Act Effct Green (s)  | 42.5  | 42.5  | 42.5  | 42.5  | 42.5  | 26.0  | 26.0  | 18.0  | 18.0  |
| Actuated g/C Ratio   | 0.42  | 0.42  | 0.42  | 0.42  | 0.42  | 0.26  | 0.26  | 0.18  | 0.18  |
| v/c Ratio            | 1.40  | 0.66  | 0.38  | 0.23  | 0.83  | 0.20  | 0.27  | 0.30  | 0.24  |
| Control Delay        | 244.7 | 28.3  | 3.8   | 22.1  | 35.9  | 30.4  | 27.5  | 54.1  | 36.2  |
| Queue Delay          | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Delay          | 244.7 | 28.3  | 3.8   | 22.1  | 35.9  | 30.4  | 27.5  | 54.1  | 36.2  |
| LOS                  | F     | C     | A     | C     | D     | C     | C     | D     | D     |
| Approach Delay       |       | 62.2  |       |       | 34.8  |       | 28.7  |       | 44.2  |
| Approach LOS         |       | E     |       |       | C     |       | C     |       | D     |

Intersection Summary

|  |                        |
|--|------------------------|
| Cycle Length: 100  |                        |
| Actuated Cycle Length: 100                                 |                        |
| Offset: 0 (0%), Referenced to phase 2:NBTL, Start of Green |                        |
| Natural Cycle: 90  |                        |
| Control Type: Actuated-Coordinated                         |                        |
| Maximum v/c Ratio: 1.40                                    |                        |
| Intersection Signal Delay: 48.4                            | Intersection LOS: D    |
| Intersection Capacity Utilization 62.8%                    | ICU Level of Service B |
| Analysis Period (min) 15                                   |                        |

Splits and Phases: 9: 7th Ave & Pinnacle Peak Rd



Deer Valley 30  
9: 7th Ave & Pinnacle Peak Rd

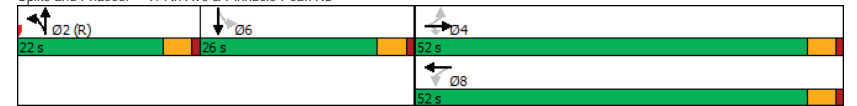
2024 Background PM Mitigated  
Timings

| Lane Group           | EBL   | EBT   | EBR   | WBL   | WBT   | NBL   | NBT   | SBL   | SBT   |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations  | ↔     | ↔     | ↔     | ↔     | ↔     | ↔     | ↔     | ↔     | ↔     |
| Traffic Volume (vph) | 39    | 389   | 74    | 30    | 440   | 207   | 38    | 185   | 83    |
| Future Volume (vph)  | 39    | 389   | 74    | 30    | 440   | 207   | 38    | 185   | 83    |
| Turn Type            | Perm  | NA    | Perm  | Perm  | NA    | Split | NA    | Perm  | NA    |
| Protected Phases     |       | 4     |       |       |       | 8     | 2     |       | 6     |
| Permitted Phases     | 4     |       | 4     | 8     |       |       |       | 6     |       |
| Detector Phase       | 4     | 4     | 4     | 8     | 8     | 2     | 2     | 6     | 6     |
| Switch Phase         |       |       |       |       |       |       |       |       |       |
| Minimum Initial (s)  | 5.0   | 5.0   | 5.0   | 5.0   | 5.0   | 5.0   | 5.0   | 5.0   | 5.0   |
| Minimum Split (s)    | 22.5  | 22.5  | 22.5  | 22.5  | 22.5  | 22.5  | 22.5  | 22.5  | 22.5  |
| Total Split (s)      | 52.0  | 52.0  | 52.0  | 52.0  | 52.0  | 22.0  | 22.0  | 26.0  | 26.0  |
| Total Split (%)      | 52.0% | 52.0% | 52.0% | 52.0% | 52.0% | 22.0% | 22.0% | 26.0% | 26.0% |
| Yellow Time (s)      | 3.5   | 3.5   | 3.5   | 3.5   | 3.5   | 3.5   | 3.5   | 3.5   | 3.5   |
| All-Red Time (s)     | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   |
| Lost Time Adjust (s) | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Lost Time (s)  | 4.5   | 4.5   | 4.5   | 4.5   | 4.5   | 4.5   | 4.5   | 4.5   | 4.5   |
| Lead/Lag             |       |       |       |       |       |       |       |       |       |
| Lead-Lag Optimize?   |       |       |       |       |       |       |       |       |       |
| Recall Mode          | None  | None  | None  | None  | None  | C-Max | C-Max | Max   | Max   |
| Act Effct Green (s)  | 38.1  | 38.1  | 38.1  | 38.1  | 38.1  | 26.9  | 26.9  | 21.5  | 21.5  |
| Actuated g/C Ratio   | 0.38  | 0.38  | 0.38  | 0.38  | 0.38  | 0.27  | 0.27  | 0.22  | 0.22  |
| v/c Ratio            | 0.33  | 0.63  | 0.13  | 0.15  | 0.82  | 0.50  | 0.18  | 0.76  | 0.67  |
| Control Delay        | 27.1  | 28.8  | 4.1   | 19.3  | 37.5  | 38.5  | 19.2  | 60.4  | 36.0  |
| Queue Delay          | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Delay          | 27.1  | 28.8  | 4.1   | 19.3  | 37.5  | 38.5  | 19.2  | 60.4  | 36.0  |
| LOS                  | C     | C     | A     | B     | D     | D     | B     | E     | D     |
| Approach Delay       |       | 25.0  |       |       | 36.5  |       | 33.3  |       | 46.3  |
| Approach LOS         |       | C     |       |       | D     |       | C     |       | D     |

Intersection Summary

|  |                        |
|--|------------------------|
| Cycle Length: 100  |                        |
| Actuated Cycle Length: 100                                 |                        |
| Offset: 0 (0%), Referenced to phase 2:NBTL, Start of Green |                        |
| Natural Cycle: 75  |                        |
| Control Type: Actuated-Coordinated                         |                        |
| Maximum v/c Ratio: 0.82                                    |                        |
| Intersection Signal Delay: 35.1                            | Intersection LOS: D    |
| Intersection Capacity Utilization 69.9%                    | ICU Level of Service C |
| Analysis Period (min) 15                                   |                        |

Splits and Phases: 9: 7th Ave & Pinnacle Peak Rd



Deer Valley 30  
9: 7th Ave & Pinnacle Peak Rd

2024 Background AM Mitigated  
HCM 6th Signalized Intersection Summary

| Movement                     | EBL   | EBT  | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
|------------------------------|-------|------|------|------|------|------|------|------|------|------|------|------|
| Lane Configurations          | ↔     | ↗    | ↘    | ↔    | ↗    | ↘    | ↔    | ↗    | ↘    | ↔    | ↗    | ↘    |
| Traffic Volume (veh/h)       | 175   | 455  | 282  | 46   | 366  | 190  | 79   | 85   | 26   | 59   | 38   | 35   |
| Future Volume (veh/h)        | 175   | 455  | 282  | 46   | 366  | 190  | 79   | 85   | 26   | 59   | 38   | 35   |
| Initial Q (Ob), veh          | 0     | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Ped-Bike Adj(A_pbT)          | 1.00  |      | 1.00 | 1.00 |      | 1.00 | 1.00 |      | 1.00 | 1.00 |      | 1.00 |
| Parking Bus, Adj             | 1.00  | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Work Zone On Approach        | No    |      | No   |      | No   |      | No   |      | No   |      | No   |      |
| Adj Sat Flow, veh/h/ln       | 1781  | 1781 | 1781 | 1781 | 1781 | 1781 | 1781 | 1781 | 1781 | 1781 | 1781 | 1781 |
| Adj Flow Rate, veh/h         | 190   | 495  | 307  | 50   | 398  | 207  | 86   | 92   | 28   | 64   | 41   | 38   |
| Peak Hour Factor             | 0.92  | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Percent Heavy Veh, %         | 8     | 8    | 8    | 8    | 8    | 8    | 8    | 8    | 8    | 8    | 8    | 8    |
| Cap, veh/h                   | 150   | 757  | 642  | 204  | 469  | 244  | 441  | 341  | 104  | 305  | 153  | 142  |
| Arrive On Green              | 0.43  | 0.43 | 0.43 | 0.43 | 0.43 | 0.43 | 0.26 | 0.26 | 0.26 | 0.18 | 0.18 | 0.18 |
| Sat Flow, veh/h              | 776   | 1781 | 1510 | 646  | 1104 | 574  | 1697 | 1311 | 399  | 1697 | 851  | 789  |
| Grp Volume(v), veh/h         | 190   | 495  | 307  | 50   | 0    | 605  | 86   | 0    | 120  | 64   | 0    | 79   |
| Grp Sat Flow(s),veh/h/ln     | 776   | 1781 | 1510 | 646  | 0    | 1678 | 1697 | 0    | 1710 | 1697 | 0    | 1639 |
| Q Serve(g_s), s              | 10.1  | 22.1 | 14.7 | 6.7  | 0.0  | 32.4 | 4.0  | 0.0  | 5.6  | 3.2  | 0.0  | 4.2  |
| Cycle Q Clear(g_c), s        | 42.5  | 22.1 | 14.7 | 28.8 | 0.0  | 32.4 | 4.0  | 0.0  | 5.6  | 3.2  | 0.0  | 4.2  |
| Prop In Lane                 | 1.00  |      | 1.00 | 1.00 |      | 0.34 | 1.00 |      | 0.23 | 1.00 |      | 0.48 |
| Lane Grp Cap(c), veh/h       | 150   | 757  | 642  | 204  | 0    | 713  | 441  | 0    | 445  | 305  | 0    | 295  |
| V/C Ratio(X)                 | 1.26  | 0.65 | 0.48 | 0.25 | 0.00 | 0.85 | 0.19 | 0.00 | 0.27 | 0.21 | 0.00 | 0.27 |
| Avail Cap(c_a), veh/h        | 150   | 757  | 642  | 204  | 0    | 713  | 441  | 0    | 445  | 305  | 0    | 295  |
| HCM Platoon Ratio            | 1.00  | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(I)           | 0.44  | 0.44 | 0.44 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 | 1.00 |
| Uniform Delay (d), s/veh     | 47.4  | 22.9 | 20.8 | 34.4 | 0.0  | 25.9 | 28.8 | 0.0  | 29.4 | 34.9 | 0.0  | 35.3 |
| Incr Delay (d2), s/veh       | 140.4 | 0.9  | 0.2  | 0.6  | 0.0  | 9.4  | 1.0  | 0.0  | 1.5  | 1.6  | 0.0  | 2.2  |
| Initial Q Delay(d3),s/veh    | 0.0   | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| %ile BackOfQ(50%),veh/ln     | 9.6   | 9.2  | 5.1  | 1.1  | 0.0  | 14.2 | 1.7  | 0.0  | 2.5  | 1.5  | 0.0  | 1.8  |
| Unsig. Movement Delay, s/veh |       |      |      |      |      |      |      |      |      |      |      |      |
| LnGrp Delay(d),s/veh         | 187.8 | 23.8 | 21.0 | 35.0 | 0.0  | 35.3 | 29.8 | 0.0  | 30.9 | 36.5 | 0.0  | 37.5 |
| LnGrp LOS                    | F     | C    | C    | C    | A    | D    | C    | A    | C    | D    | A    | D    |
| Approach Vol, veh/h          |       | 992  |      |      | 655  |      |      | 206  |      |      | 143  |      |
| Approach Delay, s/veh        |       | 54.3 |      |      | 35.3 |      |      | 30.5 |      |      | 37.1 |      |
| Approach LOS                 |       | D    |      |      | D    |      |      | C    |      |      | D    |      |
| Timer - Assigned Phs         |       | 2    |      | 4    |      | 6    |      | 8    |      |      |      |      |
| Phs Duration (G+Y+Rc), s     |       | 30.5 |      | 47.0 |      | 22.5 |      | 47.0 |      |      | 42.3 |      |
| Change Period (Y+Rc), s      |       | 4.5  |      | 4.5  |      | 4.5  |      | 4.5  |      |      | 4.5  |      |
| Max Green Setting (Gmax), s  |       | 26.0 |      | 42.5 |      | 18.0 |      | 42.5 |      |      | 47.5 |      |
| Max Q Clear Time (g_c+I1), s |       | 7.6  |      | 44.5 |      | 6.2  |      | 34.4 |      |      | 30.3 |      |
| Green Ext Time (p_c), s      |       | 0.8  |      | 0.0  |      | 0.4  |      | 2.9  |      |      | 1.1  |      |
| <b>Intersection Summary</b>  |       |      |      |      |      |      |      |      |      |      |      |      |
| HCM 6th Ctrl Delay           |       |      |      | 44.4 |      |      |      |      |      |      |      |      |
| HCM 6th LOS                  |       |      |      | D    |      |      |      |      |      |      |      |      |

Deer Valley 30  
9: 7th Ave & Pinnacle Peak Rd

2024 Background PM Mitigated  
HCM 6th Signalized Intersection Summary

| Movement   | EBL  | EBT  | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
|--|------|------|------|------|------|------|------|------|------|------|------|------|
| Lane Configurations  | ↔    | ↗    | ↘    | ↔    | ↗    | ↘    | ↔    | ↗    | ↘    | ↔    | ↗    | ↘    |
| Traffic Volume (veh/h)   | 39   | 389  | 74   | 30   | 440  | 62   | 207  | 38   | 40   | 185  | 83   | 170  |
| Future Volume (veh/h)  | 39   | 389  | 74   | 30   | 440  | 62   | 207  | 38   | 40   | 185  | 83   | 170  |
| Initial Q (Ob), veh  | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Ped-Bike Adj(A_pbT)  | 1.00 |      | 1.00 | 1.00 |      | 1.00 | 1.00 |      | 1.00 | 1.00 |      | 1.00 |
| Parking Bus, Adj   | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Work Zone On Approach  | No   |      | No   |      | No   |      | No   |      | No   |      | No   |      |
| Adj Sat Flow, veh/h/ln   | 1781 | 1781 | 1781 | 1781 | 1781 | 1781 | 1781 | 1781 | 1781 | 1781 | 1781 | 1781 |
| Adj Flow Rate, veh/h   | 42   | 423  | 80   | 33   | 478  | 67   | 225  | 41   | 43   | 201  | 90   | 131  |
| Peak Hour Factor   | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Percent Heavy Veh, %   | 8    | 8    | 8    | 8    | 8    | 8    | 8    | 8    | 8    | 8    | 8    | 8    |
| Cap, veh/h   | 150  | 673  | 570  | 229  | 577  | 81   | 462  | 217  | 227  | 365  | 141  | 205  |
| Arrive On Green  | 0.38 | 0.38 | 0.38 | 0.38 | 0.38 | 0.38 | 0.27 | 0.27 | 0.27 | 0.22 | 0.22 | 0.22 |
| Sat Flow, veh/h  | 821  | 1781 | 1510 | 853  | 1529 | 214  | 1697 | 796  | 835  | 1697 | 656  | 954  |
| Grp Volume(v), veh/h   | 42   | 423  | 80   | 33   | 0    | 545  | 225  | 0    | 84   | 201  | 0    | 221  |
| Grp Sat Flow(s),veh/h/ln   | 821  | 1781 | 1510 | 853  | 0    | 1743 | 1697 | 0    | 1631 | 1697 | 0    | 1610 |
| Q Serve(g_s), s  | 4.9  | 19.4 | 3.5  | 3.3  | 0.0  | 28.3 | 11.1 | 0.0  | 4.0  | 10.5 | 0.0  | 12.5 |
| Cycle Q Clear(g_c), s  | 33.2 | 19.4 | 3.5  | 22.7 | 0.0  | 28.3 | 11.1 | 0.0  | 4.0  | 10.5 | 0.0  | 12.5 |
| Prop In Lane   | 1.00 |      | 1.00 | 1.00 |      | 0.12 | 1.00 |      | 0.51 | 1.00 |      | 0.59 |
| Lane Grp Cap(c), veh/h   | 150  | 673  | 570  | 229  | 0    | 658  | 462  | 0    | 444  | 365  | 0    | 346  |
| V/C Ratio(X)   | 0.28 | 0.63 | 0.14 | 0.14 | 0.00 | 0.83 | 0.49 | 0.00 | 0.19 | 0.55 | 0.00 | 0.64 |
| Avail Cap(c_a), veh/h  | 229  | 846  | 717  | 312  | 0    | 828  | 462  | 0    | 444  | 365  | 0    | 346  |
| HCM Platoon Ratio  | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(I)   | 0.80 | 0.80 | 0.80 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 | 1.00 |
| Uniform Delay (d), s/veh   | 43.2 | 25.4 | 20.4 | 34.6 | 0.0  | 28.2 | 30.5 | 0.0  | 27.9 | 35.0 | 0.0  | 35.7 |
| Incr Delay (d2), s/veh   | 0.8  | 0.8  | 0.1  | 0.3  | 0.0  | 5.7  | 3.6  | 0.0  | 0.9  | 5.9  | 0.0  | 8.7  |
| Initial Q Delay(d3),s/veh  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| %ile BackOfQ(50%),veh/ln   | 1.0  | 8.1  | 1.2  | 0.7  | 0.0  | 12.5 | 5.0  | 0.0  | 1.6  | 4.9  | 0.0  | 5.7  |
| Unsig. Movement Delay, s/veh                                       |      |      |      |      |      |      |      |      |      |      |      |      |
| LnGrp Delay(d),s/veh   | 44.0 | 26.2 | 20.5 | 34.9 | 0.0  | 33.9 | 34.2 | 0.0  | 28.9 | 40.8 | 0.0  | 44.4 |
| LnGrp LOS  | D    | C    | C    | C    | A    | C    | C    | A    | C    | D    | A    | D    |
| Approach Vol, veh/h  |      | 545  |      |      | 578  |      |      | 309  |      |      | 422  |      |
| Approach Delay, s/veh  |      | 26.7 |      |      | 33.9 |      |      | 32.7 |      |      | 42.7 |      |
| Approach LOS   |      | C    |      |      | C    |      |      | C    |      |      | D    |      |
| Timer - Assigned Phs   |      | 2    |      | 4    |      | 6    |      | 8    |      |      |      |      |
| Phs Duration (G+Y+Rc), s   |      | 31.7 |      | 42.3 |      | 26.0 |      | 42.3 |      |      | 47.5 |      |
| Change Period (Y+Rc), s  |      | 4.5  |      | 4.5  |      | 4.5  |      | 4.5  |      |      | 4.5  |      |
| Max Green Setting (Gmax), s  |      | 17.5 |      | 47.5 |      | 21.5 |      | 47.5 |      |      | 47.5 |      |
| Max Q Clear Time (g_c+I1), s                                       |      | 13.1 |      | 35.2 |      | 14.5 |      | 30.3 |      |      | 30.3 |      |
| Green Ext Time (p_c), s  |      | 0.5  |      | 2.6  |      | 1.1  |      | 3.6  |      |      | 1.1  |      |
| <b>Intersection Summary</b>  |      |      |      |      |      |      |      |      |      |      |      |      |
| HCM 6th Ctrl Delay   |      |      |      |      |      |      | 33.6 |      |      |      |      |      |
| HCM 6th LOS  |      |      |      |      |      |      | C    |      |      |      |      |      |
| <b>Notes</b>   |      |      |      |      |      |      |      |      |      |      |      |      |
| User approved pedestrian interval to be less than phase max green. |      |      |      |      |      |      |      |      |      |      |      |      |

Deer Valley 30  
10: 7th Ave & Alameda Rd

2024 Background AM Mitigated  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh         | 4.5  |      |      |      |      |      |
| Movement                 | EBL  | EBR  | NBL  | NBT  | SBT  | SBR  |
| Lane Configurations      | ↔    |      | ↔    | ↔    | ↔    |      |
| Traffic Vol, veh/h       | 14   | 43   | 214  | 50   | 155  | 68   |
| Future Vol, veh/h        | 14   | 43   | 214  | 50   | 155  | 68   |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Stop | Stop | Free | Free | Free | Free |
| RT Channelized           | -    | None | -    | None | -    | None |
| Storage Length           | 0    | -    | 150  | -    | -    | -    |
| Veh in Median Storage, # | 0    | -    | -    | 0    | 0    | -    |
| Grade, %                 | 0    | -    | -    | 0    | 0    | -    |
| Peak Hour Factor         | 92   | 92   | 92   | 92   | 92   | 92   |
| Heavy Vehicles, %        | 8    | 8    | 8    | 8    | 8    | 8    |
| Mvmt Flow                | 15   | 47   | 233  | 54   | 168  | 74   |

| Major/Minor          | Minor2 | Major1 | Major2 |   |   |   |
|----------------------|--------|--------|--------|---|---|---|
| Conflicting Flow All | 725    | 205    | 242    | 0 | - | 0 |
| Stage 1              | 205    | -      | -      | - | - | - |
| Stage 2              | 520    | -      | -      | - | - | - |
| Critical Hdwy        | 6.48   | 6.28   | 4.18   | - | - | - |
| Critical Hdwy Stg 1  | 5.48   | -      | -      | - | - | - |
| Critical Hdwy Stg 2  | 5.48   | -      | -      | - | - | - |
| Follow-up Hdwy       | 3.572  | 3.372  | 2.272  | - | - | - |
| Pot Cap-1 Maneuver   | 383    | 821    | 1290   | - | - | - |
| Stage 1              | 815    | -      | -      | - | - | - |
| Stage 2              | 585    | -      | -      | - | - | - |
| Platoon blocked, %   |        |        |        | - | - | - |
| Mov Cap-1 Maneuver   | 314    | 821    | 1290   | - | - | - |
| Mov Cap-2 Maneuver   | 314    | -      | -      | - | - | - |
| Stage 1              | 667    | -      | -      | - | - | - |
| Stage 2              | 585    | -      | -      | - | - | - |

| Approach             | EB   | NB  | SB |
|----------------------|------|-----|----|
| HCM Control Delay, s | 11.8 | 6.8 | 0  |
| HCM LOS              | B    |     |    |

| Minor Lane/Major Mvmt | NBL  | NBT | EBLn1 | SBT | SBR |
|-----------------------|------|-----|-------|-----|-----|
| Capacity (veh/h)      | 1290 | -   | 588   | -   | -   |
| HCM Lane V/C Ratio    | 0.18 | -   | 0.105 | -   | -   |
| HCM Control Delay (s) | 8.4  | -   | 11.8  | -   | -   |
| HCM Lane LOS          | A    | -   | B     | -   | -   |
| HCM 95th %tile Q(veh) | 0.7  | -   | 0.4   | -   | -   |

Deer Valley 30  
10: 7th Ave & Alameda Rd

2024 Background PM Mitigated  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh         | 6.2  |      |      |      |      |      |
| Movement                 | EBL  | EBR  | NBL  | NBT  | SBT  | SBR  |
| Lane Configurations      | ↔    |      | ↔    | ↔    | ↔    |      |
| Traffic Vol, veh/h       | 67   | 208  | 48   | 168  | 81   | 15   |
| Future Vol, veh/h        | 67   | 208  | 48   | 168  | 81   | 15   |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Stop | Stop | Free | Free | Free | Free |
| RT Channelized           | -    | None | -    | None | -    | None |
| Storage Length           | 0    | -    | 150  | -    | -    | -    |
| Veh in Median Storage, # | 0    | -    | -    | 0    | 0    | -    |
| Grade, %                 | 0    | -    | -    | 0    | 0    | -    |
| Peak Hour Factor         | 92   | 92   | 92   | 92   | 92   | 92   |
| Heavy Vehicles, %        | 8    | 8    | 8    | 8    | 8    | 8    |
| Mvmt Flow                | 73   | 226  | 52   | 183  | 88   | 16   |

| Major/Minor          | Minor2 | Major1 | Major2 |   |   |   |
|----------------------|--------|--------|--------|---|---|---|
| Conflicting Flow All | 383    | 96     | 104    | 0 | - | 0 |
| Stage 1              | 96     | -      | -      | - | - | - |
| Stage 2              | 287    | -      | -      | - | - | - |
| Critical Hdwy        | 6.48   | 6.28   | 4.18   | - | - | - |
| Critical Hdwy Stg 1  | 5.48   | -      | -      | - | - | - |
| Critical Hdwy Stg 2  | 5.48   | -      | -      | - | - | - |
| Follow-up Hdwy       | 3.572  | 3.372  | 2.272  | - | - | - |
| Pot Cap-1 Maneuver   | 608    | 944    | 1451   | - | - | - |
| Stage 1              | 913    | -      | -      | - | - | - |
| Stage 2              | 748    | -      | -      | - | - | - |
| Platoon blocked, %   |        |        |        | - | - | - |
| Mov Cap-1 Maneuver   | 586    | 944    | 1451   | - | - | - |
| Mov Cap-2 Maneuver   | 586    | -      | -      | - | - | - |
| Stage 1              | 880    | -      | -      | - | - | - |
| Stage 2              | 748    | -      | -      | - | - | - |

| Approach             | EB   | NB  | SB |
|----------------------|------|-----|----|
| HCM Control Delay, s | 11.9 | 1.7 | 0  |
| HCM LOS              | B    |     |    |

| Minor Lane/Major Mvmt | NBL   | NBT | EBLn1 | SBT | SBR |
|-----------------------|-------|-----|-------|-----|-----|
| Capacity (veh/h)      | 1451  | -   | 822   | -   | -   |
| HCM Lane V/C Ratio    | 0.036 | -   | 0.364 | -   | -   |
| HCM Control Delay (s) | 7.6   | -   | 11.9  | -   | -   |
| HCM Lane LOS          | A     | -   | B     | -   | -   |
| HCM 95th %tile Q(veh) | 0.1   | -   | 1.7   | -   | -   |

Deer Valley 30  
1: 19th Ave & Happy Valley Rd

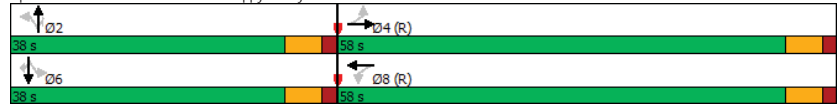
2024 Background AM Scenario B  
Timings

| Lane Group           | EBL   | EBT   | WBL   | WBT   | NBL   | NBT   | NBR   | SBL   | SBT   | SBR   |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations  | ↔     | ↔↔    | ↔     | ↔↔    | ↔     | ↔↔    | ↔     | ↔↔    | ↔↔    | ↔     |
| Traffic Volume (vph) | 87    | 348   | 150   | 295   | 153   | 257   | 102   | 267   | 408   | 96    |
| Future Volume (vph)  | 87    | 348   | 150   | 295   | 153   | 257   | 102   | 267   | 408   | 96    |
| Turn Type            | Perm  | NA    | Perm  | NA    | Perm  | NA    | Perm  | Perm  | NA    | Perm  |
| Protected Phases     |       | 4     |       | 8     |       | 2     |       | 2     | 6     | 6     |
| Permitted Phases     | 4     |       | 8     |       | 2     |       | 2     | 6     |       | 6     |
| Detector Phase       | 4     | 4     | 8     | 8     | 2     | 2     | 2     | 6     | 6     | 6     |
| Switch Phase         |       |       |       |       |       |       |       |       |       |       |
| Minimum Initial (s)  | 15.0  | 15.0  | 15.0  | 15.0  | 5.0   | 5.0   | 5.0   | 5.0   | 5.0   | 5.0   |
| Minimum Split (s)    | 41.0  | 41.0  | 41.0  | 41.0  | 43.1  | 43.1  | 43.1  | 43.1  | 43.1  | 43.1  |
| Total Split (s)      | 58.0  | 58.0  | 58.0  | 58.0  | 38.0  | 38.0  | 38.0  | 38.0  | 38.0  | 38.0  |
| Total Split (%)      | 60.4% | 60.4% | 60.4% | 60.4% | 39.6% | 39.6% | 39.6% | 39.6% | 39.6% | 39.6% |
| Yellow Time (s)      | 4.3   | 4.3   | 4.3   | 4.3   | 4.3   | 4.3   | 4.3   | 4.3   | 4.3   | 4.3   |
| All-Red Time (s)     | 1.7   | 1.7   | 1.7   | 1.7   | 1.8   | 1.8   | 1.8   | 1.8   | 1.8   | 1.8   |
| Lost Time Adjust (s) | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Lost Time (s)  | 6.0   | 6.0   | 6.0   | 6.0   | 6.1   | 6.1   | 6.1   | 6.1   | 6.1   | 6.1   |
| Lead/Lag             |       |       |       |       |       |       |       |       |       |       |
| Lead-Lag Optimize?   |       |       |       |       |       |       |       |       |       |       |
| Recall Mode          | C-Max | C-Max | C-Max | C-Max | Max   | Max   | Max   | Max   | Max   | Max   |
| Act Effct Green (s)  | 52.0  | 52.0  | 52.0  | 52.0  | 31.9  | 31.9  | 31.9  | 31.9  | 31.9  | 31.9  |
| Actuated g/C Ratio   | 0.54  | 0.54  | 0.54  | 0.54  | 0.33  | 0.33  | 0.33  | 0.33  | 0.33  | 0.33  |
| v/c Ratio            | 0.20  | 0.22  | 0.40  | 0.17  | 0.59  | 0.25  | 0.19  | 0.86  | 0.28  | 0.18  |
| Control Delay        | 12.8  | 7.7   | 16.6  | 8.1   | 36.8  | 24.1  | 5.5   | 55.5  | 24.2  | 5.6   |
| Queue Delay          | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Delay          | 12.8  | 7.7   | 16.6  | 8.1   | 36.8  | 24.1  | 5.5   | 55.5  | 24.2  | 5.6   |
| LOS                  | B     | A     | B     | A     | D     | C     | A     | E     | C     | A     |
| Approach Delay       |       | 8.4   |       | 10.4  |       | 24.2  |       |       | 32.7  |       |
| Approach LOS         |       | A     |       | B     |       | C     |       |       | C     |       |

Intersection Summary

|   |                        |
|---|------------------------|
| Cycle Length: 96  |                        |
| Actuated Cycle Length: 96   |                        |
| Offset: 0 (0%), Referenced to phase 4:EBTL and 8:WBTL, Start of Green |                        |
| Natural Cycle: 85   |                        |
| Control Type: Actuated-Coordinated                                    |                        |
| Maximum v/c Ratio: 0.86   |                        |
| Intersection Signal Delay: 19.8                                       | Intersection LOS: B    |
| Intersection Capacity Utilization 67.1%                               | ICU Level of Service C |
| Analysis Period (min) 15  |                        |

Splits and Phases: 1: 19th Ave & Happy Valley Rd



Deer Valley 30  
1: 19th Ave & Happy Valley Rd

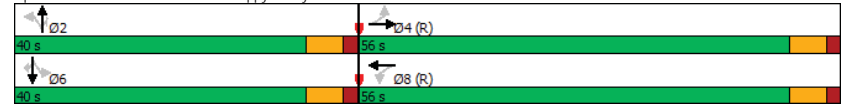
2024 Background PM Scenario B  
Timings

| Lane Group           | EBL   | EBT   | WBL   | WBT   | NBL   | NBT   | NBR   | SBL   | SBT   | SBR   |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations  | ↔     | ↔↔    | ↔     | ↔↔    | ↔     | ↔↔    | ↔     | ↔↔    | ↔↔    | ↔     |
| Traffic Volume (vph) | 167   | 383   | 165   | 747   | 304   | 481   | 125   | 177   | 228   | 122   |
| Future Volume (vph)  | 167   | 383   | 165   | 747   | 304   | 481   | 125   | 177   | 228   | 122   |
| Turn Type            | Perm  | NA    | Perm  | NA    | Perm  | NA    | Perm  | Perm  | NA    | Perm  |
| Protected Phases     |       | 4     |       | 8     |       | 2     |       | 2     | 6     | 6     |
| Permitted Phases     | 4     |       | 8     |       | 2     |       | 2     | 6     |       | 6     |
| Detector Phase       | 4     | 4     | 8     | 8     | 2     | 2     | 2     | 6     | 6     | 6     |
| Switch Phase         |       |       |       |       |       |       |       |       |       |       |
| Minimum Initial (s)  | 15.0  | 15.0  | 15.0  | 15.0  | 5.0   | 5.0   | 5.0   | 5.0   | 5.0   | 5.0   |
| Minimum Split (s)    | 41.0  | 41.0  | 41.0  | 41.0  | 43.1  | 43.1  | 43.1  | 43.1  | 43.1  | 43.1  |
| Total Split (s)      | 56.0  | 56.0  | 56.0  | 56.0  | 40.0  | 40.0  | 40.0  | 40.0  | 40.0  | 40.0  |
| Total Split (%)      | 58.3% | 58.3% | 58.3% | 58.3% | 41.7% | 41.7% | 41.7% | 41.7% | 41.7% | 41.7% |
| Yellow Time (s)      | 4.3   | 4.3   | 4.3   | 4.3   | 4.3   | 4.3   | 4.3   | 4.3   | 4.3   | 4.3   |
| All-Red Time (s)     | 1.7   | 1.7   | 1.7   | 1.7   | 1.8   | 1.8   | 1.8   | 1.8   | 1.8   | 1.8   |
| Lost Time Adjust (s) | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Lost Time (s)  | 6.0   | 6.0   | 6.0   | 6.0   | 6.1   | 6.1   | 6.1   | 6.1   | 6.1   | 6.1   |
| Lead/Lag             |       |       |       |       |       |       |       |       |       |       |
| Lead-Lag Optimize?   |       |       |       |       |       |       |       |       |       |       |
| Recall Mode          | C-Max | C-Max | C-Max | C-Max | Max   | Max   | Max   | Max   | Max   | Max   |
| Act Effct Green (s)  | 50.0  | 50.0  | 50.0  | 50.0  | 33.9  | 33.9  | 33.9  | 33.9  | 33.9  | 33.9  |
| Actuated g/C Ratio   | 0.52  | 0.52  | 0.52  | 0.52  | 0.35  | 0.35  | 0.35  | 0.35  | 0.35  | 0.35  |
| v/c Ratio            | 1.07  | 0.27  | 0.52  | 0.48  | 0.90  | 0.44  | 0.22  | 0.80  | 0.15  | 0.22  |
| Control Delay        | 116.3 | 8.2   | 21.9  | 13.4  | 58.9  | 25.3  | 4.9   | 53.9  | 21.5  | 4.9   |
| Queue Delay          | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Delay          | 116.3 | 8.2   | 21.9  | 13.4  | 58.9  | 25.3  | 4.9   | 53.9  | 21.5  | 4.9   |
| LOS                  | F     | A     | C     | B     | E     | C     | A     | D     | C     | A     |
| Approach Delay       |       | 31.4  |       | 14.5  |       | 33.7  |       |       | 28.5  |       |
| Approach LOS         |       | C     |       | B     |       | C     |       |       | C     |       |

Intersection Summary

|   |                        |
|---|------------------------|
| Cycle Length: 96  |                        |
| Actuated Cycle Length: 96   |                        |
| Offset: 0 (0%), Referenced to phase 4:EBTL and 8:WBTL, Start of Green |                        |
| Natural Cycle: 105  |                        |
| Control Type: Actuated-Coordinated                                    |                        |
| Maximum v/c Ratio: 1.07   |                        |
| Intersection Signal Delay: 25.4                                       | Intersection LOS: C    |
| Intersection Capacity Utilization 78.0%                               | ICU Level of Service D |
| Analysis Period (min) 15  |                        |

Splits and Phases: 1: 19th Ave & Happy Valley Rd





Deer Valley 30  
1: 19th Ave & Happy Valley Rd

2024 Background AM Scenario B  
HCM 6th Signalized Intersection Summary

| Movement                     | EBL   | EBT  | EBR  | WBL  | WBT   | WBR  | NBL  | NBT  | NBR  | SBL   | SBT  | SBR  |
|------------------------------|-------|------|------|------|-------|------|------|------|------|-------|------|------|
| Lane Configurations          | ↔     | ↔    | ↔    | ↔    | ↔     | ↔    | ↔    | ↔    | ↔    | ↔     | ↔    | ↔    |
| Traffic Volume (veh/h)       | 87    | 348  | 172  | 150  | 295   | 110  | 153  | 257  | 102  | 267   | 408  | 96   |
| Future Volume (veh/h)        | 87    | 348  | 172  | 150  | 295   | 110  | 153  | 257  | 102  | 267   | 408  | 96   |
| Initial Q (Ob), veh          | 0     | 0    | 0    | 0    | 0     | 0    | 0    | 0    | 0    | 0     | 0    | 0    |
| Ped-Bike Adj(A_pbT)          | 1.00  | 1.00 | 1.00 | 1.00 | 1.00  | 1.00 | 1.00 | 1.00 | 1.00 | 1.00  | 1.00 | 1.00 |
| Parking Bus, Adj             | 1.00  | 1.00 | 1.00 | 1.00 | 1.00  | 1.00 | 1.00 | 1.00 | 1.00 | 1.00  | 1.00 | 1.00 |
| Work Zone On Approach        | No    | No   | No   | No   | No    | No   | No   | No   | No   | No    | No   | No   |
| Adj Sat Flow, veh/h/ln       | 1781  | 1781 | 1781 | 1781 | 1781  | 1781 | 1781 | 1781 | 1781 | 1781  | 1781 | 1781 |
| Adj Flow Rate, veh/h         | 95    | 378  | 187  | 163  | 321   | 120  | 166  | 279  | 111  | 290   | 443  | 104  |
| Peak Hour Factor             | 0.92  | 0.92 | 0.92 | 0.92 | 0.92  | 0.92 | 0.92 | 0.92 | 0.92 | 0.92  | 0.92 | 0.92 |
| Percent Heavy Veh, %         | 8     | 8    | 8    | 8    | 8     | 8    | 8    | 8    | 8    | 8     | 8    | 8    |
| Cap, veh/h                   | 520   | 1756 | 818  | 459  | 1921  | 678  | 292  | 1125 | 502  | 333   | 1616 | 502  |
| Arrive On Green              | 0.54  | 0.54 | 0.54 | 0.54 | 0.54  | 0.33 | 0.33 | 0.33 | 0.33 | 0.33  | 0.33 | 0.33 |
| Sat Flow, veh/h              | 903   | 3242 | 1510 | 806  | 3547  | 1251 | 819  | 3385 | 1510 | 947   | 4863 | 1510 |
| Grp Volume(v), veh/h         | 95    | 378  | 187  | 163  | 292   | 149  | 166  | 279  | 111  | 290   | 443  | 104  |
| Grp Sat Flow(s), veh/h/ln    | 903   | 1621 | 1510 | 806  | 1621  | 1556 | 819  | 1692 | 1510 | 947   | 1621 | 1510 |
| Q Serve(g_s), s              | 5.7   | 5.8  | 6.2  | 12.7 | 4.4   | 4.7  | 17.9 | 5.8  | 5.1  | 26.1  | 6.4  | 4.7  |
| Cycle Q Clear(g_c), s        | 10.4  | 5.8  | 6.2  | 19.0 | 4.4   | 4.7  | 24.4 | 5.8  | 5.1  | 31.9  | 6.4  | 4.7  |
| Prop In Lane                 | 1.00  | 1.00 | 1.00 | 1.00 | 0.80  | 1.00 | 1.00 | 1.00 | 1.00 | 1.00  | 1.00 | 1.00 |
| Lane Grp Cap(c), veh/h       | 520   | 1756 | 818  | 459  | 1756  | 843  | 292  | 1125 | 502  | 333   | 1616 | 502  |
| V/C Ratio(X)                 | 0.18  | 0.22 | 0.23 | 0.36 | 0.17  | 0.18 | 0.57 | 0.25 | 0.22 | 0.87  | 0.27 | 0.21 |
| Avail Cap(c_a), veh/h        | 520   | 1756 | 818  | 459  | 1756  | 843  | 292  | 1125 | 502  | 333   | 1616 | 502  |
| HCM Platoon Ratio            | 1.00  | 1.00 | 1.00 | 1.00 | 1.00  | 1.00 | 1.00 | 1.00 | 1.00 | 1.00  | 1.00 | 1.00 |
| Upstream Filter(I)           | 1.00  | 1.00 | 1.00 | 1.00 | 1.00  | 1.00 | 1.00 | 1.00 | 1.00 | 1.00  | 1.00 | 1.00 |
| Uniform Delay (d), s/veh     | 13.8  | 11.4 | 11.5 | 16.5 | 11.1  | 11.2 | 32.5 | 23.3 | 23.1 | 36.4  | 23.5 | 23.0 |
| Incr Delay (d2), s/veh       | 0.8   | 0.3  | 0.7  | 2.1  | 0.2   | 0.5  | 7.8  | 0.5  | 1.0  | 25.5  | 0.4  | 0.9  |
| Initial Q Delay(d3), s/veh   | 0.0   | 0.0  | 0.0  | 0.0  | 0.0   | 0.0  | 0.0  | 0.0  | 0.0  | 0.0   | 0.0  | 0.0  |
| %ile BackOfQ(50%), veh/ln    | 1.2   | 2.1  | 2.1  | 2.5  | 1.5   | 1.6  | 4.1  | 2.3  | 1.9  | 9.2   | 2.5  | 1.8  |
| Unsig. Movement Delay, s/veh |       |      |      |      |       |      |      |      |      |       |      |      |
| LnGrp Delay(d), s/veh        | 14.6  | 11.7 | 12.2 | 18.6 | 11.3  | 11.6 | 40.3 | 23.8 | 24.1 | 61.9  | 24.0 | 23.9 |
| LnGrp LOS                    | B     | B    | B    | B    | B     | B    | D    | C    | C    | E     | C    | C    |
| Approach Vol, veh/h          | 660   |      |      | 604  |       |      | 556  |      |      | 837   |      |      |
| Approach Delay, s/veh        | 12.2  |      |      | 13.3 |       |      | 28.8 |      |      | 37.1  |      |      |
| Approach LOS                 | B     |      |      | B    |       |      | C    |      |      | D     |      |      |
| Timer - Assigned Phs         | 2     |      | 4    |      | 6     |      | 8    |      |      |       |      |      |
| Phs Duration (G+Y+Rc), s     | 38.0  |      | 58.0 |      | 38.0  |      | 58.0 |      |      | 58.0  |      |      |
| Change Period (Y+Rc), s      | * 6.1 |      | * 6  |      | * 6.1 |      | * 6  |      |      | * 6.1 |      |      |
| Max Green Setting (Gmax), s  | * 32  |      | * 52 |      | * 32  |      | * 52 |      |      | * 32  |      |      |
| Max Q Clear Time (g_c+I1), s | 26.4  |      | 12.4 |      | 33.9  |      | 21.0 |      |      | 35.9  |      |      |
| Green Ext Time (p_c), s      | 1.6   |      | 5.0  |      | 0.0   |      | 4.4  |      |      | 0.0   |      |      |

| Intersection Summary |      |
|----------------------|------|
| HCM 6th Ctrl Delay   | 23.8 |
| HCM 6th LOS          | C    |

Notes  
User approved pedestrian interval to be less than phase max green.  
\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Deer Valley 30  
1: 19th Ave & Happy Valley Rd

2024 Background PM Scenario B  
HCM 6th Signalized Intersection Summary

| Movement                     | EBL   | EBT  | EBR  | WBL  | WBT   | WBR  | NBL  | NBT  | NBR  | SBL   | SBT  | SBR  |
|------------------------------|-------|------|------|------|-------|------|------|------|------|-------|------|------|
| Lane Configurations          | ↔     | ↔    | ↔    | ↔    | ↔     | ↔    | ↔    | ↔    | ↔    | ↔     | ↔    | ↔    |
| Traffic Volume (veh/h)       | 167   | 383  | 232  | 165  | 747   | 348  | 304  | 481  | 125  | 177   | 228  | 122  |
| Future Volume (veh/h)        | 167   | 383  | 232  | 165  | 747   | 348  | 304  | 481  | 125  | 177   | 228  | 122  |
| Initial Q (Ob), veh          | 0     | 0    | 0    | 0    | 0     | 0    | 0    | 0    | 0    | 0     | 0    | 0    |
| Ped-Bike Adj(A_pbT)          | 1.00  | 1.00 | 1.00 | 1.00 | 1.00  | 1.00 | 1.00 | 1.00 | 1.00 | 1.00  | 1.00 | 1.00 |
| Parking Bus, Adj             | 1.00  | 1.00 | 1.00 | 1.00 | 1.00  | 1.00 | 1.00 | 1.00 | 1.00 | 1.00  | 1.00 | 1.00 |
| Work Zone On Approach        | No    | No   | No   | No   | No    | No   | No   | No   | No   | No    | No   | No   |
| Adj Sat Flow, veh/h/ln       | 1781  | 1781 | 1781 | 1781 | 1781  | 1781 | 1781 | 1781 | 1781 | 1781  | 1781 | 1781 |
| Adj Flow Rate, veh/h         | 182   | 416  | 252  | 179  | 812   | 378  | 330  | 523  | 136  | 192   | 248  | 133  |
| Peak Hour Factor             | 0.92  | 0.92 | 0.92 | 0.92 | 0.92  | 0.92 | 0.92 | 0.92 | 0.92 | 0.92  | 0.92 | 0.92 |
| Percent Heavy Veh, %         | 8     | 8    | 8    | 8    | 8     | 8    | 8    | 8    | 8    | 8     | 8    | 8    |
| Cap, veh/h                   | 236   | 1689 | 786  | 386  | 1692  | 784  | 379  | 1195 | 533  | 248   | 1717 | 533  |
| Arrive On Green              | 0.52  | 0.52 | 0.52 | 0.52 | 0.52  | 0.35 | 0.35 | 0.35 | 0.35 | 0.35  | 0.35 | 0.35 |
| Sat Flow, veh/h              | 448   | 3242 | 1510 | 732  | 3248  | 1504 | 954  | 3385 | 1510 | 738   | 4863 | 1510 |
| Grp Volume(v), veh/h         | 182   | 416  | 252  | 179  | 810   | 380  | 330  | 523  | 136  | 192   | 248  | 133  |
| Grp Sat Flow(s), veh/h/ln    | 448   | 1621 | 1510 | 732  | 1621  | 1511 | 954  | 1692 | 1510 | 738   | 1621 | 1510 |
| Q Serve(g_s), s              | 34.6  | 6.8  | 9.2  | 17.9 | 15.3  | 15.4 | 30.6 | 11.3 | 6.1  | 22.6  | 3.3  | 6.0  |
| Cycle Q Clear(g_c), s        | 50.0  | 6.8  | 9.2  | 27.1 | 15.3  | 15.4 | 33.9 | 11.3 | 6.1  | 33.9  | 3.3  | 6.0  |
| Prop In Lane                 | 1.00  | 1.00 | 1.00 | 1.00 | 1.00  | 1.00 | 1.00 | 1.00 | 1.00 | 1.00  | 1.00 | 1.00 |
| Lane Grp Cap(c), veh/h       | 236   | 1689 | 786  | 386  | 1689  | 787  | 379  | 1195 | 533  | 248   | 1717 | 533  |
| V/C Ratio(X)                 | 0.77  | 0.25 | 0.32 | 0.46 | 0.48  | 0.48 | 0.87 | 0.44 | 0.26 | 0.77  | 0.14 | 0.25 |
| Avail Cap(c_a), veh/h        | 236   | 1689 | 786  | 386  | 1689  | 787  | 379  | 1195 | 533  | 248   | 1717 | 533  |
| HCM Platoon Ratio            | 1.00  | 1.00 | 1.00 | 1.00 | 1.00  | 1.00 | 1.00 | 1.00 | 1.00 | 1.00  | 1.00 | 1.00 |
| Upstream Filter(I)           | 1.00  | 1.00 | 1.00 | 1.00 | 1.00  | 1.00 | 1.00 | 1.00 | 1.00 | 1.00  | 1.00 | 1.00 |
| Uniform Delay (d), s/veh     | 32.7  | 12.6 | 13.2 | 21.0 | 14.7  | 14.7 | 33.9 | 23.8 | 22.1 | 37.8  | 21.2 | 22.0 |
| Incr Delay (d2), s/veh       | 21.2  | 0.3  | 1.1  | 4.0  | 1.0   | 2.1  | 23.0 | 1.2  | 1.2  | 20.5  | 0.2  | 1.1  |
| Initial Q Delay(d3), s/veh   | 0.0   | 0.0  | 0.0  | 0.0  | 0.0   | 0.0  | 0.0  | 0.0  | 0.0  | 0.0   | 0.0  | 0.0  |
| %ile BackOfQ(50%), veh/ln    | 5.7   | 2.4  | 3.2  | 3.4  | 5.6   | 5.5  | 10.1 | 4.6  | 2.3  | 6.0   | 1.3  | 2.3  |
| Unsig. Movement Delay, s/veh |       |      |      |      |       |      |      |      |      |       |      |      |
| LnGrp Delay(d), s/veh        | 53.8  | 13.0 | 14.3 | 25.0 | 15.7  | 16.8 | 56.9 | 24.9 | 23.2 | 58.3  | 21.3 | 23.1 |
| LnGrp LOS                    | D     | B    | B    | C    | B     | B    | E    | C    | C    | E     | C    | C    |
| Approach Vol, veh/h          | 850   |      |      | 1369 |       |      | 989  |      |      | 573   |      |      |
| Approach Delay, s/veh        | 22.1  |      |      | 17.2 |       |      | 35.4 |      |      | 34.2  |      |      |
| Approach LOS                 | C     |      |      | B    |       |      | D    |      |      | C     |      |      |
| Timer - Assigned Phs         | 2     |      | 4    |      | 6     |      | 8    |      |      |       |      |      |
| Phs Duration (G+Y+Rc), s     | 40.0  |      | 56.0 |      | 40.0  |      | 56.0 |      |      | 56.0  |      |      |
| Change Period (Y+Rc), s      | * 6.1 |      | * 6  |      | * 6.1 |      | * 6  |      |      | * 6.1 |      |      |
| Max Green Setting (Gmax), s  | * 34  |      | * 50 |      | * 34  |      | * 50 |      |      | * 34  |      |      |
| Max Q Clear Time (g_c+I1), s | 35.9  |      | 52.0 |      | 35.9  |      | 29.1 |      |      | 35.9  |      |      |
| Green Ext Time (p_c), s      | 0.0   |      | 0.0  |      | 0.0   |      | 10.3 |      |      | 0.0   |      |      |

| Intersection Summary |      |
|----------------------|------|
| HCM 6th Ctrl Delay   | 25.6 |
| HCM 6th LOS          | C    |

Notes  
User approved pedestrian interval to be less than phase max green.  
\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Deer Valley 30  
2: 19th Ave & Optum Drwy

2024 Background AM Scenario B  
HCM 6th TWSC

| Intersection             |      |      |       |      |      |      |
|--------------------------|------|------|-------|------|------|------|
| Int Delay, s/veh         | 0.1  |      |       |      |      |      |
| Movement                 | EBL  | EBR  | NBL   | NBT  | SBT  | SBR  |
| Lane Configurations      | ↔    |      | ↔ ↑↑↑ |      | ↔    |      |
| Traffic Vol, veh/h       | 0    | 4    | 7     | 513  | 728  | 2    |
| Future Vol, veh/h        | 0    | 4    | 7     | 513  | 728  | 2    |
| Conflicting Peds, #/hr   | 0    | 0    | 0     | 0    | 0    | 0    |
| Sign Control             | Stop | Stop | Free  | Free | Free | Free |
| RT Channelized           | -    | None | -     | None | -    | None |
| Storage Length           | 0    | -    | 50    | -    | -    | -    |
| Veh in Median Storage, # | 0    | -    | -     | 0    | 0    | -    |
| Grade, %                 | 0    | -    | -     | 0    | 0    | -    |
| Peak Hour Factor         | 92   | 92   | 92    | 92   | 92   | 92   |
| Heavy Vehicles, %        | 8    | 8    | 8     | 8    | 8    | 8    |
| Mvmt Flow                | 0    | 4    | 8     | 558  | 791  | 2    |

| Major/Minor          | Minor2 | Major1 | Major2 |
|----------------------|--------|--------|--------|
| Conflicting Flow All | 1031   | 397    | 793    |
| Stage 1              | 792    | -      | -      |
| Stage 2              | 239    | -      | -      |
| Critical Hdwy        | 6.41   | 7.06   | 4.26   |
| Critical Hdwy Stg 1  | 5.96   | -      | -      |
| Critical Hdwy Stg 2  | 6.16   | -      | -      |
| Follow-up Hdwy       | 3.73   | 3.38   | 2.28   |
| Pot Cap-1 Maneuver   | 251    | 586    | 786    |
| Stage 1              | 381    | -      | -      |
| Stage 2              | 724    | -      | -      |
| Platoon blocked, %   | -      | -      | -      |
| Mov Cap-1 Maneuver   | 248    | 586    | 786    |
| Mov Cap-2 Maneuver   | 319    | -      | -      |
| Stage 1              | 377    | -      | -      |
| Stage 2              | 724    | -      | -      |

| Approach             | EB   | NB  | SB |
|----------------------|------|-----|----|
| HCM Control Delay, s | 11.2 | 0.1 | 0  |
| HCM LOS              | B    |     |    |

| Minor Lane/Major Mvmt | NBL  | NBT | EBLn1 | SBT | SBR |
|-----------------------|------|-----|-------|-----|-----|
| Capacity (veh/h)      | 786  | -   | 586   | -   | -   |
| HCM Lane V/C Ratio    | 0.01 | -   | 0.007 | -   | -   |
| HCM Control Delay (s) | 9.6  | -   | 11.2  | -   | -   |
| HCM Lane LOS          | A    | -   | B     | -   | -   |
| HCM 95th %tile Q(veh) | 0    | -   | 0     | -   | -   |

Deer Valley 30  
2: 19th Ave & Optum Drwy

2024 Background PM Scenario B  
HCM 6th TWSC

| Intersection             |      |      |       |      |      |      |
|--------------------------|------|------|-------|------|------|------|
| Int Delay, s/veh         | 0.1  |      |       |      |      |      |
| Movement                 | EBL  | EBR  | NBL   | NBT  | SBT  | SBR  |
| Lane Configurations      | ↔    |      | ↔ ↑↑↑ |      | ↔    |      |
| Traffic Vol, veh/h       | 0    | 4    | 7     | 910  | 623  | 2    |
| Future Vol, veh/h        | 0    | 4    | 7     | 910  | 623  | 2    |
| Conflicting Peds, #/hr   | 0    | 0    | 0     | 0    | 0    | 0    |
| Sign Control             | Stop | Stop | Free  | Free | Free | Free |
| RT Channelized           | -    | None | -     | None | -    | None |
| Storage Length           | 0    | -    | 50    | -    | -    | -    |
| Veh in Median Storage, # | 0    | -    | -     | 0    | 0    | -    |
| Grade, %                 | 0    | -    | -     | 0    | 0    | -    |
| Peak Hour Factor         | 92   | 92   | 92    | 92   | 92   | 92   |
| Heavy Vehicles, %        | 8    | 8    | 8     | 8    | 8    | 8    |
| Mvmt Flow                | 0    | 4    | 8     | 989  | 677  | 2    |

| Major/Minor          | Minor2 | Major1 | Major2 |
|----------------------|--------|--------|--------|
| Conflicting Flow All | 1090   | 340    | 679    |
| Stage 1              | 678    | -      | -      |
| Stage 2              | 412    | -      | -      |
| Critical Hdwy        | 6.41   | 7.06   | 4.26   |
| Critical Hdwy Stg 1  | 5.96   | -      | -      |
| Critical Hdwy Stg 2  | 6.16   | -      | -      |
| Follow-up Hdwy       | 3.73   | 3.38   | 2.28   |
| Pot Cap-1 Maneuver   | 231    | 639    | 870    |
| Stage 1              | 437    | -      | -      |
| Stage 2              | 586    | -      | -      |
| Platoon blocked, %   | -      | -      | -      |
| Mov Cap-1 Maneuver   | 229    | 639    | 870    |
| Mov Cap-2 Maneuver   | 328    | -      | -      |
| Stage 1              | 433    | -      | -      |
| Stage 2              | 586    | -      | -      |

| Approach             | EB   | NB  | SB |
|----------------------|------|-----|----|
| HCM Control Delay, s | 10.7 | 0.1 | 0  |
| HCM LOS              | B    |     |    |

| Minor Lane/Major Mvmt | NBL   | NBT | EBLn1 | SBT | SBR |
|-----------------------|-------|-----|-------|-----|-----|
| Capacity (veh/h)      | 870   | -   | 639   | -   | -   |
| HCM Lane V/C Ratio    | 0.009 | -   | 0.007 | -   | -   |
| HCM Control Delay (s) | 9.2   | -   | 10.7  | -   | -   |
| HCM Lane LOS          | A     | -   | B     | -   | -   |
| HCM 95th %tile Q(veh) | 0     | -   | 0     | -   | -   |

Deer Valley 30  
3: 19th Ave & Patio Drwy/Parkview Ln

2024 Background AM Scenario B  
HCM 6th TWSC

| Intersection             |        |        |        |        |       |       |      |      |      |      |      |      |
|--------------------------|--------|--------|--------|--------|-------|-------|------|------|------|------|------|------|
| Int Delay, s/veh         | 0.9    |        |        |        |       |       |      |      |      |      |      |      |
| Movement                 | EBL    | EBT    | EBR    | WBL    | WBT   | WBR   | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
| Lane Configurations      |        |        | ↗      |        | ↔     |       |      | ↖↗   |      | ↘    | ↖    |      |
| Traffic Vol, veh/h       | 0      | 0      | 6      | 26     | 0     | 13    | 1    | 506  | 41   | 26   | 707  | 0    |
| Future Vol, veh/h        | 0      | 0      | 6      | 26     | 0     | 13    | 1    | 506  | 41   | 26   | 707  | 0    |
| Conflicting Peds, #/hr   | 0      | 0      | 0      | 0      | 0     | 0     | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Stop   | Stop   | Stop   | Stop   | Stop  | Stop  | Free | Free | Free | Free | Free | Free |
| RT Channelized           | -      | -      | None   | -      | -     | None  | -    | -    | None | -    | -    | None |
| Storage Length           | -      | -      | 0      | -      | -     | -     | -    | -    | -    | 50   | -    | -    |
| Veh in Median Storage, # | -      | 0      | -      | -      | 0     | -     | -    | 0    | -    | -    | 0    | -    |
| Grade, %                 | -      | 0      | -      | -      | 0     | -     | -    | 0    | -    | -    | 0    | -    |
| Peak Hour Factor         | 92     | 92     | 92     | 92     | 92    | 92    | 92   | 92   | 92   | 92   | 92   | 92   |
| Heavy Vehicles, %        | 8      | 8      | 8      | 8      | 8     | 8     | 8    | 8    | 8    | 8    | 8    | 8    |
| Mvmt Flow                | 0      | 0      | 7      | 28     | 0     | 14    | 1    | 550  | 45   | 28   | 768  | 0    |
| Major/Minor              | Minor2 | Minor1 | Major1 | Major2 |       |       |      |      |      |      |      |      |
| Conflicting Flow All     | -      | -      | 384    | 1015   | 1399  | 298   | 768  | 0    | 0    | 595  | 0    | 0    |
| Stage 1                  | -      | -      | -      | 575    | 575   | -     | -    | -    | -    | -    | -    | -    |
| Stage 2                  | -      | -      | -      | 440    | 824   | -     | -    | -    | -    | -    | -    | -    |
| Critical Hdwy            | -      | -      | 7.06   | 7.11   | 6.66  | 7.26  | 4.26 | -    | -    | 5.46 | -    | -    |
| Critical Hdwy Stg 1      | -      | -      | -      | 7.46   | 5.66  | -     | -    | -    | -    | -    | -    | -    |
| Critical Hdwy Stg 2      | -      | -      | -      | 6.66   | 5.66  | -     | -    | -    | -    | -    | -    | -    |
| Follow-up Hdwy           | -      | -      | 3.38   | 3.73   | 4.08  | 3.98  | 2.28 | -    | -    | 3.18 | -    | -    |
| Pot Cap-1 Maneuver       | 0      | 0      | 597    | 210    | 132   | 582   | 804  | -    | -    | 590  | -    | 0    |
| Stage 1                  | 0      | 0      | -      | 389    | 486   | -     | -    | -    | -    | -    | -    | 0    |
| Stage 2                  | 0      | 0      | -      | 532    | 372   | -     | -    | -    | -    | -    | -    | 0    |
| Platoon blocked, %       | -      | -      | -      | -      | -     | -     | -    | -    | -    | -    | -    | -    |
| Mov Cap-1 Maneuver       | -      | -      | 597    | 200    | 126   | 582   | 804  | -    | -    | 590  | -    | -    |
| Mov Cap-2 Maneuver       | -      | -      | -      | 200    | 126   | -     | -    | -    | -    | -    | -    | -    |
| Stage 1                  | -      | -      | -      | 388    | 485   | -     | -    | -    | -    | -    | -    | -    |
| Stage 2                  | -      | -      | -      | 501    | 355   | -     | -    | -    | -    | -    | -    | -    |
| Approach                 | EB     | WB     | NB     | SB     |       |       |      |      |      |      |      |      |
| HCM Control Delay, s     | 11.1   | 21.8   | 0      | 0.4    |       |       |      |      |      |      |      |      |
| HCM LOS                  | B      | C      |        |        |       |       |      |      |      |      |      |      |
| Minor Lane/Major Mvmt    | NBL    | NBT    | NBR    | EBLn1  | WBLn1 | SBL   | SBT  |      |      |      |      |      |
| Capacity (veh/h)         | 804    | -      | -      | 597    | 256   | 590   | -    |      |      |      |      |      |
| HCM Lane V/C Ratio       | 0.001  | -      | -      | 0.011  | 0.166 | 0.048 | -    |      |      |      |      |      |
| HCM Control Delay (s)    | 9.5    | -      | -      | 11.1   | 21.8  | 11.4  | -    |      |      |      |      |      |
| HCM Lane LOS             | A      | -      | -      | B      | C     | B     | -    |      |      |      |      |      |
| HCM 95th %tile Q(veh)    | 0      | -      | -      | 0      | 0.6   | 0.2   | -    |      |      |      |      |      |

Deer Valley 30  
3: 19th Ave & Patio Drwy/Parkview Ln

2024 Background PM Scenario B  
HCM 6th TWSC

| Intersection             |        |        |        |        |       |       |      |      |      |      |      |      |
|--------------------------|--------|--------|--------|--------|-------|-------|------|------|------|------|------|------|
| Int Delay, s/veh         | 1      |        |        |        |       |       |      |      |      |      |      |      |
| Movement                 | EBL    | EBT    | EBR    | WBL    | WBT   | WBR   | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
| Lane Configurations      |        |        | ↗      |        | ↔     |       |      | ↖↗   |      | ↘    | ↖    |      |
| Traffic Vol, veh/h       | 0      | 0      | 6      | 26     | 0     | 13    | 1    | 557  | 41   | 26   | 602  | 0    |
| Future Vol, veh/h        | 0      | 0      | 6      | 26     | 0     | 13    | 1    | 557  | 41   | 26   | 602  | 0    |
| Conflicting Peds, #/hr   | 0      | 0      | 0      | 0      | 0     | 0     | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Stop   | Stop   | Stop   | Stop   | Stop  | Stop  | Free | Free | Free | Free | Free | Free |
| RT Channelized           | -      | -      | None   | -      | -     | None  | -    | -    | None | -    | -    | None |
| Storage Length           | -      | -      | 0      | -      | -     | -     | -    | -    | -    | 50   | -    | -    |
| Veh in Median Storage, # | -      | 0      | -      | -      | 0     | -     | -    | 0    | -    | -    | 0    | -    |
| Grade, %                 | -      | 0      | -      | -      | 0     | -     | -    | 0    | -    | -    | 0    | -    |
| Peak Hour Factor         | 92     | 92     | 92     | 92     | 92    | 92    | 92   | 92   | 92   | 92   | 92   | 92   |
| Heavy Vehicles, %        | 8      | 8      | 8      | 8      | 8     | 8     | 8    | 8    | 8    | 8    | 8    | 8    |
| Mvmt Flow                | 0      | 0      | 7      | 28     | 0     | 14    | 1    | 605  | 45   | 28   | 654  | 0    |
| Major/Minor              | Minor2 | Minor1 | Major1 | Major2 |       |       |      |      |      |      |      |      |
| Conflicting Flow All     | -      | -      | 327    | 1013   | 1340  | 325   | 654  | 0    | 0    | 650  | 0    | 0    |
| Stage 1                  | -      | -      | -      | 630    | 630   | -     | -    | -    | -    | -    | -    | -    |
| Stage 2                  | -      | -      | -      | 383    | 710   | -     | -    | -    | -    | -    | -    | -    |
| Critical Hdwy            | -      | -      | 7.06   | 7.11   | 6.66  | 7.26  | 4.26 | -    | -    | 5.46 | -    | -    |
| Critical Hdwy Stg 1      | -      | -      | -      | 7.46   | 5.66  | -     | -    | -    | -    | -    | -    | -    |
| Critical Hdwy Stg 2      | -      | -      | -      | 6.66   | 5.66  | -     | -    | -    | -    | -    | -    | -    |
| Follow-up Hdwy           | -      | -      | 3.38   | 3.73   | 4.08  | 3.98  | 2.28 | -    | -    | 3.18 | -    | -    |
| Pot Cap-1 Maneuver       | 0      | 0      | 651    | 211    | 144   | 559   | 889  | -    | -    | 555  | -    | 0    |
| Stage 1                  | 0      | 0      | -      | 356    | 458   | -     | -    | -    | -    | -    | -    | 0    |
| Stage 2                  | 0      | 0      | -      | 576    | 421   | -     | -    | -    | -    | -    | -    | 0    |
| Platoon blocked, %       | -      | -      | -      | -      | -     | -     | -    | -    | -    | -    | -    | -    |
| Mov Cap-1 Maneuver       | -      | -      | 651    | 200    | 137   | 559   | 889  | -    | -    | 555  | -    | -    |
| Mov Cap-2 Maneuver       | -      | -      | -      | 200    | 137   | -     | -    | -    | -    | -    | -    | -    |
| Stage 1                  | -      | -      | -      | 355    | 457   | -     | -    | -    | -    | -    | -    | -    |
| Stage 2                  | -      | -      | -      | 541    | 400   | -     | -    | -    | -    | -    | -    | -    |
| Approach                 | EB     | WB     | NB     | SB     |       |       |      |      |      |      |      |      |
| HCM Control Delay, s     | 10.6   | 22     | 0      | 0.5    |       |       |      |      |      |      |      |      |
| HCM LOS                  | B      | C      |        |        |       |       |      |      |      |      |      |      |
| Minor Lane/Major Mvmt    | NBL    | NBT    | NBR    | EBLn1  | WBLn1 | SBL   | SBT  |      |      |      |      |      |
| Capacity (veh/h)         | 889    | -      | -      | 651    | 254   | 555   | -    |      |      |      |      |      |
| HCM Lane V/C Ratio       | 0.001  | -      | -      | 0.01   | 0.167 | 0.051 | -    |      |      |      |      |      |
| HCM Control Delay (s)    | 9.1    | -      | -      | 10.6   | 22    | 11.8  | -    |      |      |      |      |      |
| HCM Lane LOS             | A      | -      | -      | B      | C     | B     | -    |      |      |      |      |      |
| HCM 95th %tile Q(veh)    | 0      | -      | -      | 0      | 0.6   | 0.2   | -    |      |      |      |      |      |

Deer Valley 30  
4: Alameda Rd & 19th Ave

2024 Background AM Scenario B  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Int Delay, s/veh         | 0.7  |      |      |      |      |      |      |      |      |      |      |      |
| Movement                 | EBL  | EBT  | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
| Lane Configurations      | ↔    |      | ↔    |      | ↔    |      | ↔↔↔  |      | ↔    |      | ↔↔   |      |
| Traffic Vol, veh/h       | 9    | 0    | 54   | 0    | 0    | 0    | 18   | 548  | 0    | 0    | 724  | 14   |
| Future Vol, veh/h        | 9    | 0    | 54   | 0    | 0    | 0    | 18   | 548  | 0    | 0    | 724  | 14   |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Stop | Stop | Stop | Stop | Stop | Stop | Free | Free | Free | Free | Free | Free |
| RT Channelized           | -    | -    | None | -    | -    | None | -    | -    | None | -    | -    | None |
| Storage Length           | 0    | -    | -    | 150  | -    | -    | 150  | -    | -    | 0    | -    | -    |
| Veh in Median Storage, # | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Grade, %                 | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Peak Hour Factor         | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   |
| Heavy Vehicles, %        | 8    | 8    | 8    | 8    | 8    | 8    | 8    | 8    | 8    | 8    | 8    | 8    |
| Mvmt Flow                | 10   | 0    | 59   | 0    | 0    | 0    | 20   | 596  | 0    | 0    | 787  | 15   |

| Major/Minor          | Minor2 | Minor1 | Major1 | Major2 |      |      |      |   |   |      |   |   |   |   |
|----------------------|--------|--------|--------|--------|------|------|------|---|---|------|---|---|---|---|
| Conflicting Flow All | 1073   | 1431   | 401    | 1030   | 1438 | 298  | 802  | 0 | 0 | 596  | 0 | 0 |   |   |
| Stage 1              | 795    | 795    | -      | 636    | 636  | -    | -    | - | - | -    | - | - | - | - |
| Stage 2              | 278    | 636    | -      | 394    | 802  | -    | -    | - | - | -    | - | - | - | - |
| Critical Hdwy        | 7.11   | 6.66   | 7.06   | 7.11   | 6.66 | 7.26 | 4.26 | - | - | 5.46 | - | - | - | - |
| Critical Hdwy Stg 1  | 6.66   | 5.66   | -      | 7.46   | 5.66 | -    | -    | - | - | -    | - | - | - | - |
| Critical Hdwy Stg 2  | 6.86   | 5.66   | -      | 6.66   | 5.66 | -    | -    | - | - | -    | - | - | - | - |
| Follow-up Hdwy       | 3.73   | 4.08   | 3.38   | 3.73   | 4.08 | 3.98 | 2.28 | - | - | 3.18 | - | - | - | - |
| Pot Cap-1 Maneuver   | *369   | 211    | 582    | 398    | 209  | *784 | 780  | - | - | 979  | - | - | - | - |
| Stage 1              | *325   | 384    | -      | 775    | 729  | -    | -    | - | - | -    | - | - | - | - |
| Stage 2              | *837   | 729    | -      | 567    | 381  | -    | -    | - | - | -    | - | - | - | - |
| Platoon blocked, %   | 1      | 1      | -      | 1      | 1    | 1    | 1    | - | - | 1    | - | - | - | - |
| Mov Cap-1 Maneuver   | *362   | 206    | 582    | 351    | 204  | *784 | 780  | - | - | 979  | - | - | - | - |
| Mov Cap-2 Maneuver   | *362   | 206    | -      | 351    | 204  | -    | -    | - | - | -    | - | - | - | - |
| Stage 1              | *317   | 384    | -      | 755    | 710  | -    | -    | - | - | -    | - | - | - | - |
| Stage 2              | *816   | 710    | -      | 510    | 381  | -    | -    | - | - | -    | - | - | - | - |

| Approach             | EB   | WB | NB  | SB |
|----------------------|------|----|-----|----|
| HCM Control Delay, s | 12.4 | 0  | 0.3 | 0  |
| HCM LOS              | B    | A  |     |    |

| Minor Lane/Major Mvmt | NBL   | NBT | NBR | EBLn1 | EBLn2 | WBLn1 | WBLn2 | SBL | SBT | SBR |
|-----------------------|-------|-----|-----|-------|-------|-------|-------|-----|-----|-----|
| Capacity (veh/h)      | 780   | -   | -   | 362   | 582   | -     | -     | 979 | -   | -   |
| HCM Lane V/C Ratio    | 0.025 | -   | -   | 0.027 | 0.101 | -     | -     | -   | -   | -   |
| HCM Control Delay (s) | 9.7   | -   | -   | 15.2  | 11.9  | 0     | 0     | 0   | -   | -   |
| HCM Lane LOS          | A     | -   | -   | C     | B     | A     | A     | A   | -   | -   |
| HCM 95th %tile Q(veh) | 0.1   | -   | -   | 0.1   | 0.3   | -     | -     | 0   | -   | -   |

Notes  
 -: Volume exceeds capacity    \$: Delay exceeds 300s    +: Computation Not Defined    \*: All major volume in platoon

Deer Valley 30  
4: Alameda Rd & 19th Ave

2024 Background PM Scenario B  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Int Delay, s/veh         | 1    |      |      |      |      |      |      |      |      |      |      |      |
| Movement                 | EBL  | EBT  | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
| Lane Configurations      | ↔    |      | ↔    |      | ↔    |      | ↔↔↔  |      | ↔    |      | ↔↔   |      |
| Traffic Vol, veh/h       | 14   | 0    | 62   | 0    | 0    | 0    | 83   | 886  | 0    | 0    | 617  | 16   |
| Future Vol, veh/h        | 14   | 0    | 62   | 0    | 0    | 0    | 83   | 886  | 0    | 0    | 617  | 16   |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Stop | Stop | Stop | Stop | Stop | Stop | Free | Free | Free | Free | Free | Free |
| RT Channelized           | -    | -    | None | -    | -    | None | -    | -    | None | -    | -    | None |
| Storage Length           | 0    | -    | -    | 150  | -    | -    | 150  | -    | -    | 0    | -    | -    |
| Veh in Median Storage, # | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Grade, %                 | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Peak Hour Factor         | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   |
| Heavy Vehicles, %        | 8    | 8    | 8    | 8    | 8    | 8    | 8    | 8    | 8    | 8    | 8    | 8    |
| Mvmt Flow                | 15   | 0    | 67   | 0    | 0    | 0    | 90   | 963  | 0    | 0    | 671  | 17   |

| Major/Minor          | Minor2 | Minor1 | Major1 | Major2 |      |      |      |   |   |      |   |   |   |   |
|----------------------|--------|--------|--------|--------|------|------|------|---|---|------|---|---|---|---|
| Conflicting Flow All | 1245   | 1823   | 344    | 1479   | 1831 | 482  | 688  | 0 | 0 | 963  | 0 | 0 |   |   |
| Stage 1              | 680    | 680    | -      | 1143   | 1143 | -    | -    | - | - | -    | - | - | - | - |
| Stage 2              | 565    | 1143   | -      | 336    | 688  | -    | -    | - | - | -    | - | - | - | - |
| Critical Hdwy        | 7.11   | 6.66   | 7.06   | 7.11   | 6.66 | 7.26 | 4.26 | - | - | 5.46 | - | - | - | - |
| Critical Hdwy Stg 1  | 6.66   | 5.66   | -      | 7.46   | 5.66 | -    | -    | - | - | -    | - | - | - | - |
| Critical Hdwy Stg 2  | 6.86   | 5.66   | -      | 6.66   | 5.66 | -    | -    | - | - | -    | - | - | - | - |
| Follow-up Hdwy       | 3.73   | 4.08   | 3.38   | 3.73   | 4.08 | 3.98 | 2.28 | - | - | 3.18 | - | - | - | - |
| Pot Cap-1 Maneuver   | *477   | 168    | 635    | 304    | 165  | *701 | 863  | - | - | *878 | - | - | - | - |
| Stage 1              | *382   | 434    | -      | 570    | 574  | -    | -    | - | - | -    | - | - | - | - |
| Stage 2              | *748   | 574    | -      | 614    | 431  | -    | -    | - | - | -    | - | - | - | - |
| Platoon blocked, %   | 1      | 1      | -      | 1      | 1    | 1    | 1    | - | - | 1    | - | - | - | - |
| Mov Cap-1 Maneuver   | *439   | 150    | 635    | 250    | 148  | *701 | 863  | - | - | *878 | - | - | - | - |
| Mov Cap-2 Maneuver   | *439   | 150    | -      | 250    | 148  | -    | -    | - | - | -    | - | - | - | - |
| Stage 1              | *342   | 434    | -      | 510    | 514  | -    | -    | - | - | -    | - | - | - | - |
| Stage 2              | *670   | 514    | -      | 549    | 431  | -    | -    | - | - | -    | - | - | - | - |

| Approach             | EB   | WB | NB  | SB |
|----------------------|------|----|-----|----|
| HCM Control Delay, s | 11.7 | 0  | 0.8 | 0  |
| HCM LOS              | B    | A  |     |    |

| Minor Lane/Major Mvmt | NBL   | NBT | NBR | EBLn1 | EBLn2 | WBLn1 | WBLn2 | SBL  | SBT | SBR |
|-----------------------|-------|-----|-----|-------|-------|-------|-------|------|-----|-----|
| Capacity (veh/h)      | 863   | -   | -   | 439   | 635   | -     | -     | *878 | -   | -   |
| HCM Lane V/C Ratio    | 0.105 | -   | -   | 0.035 | 0.106 | -     | -     | -    | -   | -   |
| HCM Control Delay (s) | 9.7   | -   | -   | 13.5  | 11.3  | 0     | 0     | 0    | -   | -   |
| HCM Lane LOS          | A     | -   | -   | B     | B     | A     | A     | A    | -   | -   |
| HCM 95th %tile Q(veh) | 0.3   | -   | -   | 0.1   | 0.4   | -     | -     | 0    | -   | -   |

Notes  
 -: Volume exceeds capacity    \$: Delay exceeds 300s    +: Computation Not Defined    \*: All major volume in platoon

Deer Valley 30  
5: 19th Ave & Sarah Bass PI

2024 Background AM Scenario B  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh         | 0.7  |      |      |      |      |      |
| Movement                 | EBL  | EBR  | NBL  | NBT  | SBT  | SBR  |
| Lane Configurations      | ↔    | ↔    | ↔    | ↔↔   | ↔↔   | ↔↔   |
| Traffic Vol, veh/h       | 13   | 36   | 27   | 553  | 770  | 9    |
| Future Vol, veh/h        | 13   | 36   | 27   | 553  | 770  | 9    |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Stop | Stop | Free | Free | Free | Free |
| RT Channelized           | -    | None | -    | None | -    | None |
| Storage Length           | 0    | 0    | 150  | -    | -    | -    |
| Veh in Median Storage, # | 0    | -    | -    | 0    | 0    | -    |
| Grade, %                 | 0    | -    | -    | 0    | 0    | -    |
| Peak Hour Factor         | 92   | 92   | 92   | 92   | 92   | 92   |
| Heavy Vehicles, %        | 8    | 8    | 8    | 8    | 8    | 8    |
| Mvmt Flow                | 14   | 39   | 29   | 601  | 837  | 10   |

| Major/Minor          | Minor2 | Major1 | Major2 |   |     |
|----------------------|--------|--------|--------|---|-----|
| Conflicting Flow All | 1140   | 424    | 847    | 0 | - 0 |
| Stage 1              | 842    | -      | -      | - | -   |
| Stage 2              | 298    | -      | -      | - | -   |
| Critical Hdwy        | 6.41   | 7.06   | 4.26   | - | - - |
| Critical Hdwy Stg 1  | 5.96   | -      | -      | - | -   |
| Critical Hdwy Stg 2  | 6.16   | -      | -      | - | -   |
| Follow-up Hdwy       | 3.73   | 3.38   | 2.28   | - | - - |
| Pot Cap-1 Maneuver   | 216    | 562    | 749    | - | - - |
| Stage 1              | 359    | -      | -      | - | -   |
| Stage 2              | 674    | -      | -      | - | -   |
| Platoon blocked, %   | -      | -      | -      | - | -   |
| Mov Cap-1 Maneuver   | 208    | 562    | 749    | - | - - |
| Mov Cap-2 Maneuver   | 287    | -      | -      | - | -   |
| Stage 1              | 345    | -      | -      | - | -   |
| Stage 2              | 674    | -      | -      | - | -   |

| Approach             | EB   | NB  | SB |
|----------------------|------|-----|----|
| HCM Control Delay, s | 13.6 | 0.5 | 0  |
| HCM LOS              | B    |     |    |

| Minor Lane/Major Mvmt | NBL   | NBT | EBLn1 | EBLn2 | SBT | SBR |
|-----------------------|-------|-----|-------|-------|-----|-----|
| Capacity (veh/h)      | 749   | -   | 287   | 562   | -   | -   |
| HCM Lane V/C Ratio    | 0.039 | -   | 0.049 | 0.07  | -   | -   |
| HCM Control Delay (s) | 10    | -   | 18.2  | 11.9  | -   | -   |
| HCM Lane LOS          | B     | -   | C     | B     | -   | -   |
| HCM 95th %tile Q(veh) | 0.1   | -   | 0.2   | 0.2   | -   | -   |

Deer Valley 30  
5: 19th Ave & Sarah Bass PI

2024 Background PM Scenario B  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh         | 0.5  |      |      |      |      |      |
| Movement                 | EBL  | EBR  | NBL  | NBT  | SBT  | SBR  |
| Lane Configurations      | ↔    | ↔    | ↔    | ↔↔   | ↔↔   | ↔↔   |
| Traffic Vol, veh/h       | 16   | 37   | 10   | 954  | 674  | 6    |
| Future Vol, veh/h        | 16   | 37   | 10   | 954  | 674  | 6    |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Stop | Stop | Free | Free | Free | Free |
| RT Channelized           | -    | None | -    | None | -    | None |
| Storage Length           | 0    | 0    | 150  | -    | -    | -    |
| Veh in Median Storage, # | 0    | -    | -    | 0    | 0    | -    |
| Grade, %                 | 0    | -    | -    | 0    | 0    | -    |
| Peak Hour Factor         | 92   | 92   | 92   | 92   | 92   | 92   |
| Heavy Vehicles, %        | 8    | 8    | 8    | 8    | 8    | 8    |
| Mvmt Flow                | 17   | 40   | 11   | 1037 | 733  | 7    |

| Major/Minor          | Minor2 | Major1 | Major2 |   |     |
|----------------------|--------|--------|--------|---|-----|
| Conflicting Flow All | 1174   | 370    | 740    | 0 | - 0 |
| Stage 1              | 737    | -      | -      | - | -   |
| Stage 2              | 437    | -      | -      | - | -   |
| Critical Hdwy        | 6.41   | 7.06   | 4.26   | - | - - |
| Critical Hdwy Stg 1  | 5.96   | -      | -      | - | -   |
| Critical Hdwy Stg 2  | 6.16   | -      | -      | - | -   |
| Follow-up Hdwy       | 3.73   | 3.38   | 2.28   | - | - - |
| Pot Cap-1 Maneuver   | 206    | 610    | 824    | - | - - |
| Stage 1              | 407    | -      | -      | - | -   |
| Stage 2              | 568    | -      | -      | - | -   |
| Platoon blocked, %   | -      | -      | -      | - | -   |
| Mov Cap-1 Maneuver   | 203    | 610    | 824    | - | - - |
| Mov Cap-2 Maneuver   | 303    | -      | -      | - | -   |
| Stage 1              | 402    | -      | -      | - | -   |
| Stage 2              | 568    | -      | -      | - | -   |

| Approach             | EB   | NB  | SB |
|----------------------|------|-----|----|
| HCM Control Delay, s | 13.2 | 0.1 | 0  |
| HCM LOS              | B    |     |    |

| Minor Lane/Major Mvmt | NBL   | NBT | EBLn1 | EBLn2 | SBT | SBR |
|-----------------------|-------|-----|-------|-------|-----|-----|
| Capacity (veh/h)      | 824   | -   | 303   | 610   | -   | -   |
| HCM Lane V/C Ratio    | 0.013 | -   | 0.057 | 0.066 | -   | -   |
| HCM Control Delay (s) | 9.4   | -   | 17.6  | 11.3  | -   | -   |
| HCM Lane LOS          | A     | -   | C     | B     | -   | -   |
| HCM 95th %tile Q(veh) | 0     | -   | 0.2   | 0.2   | -   | -   |

Deer Valley 30  
6: Pinnacle Peak Rd & 19th Ave

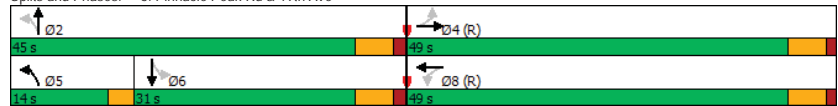
2024 Background AM Scenario B  
Timings

| Lane Group           | EBL   | EBT   | WBL   | WBT   | NBL   | NBT   | SBL   | SBT   |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations  | ↖     | ↗     | ↖     | ↗     | ↖     | ↗     | ↖     | ↗     |
| Traffic Volume (vph) | 86    | 387   | 57    | 176   | 169   | 436   | 99    | 648   |
| Future Volume (vph)  | 86    | 387   | 57    | 176   | 169   | 436   | 99    | 648   |
| Turn Type            | Perm  | NA    | Perm  | NA    | pm+pt | NA    | Perm  | NA    |
| Protected Phases     |       | 4     |       | 8     | 5     | 2     |       | 6     |
| Permitted Phases     | 4     |       | 8     |       | 2     |       | 6     |       |
| Detector Phase       | 4     | 4     | 8     | 8     | 5     | 2     | 6     | 6     |
| Switch Phase         |       |       |       |       |       |       |       |       |
| Minimum Initial (s)  | 15.0  | 15.0  | 15.0  | 15.0  | 5.0   | 15.0  | 15.0  | 15.0  |
| Minimum Split (s)    | 34.6  | 34.6  | 34.6  | 34.6  | 9.5   | 30.8  | 30.8  | 30.8  |
| Total Split (s)      | 49.0  | 49.0  | 49.0  | 49.0  | 14.0  | 45.0  | 31.0  | 31.0  |
| Total Split (%)      | 52.1% | 52.1% | 52.1% | 52.1% | 14.9% | 47.9% | 33.0% | 33.0% |
| Yellow Time (s)      | 4.3   | 4.3   | 4.3   | 4.3   | 3.0   | 4.3   | 4.3   | 4.3   |
| All-Red Time (s)     | 1.3   | 1.3   | 1.3   | 1.3   | 0.0   | 1.5   | 1.5   | 1.5   |
| Lost Time Adjust (s) | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Lost Time (s)  | 5.6   | 5.6   | 5.6   | 5.6   | 3.0   | 5.8   | 5.8   | 5.8   |
| Lead/Lag             |       |       |       |       | Lead  |       | Lag   | Lag   |
| Lead-Lag Optimize?   |       |       |       |       | Yes   |       | Yes   | Yes   |
| Recall Mode          | C-Max | C-Max | C-Max | C-Max | None  | Max   | Max   | Max   |
| Act Effct Green (s)  | 43.4  | 43.4  | 43.4  | 43.4  | 42.0  | 39.2  | 25.9  | 25.9  |
| Actuated g/C Ratio   | 0.46  | 0.46  | 0.46  | 0.46  | 0.45  | 0.42  | 0.28  | 0.28  |
| v/c Ratio            | 0.19  | 0.48  | 0.26  | 0.17  | 0.68  | 0.29  | 0.53  | 0.84  |
| Control Delay        | 16.3  | 11.4  | 19.3  | 11.3  | 30.2  | 16.4  | 40.4  | 41.6  |
| Queue Delay          | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Delay          | 16.3  | 11.4  | 19.3  | 11.3  | 30.2  | 16.4  | 40.4  | 41.6  |
| LOS                  | B     | B     | B     | B     | C     | B     | D     | D     |
| Approach Delay       |       | 12.0  |       | 12.9  |       | 19.7  |       | 41.4  |
| Approach LOS         |       | B     |       | B     |       | B     |       | D     |

Intersection Summary

Cycle Length: 94  
 Actuated Cycle Length: 94  
 Offset: 31 (33%), Referenced to phase 4:EBTL and 8:WBTL, Start of Green  
 Natural Cycle: 75  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.84  
 Intersection Signal Delay: 23.4  
 Intersection Capacity Utilization 79.7%  
 Intersection LOS: C  
 ICU Level of Service D  
 Analysis Period (min) 15

Splits and Phases: 6: Pinnacle Peak Rd & 19th Ave



Deer Valley 30  
6: Pinnacle Peak Rd & 19th Ave

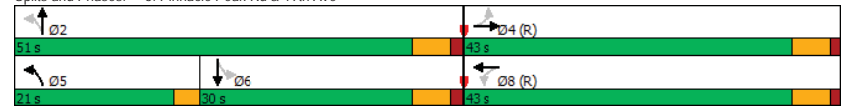
2024 Background PM Scenario B  
Timings

| Lane Group           | EBL   | EBT   | WBL   | WBT   | NBL   | NBT   | SBL   | SBT   |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations  | ↖     | ↗     | ↖     | ↗     | ↖     | ↗     | ↖     | ↗     |
| Traffic Volume (vph) | 80    | 145   | 57    | 327   | 408   | 805   | 50    | 570   |
| Future Volume (vph)  | 80    | 145   | 57    | 327   | 408   | 805   | 50    | 570   |
| Turn Type            | Perm  | NA    | Perm  | NA    | pm+pt | NA    | Perm  | NA    |
| Protected Phases     |       | 4     |       | 8     | 5     | 2     |       | 6     |
| Permitted Phases     | 4     |       | 8     |       | 2     |       | 6     |       |
| Detector Phase       | 4     | 4     | 8     | 8     | 5     | 2     | 6     | 6     |
| Switch Phase         |       |       |       |       |       |       |       |       |
| Minimum Initial (s)  | 15.0  | 15.0  | 15.0  | 15.0  | 5.0   | 15.0  | 15.0  | 15.0  |
| Minimum Split (s)    | 34.6  | 34.6  | 34.6  | 34.6  | 9.5   | 30.8  | 30.8  | 30.8  |
| Total Split (s)      | 43.0  | 43.0  | 43.0  | 43.0  | 21.0  | 51.0  | 30.0  | 30.0  |
| Total Split (%)      | 45.7% | 45.7% | 45.7% | 45.7% | 22.3% | 54.3% | 31.9% | 31.9% |
| Yellow Time (s)      | 4.3   | 4.3   | 4.3   | 4.3   | 3.0   | 4.3   | 4.3   | 4.3   |
| All-Red Time (s)     | 1.3   | 1.3   | 1.3   | 1.3   | 0.0   | 1.5   | 1.5   | 1.5   |
| Lost Time Adjust (s) | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Lost Time (s)  | 5.6   | 5.6   | 5.6   | 5.6   | 3.0   | 5.8   | 5.8   | 5.8   |
| Lead/Lag             |       |       |       |       | Lead  |       | Lag   | Lag   |
| Lead-Lag Optimize?   |       |       |       |       | Yes   |       | Yes   | Yes   |
| Recall Mode          | C-Max | C-Max | C-Max | C-Max | None  | Max   | Max   | Max   |
| Act Effct Green (s)  | 37.4  | 37.4  | 37.4  | 37.4  | 48.0  | 45.2  | 24.2  | 24.2  |
| Actuated g/C Ratio   | 0.40  | 0.40  | 0.40  | 0.40  | 0.51  | 0.48  | 0.26  | 0.26  |
| v/c Ratio            | 0.27  | 0.31  | 0.19  | 0.34  | 1.08  | 0.39  | 0.40  | 0.84  |
| Control Delay        | 22.0  | 7.6   | 20.4  | 18.8  | 93.5  | 16.1  | 39.2  | 42.5  |
| Queue Delay          | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Delay          | 22.0  | 7.6   | 20.4  | 18.8  | 93.5  | 16.1  | 39.2  | 42.5  |
| LOS                  | C     | A     | C     | B     | F     | B     | D     | D     |
| Approach Delay       |       | 10.0  |       | 19.0  |       | 41.5  |       | 42.3  |
| Approach LOS         |       | B     |       | B     |       | D     |       | D     |

Intersection Summary

Cycle Length: 94  
 Actuated Cycle Length: 94  
 Offset: 31 (33%), Referenced to phase 4:EBTL and 8:WBTL, Start of Green  
 Natural Cycle: 90  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 1.08  
 Intersection Signal Delay: 32.9  
 Intersection Capacity Utilization 83.7%  
 Intersection LOS: C  
 ICU Level of Service E  
 Analysis Period (min) 15

Splits and Phases: 6: Pinnacle Peak Rd & 19th Ave



Deer Valley 30  
6: Pinnacle Peak Rd & 19th Ave

2024 Background AM Scenario B  
HCM 6th Signalized Intersection Summary

| Movement                     | EBL  | EBT  | EBR   | WBL  | WBT  | WBR  | NBL  | NBT  | NBR   | SBL  | SBT  | SBR  |
|------------------------------|--|------|-------|------|------|------|------|------|-------|------|------|------|
| Lane Configurations          |  |      |       |      |      |      |      |      |       |      |      |      |
| Traffic Volume (veh/h)       | 86   | 387  | 309   | 57   | 176  | 58   | 169  | 436  | 99    | 99   | 648  | 58   |
| Future Volume (veh/h)        | 86   | 387  | 309   | 57   | 176  | 58   | 169  | 436  | 99    | 99   | 648  | 58   |
| Initial Q (Ob), veh          | 0  | 0    | 0     | 0    | 0    | 0    | 0    | 0    | 0     | 0    | 0    | 0    |
| Ped-Bike Adj(A_pbT)          | 1.00   |      | 1.00  | 1.00 |      | 1.00 | 1.00 |      | 1.00  | 1.00 |      | 1.00 |
| Parking Bus, Adj             | 1.00   | 1.00 | 1.00  | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00  | 1.00 | 1.00 | 1.00 |
| Work Zone On Approach        | No   |      |       |      |      |      |      |      |       |      |      |      |
| Adj Sat Flow, veh/h/ln       | 1781   | 1781 | 1781  | 1781 | 1781 | 1781 | 1781 | 1781 | 1781  | 1781 | 1781 | 1781 |
| Adj Flow Rate, veh/h         | 93   | 421  | 336   | 62   | 191  | 63   | 184  | 474  | 108   | 108  | 704  | 63   |
| Peak Hour Factor             | 0.92   | 0.92 | 0.92  | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92  | 0.92 | 0.92 | 0.92 |
| Percent Heavy Veh, %         | 8  | 8    | 8     | 8    | 8    | 8    | 8    | 8    | 8     | 8    | 8    | 8    |
| Cap, veh/h                   | 523  | 829  | 657   | 276  | 1164 | 373  | 294  | 1660 | 368   | 308  | 915  | 82   |
| Arrive On Green              | 0.46   | 0.46 | 0.46  | 0.46 | 0.46 | 0.46 | 0.09 | 0.42 | 0.42  | 0.29 | 0.29 | 0.29 |
| Sat Flow, veh/h              | 1072   | 1795 | 1423  | 674  | 2522 | 807  | 1697 | 3981 | 883   | 793  | 3142 | 281  |
| Grp Volume(v), veh/h         | 93   | 397  | 360   | 62   | 126  | 128  | 184  | 384  | 198   | 108  | 379  | 388  |
| Grp Sat Flow(s),veh/h/ln     | 1072   | 1692 | 1525  | 674  | 1692 | 1636 | 1697 | 1621 | 1622  | 793  | 1692 | 1731 |
| Q Serve(g_s), s              | 5.2  | 15.5 | 15.6  | 6.7  | 4.1  | 4.3  | 6.8  | 7.4  | 7.6   | 10.5 | 19.2 | 19.3 |
| Cycle Q Clear(g_c), s        | 9.5  | 15.5 | 15.6  | 22.4 | 4.1  | 4.3  | 6.8  | 7.4  | 7.6   | 10.5 | 19.2 | 19.3 |
| Prop In Lane                 | 1.00   |      | 0.93  | 1.00 |      | 0.49 | 1.00 |      | 0.54  | 1.00 |      | 0.16 |
| Lane Grp Cap(c), veh/h       | 523  | 781  | 704   | 276  | 781  | 755  | 294  | 1352 | 677   | 308  | 493  | 504  |
| V/C Ratio(X)                 | 0.18   | 0.51 | 0.51  | 0.22 | 0.16 | 0.17 | 0.63 | 0.28 | 0.29  | 0.35 | 0.77 | 0.77 |
| Avail Cap(c_a), veh/h        | 523  | 781  | 704   | 276  | 781  | 755  | 333  | 1352 | 677   | 308  | 493  | 504  |
| HCM Platoon Ratio            | 1.00   | 1.00 | 1.00  | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00  | 1.00 | 1.00 | 1.00 |
| Upstream Filter(I)           | 1.00   | 1.00 | 1.00  | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00  | 1.00 | 1.00 | 1.00 |
| Uniform Delay (d), s/veh     | 17.5   | 17.8 | 17.8  | 25.7 | 14.7 | 14.8 | 21.9 | 18.1 | 18.2  | 27.3 | 30.4 | 30.4 |
| Incr Delay (d2), s/veh       | 0.7  | 2.4  | 2.6   | 1.9  | 0.4  | 0.5  | 3.0  | 0.5  | 1.1   | 3.1  | 11.0 | 10.8 |
| Initial Q Delay(d3),s/veh    | 0.0  | 0.0  | 0.0   | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0   | 0.0  | 0.0  | 0.0  |
| %ile BackOfQ(50%),veh/ln     | 1.4  | 6.3  | 5.8   | 1.2  | 1.6  | 1.6  | 2.8  | 2.8  | 3.0   | 2.2  | 9.1  | 9.3  |
| Unsig. Movement Delay, s/veh |  |      |       |      |      |      |      |      |       |      |      |      |
| LnGrp Delay(d),s/veh         | 18.3   | 20.1 | 20.5  | 27.6 | 15.2 | 15.3 | 24.9 | 18.6 | 19.3  | 30.5 | 41.4 | 41.2 |
| LnGrp LOS                    | B  | C    | C     | C    | B    | B    | C    | B    | B     | C    | D    | D    |
| Approach Vol, veh/h          | 850  |      |       | 316  |      |      | 766  |      |       | 875  |      |      |
| Approach Delay, s/veh        | 20.1   |      |       | 17.6 |      |      | 20.3 |      |       | 40.0 |      |      |
| Approach LOS                 | C  |      |       | B    |      |      | C    |      |       | D    |      |      |
| Timer - Assigned Phs         | 2  |      | 4     |      | 5    |      | 6    |      | 8     |      |      |      |
| Phs Duration (G+Y+Rc), s     | 45.0   |      | 49.0  |      | 11.8 |      | 33.2 |      | 49.0  |      |      |      |
| Change Period (Y+Rc), s      | 5.8  |      | * 5.6 |      | 3.0  |      | 5.8  |      | * 5.6 |      |      |      |
| Max Green Setting (Gmax), s  | 39.2   |      | * 43  |      | 11.0 |      | 25.2 |      | * 43  |      |      |      |
| Max Q Clear Time (g_c+I1), s | 9.6  |      | 17.6  |      | 8.8  |      | 21.3 |      | 24.4  |      |      |      |
| Green Ext Time (p_c), s      | 4.2  |      | 5.9   |      | 0.1  |      | 2.0  |      | 1.9   |      |      |      |
| <b>Intersection Summary</b>  |  |      |       |      |      |      |      |      |       |      |      |      |
| HCM 6th Ctrl Delay           | 26.1   |      |       |      |      |      |      |      |       |      |      |      |
| HCM 6th LOS                  | C  |      |       |      |      |      |      |      |       |      |      |      |
| <b>Notes</b>                 | * HCM 6th computational engine requires equal clearance times for the phases crossing the barrier. |      |       |      |      |      |      |      |       |      |      |      |

Deer Valley 30  
6: Pinnacle Peak Rd & 19th Ave

2024 Background PM Scenario B  
HCM 6th Signalized Intersection Summary

| Movement                     | EBL  | EBT  | EBR   | WBL  | WBT  | WBR  | NBL  | NBT  | NBR   | SBL  | SBT  | SBR  |
|------------------------------|--|------|-------|------|------|------|------|------|-------|------|------|------|
| Lane Configurations          |  |      |       |      |      |      |      |      |       |      |      |      |
| Traffic Volume (veh/h)       | 80   | 145  | 246   | 57   | 327  | 79   | 408  | 805  | 29    | 50   | 570  | 90   |
| Future Volume (veh/h)        | 80   | 145  | 246   | 57   | 327  | 79   | 408  | 805  | 29    | 50   | 570  | 90   |
| Initial Q (Ob), veh          | 0  | 0    | 0     | 0    | 0    | 0    | 0    | 0    | 0     | 0    | 0    | 0    |
| Ped-Bike Adj(A_pbT)          | 1.00   |      | 1.00  | 1.00 |      | 1.00 | 1.00 |      | 1.00  | 1.00 |      | 1.00 |
| Parking Bus, Adj             | 1.00   | 1.00 | 1.00  | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00  | 1.00 | 1.00 | 1.00 |
| Work Zone On Approach        | No   |      |       |      |      |      |      |      |       |      |      |      |
| Adj Sat Flow, veh/h/ln       | 1781   | 1781 | 1781  | 1781 | 1781 | 1781 | 1781 | 1781 | 1781  | 1781 | 1781 | 1781 |
| Adj Flow Rate, veh/h         | 87   | 158  | 267   | 62   | 355  | 86   | 443  | 875  | 32    | 54   | 620  | -11  |
| Peak Hour Factor             | 0.92   | 0.92 | 0.92  | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92  | 0.92 | 0.92 | 0.92 |
| Percent Heavy Veh, %         | 8  | 8    | 8     | 8    | 8    | 8    | 8    | 8    | 8     | 8    | 8    | 8    |
| Cap, veh/h                   | 353  | 673  | 601   | 323  | 1078 | 258  | 475  | 2316 | 85    | 227  | 871  | 0    |
| Arrive On Green              | 0.40   | 0.40 | 0.40  | 0.40 | 0.40 | 0.40 | 0.19 | 0.48 | 0.48  | 0.26 | 0.26 | 0.00 |
| Sat Flow, veh/h              | 903  | 1692 | 1510  | 917  | 2709 | 648  | 1697 | 4816 | 176   | 586  | 3474 | 0    |
| Grp Volume(v), veh/h         | 87   | 158  | 267   | 62   | 220  | 221  | 443  | 589  | 318   | 54   | 609  | 0    |
| Grp Sat Flow(s),veh/h/ln     | 903  | 1692 | 1510  | 917  | 1692 | 1665 | 1697 | 1621 | 1750  | 586  | 1692 | 0    |
| Q Serve(g_s), s              | 7.0  | 5.8  | 12.2  | 5.0  | 8.5  | 8.7  | 17.6 | 10.8 | 10.9  | 7.1  | 15.3 | 0.0  |
| Cycle Q Clear(g_c), s        | 15.6   | 5.8  | 12.2  | 17.1 | 8.5  | 8.7  | 17.6 | 10.8 | 10.9  | 7.1  | 15.3 | 0.0  |
| Prop In Lane                 | 1.00   |      | 1.00  | 1.00 |      | 0.39 | 1.00 |      | 0.10  | 1.00 |      | 0.00 |
| Lane Grp Cap(c), veh/h       | 353  | 673  | 601   | 323  | 673  | 662  | 475  | 1559 | 841   | 227  | 871  | 0    |
| V/C Ratio(X)                 | 0.25   | 0.23 | 0.44  | 0.19 | 0.33 | 0.33 | 0.93 | 0.38 | 0.38  | 0.24 | 0.70 | 0.00 |
| Avail Cap(c_a), veh/h        | 353  | 673  | 601   | 323  | 673  | 662  | 475  | 1559 | 841   | 227  | 871  | 0    |
| HCM Platoon Ratio            | 1.00   | 1.00 | 1.00  | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00  | 1.00 | 1.00 | 1.00 |
| Upstream Filter(I)           | 1.00   | 1.00 | 1.00  | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00  | 1.00 | 1.00 | 0.00 |
| Uniform Delay (d), s/veh     | 25.1   | 18.8 | 20.7  | 27.0 | 19.6 | 19.6 | 20.8 | 15.5 | 15.5  | 28.5 | 31.6 | 0.0  |
| Incr Delay (d2), s/veh       | 1.7  | 0.8  | 2.4   | 1.3  | 1.3  | 1.4  | 25.7 | 0.7  | 1.3   | 2.4  | 4.6  | 0.0  |
| Initial Q Delay(d3),s/veh    | 0.0  | 0.0  | 0.0   | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0   | 0.0  | 0.0  | 0.0  |
| %ile BackOfQ(50%),veh/ln     | 1.6  | 2.4  | 4.6   | 1.2  | 3.5  | 3.5  | 9.9  | 4.0  | 4.5   | 1.1  | 6.7  | 0.0  |
| Unsig. Movement Delay, s/veh |  |      |       |      |      |      |      |      |       |      |      |      |
| LnGrp Delay(d),s/veh         | 26.7   | 19.6 | 23.1  | 28.3 | 20.9 | 21.0 | 46.4 | 16.2 | 16.8  | 31.0 | 36.2 | 0.0  |
| LnGrp LOS                    | C  | B    | C     | C    | C    | C    | D    | B    | B     | C    | D    | A    |
| Approach Vol, veh/h          | 512  |      |       | 503  |      |      | 1350 |      |       | 663  |      |      |
| Approach Delay, s/veh        | 22.6   |      |       | 21.8 |      |      | 26.2 |      |       | 35.8 |      |      |
| Approach LOS                 | C  |      |       | C    |      |      | C    |      |       | D    |      |      |
| Timer - Assigned Phs         | 2  |      | 4     |      | 5    |      | 6    |      | 8     |      |      |      |
| Phs Duration (G+Y+Rc), s     | 51.0   |      | 43.0  |      | 21.0 |      | 30.0 |      | 43.0  |      |      |      |
| Change Period (Y+Rc), s      | 5.8  |      | * 5.6 |      | 3.0  |      | 5.8  |      | * 5.6 |      |      |      |
| Max Green Setting (Gmax), s  | 45.2   |      | * 37  |      | 18.0 |      | 24.2 |      | * 37  |      |      |      |
| Max Q Clear Time (g_c+I1), s | 12.9   |      | 17.6  |      | 19.6 |      | 17.3 |      | 19.1  |      |      |      |
| Green Ext Time (p_c), s      | 7.0  |      | 3.1   |      | 0.0  |      | 2.6  |      | 2.9   |      |      |      |
| <b>Intersection Summary</b>  |  |      |       |      |      |      |      |      |       |      |      |      |
| HCM 6th Ctrl Delay           | 27.0   |      |       |      |      |      |      |      |       |      |      |      |
| HCM 6th LOS                  | C  |      |       |      |      |      |      |      |       |      |      |      |
| <b>Notes</b>                 | User approved pedestrian interval to be less than phase max green.<br>* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier. |      |       |      |      |      |      |      |       |      |      |      |

Deer Valley 30  
7: 15th Ave & Happy Valley Rd

2024 Background AM Scenario B  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Int Delay, s/veh         | 0.9  |      |      |      |      |      |      |      |      |      |      |      |
| Movement                 | EBL  | EBT  | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
| Lane Configurations      | ↕    |      |      | ↕    |      |      | ↕    |      |      | ↕    |      |      |
| Traffic Vol, veh/h       | 6    | 486  | 23   | 14   | 339  | 0    | 19   | 0    | 10   | 2    | 0    | 6    |
| Future Vol, veh/h        | 6    | 486  | 23   | 14   | 339  | 0    | 19   | 0    | 10   | 2    | 0    | 6    |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Free | Free | Free | Free | Free | Free | Stop | Stop | Stop | Stop | Stop | Stop |
| RT Channelized           | -    | -    | None | -    | -    | None | -    | -    | None | -    | -    | None |
| Storage Length           | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    |
| Veh in Median Storage, # | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Grade, %                 | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Peak Hour Factor         | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   |
| Heavy Vehicles, %        | 8    | 8    | 8    | 8    | 8    | 8    | 8    | 8    | 8    | 8    | 8    | 8    |
| Mvmt Flow                | 7    | 528  | 25   | 15   | 368  | 0    | 21   | 0    | 11   | 2    | 0    | 7    |

| Major/Minor          | Major1 | Major2 | Minor1 | Minor2 |
|----------------------|--------|--------|--------|--------|
| Conflicting Flow All | 368    | 0      | 553    | 957    |
| Stage 1              | -      | -      | -      | 555    |
| Stage 2              | -      | -      | -      | 402    |
| Critical Hdwy        | 4.18   | -      | 4.18   | 7.18   |
| Critical Hdwy Stg 1  | -      | -      | -      | 6.18   |
| Critical Hdwy Stg 2  | -      | -      | -      | 6.18   |
| Follow-up Hdwy       | 2.272  | -      | 2.272  | 4.072  |
| Pot Cap-1 Maneuver   | 1158   | -      | 988    | 231    |
| Stage 1              | -      | -      | -      | 506    |
| Stage 2              | -      | -      | -      | 613    |
| Platoon blocked, %   | -      | -      | -      | -      |
| Mov Cap-1 Maneuver   | 1158   | -      | 988    | 224    |
| Mov Cap-2 Maneuver   | -      | -      | -      | 224    |
| Stage 1              | -      | -      | -      | 501    |
| Stage 2              | -      | -      | -      | 595    |

| Approach             | EB  | WB  | NB   | SB   |
|----------------------|-----|-----|------|------|
| HCM Control Delay, s | 0.1 | 0.3 | 19.5 | 13.3 |
| HCM LOS              |     |     | C    | B    |

| Minor Lane/Major Mvmt | NBLn1 | EBL   | EBT | EBR | WBL   | WBT | WBR | SBLn1 |
|-----------------------|-------|-------|-----|-----|-------|-----|-----|-------|
| Capacity (veh/h)      | 280   | 1158  | -   | -   | 988   | -   | -   | 443   |
| HCM Lane V/C Ratio    | 0.113 | 0.006 | -   | -   | 0.015 | -   | -   | 0.02  |
| HCM Control Delay (s) | 19.5  | 8.1   | 0   | -   | 8.7   | 0   | -   | 13.3  |
| HCM Lane LOS          | C     | A     | A   | -   | A     | A   | -   | B     |
| HCM 95th %tile Q(veh) | 0.4   | 0     | -   | -   | 0     | -   | -   | 0.1   |

Deer Valley 30  
7: 15th Ave & Happy Valley Rd

2024 Background PM Scenario B  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Int Delay, s/veh         | 1.1  |      |      |      |      |      |      |      |      |      |      |      |
| Movement                 | EBL  | EBT  | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
| Lane Configurations      | ↕    |      |      | ↕    |      |      | ↕    |      |      | ↕    |      |      |
| Traffic Vol, veh/h       | 2    | 487  | 3    | 8    | 927  | 0    | 20   | 0    | 17   | 0    | 0    | 1    |
| Future Vol, veh/h        | 2    | 487  | 3    | 8    | 927  | 0    | 20   | 0    | 17   | 0    | 0    | 1    |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Free | Free | Free | Free | Free | Free | Stop | Stop | Stop | Stop | Stop | Stop |
| RT Channelized           | -    | -    | None | -    | -    | None | -    | -    | None | -    | -    | None |
| Storage Length           | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    |
| Veh in Median Storage, # | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Grade, %                 | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Peak Hour Factor         | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   |
| Heavy Vehicles, %        | 8    | 8    | 8    | 8    | 8    | 8    | 8    | 8    | 8    | 8    | 8    | 8    |
| Mvmt Flow                | 2    | 529  | 3    | 9    | 1008 | 0    | 22   | 0    | 18   | 0    | 0    | 1    |

| Major/Minor          | Major1 | Major2 | Minor1 | Minor2 |
|----------------------|--------|--------|--------|--------|
| Conflicting Flow All | 1008   | 0      | 532    | 1562   |
| Stage 1              | -      | -      | -      | 535    |
| Stage 2              | -      | -      | -      | 1027   |
| Critical Hdwy        | 4.18   | -      | 4.18   | 7.18   |
| Critical Hdwy Stg 1  | -      | -      | -      | 6.18   |
| Critical Hdwy Stg 2  | -      | -      | -      | 6.18   |
| Follow-up Hdwy       | 2.272  | -      | 2.272  | 4.072  |
| Pot Cap-1 Maneuver   | 664    | -      | 1006   | 88     |
| Stage 1              | -      | -      | -      | 518    |
| Stage 2              | -      | -      | -      | 276    |
| Platoon blocked, %   | -      | -      | -      | -      |
| Mov Cap-1 Maneuver   | 664    | -      | 1006   | 86     |
| Mov Cap-2 Maneuver   | -      | -      | -      | 86     |
| Stage 1              | -      | -      | -      | 516    |
| Stage 2              | -      | -      | -      | 269    |

| Approach             | EB | WB  | NB   | SB   |
|----------------------|----|-----|------|------|
| HCM Control Delay, s | 0  | 0.1 | 40.8 | 17.7 |
| HCM LOS              |    |     | E    | C    |

| Minor Lane/Major Mvmt | NBLn1 | EBL   | EBT | EBR | WBL   | WBT | WBR | SBLn1 |
|-----------------------|-------|-------|-----|-----|-------|-----|-----|-------|
| Capacity (veh/h)      | 140   | 664   | -   | -   | 1006  | -   | -   | 284   |
| HCM Lane V/C Ratio    | 0.287 | 0.003 | -   | -   | 0.009 | -   | -   | 0.004 |
| HCM Control Delay (s) | 40.8  | 10.4  | 0   | -   | 8.6   | 0   | -   | 17.7  |
| HCM Lane LOS          | E     | B     | A   | -   | A     | A   | -   | C     |
| HCM 95th %tile Q(veh) | 1.1   | 0     | -   | -   | 0     | -   | -   | 0     |



Deer Valley 30  
8: 7th Ave & Happy Valley Rd

2024 Background AM Scenario B  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh         | 0.6  |      |      |      |      |      |
| Movement                 | EBT  | EBR  | WBL  | WBT  | NBL  | NBR  |
| Lane Configurations      | ↔    |      |      | ↕    | ↕    |      |
| Traffic Vol, veh/h       | 508  | 24   | 9    | 282  | 17   | 10   |
| Future Vol, veh/h        | 508  | 24   | 9    | 282  | 17   | 10   |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Free | Free | Free | Free | Stop | Stop |
| RT Channelized           | -    | None | -    | None | -    | None |
| Storage Length           | -    | -    | -    | -    | -    | -    |
| Veh in Median Storage, # | 0    | -    | -    | 0    | 0    | -    |
| Grade, %                 | 0    | -    | -    | 0    | 0    | -    |
| Peak Hour Factor         | 92   | 92   | 92   | 92   | 92   | 92   |
| Heavy Vehicles, %        | 8    | 8    | 8    | 8    | 8    | 8    |
| Mvmt Flow                | 552  | 26   | 10   | 307  | 18   | 11   |

| Major/Minor          | Major1 | Major2 | Minor1 |   |       |
|----------------------|--------|--------|--------|---|-------|
| Conflicting Flow All | 0      | 0      | 578    | 0 | 892   |
| Stage 1              | -      | -      | -      | - | 565   |
| Stage 2              | -      | -      | -      | - | 327   |
| Critical Hdwy        | -      | -      | 4.18   | - | 6.48  |
| Critical Hdwy Stg 1  | -      | -      | -      | - | 5.48  |
| Critical Hdwy Stg 2  | -      | -      | -      | - | 5.48  |
| Follow-up Hdwy       | -      | -      | 2.272  | - | 3.372 |
| Pot Cap-1 Maneuver   | -      | -      | 967    | - | 305   |
| Stage 1              | -      | -      | -      | - | 557   |
| Stage 2              | -      | -      | -      | - | 717   |
| Platoon blocked, %   | -      | -      | -      | - | -     |
| Mov Cap-1 Maneuver   | -      | -      | 967    | - | 301   |
| Mov Cap-2 Maneuver   | -      | -      | -      | - | 301   |
| Stage 1              | -      | -      | -      | - | 557   |
| Stage 2              | -      | -      | -      | - | 708   |

| Approach             | EB | WB  | NB   |
|----------------------|----|-----|------|
| HCM Control Delay, s | 0  | 0.3 | 16.1 |
| HCM LOS              |    |     | C    |

| Minor Lane/Major Mvmt | NBLn1 | EBT | EBR | WBL  | WBT |
|-----------------------|-------|-----|-----|------|-----|
| Capacity (veh/h)      | 355   | -   | -   | 967  | -   |
| HCM Lane V/C Ratio    | 0.083 | -   | -   | 0.01 | -   |
| HCM Control Delay (s) | 16.1  | -   | -   | 8.8  | 0   |
| HCM Lane LOS          | C     | -   | -   | A    | A   |
| HCM 95th %tile Q(veh) | 0.3   | -   | -   | 0    | -   |

Deer Valley 30  
8: 7th Ave & Happy Valley Rd

2024 Background PM Scenario B  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh         | 1.7  |      |      |      |      |      |
| Movement                 | EBT  | EBR  | WBL  | WBT  | NBL  | NBR  |
| Lane Configurations      | ↔    |      |      | ↕    | ↕    |      |
| Traffic Vol, veh/h       | 479  | 37   | 19   | 854  | 41   | 11   |
| Future Vol, veh/h        | 479  | 37   | 19   | 854  | 41   | 11   |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Free | Free | Free | Free | Stop | Stop |
| RT Channelized           | -    | None | -    | None | -    | None |
| Storage Length           | -    | -    | -    | -    | -    | -    |
| Veh in Median Storage, # | 0    | -    | -    | 0    | 0    | -    |
| Grade, %                 | 0    | -    | -    | 0    | 0    | -    |
| Peak Hour Factor         | 92   | 92   | 92   | 92   | 92   | 92   |
| Heavy Vehicles, %        | 8    | 8    | 8    | 8    | 8    | 8    |
| Mvmt Flow                | 521  | 40   | 21   | 928  | 45   | 12   |

| Major/Minor          | Major1 | Major2 | Minor1 |   |       |
|----------------------|--------|--------|--------|---|-------|
| Conflicting Flow All | 0      | 0      | 561    | 0 | 1511  |
| Stage 1              | -      | -      | -      | - | 541   |
| Stage 2              | -      | -      | -      | - | 970   |
| Critical Hdwy        | -      | -      | 4.18   | - | 6.48  |
| Critical Hdwy Stg 1  | -      | -      | -      | - | 5.48  |
| Critical Hdwy Stg 2  | -      | -      | -      | - | 5.48  |
| Follow-up Hdwy       | -      | -      | 2.272  | - | 3.372 |
| Pot Cap-1 Maneuver   | -      | -      | 981    | - | 128   |
| Stage 1              | -      | -      | -      | - | 572   |
| Stage 2              | -      | -      | -      | - | 359   |
| Platoon blocked, %   | -      | -      | -      | - | -     |
| Mov Cap-1 Maneuver   | -      | -      | 981    | - | 122   |
| Mov Cap-2 Maneuver   | -      | -      | -      | - | 122   |
| Stage 1              | -      | -      | -      | - | 572   |
| Stage 2              | -      | -      | -      | - | 343   |

| Approach             | EB | WB  | NB   |
|----------------------|----|-----|------|
| HCM Control Delay, s | 0  | 0.2 | 44.4 |
| HCM LOS              |    |     | E    |

| Minor Lane/Major Mvmt | NBLn1 | EBT | EBR | WBL   | WBT |
|-----------------------|-------|-----|-----|-------|-----|
| Capacity (veh/h)      | 146   | -   | -   | 981   | -   |
| HCM Lane V/C Ratio    | 0.387 | -   | -   | 0.021 | -   |
| HCM Control Delay (s) | 44.4  | -   | -   | 8.7   | 0   |
| HCM Lane LOS          | E     | -   | -   | A     | A   |
| HCM 95th %tile Q(veh) | 1.7   | -   | -   | 0.1   | -   |

Deer Valley 30  
9: 7th Ave & Pinnacle Peak Rd

2024 Background AM Scenario B  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Int Delay, s/veh         | 2    |      |      |      |      |      |      |      |      |      |      |      |
| Movement                 | EBL  | EBT  | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
| Lane Configurations      | ↔    | ↕    | ↔    | ↔    | ↔    | ↔    | ↔    | ↔    | ↔    | ↔    | ↔    | ↔    |
| Traffic Vol, veh/h       | 0    | 192  | 119  | 33   | 227  | 0    | 54   | 0    | 24   | 0    | 0    | 0    |
| Future Vol, veh/h        | 0    | 192  | 119  | 33   | 227  | 0    | 54   | 0    | 24   | 0    | 0    | 0    |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Free | Free | Free | Free | Free | Free | Stop | Stop | Stop | Stop | Stop | Stop |
| RT Channelized           | -    | -    | None | -    | -    | None | -    | -    | None | -    | -    | None |
| Storage Length           | 150  | -    | 170  | 150  | -    | -    | 150  | -    | -    | 150  | -    | -    |
| Veh in Median Storage, # | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Grade, %                 | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Peak Hour Factor         | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   |
| Heavy Vehicles, %        | 8    | 8    | 8    | 8    | 8    | 8    | 8    | 8    | 8    | 8    | 8    | 8    |
| Mvmt Flow                | 0    | 209  | 129  | 36   | 247  | 0    | 59   | 0    | 26   | 0    | 0    | 0    |

| Major/Minor          | Major1 | Major2 | Minor1 | Minor2 |
|----------------------|--------|--------|--------|--------|
| Conflicting Flow All | 247    | 0      | 0      | 338    |
| Stage 1              | -      | -      | -      | -      |
| Stage 2              | -      | -      | -      | -      |
| Critical Hdwy        | 4.18   | -      | -      | 4.18   |
| Critical Hdwy Stg 1  | -      | -      | -      | -      |
| Critical Hdwy Stg 2  | -      | -      | -      | -      |
| Follow-up Hdwy       | 2.272  | -      | -      | 2.272  |
| Pot Cap-1 Maneuver   | 1285   | -      | -      | 1188   |
| Stage 1              | -      | -      | -      | -      |
| Stage 2              | -      | -      | -      | -      |
| Platoon blocked, %   | -      | -      | -      | -      |
| Mov Cap-1 Maneuver   | 1285   | -      | -      | 1188   |
| Mov Cap-2 Maneuver   | -      | -      | -      | -      |
| Stage 1              | -      | -      | -      | -      |
| Stage 2              | -      | -      | -      | -      |

| Approach             | EB | WB | NB   | SB |
|----------------------|----|----|------|----|
| HCM Control Delay, s | 0  | 1  | 12.9 | 0  |
| HCM LOS              |    |    | B    | A  |

| Minor Lane/Major Mvmt | NBLn1 | NBLn2 | EBL  | EBT | EBR | WBL  | WBT | WBR | SBLn1 | SBLn2 |
|-----------------------|-------|-------|------|-----|-----|------|-----|-----|-------|-------|
| Capacity (veh/h)      | 442   | 816   | 1285 | -   | -   | 1188 | -   | -   | -     | -     |
| HCM Lane V/C Ratio    | 0.133 | 0.032 | -    | -   | -   | 0.03 | -   | -   | -     | -     |
| HCM Control Delay (s) | 14.4  | 9.6   | 0    | -   | -   | 8.1  | -   | -   | 0     | 0     |
| HCM Lane LOS          | B     | A     | A    | -   | -   | A    | -   | -   | A     | A     |
| HCM 95th %tile Q(veh) | 0.5   | 0.1   | 0    | -   | -   | 0.1  | -   | -   | -     | -     |

Deer Valley 30  
9: 7th Ave & Pinnacle Peak Rd

2024 Background PM Scenario B  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Int Delay, s/veh         | 2.2  |      |      |      |      |      |      |      |      |      |      |      |
| Movement                 | EBL  | EBT  | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
| Lane Configurations      | ↔    | ↕    | ↔    | ↔    | ↔    | ↔    | ↔    | ↔    | ↔    | ↔    | ↔    | ↔    |
| Traffic Vol, veh/h       | 0    | 252  | 48   | 28   | 195  | 0    | 58   | 0    | 28   | 0    | 0    | 0    |
| Future Vol, veh/h        | 0    | 252  | 48   | 28   | 195  | 0    | 58   | 0    | 28   | 0    | 0    | 0    |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Free | Free | Free | Free | Free | Free | Stop | Stop | Stop | Stop | Stop | Stop |
| RT Channelized           | -    | -    | None | -    | -    | None | -    | -    | None | -    | -    | None |
| Storage Length           | 150  | -    | 170  | 150  | -    | -    | 150  | -    | -    | 150  | -    | -    |
| Veh in Median Storage, # | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Grade, %                 | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Peak Hour Factor         | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   |
| Heavy Vehicles, %        | 8    | 8    | 8    | 8    | 8    | 8    | 8    | 8    | 8    | 8    | 8    | 8    |
| Mvmt Flow                | 0    | 274  | 52   | 30   | 212  | 0    | 63   | 0    | 30   | 0    | 0    | 0    |

| Major/Minor          | Major1 | Major2 | Minor1 | Minor2 |
|----------------------|--------|--------|--------|--------|
| Conflicting Flow All | 212    | 0      | 0      | 326    |
| Stage 1              | -      | -      | -      | -      |
| Stage 2              | -      | -      | -      | -      |
| Critical Hdwy        | 4.18   | -      | -      | 4.18   |
| Critical Hdwy Stg 1  | -      | -      | -      | -      |
| Critical Hdwy Stg 2  | -      | -      | -      | -      |
| Follow-up Hdwy       | 2.272  | -      | -      | 2.272  |
| Pot Cap-1 Maneuver   | 1323   | -      | -      | 1201   |
| Stage 1              | -      | -      | -      | -      |
| Stage 2              | -      | -      | -      | -      |
| Platoon blocked, %   | -      | -      | -      | -      |
| Mov Cap-1 Maneuver   | 1323   | -      | -      | 1201   |
| Mov Cap-2 Maneuver   | -      | -      | -      | -      |
| Stage 1              | -      | -      | -      | -      |
| Stage 2              | -      | -      | -      | -      |

| Approach             | EB | WB | NB   | SB |
|----------------------|----|----|------|----|
| HCM Control Delay, s | 0  | 1  | 13.2 | 0  |
| HCM LOS              |    |    | B    | A  |

| Minor Lane/Major Mvmt | NBLn1 | NBLn2 | EBL  | EBT | EBR | WBL   | WBT | WBR | SBLn1 | SBLn2 |
|-----------------------|-------|-------|------|-----|-----|-------|-----|-----|-------|-------|
| Capacity (veh/h)      | 431   | 751   | 1323 | -   | -   | 1201  | -   | -   | -     | -     |
| HCM Lane V/C Ratio    | 0.146 | 0.041 | -    | -   | -   | 0.025 | -   | -   | -     | -     |
| HCM Control Delay (s) | 14.8  | 10    | 0    | -   | -   | 8.1   | -   | -   | 0     | 0     |
| HCM Lane LOS          | B     | B     | A    | -   | -   | A     | -   | -   | A     | A     |
| HCM 95th %tile Q(veh) | 0.5   | 0.1   | 0    | -   | -   | 0.1   | -   | -   | -     | -     |

Deer Valley 30  
11: 15th Ave & Parkview Ln

2024 Background AM Scenario B  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh         | 0    |      |      |      |      |      |
| Movement                 | EBT  | EBR  | WBL  | WBT  | NBL  | NBR  |
| Lane Configurations      | ↻    |      |      | ↻    | ↻    |      |
| Traffic Vol, veh/h       | 0    | 0    | 0    | 0    | 0    | 0    |
| Future Vol, veh/h        | 0    | 0    | 0    | 0    | 0    | 0    |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Free | Free | Free | Free | Stop | Stop |
| RT Channelized           | -    | None | -    | None | -    | None |
| Storage Length           | -    | -    | -    | -    | 0    | -    |
| Veh in Median Storage, # | 0    | -    | -    | 0    | 0    | -    |
| Grade, %                 | 0    | -    | -    | 0    | 0    | -    |
| Peak Hour Factor         | 92   | 92   | 92   | 92   | 92   | 92   |
| Heavy Vehicles, %        | 8    | 8    | 8    | 8    | 8    | 8    |
| Mvmt Flow                | 0    | 0    | 0    | 0    | 0    | 0    |

| Major/Minor          | Major1 | Major2 | Minor1 |   |       |
|----------------------|--------|--------|--------|---|-------|
| Conflicting Flow All | 0      | 0      | 1      | 0 | 2     |
| Stage 1              | -      | -      | -      | - | 1     |
| Stage 2              | -      | -      | -      | - | 1     |
| Critical Hdwy        | -      | -      | 4.18   | - | 6.48  |
| Critical Hdwy Stg 1  | -      | -      | -      | - | 5.48  |
| Critical Hdwy Stg 2  | -      | -      | -      | - | 5.48  |
| Follow-up Hdwy       | -      | -      | 2.272  | - | 3.372 |
| Pot Cap-1 Maneuver   | -      | -      | 1583   | - | 1005  |
| Stage 1              | -      | -      | -      | - | 1007  |
| Stage 2              | -      | -      | -      | - | 1007  |
| Platoon blocked, %   | -      | -      | -      | - | -     |
| Mov Cap-1 Maneuver   | -      | -      | 1583   | - | 1005  |
| Mov Cap-2 Maneuver   | -      | -      | -      | - | 1005  |
| Stage 1              | -      | -      | -      | - | 1007  |
| Stage 2              | -      | -      | -      | - | 1007  |

| Approach             | EB | WB | NB |
|----------------------|----|----|----|
| HCM Control Delay, s | 0  | 0  | 0  |
| HCM LOS              |    |    | A  |

| Minor Lane/Major Mvmt | NBLn1 | EBT | EBR | WBL  | WBT |
|-----------------------|-------|-----|-----|------|-----|
| Capacity (veh/h)      | -     | -   | -   | 1583 | -   |
| HCM Lane V/C Ratio    | -     | -   | -   | -    | -   |
| HCM Control Delay (s) | 0     | -   | -   | 0    | -   |
| HCM Lane LOS          | A     | -   | -   | A    | -   |
| HCM 95th %tile Q(veh) | -     | -   | -   | 0    | -   |

Deer Valley 30  
11: 15th Ave & Parkview Ln

2024 Background PM Scenario B  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh         | 0    |      |      |      |      |      |
| Movement                 | EBT  | EBR  | WBL  | WBT  | NBL  | NBR  |
| Lane Configurations      | ↻    |      |      | ↻    | ↻    |      |
| Traffic Vol, veh/h       | 0    | 0    | 0    | 0    | 0    | 0    |
| Future Vol, veh/h        | 0    | 0    | 0    | 0    | 0    | 0    |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Free | Free | Free | Free | Stop | Stop |
| RT Channelized           | -    | None | -    | None | -    | None |
| Storage Length           | -    | -    | -    | -    | 0    | -    |
| Veh in Median Storage, # | 0    | -    | -    | 0    | 0    | -    |
| Grade, %                 | 0    | -    | -    | 0    | 0    | -    |
| Peak Hour Factor         | 92   | 92   | 92   | 92   | 92   | 92   |
| Heavy Vehicles, %        | 8    | 8    | 8    | 8    | 8    | 8    |
| Mvmt Flow                | 0    | 0    | 0    | 0    | 0    | 0    |

| Major/Minor          | Major1 | Major2 | Minor1 |   |       |
|----------------------|--------|--------|--------|---|-------|
| Conflicting Flow All | 0      | 0      | 1      | 0 | 2     |
| Stage 1              | -      | -      | -      | - | 1     |
| Stage 2              | -      | -      | -      | - | 1     |
| Critical Hdwy        | -      | -      | 4.18   | - | 6.48  |
| Critical Hdwy Stg 1  | -      | -      | -      | - | 5.48  |
| Critical Hdwy Stg 2  | -      | -      | -      | - | 5.48  |
| Follow-up Hdwy       | -      | -      | 2.272  | - | 3.372 |
| Pot Cap-1 Maneuver   | -      | -      | 1583   | - | 1005  |
| Stage 1              | -      | -      | -      | - | 1007  |
| Stage 2              | -      | -      | -      | - | 1007  |
| Platoon blocked, %   | -      | -      | -      | - | -     |
| Mov Cap-1 Maneuver   | -      | -      | 1583   | - | 1005  |
| Mov Cap-2 Maneuver   | -      | -      | -      | - | 1005  |
| Stage 1              | -      | -      | -      | - | 1007  |
| Stage 2              | -      | -      | -      | - | 1007  |

| Approach             | EB | WB | NB |
|----------------------|----|----|----|
| HCM Control Delay, s | 0  | 0  | 0  |
| HCM LOS              |    |    | A  |

| Minor Lane/Major Mvmt | NBLn1 | EBT | EBR | WBL  | WBT |
|-----------------------|-------|-----|-----|------|-----|
| Capacity (veh/h)      | -     | -   | -   | 1583 | -   |
| HCM Lane V/C Ratio    | -     | -   | -   | -    | -   |
| HCM Control Delay (s) | 0     | -   | -   | 0    | -   |
| HCM Lane LOS          | A     | -   | -   | A    | -   |
| HCM 95th %tile Q(veh) | -     | -   | -   | 0    | -   |

Deer Valley 30  
12: Alameda Rd & Access A

2024 Background AM Scenario B  
HCM 6th TWSC

| Intersection             |        |        |        |      |       |       |
|--------------------------|--------|--------|--------|------|-------|-------|
| Int Delay, s/veh         | 0      |        |        |      |       |       |
| Movement                 | EBL    | EBT    | WBT    | WBR  | SBL   | SBR   |
| Lane Configurations      |        | ↕      | ↕      |      | ↕     |       |
| Traffic Vol, veh/h       | 0      | 0      | 0      | 0    | 0     | 0     |
| Future Vol, veh/h        | 0      | 0      | 0      | 0    | 0     | 0     |
| Conflicting Peds, #/hr   | 0      | 0      | 0      | 0    | 0     | 0     |
| Sign Control             | Free   | Free   | Free   | Free | Stop  | Stop  |
| RT Channelized           | -      | None   | -      | None | -     | None  |
| Storage Length           | -      | -      | -      | -    | 0     | -     |
| Veh in Median Storage, # | -      | 0      | 0      | -    | 0     | -     |
| Grade, %                 | -      | 0      | 0      | -    | 0     | -     |
| Peak Hour Factor         | 92     | 92     | 92     | 92   | 92    | 92    |
| Heavy Vehicles, %        | 8      | 8      | 8      | 8    | 8     | 8     |
| Mvmt Flow                | 0      | 0      | 0      | 0    | 0     | 0     |
| Major/Minor              | Major1 | Major2 | Minor2 |      |       |       |
| Conflicting Flow All     | 1      | 0      | -      | 0    | 1     | 1     |
| Stage 1                  | -      | -      | -      | -    | 1     | -     |
| Stage 2                  | -      | -      | -      | -    | 0     | -     |
| Critical Hdwy            | 4.18   | -      | -      | -    | 6.48  | 6.28  |
| Critical Hdwy Stg 1      | -      | -      | -      | -    | 5.48  | -     |
| Critical Hdwy Stg 2      | -      | -      | -      | -    | 5.48  | -     |
| Follow-up Hdwy           | 2.272  | -      | -      | -    | 3.572 | 3.372 |
| Pot Cap-1 Maneuver       | 1583   | -      | -      | -    | 1007  | 1066  |
| Stage 1                  | -      | -      | -      | -    | 1007  | -     |
| Stage 2                  | -      | -      | -      | -    | -     | -     |
| Platoon blocked, %       | -      | -      | -      | -    | -     | -     |
| Mov Cap-1 Maneuver       | 1583   | -      | -      | -    | 1007  | 1066  |
| Mov Cap-2 Maneuver       | -      | -      | -      | -    | 1007  | -     |
| Stage 1                  | -      | -      | -      | -    | 1007  | -     |
| Stage 2                  | -      | -      | -      | -    | -     | -     |
| Approach                 | EB     | WB     | SB     |      |       |       |
| HCM Control Delay, s     | 0      | 0      | 0      |      |       |       |
| HCM LOS                  | A      |        |        |      |       |       |
| Minor Lane/Major Mvmt    | EBL    | EBT    | WBT    | WBR  | SBLn1 | SBRn1 |
| Capacity (veh/h)         | 1583   | -      | -      | -    | -     | -     |
| HCM Lane V/C Ratio       | -      | -      | -      | -    | -     | -     |
| HCM Control Delay (s)    | 0      | -      | -      | -    | 0     | -     |
| HCM Lane LOS             | A      | -      | -      | -    | A     | -     |
| HCM 95th %tile Q(veh)    | 0      | -      | -      | -    | -     | -     |

Deer Valley 30  
12: Alameda Rd & Access A

2024 Background PM Scenario B  
HCM 6th TWSC

| Intersection             |        |        |        |      |       |       |
|--------------------------|--------|--------|--------|------|-------|-------|
| Int Delay, s/veh         | 0      |        |        |      |       |       |
| Movement                 | EBL    | EBT    | WBT    | WBR  | SBL   | SBR   |
| Lane Configurations      |        | ↕      | ↕      |      | ↕     |       |
| Traffic Vol, veh/h       | 0      | 0      | 0      | 0    | 0     | 0     |
| Future Vol, veh/h        | 0      | 0      | 0      | 0    | 0     | 0     |
| Conflicting Peds, #/hr   | 0      | 0      | 0      | 0    | 0     | 0     |
| Sign Control             | Free   | Free   | Free   | Free | Stop  | Stop  |
| RT Channelized           | -      | None   | -      | None | -     | None  |
| Storage Length           | -      | -      | -      | -    | 0     | -     |
| Veh in Median Storage, # | -      | 0      | 0      | -    | 0     | -     |
| Grade, %                 | -      | 0      | 0      | -    | 0     | -     |
| Peak Hour Factor         | 92     | 92     | 92     | 92   | 92    | 92    |
| Heavy Vehicles, %        | 8      | 8      | 8      | 8    | 8     | 8     |
| Mvmt Flow                | 0      | 0      | 0      | 0    | 0     | 0     |
| Major/Minor              | Major1 | Major2 | Minor2 |      |       |       |
| Conflicting Flow All     | 1      | 0      | -      | 0    | 1     | 1     |
| Stage 1                  | -      | -      | -      | -    | 1     | -     |
| Stage 2                  | -      | -      | -      | -    | 0     | -     |
| Critical Hdwy            | 4.18   | -      | -      | -    | 6.48  | 6.28  |
| Critical Hdwy Stg 1      | -      | -      | -      | -    | 5.48  | -     |
| Critical Hdwy Stg 2      | -      | -      | -      | -    | 5.48  | -     |
| Follow-up Hdwy           | 2.272  | -      | -      | -    | 3.572 | 3.372 |
| Pot Cap-1 Maneuver       | 1583   | -      | -      | -    | 1007  | 1066  |
| Stage 1                  | -      | -      | -      | -    | 1007  | -     |
| Stage 2                  | -      | -      | -      | -    | -     | -     |
| Platoon blocked, %       | -      | -      | -      | -    | -     | -     |
| Mov Cap-1 Maneuver       | 1583   | -      | -      | -    | 1007  | 1066  |
| Mov Cap-2 Maneuver       | -      | -      | -      | -    | 1007  | -     |
| Stage 1                  | -      | -      | -      | -    | 1007  | -     |
| Stage 2                  | -      | -      | -      | -    | -     | -     |
| Approach                 | EB     | WB     | SB     |      |       |       |
| HCM Control Delay, s     | 0      | 0      | 0      |      |       |       |
| HCM LOS                  | A      |        |        |      |       |       |
| Minor Lane/Major Mvmt    | EBL    | EBT    | WBT    | WBR  | SBLn1 | SBRn1 |
| Capacity (veh/h)         | 1583   | -      | -      | -    | -     | -     |
| HCM Lane V/C Ratio       | -      | -      | -      | -    | -     | -     |
| HCM Control Delay (s)    | 0      | -      | -      | -    | 0     | -     |
| HCM Lane LOS             | A      | -      | -      | -    | A     | -     |
| HCM 95th %tile Q(veh)    | 0      | -      | -      | -    | -     | -     |

Deer Valley 30  
13: Alameda Rd & Access B

2024 Background AM Scenario B  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh         | 0    |      |      |      |      |      |
| Movement                 | EBL  | EBT  | WBT  | WBR  | SBL  | SBR  |
| Lane Configurations      |      | ↕    | ↕    |      | ↕    |      |
| Traffic Vol, veh/h       | 0    | 0    | 0    | 0    | 0    | 0    |
| Future Vol, veh/h        | 0    | 0    | 0    | 0    | 0    | 0    |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Free | Free | Free | Free | Stop | Stop |
| RT Channelized           | -    | None | -    | None | -    | None |
| Storage Length           | -    | -    | -    | -    | 0    | -    |
| Veh in Median Storage, # | -    | 0    | 0    | -    | 0    | -    |
| Grade, %                 | -    | 0    | 0    | -    | 0    | -    |
| Peak Hour Factor         | 92   | 92   | 92   | 92   | 92   | 92   |
| Heavy Vehicles, %        | 8    | 8    | 8    | 8    | 8    | 8    |
| Mvmt Flow                | 0    | 0    | 0    | 0    | 0    | 0    |

| Major/Minor          | Major1 | Major2 | Minor2 |
|----------------------|--------|--------|--------|
| Conflicting Flow All | 1      | 0      | 1      |
| Stage 1              | -      | -      | 1      |
| Stage 2              | -      | -      | 0      |
| Critical Hdwy        | 4.18   | -      | 6.48   |
| Critical Hdwy Stg 1  | -      | -      | 5.48   |
| Critical Hdwy Stg 2  | -      | -      | 5.48   |
| Follow-up Hdwy       | 2.272  | -      | 3.372  |
| Pot Cap-1 Maneuver   | 1583   | -      | 1066   |
| Stage 1              | -      | -      | 1066   |
| Stage 2              | -      | -      | -      |
| Platoon blocked, %   | -      | -      | -      |
| Mov Cap-1 Maneuver   | 1583   | -      | 1066   |
| Mov Cap-2 Maneuver   | -      | -      | 1066   |
| Stage 1              | -      | -      | 1066   |
| Stage 2              | -      | -      | -      |

| Approach             | EB | WB | SB |
|----------------------|----|----|----|
| HCM Control Delay, s | 0  | 0  | 0  |
| HCM LOS              |    |    | A  |

| Minor Lane/Major Mvmt | EBL  | EBT | WBT | WBR | SBLn1 |
|-----------------------|------|-----|-----|-----|-------|
| Capacity (veh/h)      | 1583 | -   | -   | -   | -     |
| HCM Lane V/C Ratio    | -    | -   | -   | -   | -     |
| HCM Control Delay (s) | 0    | -   | -   | -   | 0     |
| HCM Lane LOS          | A    | -   | -   | -   | A     |
| HCM 95th %tile Q(veh) | 0    | -   | -   | -   | -     |

Deer Valley 30  
13: Alameda Rd & Access B

2024 Background PM Scenario B  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh         | 0    |      |      |      |      |      |
| Movement                 | EBL  | EBT  | WBT  | WBR  | SBL  | SBR  |
| Lane Configurations      |      | ↕    | ↕    |      | ↕    |      |
| Traffic Vol, veh/h       | 0    | 0    | 0    | 0    | 0    | 0    |
| Future Vol, veh/h        | 0    | 0    | 0    | 0    | 0    | 0    |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Free | Free | Free | Free | Stop | Stop |
| RT Channelized           | -    | None | -    | None | -    | None |
| Storage Length           | -    | -    | -    | -    | 0    | -    |
| Veh in Median Storage, # | -    | 0    | 0    | -    | 0    | -    |
| Grade, %                 | -    | 0    | 0    | -    | 0    | -    |
| Peak Hour Factor         | 92   | 92   | 92   | 92   | 92   | 92   |
| Heavy Vehicles, %        | 8    | 8    | 8    | 8    | 8    | 8    |
| Mvmt Flow                | 0    | 0    | 0    | 0    | 0    | 0    |

| Major/Minor          | Major1 | Major2 | Minor2 |
|----------------------|--------|--------|--------|
| Conflicting Flow All | 1      | 0      | 1      |
| Stage 1              | -      | -      | 1      |
| Stage 2              | -      | -      | 0      |
| Critical Hdwy        | 4.18   | -      | 6.48   |
| Critical Hdwy Stg 1  | -      | -      | 5.48   |
| Critical Hdwy Stg 2  | -      | -      | 5.48   |
| Follow-up Hdwy       | 2.272  | -      | 3.372  |
| Pot Cap-1 Maneuver   | 1583   | -      | 1066   |
| Stage 1              | -      | -      | 1066   |
| Stage 2              | -      | -      | -      |
| Platoon blocked, %   | -      | -      | -      |
| Mov Cap-1 Maneuver   | 1583   | -      | 1066   |
| Mov Cap-2 Maneuver   | -      | -      | 1066   |
| Stage 1              | -      | -      | 1066   |
| Stage 2              | -      | -      | -      |

| Approach             | EB | WB | SB |
|----------------------|----|----|----|
| HCM Control Delay, s | 0  | 0  | 0  |
| HCM LOS              |    |    | A  |

| Minor Lane/Major Mvmt | EBL  | EBT | WBT | WBR | SBLn1 |
|-----------------------|------|-----|-----|-----|-------|
| Capacity (veh/h)      | 1583 | -   | -   | -   | -     |
| HCM Lane V/C Ratio    | -    | -   | -   | -   | -     |
| HCM Control Delay (s) | 0    | -   | -   | -   | 0     |
| HCM Lane LOS          | A    | -   | -   | -   | A     |
| HCM 95th %tile Q(veh) | 0    | -   | -   | -   | -     |

Deer Valley 30  
14: Alameda Rd & Access C

2024 Background AM Scenario B  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh         | 0    |      |      |      |      |      |
| Movement                 | EBL  | EBT  | WBT  | WBR  | SBL  | SBR  |
| Lane Configurations      |      | ↕    | ↕    |      | ↕    | ↕    |
| Traffic Vol, veh/h       | 0    | 0    | 0    | 0    | 0    | 0    |
| Future Vol, veh/h        | 0    | 0    | 0    | 0    | 0    | 0    |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Free | Free | Free | Free | Stop | Stop |
| RT Channelized           | -    | None | -    | None | -    | None |
| Storage Length           | -    | -    | -    | -    | 0    | -    |
| Veh in Median Storage, # | -    | 0    | 0    | -    | 0    | -    |
| Grade, %                 | -    | 0    | 0    | -    | 0    | -    |
| Peak Hour Factor         | 92   | 92   | 92   | 92   | 92   | 92   |
| Heavy Vehicles, %        | 8    | 8    | 8    | 8    | 8    | 8    |
| Mvmt Flow                | 0    | 0    | 0    | 0    | 0    | 0    |

| Major/Minor          | Major1 | Major2 | Minor2 |
|----------------------|--------|--------|--------|
| Conflicting Flow All | 1      | 0      | 1      |
| Stage 1              | -      | -      | 1      |
| Stage 2              | -      | -      | 0      |
| Critical Hdwy        | 4.18   | -      | 6.48   |
| Critical Hdwy Stg 1  | -      | -      | 5.48   |
| Critical Hdwy Stg 2  | -      | -      | 5.48   |
| Follow-up Hdwy       | 2.272  | -      | 3.372  |
| Pot Cap-1 Maneuver   | 1583   | -      | 1066   |
| Stage 1              | -      | -      | 1066   |
| Stage 2              | -      | -      | -      |
| Platoon blocked, %   | -      | -      | -      |
| Mov Cap-1 Maneuver   | 1583   | -      | 1066   |
| Mov Cap-2 Maneuver   | -      | -      | 1066   |
| Stage 1              | -      | -      | 1066   |
| Stage 2              | -      | -      | -      |

| Approach             | EB | WB | SB |
|----------------------|----|----|----|
| HCM Control Delay, s | 0  | 0  | 0  |
| HCM LOS              |    |    | A  |

| Minor Lane/Major Mvmt | EBL  | EBT | WBT | WBR | SBLn1 |
|-----------------------|------|-----|-----|-----|-------|
| Capacity (veh/h)      | 1583 | -   | -   | -   | -     |
| HCM Lane V/C Ratio    | -    | -   | -   | -   | -     |
| HCM Control Delay (s) | 0    | -   | -   | -   | 0     |
| HCM Lane LOS          | A    | -   | -   | -   | A     |
| HCM 95th %tile Q(veh) | 0    | -   | -   | -   | -     |

Deer Valley 30  
14: Alameda Rd & Access C

2024 Background PM Scenario B  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh         | 0    |      |      |      |      |      |
| Movement                 | EBL  | EBT  | WBT  | WBR  | SBL  | SBR  |
| Lane Configurations      |      | ↕    | ↕    |      | ↕    | ↕    |
| Traffic Vol, veh/h       | 0    | 0    | 0    | 0    | 0    | 0    |
| Future Vol, veh/h        | 0    | 0    | 0    | 0    | 0    | 0    |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Free | Free | Free | Free | Stop | Stop |
| RT Channelized           | -    | None | -    | None | -    | None |
| Storage Length           | -    | -    | -    | -    | 0    | -    |
| Veh in Median Storage, # | -    | 0    | 0    | -    | 0    | -    |
| Grade, %                 | -    | 0    | 0    | -    | 0    | -    |
| Peak Hour Factor         | 92   | 92   | 92   | 92   | 92   | 92   |
| Heavy Vehicles, %        | 8    | 8    | 8    | 8    | 8    | 8    |
| Mvmt Flow                | 0    | 0    | 0    | 0    | 0    | 0    |

| Major/Minor          | Major1 | Major2 | Minor2 |
|----------------------|--------|--------|--------|
| Conflicting Flow All | 1      | 0      | 1      |
| Stage 1              | -      | -      | 1      |
| Stage 2              | -      | -      | 0      |
| Critical Hdwy        | 4.18   | -      | 6.48   |
| Critical Hdwy Stg 1  | -      | -      | 5.48   |
| Critical Hdwy Stg 2  | -      | -      | 5.48   |
| Follow-up Hdwy       | 2.272  | -      | 3.372  |
| Pot Cap-1 Maneuver   | 1583   | -      | 1066   |
| Stage 1              | -      | -      | 1066   |
| Stage 2              | -      | -      | -      |
| Platoon blocked, %   | -      | -      | -      |
| Mov Cap-1 Maneuver   | 1583   | -      | 1066   |
| Mov Cap-2 Maneuver   | -      | -      | 1066   |
| Stage 1              | -      | -      | 1066   |
| Stage 2              | -      | -      | -      |

| Approach             | EB | WB | SB |
|----------------------|----|----|----|
| HCM Control Delay, s | 0  | 0  | 0  |
| HCM LOS              |    |    | A  |

| Minor Lane/Major Mvmt | EBL  | EBT | WBT | WBR | SBLn1 |
|-----------------------|------|-----|-----|-----|-------|
| Capacity (veh/h)      | 1583 | -   | -   | -   | -     |
| HCM Lane V/C Ratio    | -    | -   | -   | -   | -     |
| HCM Control Delay (s) | 0    | -   | -   | -   | 0     |
| HCM Lane LOS          | A    | -   | -   | -   | A     |
| HCM 95th %tile Q(veh) | 0    | -   | -   | -   | -     |

Deer Valley 30  
15: Alameda Rd & 15th Ave

2024 Background AM Scenario B  
HCM 6th TWSC

| Intersection             |        |        |        |      |       |       |
|--------------------------|--------|--------|--------|------|-------|-------|
| Int Delay, s/veh         | 0      |        |        |      |       |       |
| Movement                 | EBL    | EBT    | WBT    | WBR  | SBL   | SBR   |
| Lane Configurations      |        | ↕      | ↕      |      | ↕     |       |
| Traffic Vol, veh/h       | 0      | 0      | 0      | 0    | 0     | 0     |
| Future Vol, veh/h        | 0      | 0      | 0      | 0    | 0     | 0     |
| Conflicting Peds, #/hr   | 0      | 0      | 0      | 0    | 0     | 0     |
| Sign Control             | Free   | Free   | Free   | Free | Stop  | Stop  |
| RT Channelized           | -      | None   | -      | None | -     | None  |
| Storage Length           | -      | -      | -      | -    | 0     | -     |
| Veh in Median Storage, # | -      | 0      | 0      | -    | 0     | -     |
| Grade, %                 | -      | 0      | 0      | -    | 0     | -     |
| Peak Hour Factor         | 92     | 92     | 92     | 92   | 92    | 92    |
| Heavy Vehicles, %        | 8      | 8      | 8      | 8    | 8     | 8     |
| Mvmt Flow                | 0      | 0      | 0      | 0    | 0     | 0     |
| Major/Minor              | Major1 | Major2 | Minor2 |      |       |       |
| Conflicting Flow All     | 1      | 0      | -      | 0    | 1     | 1     |
| Stage 1                  | -      | -      | -      | -    | 1     | -     |
| Stage 2                  | -      | -      | -      | -    | 0     | -     |
| Critical Hdwy            | 4.18   | -      | -      | -    | 6.48  | 6.28  |
| Critical Hdwy Stg 1      | -      | -      | -      | -    | 5.48  | -     |
| Critical Hdwy Stg 2      | -      | -      | -      | -    | 5.48  | -     |
| Follow-up Hdwy           | 2.272  | -      | -      | -    | 3.572 | 3.372 |
| Pot Cap-1 Maneuver       | 1583   | -      | -      | -    | 1007  | 1066  |
| Stage 1                  | -      | -      | -      | -    | 1007  | -     |
| Stage 2                  | -      | -      | -      | -    | -     | -     |
| Platoon blocked, %       | -      | -      | -      | -    | -     | -     |
| Mov Cap-1 Maneuver       | 1583   | -      | -      | -    | 1007  | 1066  |
| Mov Cap-2 Maneuver       | -      | -      | -      | -    | 1007  | -     |
| Stage 1                  | -      | -      | -      | -    | 1007  | -     |
| Stage 2                  | -      | -      | -      | -    | -     | -     |
| Approach                 | EB     | WB     | SB     |      |       |       |
| HCM Control Delay, s     | 0      | 0      | 0      |      |       |       |
| HCM LOS                  | A      |        |        |      |       |       |
| Minor Lane/Major Mvmt    | EBL    | EBT    | WBT    | WBR  | SBLn1 | SBRn1 |
| Capacity (veh/h)         | 1583   | -      | -      | -    | -     | -     |
| HCM Lane V/C Ratio       | -      | -      | -      | -    | -     | -     |
| HCM Control Delay (s)    | 0      | -      | -      | -    | 0     | -     |
| HCM Lane LOS             | A      | -      | -      | -    | A     | -     |
| HCM 95th %tile Q(veh)    | 0      | -      | -      | -    | -     | -     |

Deer Valley 30  
15: Alameda Rd & 15th Ave

2024 Background PM Scenario B  
HCM 6th TWSC

| Intersection             |        |        |        |      |       |       |
|--------------------------|--------|--------|--------|------|-------|-------|
| Int Delay, s/veh         | 0      |        |        |      |       |       |
| Movement                 | EBL    | EBT    | WBT    | WBR  | SBL   | SBR   |
| Lane Configurations      |        | ↕      | ↕      |      | ↕     |       |
| Traffic Vol, veh/h       | 0      | 0      | 0      | 0    | 0     | 0     |
| Future Vol, veh/h        | 0      | 0      | 0      | 0    | 0     | 0     |
| Conflicting Peds, #/hr   | 0      | 0      | 0      | 0    | 0     | 0     |
| Sign Control             | Free   | Free   | Free   | Free | Stop  | Stop  |
| RT Channelized           | -      | None   | -      | None | -     | None  |
| Storage Length           | -      | -      | -      | -    | 0     | -     |
| Veh in Median Storage, # | -      | 0      | 0      | -    | 0     | -     |
| Grade, %                 | -      | 0      | 0      | -    | 0     | -     |
| Peak Hour Factor         | 92     | 92     | 92     | 92   | 92    | 92    |
| Heavy Vehicles, %        | 8      | 8      | 8      | 8    | 8     | 8     |
| Mvmt Flow                | 0      | 0      | 0      | 0    | 0     | 0     |
| Major/Minor              | Major1 | Major2 | Minor2 |      |       |       |
| Conflicting Flow All     | 1      | 0      | -      | 0    | 1     | 1     |
| Stage 1                  | -      | -      | -      | -    | 1     | -     |
| Stage 2                  | -      | -      | -      | -    | 0     | -     |
| Critical Hdwy            | 4.18   | -      | -      | -    | 6.48  | 6.28  |
| Critical Hdwy Stg 1      | -      | -      | -      | -    | 5.48  | -     |
| Critical Hdwy Stg 2      | -      | -      | -      | -    | 5.48  | -     |
| Follow-up Hdwy           | 2.272  | -      | -      | -    | 3.572 | 3.372 |
| Pot Cap-1 Maneuver       | 1583   | -      | -      | -    | 1007  | 1066  |
| Stage 1                  | -      | -      | -      | -    | 1007  | -     |
| Stage 2                  | -      | -      | -      | -    | -     | -     |
| Platoon blocked, %       | -      | -      | -      | -    | -     | -     |
| Mov Cap-1 Maneuver       | 1583   | -      | -      | -    | 1007  | 1066  |
| Mov Cap-2 Maneuver       | -      | -      | -      | -    | 1007  | -     |
| Stage 1                  | -      | -      | -      | -    | 1007  | -     |
| Stage 2                  | -      | -      | -      | -    | -     | -     |
| Approach                 | EB     | WB     | SB     |      |       |       |
| HCM Control Delay, s     | 0      | 0      | 0      |      |       |       |
| HCM LOS                  | A      |        |        |      |       |       |
| Minor Lane/Major Mvmt    | EBL    | EBT    | WBT    | WBR  | SBLn1 | SBRn1 |
| Capacity (veh/h)         | 1583   | -      | -      | -    | -     | -     |
| HCM Lane V/C Ratio       | -      | -      | -      | -    | -     | -     |
| HCM Control Delay (s)    | 0      | -      | -      | -    | 0     | -     |
| HCM Lane LOS             | A      | -      | -      | -    | A     | -     |
| HCM 95th %tile Q(veh)    | 0      | -      | -      | -    | -     | -     |

Deer Valley 30  
16: Access D

2024 Background AM Scenario B  
HCM 6th TWSC

| Intersection             |        |        |        |       |      |       |
|--------------------------|--------|--------|--------|-------|------|-------|
| Int Delay, s/veh         | 0      |        |        |       |      |       |
| Movement                 | EBL    | EBT    | WBT    | WBR   | SBL  | SBR   |
| Lane Configurations      |        | ↕      | ↑      |       |      | ↕     |
| Traffic Vol, veh/h       | 0      | 0      | 0      | 0     | 0    | 0     |
| Future Vol, veh/h        | 0      | 0      | 0      | 0     | 0    | 0     |
| Conflicting Peds, #/hr   | 0      | 0      | 0      | 0     | 0    | 0     |
| Sign Control             | Free   | Free   | Free   | Free  | Stop | Stop  |
| RT Channelized           | -      | None   | -      | None  | -    | None  |
| Storage Length           | -      | -      | -      | -     | -    | 0     |
| Veh in Median Storage, # | -      | 0      | 0      | -     | 0    | -     |
| Grade, %                 | -      | 0      | 0      | -     | 0    | -     |
| Peak Hour Factor         | 92     | 92     | 92     | 92    | 92   | 92    |
| Heavy Vehicles, %        | 8      | 8      | 8      | 8     | 8    | 8     |
| Mvmt Flow                | 0      | 0      | 0      | 0     | 0    | 0     |
| Major/Minor              | Major1 | Major2 | Minor2 |       |      |       |
| Conflicting Flow All     | 1      | 0      | -      | 0     | -    | 1     |
| Stage 1                  | -      | -      | -      | -     | -    | -     |
| Stage 2                  | -      | -      | -      | -     | -    | -     |
| Critical Hdwy            | 4.18   | -      | -      | -     | -    | 6.28  |
| Critical Hdwy Stg 1      | -      | -      | -      | -     | -    | -     |
| Critical Hdwy Stg 2      | -      | -      | -      | -     | -    | -     |
| Follow-up Hdwy           | 2.272  | -      | -      | -     | -    | 3.372 |
| Pot Cap-1 Maneuver       | 1583   | -      | -      | 0     | 0    | 1066  |
| Stage 1                  | -      | -      | -      | 0     | 0    | -     |
| Stage 2                  | -      | -      | -      | 0     | 0    | -     |
| Platoon blocked, %       | -      | -      | -      | -     | -    | -     |
| Mov Cap-1 Maneuver       | 1583   | -      | -      | -     | -    | 1066  |
| Mov Cap-2 Maneuver       | -      | -      | -      | -     | -    | -     |
| Stage 1                  | -      | -      | -      | -     | -    | -     |
| Stage 2                  | -      | -      | -      | -     | -    | -     |
| Approach                 | EB     | WB     | SB     |       |      |       |
| HCM Control Delay, s     | 0      | 0      | 0      |       |      |       |
| HCM LOS                  |        |        |        | A     |      |       |
| Minor Lane/Major Mvmt    | EBL    | EBT    | WBT    | SBLn1 |      |       |
| Capacity (veh/h)         | 1583   | -      | -      | -     |      |       |
| HCM Lane V/C Ratio       | -      | -      | -      | -     |      |       |
| HCM Control Delay (s)    | 0      | -      | -      | 0     |      |       |
| HCM Lane LOS             | A      | -      | -      | A     |      |       |
| HCM 95th %tile Q(veh)    | 0      | -      | -      | -     |      |       |

Deer Valley 30  
16: Access D

2024 Background PM Scenario B  
HCM 6th TWSC

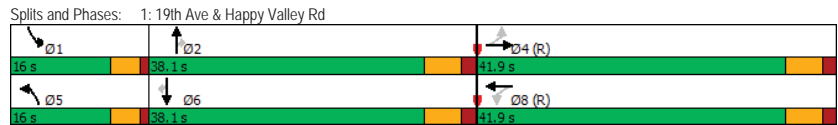
| Intersection             |        |        |        |       |      |       |
|--------------------------|--------|--------|--------|-------|------|-------|
| Int Delay, s/veh         | 0      |        |        |       |      |       |
| Movement                 | EBL    | EBT    | WBT    | WBR   | SBL  | SBR   |
| Lane Configurations      |        | ↕      | ↑      |       |      | ↕     |
| Traffic Vol, veh/h       | 0      | 0      | 0      | 0     | 0    | 0     |
| Future Vol, veh/h        | 0      | 0      | 0      | 0     | 0    | 0     |
| Conflicting Peds, #/hr   | 0      | 0      | 0      | 0     | 0    | 0     |
| Sign Control             | Free   | Free   | Free   | Free  | Stop | Stop  |
| RT Channelized           | -      | None   | -      | None  | -    | None  |
| Storage Length           | -      | -      | -      | -     | -    | 0     |
| Veh in Median Storage, # | -      | 0      | 0      | -     | 0    | -     |
| Grade, %                 | -      | 0      | 0      | -     | 0    | -     |
| Peak Hour Factor         | 92     | 92     | 92     | 92    | 92   | 92    |
| Heavy Vehicles, %        | 8      | 8      | 8      | 8     | 8    | 8     |
| Mvmt Flow                | 0      | 0      | 0      | 0     | 0    | 0     |
| Major/Minor              | Major1 | Major2 | Minor2 |       |      |       |
| Conflicting Flow All     | 1      | 0      | -      | 0     | -    | 1     |
| Stage 1                  | -      | -      | -      | -     | -    | -     |
| Stage 2                  | -      | -      | -      | -     | -    | -     |
| Critical Hdwy            | 4.18   | -      | -      | -     | -    | 6.28  |
| Critical Hdwy Stg 1      | -      | -      | -      | -     | -    | -     |
| Critical Hdwy Stg 2      | -      | -      | -      | -     | -    | -     |
| Follow-up Hdwy           | 2.272  | -      | -      | -     | -    | 3.372 |
| Pot Cap-1 Maneuver       | 1583   | -      | -      | 0     | 0    | 1066  |
| Stage 1                  | -      | -      | -      | 0     | 0    | -     |
| Stage 2                  | -      | -      | -      | 0     | 0    | -     |
| Platoon blocked, %       | -      | -      | -      | -     | -    | -     |
| Mov Cap-1 Maneuver       | 1583   | -      | -      | -     | -    | 1066  |
| Mov Cap-2 Maneuver       | -      | -      | -      | -     | -    | -     |
| Stage 1                  | -      | -      | -      | -     | -    | -     |
| Stage 2                  | -      | -      | -      | -     | -    | -     |
| Approach                 | EB     | WB     | SB     |       |      |       |
| HCM Control Delay, s     | 0      | 0      | 0      |       |      |       |
| HCM LOS                  |        |        |        | A     |      |       |
| Minor Lane/Major Mvmt    | EBL    | EBT    | WBT    | SBLn1 |      |       |
| Capacity (veh/h)         | 1583   | -      | -      | -     |      |       |
| HCM Lane V/C Ratio       | -      | -      | -      | -     |      |       |
| HCM Control Delay (s)    | 0      | -      | -      | 0     |      |       |
| HCM Lane LOS             | A      | -      | -      | A     |      |       |
| HCM 95th %tile Q(veh)    | 0      | -      | -      | -     |      |       |



Deer Valley 30  
1: 19th Ave & Happy Valley Rd  
2024 Background AM Mitigated Scenario B  
Timings

| Lane Group           | EBL   | EBT   | WBL   | WBT   | NBL   | NBT   | NBR   | SBL   | SBT   | SBR   |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations  | ↔     | ↔↔    | ↔     | ↔↔    | ↔     | ↔     | ↔     | ↔     | ↔↔    | ↔     |
| Traffic Volume (vph) | 87    | 348   | 150   | 295   | 153   | 257   | 102   | 267   | 408   | 96    |
| Future Volume (vph)  | 87    | 348   | 150   | 295   | 153   | 257   | 102   | 267   | 408   | 96    |
| Turn Type            | Perm  | NA    | Perm  | NA    | Prot  | NA    | Perm  | Prot  | NA    | Perm  |
| Protected Phases     |       | 4     |       | 8     |       | 5     | 2     |       | 1     | 6     |
| Permitted Phases     | 4     |       | 8     |       |       |       | 2     |       |       | 6     |
| Detector Phase       | 4     | 4     | 8     | 8     | 5     | 2     | 2     | 1     | 6     | 6     |
| Switch Phase         |       |       |       |       |       |       |       |       |       |       |
| Minimum Initial (s)  | 15.0  | 15.0  | 15.0  | 15.0  | 5.0   | 5.0   | 5.0   | 5.0   | 5.0   | 5.0   |
| Minimum Split (s)    | 41.0  | 41.0  | 41.0  | 41.0  | 9.5   | 43.1  | 43.1  | 9.5   | 43.1  | 43.1  |
| Total Split (s)      | 41.9  | 41.9  | 41.9  | 41.9  | 16.0  | 38.1  | 38.1  | 16.0  | 38.1  | 38.1  |
| Total Split (%)      | 43.6% | 43.6% | 43.6% | 43.6% | 16.7% | 39.7% | 39.7% | 16.7% | 39.7% | 39.7% |
| Yellow Time (s)      | 4.3   | 4.3   | 4.3   | 4.3   | 3.5   | 4.3   | 4.3   | 3.5   | 4.3   | 4.3   |
| All-Red Time (s)     | 1.7   | 1.7   | 1.7   | 1.7   | 1.0   | 1.8   | 1.8   | 1.0   | 1.8   | 1.8   |
| Lost Time Adjust (s) | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Lost Time (s)  | 6.0   | 6.0   | 6.0   | 6.0   | 4.5   | 6.1   | 6.1   | 4.5   | 6.1   | 6.1   |
| Lead/Lag             |       |       |       |       | Lead  | Lag   | Lag   | Lead  | Lag   | Lag   |
| Lead-Lag Optimize?   |       |       |       |       | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   |
| Recall Mode          | C-Max | C-Max | C-Max | C-Max | None  | Max   | Max   | None  | Max   | Max   |
| Act Effct Green (s)  | 35.9  | 35.9  | 35.9  | 35.9  | 9.9   | 32.3  | 32.3  | 11.2  | 33.6  | 33.6  |
| Actuated g/C Ratio   | 0.37  | 0.37  | 0.37  | 0.37  | 0.10  | 0.34  | 0.34  | 0.12  | 0.35  | 0.35  |
| v/c Ratio            | 0.30  | 0.31  | 0.61  | 0.25  | 0.50  | 0.25  | 0.19  | 0.77  | 0.26  | 0.18  |
| Control Delay        | 24.4  | 15.9  | 35.9  | 15.6  | 45.7  | 23.9  | 5.5   | 55.3  | 23.2  | 5.5   |
| Queue Delay          | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Delay          | 24.4  | 15.9  | 35.9  | 15.6  | 45.7  | 23.9  | 5.5   | 55.3  | 23.2  | 5.5   |
| LOS                  | C     | B     | D     | B     | D     | C     | A     | E     | C     | A     |
| Approach Delay       |       | 17.1  |       | 21.1  |       | 26.8  |       |       | 32.1  |       |
| Approach LOS         |       | B     |       | C     |       | C     |       |       | C     |       |

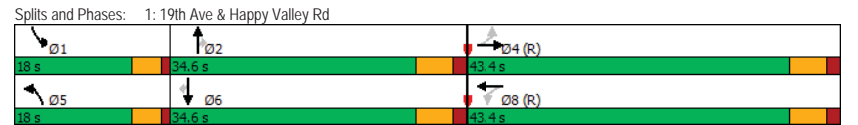
**Intersection Summary**  
 Cycle Length: 96  
 Actuated Cycle Length: 96  
 Offset: 0 (0%), Referenced to phase 4:EBTL and 8:WBTL, Start of Green  
 Natural Cycle: 95  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.77  
 Intersection Signal Delay: 24.8  
 Intersection Capacity Utilization 58.6%  
 Analysis Period (min) 15  
 Intersection LOS: C  
 ICU Level of Service B



Deer Valley 30  
1: 19th Ave & Happy Valley Rd  
2024 Background PM Mitigated Scenario B  
Timings

| Lane Group           | EBL   | EBT   | WBL   | WBT   | NBL   | NBT   | NBR   | SBL   | SBT   | SBR   |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations  | ↔     | ↔↔    | ↔     | ↔↔    | ↔     | ↔     | ↔     | ↔     | ↔↔    | ↔     |
| Traffic Volume (vph) | 167   | 383   | 165   | 747   | 304   | 481   | 125   | 177   | 228   | 122   |
| Future Volume (vph)  | 167   | 383   | 165   | 747   | 304   | 481   | 125   | 177   | 228   | 122   |
| Turn Type            | Perm  | NA    | Perm  | NA    | Prot  | NA    | Perm  | Prot  | NA    | Perm  |
| Protected Phases     |       | 4     |       | 8     |       | 5     | 2     |       | 1     | 6     |
| Permitted Phases     | 4     |       | 8     |       |       |       | 2     |       |       | 6     |
| Detector Phase       | 4     | 4     | 8     | 8     | 5     | 2     | 2     | 1     | 6     | 6     |
| Switch Phase         |       |       |       |       |       |       |       |       |       |       |
| Minimum Initial (s)  | 15.0  | 15.0  | 15.0  | 15.0  | 5.0   | 5.0   | 5.0   | 5.0   | 5.0   | 5.0   |
| Minimum Split (s)    | 41.0  | 41.0  | 41.0  | 41.0  | 9.5   | 43.1  | 43.1  | 9.5   | 43.1  | 43.1  |
| Total Split (s)      | 43.4  | 43.4  | 43.4  | 43.4  | 18.0  | 34.6  | 34.6  | 18.0  | 34.6  | 34.6  |
| Total Split (%)      | 45.2% | 45.2% | 45.2% | 45.2% | 18.8% | 36.0% | 36.0% | 18.8% | 36.0% | 36.0% |
| Yellow Time (s)      | 4.3   | 4.3   | 4.3   | 4.3   | 3.5   | 4.3   | 4.3   | 3.5   | 4.3   | 4.3   |
| All-Red Time (s)     | 1.7   | 1.7   | 1.7   | 1.7   | 1.0   | 1.8   | 1.8   | 1.0   | 1.8   | 1.8   |
| Lost Time Adjust (s) | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Lost Time (s)  | 6.0   | 6.0   | 6.0   | 6.0   | 4.5   | 6.1   | 6.1   | 4.5   | 6.1   | 6.1   |
| Lead/Lag             |       |       |       |       | Lead  | Lag   | Lag   | Lead  | Lag   | Lag   |
| Lead-Lag Optimize?   |       |       |       |       | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   |
| Recall Mode          | C-Max | C-Max | C-Max | C-Max | None  | Max   | Max   | None  | Max   | Max   |
| Act Effct Green (s)  | 37.4  | 37.4  | 37.4  | 37.4  | 13.0  | 31.1  | 31.1  | 10.9  | 29.0  | 29.0  |
| Actuated g/C Ratio   | 0.39  | 0.39  | 0.39  | 0.39  | 0.14  | 0.32  | 0.32  | 0.11  | 0.30  | 0.30  |
| v/c Ratio            | 1.80  | 0.36  | 0.74  | 0.64  | 0.75  | 0.48  | 0.24  | 0.52  | 0.17  | 0.26  |
| Control Delay        | 421.4 | 15.2  | 46.4  | 22.5  | 51.7  | 28.3  | 5.7   | 45.1  | 25.2  | 12.1  |
| Queue Delay          | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Delay          | 421.4 | 15.2  | 46.4  | 22.5  | 51.7  | 28.3  | 5.7   | 45.1  | 25.2  | 12.1  |
| LOS                  | F     | B     | D     | C     | D     | C     | A     | D     | C     | B     |
| Approach Delay       |       | 102.1 |       | 25.7  |       | 33.0  |       |       | 28.8  |       |
| Approach LOS         |       | F     |       | C     |       | C     |       |       | C     |       |

**Intersection Summary**  
 Cycle Length: 96  
 Actuated Cycle Length: 96  
 Offset: 0 (0%), Referenced to phase 4:EBTL and 8:WBTL, Start of Green  
 Natural Cycle: 145  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 1.80  
 Intersection Signal Delay: 45.3  
 Intersection Capacity Utilization 71.9%  
 Analysis Period (min) 15  
 Intersection LOS: D  
 ICU Level of Service C



Deer Valley 30  
1: 19th Ave & Happy Valley Rd

2024 Background AM Mitigated Scenario B  
HCM 6th Signalized Intersection Summary

| Movement                     | EBL  | EBT   | EBR  | WBL  | WBT  | WBR   | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
|------------------------------|------|-------|------|------|------|-------|------|------|------|------|------|------|
| Lane Configurations          | ↔    | ↔↔    | ↔    | ↔    | ↔↔   | ↔     | ↔    | ↔    | ↔    | ↔    | ↔↔   | ↔    |
| Traffic Volume (veh/h)       | 87   | 348   | 172  | 150  | 295  | 110   | 153  | 257  | 102  | 267  | 408  | 96   |
| Future Volume (veh/h)        | 87   | 348   | 172  | 150  | 295  | 110   | 153  | 257  | 102  | 267  | 408  | 96   |
| Initial Q (Ob), veh          | 0    | 0     | 0    | 0    | 0    | 0     | 0    | 0    | 0    | 0    | 0    | 0    |
| Ped-Bike Adj(A_pbT)          | 1.00 |       | 1.00 | 1.00 |      | 1.00  | 1.00 |      | 1.00 | 1.00 |      | 1.00 |
| Parking Bus, Adj             | 1.00 | 1.00  | 1.00 | 1.00 | 1.00 | 1.00  | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Work Zone On Approach        | No   |       | No   |      | No   |       | No   |      | No   |      | No   |      |
| Adj Sat Flow, veh/h/ln       | 1781 | 1781  | 1781 | 1781 | 1781 | 1781  | 1781 | 1781 | 1781 | 1781 | 1781 | 1781 |
| Adj Flow Rate, veh/h         | 95   | 378   | 187  | 163  | 321  | 120   | 166  | 279  | 111  | 290  | 443  | 104  |
| Peak Hour Factor             | 0.92 | 0.92  | 0.92 | 0.92 | 0.92 | 0.92  | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Percent Heavy Veh, %         | 8    | 8     | 8    | 8    | 8    | 8     | 8    | 8    | 8    | 8    | 8    | 8    |
| Cap, veh/h                   | 364  | 1250  | 582  | 315  | 1367 | 482   | 235  | 1128 | 503  | 357  | 1801 | 559  |
| Arrive On Green              | 0.39 | 0.39  | 0.39 | 0.39 | 0.39 | 0.39  | 0.07 | 0.33 | 0.33 | 0.11 | 0.37 | 0.37 |
| Sat Flow, veh/h              | 903  | 3242  | 1510 | 806  | 3547 | 1251  | 3291 | 3385 | 1510 | 3291 | 4863 | 1510 |
| Grp Volume(v), veh/h         | 95   | 378   | 187  | 163  | 292  | 149   | 166  | 279  | 111  | 290  | 443  | 104  |
| Grp Sat Flow(s), veh/h/ln    | 903  | 1621  | 1510 | 806  | 1621 | 1556  | 1646 | 1692 | 1510 | 1646 | 1621 | 1510 |
| Q Serve(g_s), s              | 7.7  | 7.8   | 8.3  | 17.1 | 5.8  | 6.3   | 4.7  | 5.7  | 5.1  | 8.3  | 6.1  | 4.5  |
| Cycle Q Clear(g_c), s        | 13.9 | 7.8   | 8.3  | 25.4 | 5.8  | 6.3   | 4.7  | 5.7  | 5.1  | 8.3  | 6.1  | 4.5  |
| Prop In Lane                 | 1.00 |       | 1.00 | 1.00 |      | 0.80  | 1.00 |      | 1.00 | 1.00 |      | 1.00 |
| Lane Grp Cap(c), veh/h       | 364  | 1250  | 582  | 315  | 1250 | 600   | 235  | 1128 | 503  | 357  | 1801 | 559  |
| V/C Ratio(X)                 | 0.26 | 0.30  | 0.32 | 0.52 | 0.23 | 0.25  | 0.71 | 0.25 | 0.22 | 0.81 | 0.25 | 0.19 |
| Avail Cap(c_a), veh/h        | 364  | 1250  | 582  | 315  | 1250 | 600   | 394  | 1128 | 503  | 394  | 1801 | 559  |
| HCM Platoon Ratio            | 1.00 | 1.00  | 1.00 | 1.00 | 1.00 | 1.00  | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(I)           | 1.00 | 1.00  | 1.00 | 1.00 | 1.00 | 1.00  | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Uniform Delay (d), s/veh     | 24.8 | 20.5  | 20.7 | 29.6 | 19.9 | 20.1  | 43.6 | 23.2 | 23.0 | 41.8 | 20.9 | 20.4 |
| Incr Delay (d2), s/veh       | 1.7  | 0.6   | 1.5  | 5.9  | 0.4  | 1.0   | 3.9  | 0.5  | 1.0  | 11.3 | 0.3  | 0.7  |
| Initial Q Delay(d3), s/veh   | 0.0  | 0.0   | 0.0  | 0.0  | 0.0  | 0.0   | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| %ile BackOfQ(50%), veh/ln    | 1.8  | 3.0   | 3.1  | 3.8  | 2.2  | 2.4   | 2.0  | 2.3  | 1.9  | 3.9  | 2.3  | 1.7  |
| Unsig. Movement Delay, s/veh |      |       |      |      |      |       |      |      |      |      |      |      |
| LnGrp Delay(d), s/veh        | 26.5 | 21.1  | 22.2 | 35.6 | 20.4 | 21.0  | 47.5 | 23.8 | 24.0 | 53.2 | 21.3 | 21.2 |
| LnGrp LOS                    | C    | B     | C    | D    | C    | C     | D    | C    | C    | D    | C    | C    |
| Approach Vol, veh/h          |      | 660   |      |      | 604  |       |      | 556  |      |      | 837  |      |
| Approach Delay, s/veh        |      | 22.2  |      |      | 24.6 |       |      | 30.9 |      |      | 32.3 |      |
| Approach LOS                 |      | C     |      |      | C    |       |      | C    |      |      | C    |      |
| Timer - Assigned Phs         | 1    | 2     |      | 4    | 5    | 6     |      | 8    |      |      |      |      |
| Phs Duration (G+Y+Rc), s     | 14.9 | 38.1  |      | 43.0 | 11.4 | 41.6  |      | 43.0 |      |      |      |      |
| Change Period (Y+Rc), s      | 4.5  | * 6.1 |      | * 6  | 4.5  | * 6.1 |      | * 6  |      |      |      |      |
| Max Green Setting (Gmax), s  | 11.5 | * 32  |      | * 36 | 11.5 | * 32  |      | * 36 |      |      |      |      |
| Max Q Clear Time (g_c+I1), s | 10.3 | 7.7   |      | 15.9 | 6.7  | 8.1   |      | 27.4 |      |      |      |      |
| Green Ext Time (p_c), s      | 0.1  | 2.2   |      | 4.3  | 0.2  | 3.5   |      | 2.5  |      |      |      |      |

| Intersection Summary |  |      |
|----------------------|--|------|
| HCM 6th Ctrl Delay   |  | 27.8 |
| HCM 6th LOS          |  | C    |

Notes  
User approved pedestrian interval to be less than phase max green.  
\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Deer Valley 30  
1: 19th Ave & Happy Valley Rd

2024 Background PM Mitigated Scenario B  
HCM 6th Signalized Intersection Summary

| Movement                     | EBL   | EBT   | EBR  | WBL  | WBT  | WBR   | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
|------------------------------|-------|-------|------|------|------|-------|------|------|------|------|------|------|
| Lane Configurations          | ↔     | ↔↔    | ↔    | ↔    | ↔↔   | ↔     | ↔    | ↔    | ↔    | ↔    | ↔↔   | ↔    |
| Traffic Volume (veh/h)       | 167   | 383   | 232  | 165  | 747  | 348   | 304  | 481  | 125  | 177  | 228  | 122  |
| Future Volume (veh/h)        | 167   | 383   | 232  | 165  | 747  | 348   | 304  | 481  | 125  | 177  | 228  | 122  |
| Initial Q (Ob), veh          | 0     | 0     | 0    | 0    | 0    | 0     | 0    | 0    | 0    | 0    | 0    | 0    |
| Ped-Bike Adj(A_pbT)          | 1.00  |       | 1.00 | 1.00 |      | 1.00  | 1.00 |      | 1.00 | 1.00 |      | 1.00 |
| Parking Bus, Adj             | 1.00  | 1.00  | 1.00 | 1.00 | 1.00 | 1.00  | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Work Zone On Approach        | No    |       | No   |      | No   |       | No   |      | No   |      | No   |      |
| Adj Sat Flow, veh/h/ln       | 1781  | 1781  | 1781 | 1781 | 1781 | 1781  | 1781 | 1781 | 1781 | 1781 | 1781 | 1781 |
| Adj Flow Rate, veh/h         | 182   | 416   | 252  | 179  | 812  | 378   | 330  | 523  | 136  | 192  | 248  | 133  |
| Peak Hour Factor             | 0.92  | 0.92  | 0.92 | 0.92 | 0.92 | 0.92  | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Percent Heavy Veh, %         | 8     | 8     | 8    | 8    | 8    | 8     | 8    | 8    | 8    | 8    | 8    | 8    |
| Cap, veh/h                   | 169   | 1325  | 617  | 288  | 1328 | 615   | 400  | 1144 | 510  | 265  | 1444 | 448  |
| Arrive On Green              | 0.41  | 0.41  | 0.41 | 0.41 | 0.41 | 0.41  | 0.12 | 0.34 | 0.34 | 0.08 | 0.30 | 0.30 |
| Sat Flow, veh/h              | 448   | 3242  | 1510 | 732  | 3248 | 1504  | 3291 | 3385 | 1510 | 3291 | 4863 | 1510 |
| Grp Volume(v), veh/h         | 182   | 416   | 252  | 179  | 810  | 380   | 330  | 523  | 136  | 192  | 248  | 133  |
| Grp Sat Flow(s), veh/h/ln    | 448   | 1621  | 1510 | 732  | 1621 | 1511  | 1646 | 1692 | 1510 | 1646 | 1621 | 1510 |
| Q Serve(g_s), s              | 20.2  | 8.4   | 11.4 | 22.0 | 18.9 | 19.0  | 9.4  | 11.6 | 6.3  | 5.5  | 3.6  | 6.5  |
| Cycle Q Clear(g_c), s        | 39.2  | 8.4   | 11.4 | 33.4 | 18.9 | 19.0  | 9.4  | 11.6 | 6.3  | 5.5  | 3.6  | 6.5  |
| Prop In Lane                 | 1.00  |       | 1.00 | 1.00 |      | 1.00  | 1.00 |      | 1.00 | 1.00 |      | 1.00 |
| Lane Grp Cap(c), veh/h       | 169   | 1325  | 617  | 288  | 1325 | 617   | 400  | 1144 | 510  | 265  | 1444 | 448  |
| V/C Ratio(X)                 | 1.08  | 0.31  | 0.41 | 0.62 | 0.61 | 0.61  | 0.83 | 0.46 | 0.27 | 0.73 | 0.17 | 0.30 |
| Avail Cap(c_a), veh/h        | 169   | 1325  | 617  | 288  | 1325 | 617   | 463  | 1144 | 510  | 463  | 1444 | 448  |
| HCM Platoon Ratio            | 1.00  | 1.00  | 1.00 | 1.00 | 1.00 | 1.00  | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(I)           | 1.00  | 1.00  | 1.00 | 1.00 | 1.00 | 1.00  | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Uniform Delay (d), s/veh     | 42.4  | 19.3  | 20.1 | 32.0 | 22.4 | 22.4  | 41.2 | 24.9 | 23.1 | 43.1 | 25.0 | 26.0 |
| Incr Delay (d2), s/veh       | 90.6  | 0.6   | 2.0  | 9.8  | 2.1  | 4.5   | 10.3 | 1.3  | 1.3  | 3.8  | 0.3  | 1.7  |
| Initial Q Delay(d3), s/veh   | 0.0   | 0.0   | 0.0  | 0.0  | 0.0  | 0.0   | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| %ile BackOfQ(50%), veh/ln    | 8.3   | 3.2   | 4.2  | 4.6  | 7.3  | 7.3   | 4.3  | 4.8  | 2.4  | 2.3  | 1.4  | 2.5  |
| Unsig. Movement Delay, s/veh |       |       |      |      |      |       |      |      |      |      |      |      |
| LnGrp Delay(d), s/veh        | 133.0 | 19.9  | 22.1 | 41.8 | 24.5 | 26.9  | 51.5 | 26.2 | 24.4 | 46.9 | 25.3 | 27.7 |
| LnGrp LOS                    | F     | B     | C    | D    | C    | C     | D    | C    | C    | D    | C    | C    |
| Approach Vol, veh/h          |       | 850   |      |      | 1369 |       |      | 989  |      |      | 573  |      |
| Approach Delay, s/veh        |       | 44.8  |      |      | 27.4 |       |      | 34.4 |      |      | 33.1 |      |
| Approach LOS                 |       | D     |      |      | C    |       |      | C    |      |      | C    |      |
| Timer - Assigned Phs         | 1     | 2     |      | 4    | 5    | 6     |      | 8    |      |      |      |      |
| Phs Duration (G+Y+Rc), s     | 12.2  | 38.5  |      | 45.2 | 16.2 | 34.6  |      | 45.2 |      |      |      |      |
| Change Period (Y+Rc), s      | 4.5   | * 6.1 |      | * 6  | 4.5  | * 6.1 |      | * 6  |      |      |      |      |
| Max Green Setting (Gmax), s  | 13.5  | * 29  |      | * 37 | 13.5 | * 29  |      | * 37 |      |      |      |      |
| Max Q Clear Time (g_c+I1), s | 7.5   | 13.6  |      | 41.2 | 11.4 | 8.5   |      | 35.4 |      |      |      |      |
| Green Ext Time (p_c), s      | 0.3   | 3.5   |      | 0.0  | 0.3  | 2.0   |      | 1.5  |      |      |      |      |

| Intersection Summary |  |      |
|----------------------|--|------|
| HCM 6th Ctrl Delay   |  | 34.0 |
| HCM 6th LOS          |  | C    |

Notes  
User approved pedestrian interval to be less than phase max green.  
\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

## **APPENDIX H**

### **2024 BUILD PEAK HOUR ANALYSIS**

Deer Valley 30  
1: 19th Ave & Happy Valley Rd

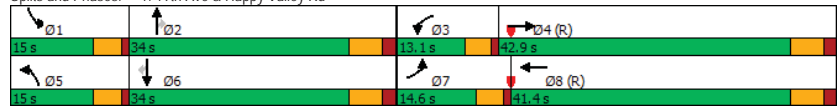
2024 Total AM Scenario A  
Timings

| Lane Group           | EBL   | EBT   | WBL   | WBT   | NBL   | NBT   | NBR   | SBL   | SBT   | SBR   |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations  | ↔↔    | ↔↔↔   | ↔↔    | ↔↔↔   | ↔↔    | ↔↔    | ↔     | ↔↔    | ↔↔↔   | ↔     |
| Traffic Volume (vph) | 87    | 511   | 150   | 326   | 222   | 268   | 102   | 294   | 468   | 96    |
| Future Volume (vph)  | 87    | 511   | 150   | 326   | 222   | 268   | 102   | 294   | 468   | 96    |
| Turn Type            | Prot  | NA    | Prot  | NA    | Prot  | NA    | Perm  | Prot  | NA    | Perm  |
| Protected Phases     | 7     | 4     | 3     | 8     | 5     | 2     |       | 1     | 6     |       |
| Permitted Phases     |       |       |       |       |       |       | 2     |       |       | 6     |
| Detector Phase       | 7     | 4     | 3     | 8     | 5     | 2     | 2     | 1     | 6     | 6     |
| Switch Phase         |       |       |       |       |       |       |       |       |       |       |
| Minimum Initial (s)  | 5.0   | 15.0  | 5.0   | 15.0  | 5.0   | 5.0   | 5.0   | 5.0   | 5.0   | 5.0   |
| Minimum Split (s)    | 9.5   | 41.0  | 9.5   | 41.0  | 9.5   | 43.1  | 43.1  | 9.5   | 43.1  | 43.1  |
| Total Split (s)      | 14.6  | 42.9  | 13.1  | 41.4  | 15.0  | 34.0  | 34.0  | 15.0  | 34.0  | 34.0  |
| Total Split (%)      | 13.9% | 40.9% | 12.5% | 39.4% | 14.3% | 32.4% | 32.4% | 14.3% | 32.4% | 32.4% |
| Yellow Time (s)      | 3.5   | 4.3   | 3.5   | 4.3   | 3.5   | 4.3   | 4.3   | 3.5   | 4.3   | 4.3   |
| All-Red Time (s)     | 1.0   | 1.7   | 1.0   | 1.7   | 1.0   | 1.8   | 1.8   | 1.0   | 1.8   | 1.8   |
| Lost Time Adjust (s) | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Lost Time (s)  | 4.5   | 6.0   | 4.5   | 6.0   | 4.5   | 6.1   | 6.1   | 4.5   | 6.1   | 6.1   |
| Lead/Lag             | Lead  | Lag   | Lead  | Lag   | Lead  | Lag   | Lag   | Lead  | Lag   | Lag   |
| Lead-Lag Optimize?   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   |
| Recall Mode          | None  | C-Max | None  | C-Max | None  | Max   | Max   | None  | Max   | Max   |
| Act Effct Green (s)  | 8.3   | 37.1  | 8.4   | 39.3  | 10.3  | 27.9  | 27.9  | 10.5  | 28.1  | 28.1  |
| Actuated g/C Ratio   | 0.08  | 0.35  | 0.08  | 0.37  | 0.10  | 0.27  | 0.27  | 0.10  | 0.27  | 0.27  |
| v/c Ratio            | 0.37  | 0.65  | 0.63  | 0.27  | 0.76  | 0.33  | 0.23  | 0.99  | 0.40  | 0.21  |
| Control Delay        | 49.6  | 23.1  | 58.2  | 19.5  | 62.1  | 32.3  | 5.5   | 95.2  | 32.7  | 4.7   |
| Queue Delay          | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Delay          | 49.6  | 23.1  | 58.2  | 19.5  | 62.1  | 32.3  | 5.5   | 95.2  | 32.7  | 4.7   |
| LOS                  | D     | C     | E     | B     | E     | C     | A     | F     | C     | A     |
| Approach Delay       |       | 25.2  |       | 29.3  |       | 38.8  |       | 51.0  |       |       |
| Approach LOS         |       | C     |       | C     |       | D     |       | D     |       |       |

Intersection Summary

Cycle Length: 105  
 Actuated Cycle Length: 105  
 Offset: 0 (0%), Referenced to phase 4:EBT and 8:WBT, Start of Green  
 Natural Cycle: 105  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.99  
 Intersection Signal Delay: 35.5  
 Intersection Capacity Utilization 59.3%  
 Intersection LOS: D  
 ICU Level of Service B  
 Analysis Period (min) 15

Splits and Phases: 1: 19th Ave & Happy Valley Rd



Deer Valley 30  
1: 19th Ave & Happy Valley Rd

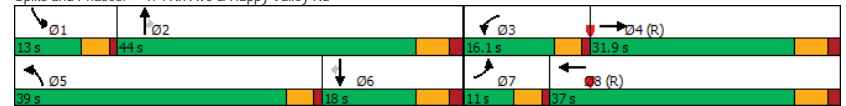
2024 Total PM Scenario A  
Timings

| Lane Group           | EBL   | EBT   | WBL   | WBT   | NBL   | NBT   | NBR   | SBL   | SBT   | SBR   |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations  | ↔↔    | ↔↔↔   | ↔↔    | ↔↔↔   | ↔↔    | ↔↔    | ↔     | ↔↔    | ↔↔↔   | ↔     |
| Traffic Volume (vph) | 167   | 417   | 165   | 904   | 631   | 536   | 125   | 183   | 239   | 122   |
| Future Volume (vph)  | 167   | 417   | 165   | 904   | 631   | 536   | 125   | 183   | 239   | 122   |
| Turn Type            | Prot  | NA    | Prot  | NA    | Prot  | NA    | Perm  | Prot  | NA    | Perm  |
| Protected Phases     | 7     | 4     | 3     | 8     | 5     | 2     |       | 1     | 6     |       |
| Permitted Phases     |       |       |       |       |       |       | 2     |       |       | 6     |
| Detector Phase       | 7     | 4     | 3     | 8     | 5     | 2     | 2     | 1     | 6     | 6     |
| Switch Phase         |       |       |       |       |       |       |       |       |       |       |
| Minimum Initial (s)  | 5.0   | 15.0  | 5.0   | 15.0  | 5.0   | 5.0   | 5.0   | 5.0   | 5.0   | 5.0   |
| Minimum Split (s)    | 9.5   | 31.0  | 9.5   | 34.0  | 9.5   | 43.1  | 43.1  | 9.5   | 22.0  | 22.0  |
| Total Split (s)      | 11.0  | 31.9  | 16.1  | 37.0  | 39.0  | 44.0  | 44.0  | 13.0  | 18.0  | 18.0  |
| Total Split (%)      | 10.5% | 30.4% | 15.3% | 35.2% | 37.1% | 41.9% | 41.9% | 12.4% | 17.1% | 17.1% |
| Yellow Time (s)      | 3.5   | 4.3   | 3.5   | 4.3   | 3.5   | 4.3   | 4.3   | 3.5   | 4.3   | 4.3   |
| All-Red Time (s)     | 1.0   | 1.7   | 1.0   | 1.7   | 1.0   | 1.8   | 1.8   | 1.0   | 1.8   | 1.8   |
| Lost Time Adjust (s) | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Lost Time (s)  | 4.5   | 6.0   | 4.5   | 6.0   | 4.5   | 6.1   | 6.1   | 4.5   | 6.1   | 6.1   |
| Lead/Lag             | Lead  | Lag   | Lead  | Lag   | Lead  | Lag   | Lag   | Lead  | Lag   | Lag   |
| Lead-Lag Optimize?   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   |
| Recall Mode          | None  | C-Max | None  | C-Max | None  | Max   | Max   | None  | Max   | Max   |
| Act Effct Green (s)  | 6.5   | 27.1  | 10.4  | 31.0  | 27.7  | 37.9  | 37.9  | 8.5   | 18.7  | 18.7  |
| Actuated g/C Ratio   | 0.06  | 0.26  | 0.10  | 0.30  | 0.26  | 0.36  | 0.36  | 0.08  | 0.18  | 0.18  |
| v/c Ratio            | 0.91  | 0.61  | 0.56  | 0.97  | 0.80  | 0.48  | 0.21  | 0.76  | 0.30  | 0.30  |
| Control Delay        | 93.8  | 29.2  | 51.8  | 53.0  | 43.5  | 27.6  | 2.5   | 66.5  | 40.0  | 1.8   |
| Queue Delay          | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Delay          | 93.8  | 29.2  | 51.8  | 53.0  | 43.5  | 27.6  | 2.5   | 66.5  | 40.0  | 1.8   |
| LOS                  | F     | C     | D     | D     | D     | C     | A     | E     | D     | A     |
| Approach Delay       |       | 41.3  |       | 52.9  |       | 32.9  |       | 40.3  |       |       |
| Approach LOS         |       | D     |       | D     |       | C     |       | D     |       |       |

Intersection Summary

Cycle Length: 105  
 Actuated Cycle Length: 105  
 Offset: 0 (0%), Referenced to phase 4:EBT and 8:WBT, Start of Green  
 Natural Cycle: 100  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.97  
 Intersection Signal Delay: 42.6  
 Intersection Capacity Utilization 70.8%  
 Intersection LOS: D  
 ICU Level of Service C  
 Analysis Period (min) 15

Splits and Phases: 1: 19th Ave & Happy Valley Rd



Deer Valley 30  
1: 19th Ave & Happy Valley Rd

2024 Total AM Scenario A  
HCM 6th Signalized Intersection Summary

| Movement                     | EBL  | EBT   | EBR  | WBL  | WBT  | WBR   | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
|------------------------------|------|-------|------|------|------|-------|------|------|------|------|------|------|
| Lane Configurations          | ↔    | ↔     | ↔    | ↔    | ↔    | ↔     | ↔    | ↔    | ↔    | ↔    | ↔    | ↔    |
| Traffic Volume (veh/h)       | 87   | 511   | 525  | 150  | 326  | 115   | 222  | 268  | 102  | 294  | 468  | 96   |
| Future Volume (veh/h)        | 87   | 511   | 525  | 150  | 326  | 115   | 222  | 268  | 102  | 294  | 468  | 96   |
| Initial Q (Ob), veh          | 0    | 0     | 0    | 0    | 0    | 0     | 0    | 0    | 0    | 0    | 0    | 0    |
| Ped-Bike Adj(A_pbT)          | 1.00 | 1.00  | 1.00 | 1.00 | 1.00 | 1.00  | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Parking Bus, Adj             | 1.00 | 1.00  | 1.00 | 1.00 | 1.00 | 1.00  | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Work Zone On Approach        | No   | No    | No   | No   | No   | No    | No   | No   | No   | No   | No   | No   |
| Adj Sat Flow, veh/h/ln       | 1781 | 1781  | 1781 | 1781 | 1781 | 1781  | 1781 | 1781 | 1781 | 1781 | 1781 | 1781 |
| Adj Flow Rate, veh/h         | 95   | 555   | 571  | 163  | 354  | 125   | 241  | 291  | 111  | 320  | 509  | 104  |
| Peak Hour Factor             | 0.92 | 0.92  | 0.92 | 0.92 | 0.92 | 0.92  | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Percent Heavy Veh, %         | 8    | 8     | 8    | 8    | 8    | 8     | 8    | 8    | 8    | 8    | 8    | 8    |
| Cap, veh/h                   | 149  | 1185  | 552  | 223  | 1396 | 469   | 301  | 899  | 401  | 329  | 1333 | 414  |
| Arrive On Green              | 0.05 | 0.37  | 0.37 | 0.07 | 0.39 | 0.39  | 0.09 | 0.27 | 0.27 | 0.10 | 0.27 | 0.27 |
| Sat Flow, veh/h              | 3291 | 3242  | 1510 | 3291 | 3599 | 1208  | 3291 | 3385 | 1510 | 3291 | 4863 | 1510 |
| Grp Volume(v), veh/h         | 95   | 555   | 571  | 163  | 317  | 162   | 241  | 291  | 111  | 320  | 509  | 104  |
| Grp Sat Flow(s), veh/h/ln    | 1646 | 1621  | 1510 | 1646 | 1621 | 1564  | 1646 | 1692 | 1510 | 1646 | 1621 | 1510 |
| Q Serve(g_s), s              | 3.0  | 13.8  | 38.4 | 5.1  | 7.0  | 7.4   | 7.5  | 7.3  | 6.1  | 10.2 | 8.9  | 5.6  |
| Cycle Q Clear(g_c), s        | 3.0  | 13.8  | 38.4 | 5.1  | 7.0  | 7.4   | 7.5  | 7.3  | 6.1  | 10.2 | 8.9  | 5.6  |
| Prop In Lane                 | 1.00 | 1.00  | 1.00 | 1.00 | 0.77 | 1.00  | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Lane Grp Cap(c), veh/h       | 149  | 1185  | 552  | 223  | 1258 | 607   | 301  | 899  | 401  | 329  | 1333 | 414  |
| V/C Ratio(X)                 | 0.64 | 0.47  | 1.03 | 0.73 | 0.25 | 0.27  | 0.80 | 0.32 | 0.28 | 0.97 | 0.38 | 0.25 |
| Avail Cap(c_a), veh/h        | 317  | 1185  | 552  | 270  | 1258 | 607   | 329  | 899  | 401  | 329  | 1333 | 414  |
| HCM Platoon Ratio            | 1.00 | 1.00  | 1.00 | 1.00 | 1.00 | 1.00  | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(I)           | 1.00 | 1.00  | 1.00 | 1.00 | 1.00 | 1.00  | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Uniform Delay (d), s/veh     | 49.3 | 25.5  | 33.3 | 48.0 | 21.8 | 21.9  | 46.8 | 31.0 | 30.6 | 47.1 | 30.9 | 29.7 |
| Incr Delay (d2), s/veh       | 4.5  | 1.3   | 47.5 | 7.8  | 0.5  | 1.1   | 12.2 | 1.0  | 1.7  | 42.0 | 0.8  | 1.5  |
| Initial Q Delay(d3), s/veh   | 0.0  | 0.0   | 0.0  | 0.0  | 0.0  | 0.0   | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| %ile BackOfQ(50%), veh/ln    | 1.3  | 5.5   | 20.9 | 2.3  | 2.7  | 2.9   | 3.6  | 3.1  | 0.2  | 6.1  | 3.6  | 2.2  |
| Unsig. Movement Delay, s/veh |      |       |      |      |      |       |      |      |      |      |      |      |
| LnGrp Delay(d), s/veh        | 53.7 | 26.8  | 80.8 | 55.9 | 22.3 | 23.0  | 59.0 | 31.9 | 32.3 | 89.1 | 31.7 | 31.2 |
| LnGrp LOS                    | D    | C     | F    | E    | C    | C     | E    | C    | C    | F    | C    | C    |
| Approach Vol, veh/h          |      | 1221  |      |      | 642  |       |      | 643  |      |      | 933  |      |
| Approach Delay, s/veh        |      | 54.2  |      |      | 31.0 |       |      | 42.1 |      |      | 51.3 |      |
| Approach LOS                 |      | D     |      |      | C    |       |      | D    |      |      | D    |      |
| Timer - Assigned Phs         | 1    | 2     | 3    | 4    | 5    | 6     | 7    | 8    |      |      |      |      |
| Phs Duration (G+Y+Rc), s     | 15.0 | 34.0  | 11.6 | 44.4 | 14.1 | 34.9  | 9.3  | 46.7 |      |      |      |      |
| Change Period (Y+Rc), s      | 4.5  | * 6.1 | 4.5  | * 6  | 4.5  | * 6.1 | 4.5  | * 6  |      |      |      |      |
| Max Green Setting (Gmax), s  | 10.5 | * 28  | 8.6  | * 37 | 10.5 | * 28  | 10.1 | * 35 |      |      |      |      |
| Max Q Clear Time (g_c+I1), s | 12.2 | 9.3   | 7.1  | 40.4 | 9.5  | 10.9  | 5.0  | 9.4  |      |      |      |      |
| Green Ext Time (p_c), s      | 0.0  | 2.1   | 0.1  | 0.0  | 0.1  | 3.6   | 0.1  | 3.3  |      |      |      |      |

| Intersection Summary |      |  |  |  |  |  |  |  |  |  |  |  |
|----------------------|------|--|--|--|--|--|--|--|--|--|--|--|
| HCM 6th Ctrl Delay   | 46.8 |  |  |  |  |  |  |  |  |  |  |  |
| HCM 6th LOS          | D    |  |  |  |  |  |  |  |  |  |  |  |

Notes  
User approved pedestrian interval to be less than phase max green.  
\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Deer Valley 30  
1: 19th Ave & Happy Valley Rd

2024 Total PM Scenario A  
HCM 6th Signalized Intersection Summary

| Movement                     | EBL  | EBT   | EBR  | WBL  | WBT  | WBR   | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
|------------------------------|------|-------|------|------|------|-------|------|------|------|------|------|------|
| Lane Configurations          | ↔    | ↔     | ↔    | ↔    | ↔    | ↔     | ↔    | ↔    | ↔    | ↔    | ↔    | ↔    |
| Traffic Volume (veh/h)       | 167  | 417   | 305  | 165  | 904  | 374   | 631  | 536  | 125  | 183  | 239  | 122  |
| Future Volume (veh/h)        | 167  | 417   | 305  | 165  | 904  | 374   | 631  | 536  | 125  | 183  | 239  | 122  |
| Initial Q (Ob), veh          | 0    | 0     | 0    | 0    | 0    | 0     | 0    | 0    | 0    | 0    | 0    | 0    |
| Ped-Bike Adj(A_pbT)          | 1.00 | 1.00  | 1.00 | 1.00 | 1.00 | 1.00  | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Parking Bus, Adj             | 1.00 | 1.00  | 1.00 | 1.00 | 1.00 | 1.00  | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Work Zone On Approach        | No   | No    | No   | No   | No   | No    | No   | No   | No   | No   | No   | No   |
| Adj Sat Flow, veh/h/ln       | 1781 | 1781  | 1781 | 1781 | 1781 | 1781  | 1781 | 1781 | 1781 | 1781 | 1781 | 1781 |
| Adj Flow Rate, veh/h         | 182  | 453   | 250  | 179  | 983  | 325   | 686  | 583  | 82   | 199  | 260  | 79   |
| Peak Hour Factor             | 0.92 | 0.92  | 0.92 | 0.92 | 0.92 | 0.92  | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Percent Heavy Veh, %         | 8    | 8     | 8    | 8    | 8    | 8     | 8    | 8    | 8    | 8    | 8    | 8    |
| Cap, veh/h                   | 204  | 927   | 432  | 243  | 1077 | 356   | 789  | 1222 | 545  | 258  | 970  | 301  |
| Arrive On Green              | 0.06 | 0.29  | 0.29 | 0.07 | 0.30 | 0.30  | 0.24 | 0.36 | 0.36 | 0.08 | 0.20 | 0.20 |
| Sat Flow, veh/h              | 3291 | 3242  | 1510 | 3291 | 3615 | 1194  | 3291 | 3385 | 1510 | 3291 | 4863 | 1510 |
| Grp Volume(v), veh/h         | 182  | 453   | 250  | 179  | 882  | 426   | 686  | 583  | 82   | 199  | 260  | 79   |
| Grp Sat Flow(s), veh/h/ln    | 1646 | 1621  | 1510 | 1646 | 1621 | 1567  | 1646 | 1692 | 1510 | 1646 | 1621 | 1510 |
| Q Serve(g_s), s              | 5.8  | 12.2  | 14.9 | 5.6  | 27.5 | 27.6  | 21.0 | 14.0 | 3.9  | 6.2  | 4.7  | 4.6  |
| Cycle Q Clear(g_c), s        | 5.8  | 12.2  | 14.9 | 5.6  | 27.5 | 27.6  | 21.0 | 14.0 | 3.9  | 6.2  | 4.7  | 4.6  |
| Prop In Lane                 | 1.00 | 1.00  | 1.00 | 1.00 | 0.76 | 1.00  | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Lane Grp Cap(c), veh/h       | 204  | 927   | 432  | 243  | 966  | 467   | 789  | 1222 | 545  | 258  | 970  | 301  |
| V/C Ratio(X)                 | 0.89 | 0.49  | 0.58 | 0.74 | 0.91 | 0.91  | 0.87 | 0.48 | 0.15 | 0.77 | 0.27 | 0.26 |
| Avail Cap(c_a), veh/h        | 204  | 927   | 432  | 364  | 966  | 467   | 1081 | 1222 | 545  | 266  | 970  | 301  |
| HCM Platoon Ratio            | 1.00 | 1.00  | 1.00 | 1.00 | 1.00 | 1.00  | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(I)           | 1.00 | 1.00  | 1.00 | 1.00 | 1.00 | 1.00  | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Uniform Delay (d), s/veh     | 48.9 | 31.1  | 32.1 | 47.6 | 35.5 | 35.6  | 38.3 | 25.9 | 22.7 | 47.5 | 35.5 | 35.5 |
| Incr Delay (d2), s/veh       | 35.4 | 1.8   | 5.6  | 4.3  | 14.3 | 24.9  | 5.9  | 1.3  | 0.6  | 12.7 | 0.7  | 2.1  |
| Initial Q Delay(d3), s/veh   | 0.0  | 0.0   | 0.0  | 0.0  | 0.0  | 0.0   | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| %ile BackOfQ(50%), veh/ln    | 3.4  | 5.0   | 6.0  | 2.4  | 12.6 | 13.5  | 9.0  | 5.8  | 1.5  | 3.0  | 1.9  | 1.9  |
| Unsig. Movement Delay, s/veh |      |       |      |      |      |       |      |      |      |      |      |      |
| LnGrp Delay(d), s/veh        | 84.3 | 33.0  | 37.6 | 52.0 | 49.8 | 60.5  | 44.2 | 27.2 | 23.3 | 60.2 | 36.2 | 37.6 |
| LnGrp LOS                    | F    | C     | D    | D    | D    | E     | D    | C    | C    | E    | D    | D    |
| Approach Vol, veh/h          |      | 885   |      |      | 1487 |       |      | 1351 |      |      | 538  |      |
| Approach Delay, s/veh        |      | 44.8  |      |      | 53.1 |       |      | 35.6 |      |      | 45.3 |      |
| Approach LOS                 |      | D     |      |      | D    |       |      | D    |      |      | D    |      |
| Timer - Assigned Phs         | 1    | 2     | 3    | 4    | 5    | 6     | 7    | 8    |      |      |      |      |
| Phs Duration (G+Y+Rc), s     | 12.7 | 44.0  | 12.2 | 36.0 | 29.7 | 27.0  | 11.0 | 37.3 |      |      |      |      |
| Change Period (Y+Rc), s      | 4.5  | * 6.1 | 4.5  | * 6  | 4.5  | * 6.1 | 4.5  | * 6  |      |      |      |      |
| Max Green Setting (Gmax), s  | 8.5  | * 38  | 11.6 | * 26 | 34.5 | * 12  | 6.5  | * 31 |      |      |      |      |
| Max Q Clear Time (g_c+I1), s | 8.2  | 16.0  | 7.6  | 16.9 | 23.0 | 6.7   | 7.8  | 29.6 |      |      |      |      |
| Green Ext Time (p_c), s      | 0.0  | 4.3   | 0.2  | 3.1  | 2.2  | 0.9   | 0.0  | 1.1  |      |      |      |      |

| Intersection Summary |      |  |  |  |  |  |  |  |  |  |  |  |
|----------------------|------|--|--|--|--|--|--|--|--|--|--|--|
| HCM 6th Ctrl Delay   | 44.9 |  |  |  |  |  |  |  |  |  |  |  |
| HCM 6th LOS          | D    |  |  |  |  |  |  |  |  |  |  |  |

Notes  
User approved pedestrian interval to be less than phase max green.  
\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Deer Valley 30  
2: 19th Ave & Optum Drwy

2024 Total AM Scenario A  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh         | 0.1  |      |      |      |      |      |
| Movement                 | EBL  | EBR  | NBL  | NBT  | SBT  | SBR  |
| Lane Configurations      | W    |      | T    | T    | T    | T    |
| Traffic Vol, veh/h       | 0    | 4    | 7    | 593  | 1142 | 2    |
| Future Vol, veh/h        | 0    | 4    | 7    | 593  | 1142 | 2    |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Stop | Stop | Free | Free | Free | Free |
| RT Channelized           | -    | None | -    | None | -    | None |
| Storage Length           | 0    | -    | 50   | -    | -    | -    |
| Veh in Median Storage, # | 0    | -    | -    | 0    | 0    | -    |
| Grade, %                 | 0    | -    | -    | 0    | 0    | -    |
| Peak Hour Factor         | 92   | 92   | 92   | 92   | 92   | 92   |
| Heavy Vehicles, %        | 8    | 8    | 8    | 8    | 8    | 8    |
| Mvmt Flow                | 0    | 4    | 8    | 645  | 1241 | 2    |

| Major/Minor          | Minor2 | Major1 | Major2 |   |   |   |
|----------------------|--------|--------|--------|---|---|---|
| Conflicting Flow All | 1516   | 622    | 1243   | 0 | - | 0 |
| Stage 1              | 1242   | -      | -      | - | - | - |
| Stage 2              | 274    | -      | -      | - | - | - |
| Critical Hdwy        | 6.41   | 7.06   | 4.26   | - | - | - |
| Critical Hdwy Stg 1  | 5.96   | -      | -      | - | - | - |
| Critical Hdwy Stg 2  | 6.16   | -      | -      | - | - | - |
| Follow-up Hdwy       | 3.73   | 3.38   | 2.28   | - | - | - |
| Pot Cap-1 Maneuver   | 129    | 415    | 524    | - | - | - |
| Stage 1              | 220    | -      | -      | - | - | - |
| Stage 2              | 694    | -      | -      | - | - | - |
| Platoon blocked, %   |        |        |        | - | - | - |
| Mov Cap-1 Maneuver   | 127    | 415    | 524    | - | - | - |
| Mov Cap-2 Maneuver   | 187    | -      | -      | - | - | - |
| Stage 1              | 217    | -      | -      | - | - | - |
| Stage 2              | 694    | -      | -      | - | - | - |

| Approach             | EB   | NB  | SB |
|----------------------|------|-----|----|
| HCM Control Delay, s | 13.8 | 0.1 | 0  |
| HCM LOS              | B    |     |    |

| Minor Lane/Major Mvmt | NBL   | NBT | EBLn1 | SBT | SBR |
|-----------------------|-------|-----|-------|-----|-----|
| Capacity (veh/h)      | 524   | -   | 415   | -   | -   |
| HCM Lane V/C Ratio    | 0.015 | -   | 0.01  | -   | -   |
| HCM Control Delay (s) | 12    | -   | 13.8  | -   | -   |
| HCM Lane LOS          | B     | -   | B     | -   | -   |
| HCM 95th %tile Q(veh) | 0     | -   | 0     | -   | -   |

Deer Valley 30  
2: 19th Ave & Optum Drwy

2024 Total PM Scenario A  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh         | 0.1  |      |      |      |      |      |
| Movement                 | EBL  | EBR  | NBL  | NBT  | SBT  | SBR  |
| Lane Configurations      | W    |      | T    | T    | T    | T    |
| Traffic Vol, veh/h       | 0    | 4    | 7    | 1292 | 707  | 2    |
| Future Vol, veh/h        | 0    | 4    | 7    | 1292 | 707  | 2    |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Stop | Stop | Free | Free | Free | Free |
| RT Channelized           | -    | None | -    | None | -    | None |
| Storage Length           | 0    | -    | 50   | -    | -    | -    |
| Veh in Median Storage, # | 0    | -    | -    | 0    | 0    | -    |
| Grade, %                 | 0    | -    | -    | 0    | 0    | -    |
| Peak Hour Factor         | 92   | 92   | 92   | 92   | 92   | 92   |
| Heavy Vehicles, %        | 8    | 8    | 8    | 8    | 8    | 8    |
| Mvmt Flow                | 0    | 4    | 8    | 1404 | 768  | 2    |

| Major/Minor          | Minor2 | Major1 | Major2 |   |   |   |
|----------------------|--------|--------|--------|---|---|---|
| Conflicting Flow All | 1347   | 385    | 770    | 0 | - | 0 |
| Stage 1              | 769    | -      | -      | - | - | - |
| Stage 2              | 578    | -      | -      | - | - | - |
| Critical Hdwy        | 6.41   | 7.06   | 4.26   | - | - | - |
| Critical Hdwy Stg 1  | 5.96   | -      | -      | - | - | - |
| Critical Hdwy Stg 2  | 6.16   | -      | -      | - | - | - |
| Follow-up Hdwy       | 3.73   | 3.38   | 2.28   | - | - | - |
| Pot Cap-1 Maneuver   | 163    | 597    | 802    | - | - | - |
| Stage 1              | 392    | -      | -      | - | - | - |
| Stage 2              | 477    | -      | -      | - | - | - |
| Platoon blocked, %   |        |        |        | - | - | - |
| Mov Cap-1 Maneuver   | 161    | 597    | 802    | - | - | - |
| Mov Cap-2 Maneuver   | 268    | -      | -      | - | - | - |
| Stage 1              | 388    | -      | -      | - | - | - |
| Stage 2              | 477    | -      | -      | - | - | - |

| Approach             | EB   | NB  | SB |
|----------------------|------|-----|----|
| HCM Control Delay, s | 11.1 | 0.1 | 0  |
| HCM LOS              | B    |     |    |

| Minor Lane/Major Mvmt | NBL   | NBT | EBLn1 | SBT | SBR |
|-----------------------|-------|-----|-------|-----|-----|
| Capacity (veh/h)      | 802   | -   | 597   | -   | -   |
| HCM Lane V/C Ratio    | 0.009 | -   | 0.007 | -   | -   |
| HCM Control Delay (s) | 9.5   | -   | 11.1  | -   | -   |
| HCM Lane LOS          | A     | -   | B     | -   | -   |
| HCM 95th %tile Q(veh) | 0     | -   | 0     | -   | -   |

Deer Valley 30  
3: 19th Ave & Patio Drwy/Parkview Ln

2024 Total AM Scenario A  
HCM 6th TWSC

| Intersection             |        |      |        |       |        |       |        |      |      |      |      |      |
|--------------------------|--------|------|--------|-------|--------|-------|--------|------|------|------|------|------|
| Int Delay, s/veh 1       |        |      |        |       |        |       |        |      |      |      |      |      |
| Movement                 | EBL    | EBT  | EBR    | WBL   | WBT    | WBR   | NBL    | NBT  | NBR  | SBL  | SBT  | SBR  |
| Lane Configurations      |        |      | ↗      | ↔     | ↔      |       |        | ↖↖   |      | ↘    | ↖    |      |
| Traffic Vol, veh/h       | 0      | 0    | 6      | 26    | 0      | 13    | 1      | 586  | 41   | 26   | 1121 | 0    |
| Future Vol, veh/h        | 0      | 0    | 6      | 26    | 0      | 13    | 1      | 586  | 41   | 26   | 1121 | 0    |
| Conflicting Peds, #/hr   | 0      | 0    | 0      | 0     | 0      | 0     | 0      | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Stop   | Stop | Stop   | Stop  | Stop   | Stop  | Free   | Free | Free | Free | Free | Free |
| RT Channelized           | -      | -    | None   | -     | -      | None  | -      | -    | None | -    | -    | None |
| Storage Length           | -      | -    | 0      | -     | -      | -     | -      | -    | -    | 50   | -    | -    |
| Veh in Median Storage, # | -      | 0    | -      | -     | 0      | -     | -      | 0    | -    | -    | 0    | -    |
| Grade, %                 | -      | 0    | -      | -     | 0      | -     | -      | 0    | -    | -    | 0    | -    |
| Peak Hour Factor         | 92     | 92   | 92     | 92    | 92     | 92    | 92     | 92   | 92   | 92   | 92   | 92   |
| Heavy Vehicles, %        | 8      | 8    | 8      | 8     | 8      | 8     | 8      | 8    | 8    | 8    | 8    | 8    |
| Mvmt Flow                | 0      | 0    | 7      | 28    | 0      | 14    | 1      | 637  | 45   | 28   | 1218 | 0    |
| Major/Minor              | Minor2 |      | Minor1 |       | Major1 |       | Major2 |      |      |      |      |      |
| Conflicting Flow All     | -      | -    | 609    | 1327  | 1936   | 341   | 1218   | 0    | 0    | 682  | 0    | 0    |
| Stage 1                  | -      | -    | -      | 662   | 662    | -     | -      | -    | -    | -    | -    | -    |
| Stage 2                  | -      | -    | -      | 665   | 1274   | -     | -      | -    | -    | -    | -    | -    |
| Critical Hdwy            | -      | -    | 7.06   | 7.11  | 6.66   | 7.26  | 4.26   | -    | -    | 5.46 | -    | -    |
| Critical Hdwy Stg 1      | -      | -    | -      | 7.46  | 5.66   | -     | -      | -    | -    | -    | -    | -    |
| Critical Hdwy Stg 2      | -      | -    | -      | 6.66  | 5.66   | -     | -      | -    | -    | -    | -    | -    |
| Follow-up Hdwy           | -      | -    | 3.38   | 3.73  | 4.08   | 3.98  | 2.28   | -    | -    | 3.18 | -    | -    |
| Pot Cap-1 Maneuver       | 0      | 0    | 424    | 129   | 61     | 546   | 536    | -    | -    | 536  | -    | 0    |
| Stage 1                  | 0      | 0    | -      | 338   | 443    | -     | -      | -    | -    | -    | -    | 0    |
| Stage 2                  | 0      | 0    | -      | 390   | 225    | -     | -      | -    | -    | -    | -    | 0    |
| Platoon blocked, %       | -      | -    | -      | -     | -      | -     | -      | -    | -    | -    | -    | -    |
| Mov Cap-1 Maneuver       | -      | -    | 424    | 122   | 58     | 546   | 536    | -    | -    | 536  | -    | -    |
| Mov Cap-2 Maneuver       | -      | -    | -      | 122   | 58     | -     | -      | -    | -    | -    | -    | -    |
| Stage 1                  | -      | -    | -      | 337   | 442    | -     | -      | -    | -    | -    | -    | -    |
| Stage 2                  | -      | -    | -      | 364   | 213    | -     | -      | -    | -    | -    | -    | -    |
| Approach                 | EB     |      | WB     |       | NB     |       | SB     |      |      |      |      |      |
| HCM Control Delay, s     | 13.6   |      | 34.2   |       | 0      |       | 0.3    |      |      |      |      |      |
| HCM LOS                  | B      |      | D      |       |        |       |        |      |      |      |      |      |
| Minor Lane/Major Mvmt    | NBL    | NBT  | NBR    | EBLn1 | WBLn1  | SBL   | SBT    |      |      |      |      |      |
| Capacity (veh/h)         | 536    | -    | -      | 424   | 165    | 536   | -      |      |      |      |      |      |
| HCM Lane V/C Ratio       | 0.002  | -    | -      | 0.015 | 0.257  | 0.053 | -      |      |      |      |      |      |
| HCM Control Delay (s)    | 11.7   | -    | -      | 13.6  | 34.2   | 12.1  | -      |      |      |      |      |      |
| HCM Lane LOS             | B      | -    | -      | B     | D      | B     | -      |      |      |      |      |      |
| HCM 95th %tile Q(veh)    | 0      | -    | -      | 0     | 1      | 0.2   | -      |      |      |      |      |      |

Deer Valley 30  
3: 19th Ave & Patio Drwy/Parkview Ln

2024 Total PM Scenario A  
HCM 6th TWSC

| Intersection             |        |      |        |       |        |       |        |      |      |      |      |      |
|--------------------------|--------|------|--------|-------|--------|-------|--------|------|------|------|------|------|
| Int Delay, s/veh 1.3     |        |      |        |       |        |       |        |      |      |      |      |      |
| Movement                 | EBL    | EBT  | EBR    | WBL   | WBT    | WBR   | NBL    | NBT  | NBR  | SBL  | SBT  | SBR  |
| Lane Configurations      |        |      | ↗      | ↔     | ↔      |       |        | ↖↖   |      | ↘    | ↖    |      |
| Traffic Vol, veh/h       | 0      | 0    | 6      | 26    | 0      | 13    | 1      | 939  | 41   | 26   | 686  | 0    |
| Future Vol, veh/h        | 0      | 0    | 6      | 26    | 0      | 13    | 1      | 939  | 41   | 26   | 686  | 0    |
| Conflicting Peds, #/hr   | 0      | 0    | 0      | 0     | 0      | 0     | 0      | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Stop   | Stop | Stop   | Stop  | Stop   | Stop  | Free   | Free | Free | Free | Free | Free |
| RT Channelized           | -      | -    | None   | -     | -      | None  | -      | -    | None | -    | -    | None |
| Storage Length           | -      | -    | 0      | -     | -      | -     | -      | -    | -    | 50   | -    | -    |
| Veh in Median Storage, # | -      | 0    | -      | -     | 0      | -     | -      | 0    | -    | -    | 0    | -    |
| Grade, %                 | -      | 0    | -      | -     | 0      | -     | -      | 0    | -    | -    | 0    | -    |
| Peak Hour Factor         | 92     | 92   | 92     | 92    | 92     | 92    | 92     | 92   | 92   | 92   | 92   | 92   |
| Heavy Vehicles, %        | 8      | 8    | 8      | 8     | 8      | 8     | 8      | 8    | 8    | 8    | 8    | 8    |
| Mvmt Flow                | 0      | 0    | 7      | 28    | 0      | 14    | 1      | 1021 | 45   | 28   | 746  | 0    |
| Major/Minor              | Minor2 |      | Minor1 |       | Major1 |       | Major2 |      |      |      |      |      |
| Conflicting Flow All     | -      | -    | 373    | 1475  | 1848   | 533   | 746    | 0    | 0    | 1066 | 0    | 0    |
| Stage 1                  | -      | -    | -      | 1046  | 1046   | -     | -      | -    | -    | -    | -    | -    |
| Stage 2                  | -      | -    | -      | 429   | 802    | -     | -      | -    | -    | -    | -    | -    |
| Critical Hdwy            | -      | -    | 7.06   | 7.11  | 6.66   | 7.26  | 4.26   | -    | -    | 5.46 | -    | -    |
| Critical Hdwy Stg 1      | -      | -    | -      | 7.46  | 5.66   | -     | -      | -    | -    | -    | -    | -    |
| Critical Hdwy Stg 2      | -      | -    | -      | 6.66  | 5.66   | -     | -      | -    | -    | -    | -    | -    |
| Follow-up Hdwy           | -      | -    | 3.38   | 3.73  | 4.08   | 3.98  | 2.28   | -    | -    | 3.18 | -    | -    |
| Pot Cap-1 Maneuver       | 0      | 0    | 607    | 102   | 69     | 409   | 820    | -    | -    | 347  | -    | 0    |
| Stage 1                  | 0      | 0    | -      | 181   | 291    | -     | -      | -    | -    | -    | -    | 0    |
| Stage 2                  | 0      | 0    | -      | 541   | 381    | -     | -      | -    | -    | -    | -    | 0    |
| Platoon blocked, %       | -      | -    | -      | -     | -      | -     | -      | -    | -    | -    | -    | -    |
| Mov Cap-1 Maneuver       | -      | -    | 607    | 94    | 63     | 409   | 820    | -    | -    | 347  | -    | -    |
| Mov Cap-2 Maneuver       | -      | -    | -      | 94    | 63     | -     | -      | -    | -    | -    | -    | -    |
| Stage 1                  | -      | -    | -      | 180   | 290    | -     | -      | -    | -    | -    | -    | -    |
| Stage 2                  | -      | -    | -      | 492   | 350    | -     | -      | -    | -    | -    | -    | -    |
| Approach                 | EB     |      | WB     |       | NB     |       | SB     |      |      |      |      |      |
| HCM Control Delay, s     | 11     |      | 47.4   |       | 0      |       | 0.6    |      |      |      |      |      |
| HCM LOS                  | B      |      | E      |       |        |       |        |      |      |      |      |      |
| Minor Lane/Major Mvmt    | NBL    | NBT  | NBR    | EBLn1 | WBLn1  | SBL   | SBT    |      |      |      |      |      |
| Capacity (veh/h)         | 820    | -    | -      | 607   | 126    | 347   | -      |      |      |      |      |      |
| HCM Lane V/C Ratio       | 0.001  | -    | -      | 0.011 | 0.336  | 0.081 | -      |      |      |      |      |      |
| HCM Control Delay (s)    | 9.4    | -    | -      | 11    | 47.4   | 16.3  | -      |      |      |      |      |      |
| HCM Lane LOS             | A      | -    | -      | B     | E      | C     | -      |      |      |      |      |      |
| HCM 95th %tile Q(veh)    | 0      | -    | -      | 0     | 1.3    | 0.3   | -      |      |      |      |      |      |

Deer Valley 30  
4: Alameda Rd & 19th Ave

2024 Total AM Scenario A  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Int Delay, s/veh         | 11.2 |      |      |      |      |      |      |      |      |      |      |      |
| Movement                 | EBL  | EBT  | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
| Lane Configurations      | ↔    |      | ↔    |      | ↔    |      | ↔    |      | ↔    |      | ↔    |      |
| Traffic Vol, veh/h       | 9    | 0    | 56   | 42   | 0    | 35   | 18   | 593  | 224  | 187  | 951  | 14   |
| Future Vol, veh/h        | 9    | 0    | 56   | 42   | 0    | 35   | 18   | 593  | 224  | 187  | 951  | 14   |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Stop | Stop | Stop | Stop | Stop | Stop | Free | Free | Free | Free | Free | Free |
| RT Channelized           | -    | -    | None | -    | -    | None | -    | -    | None | -    | -    | None |
| Storage Length           | 0    | -    | -    | 150  | -    | -    | 150  | -    | -    | 0    | -    | -    |
| Veh in Median Storage, # | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Grade, %                 | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Peak Hour Factor         | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   |
| Heavy Vehicles, %        | 8    | 8    | 8    | 8    | 8    | 8    | 8    | 8    | 8    | 8    | 8    | 8    |
| Mvmt Flow                | 10   | 0    | 61   | 46   | 0    | 38   | 20   | 645  | 243  | 203  | 1034 | 15   |

| Major/Minor          | Minor2 | Minor1 | Major1 | Major2 |
|----------------------|--------|--------|--------|--------|
| Conflicting Flow All | 1746   | 2376   | 525    | 1730   |
| Stage 1              | 1448   | 1448   | -      | 807    |
| Stage 2              | 298    | 928    | -      | 923    |
| Critical Hdwy        | 7.11   | 6.66   | 7.06   | 7.11   |
| Critical Hdwy Stg 1  | 6.66   | 5.66   | -      | 7.46   |
| Critical Hdwy Stg 2  | 6.86   | 5.66   | -      | 6.66   |
| Follow-up Hdwy       | 3.73   | 4.08   | 3.38   | 3.73   |
| Pot Cap-1 Maneuver   | 66     | 31     | 482    | 68     |
| Stage 1              | 128    | 184    | -      | 267    |
| Stage 2              | 636    | 332    | -      | 272    |
| Platoon blocked, %   | -      | -      | -      | -      |
| Mov Cap-1 Maneuver   | 37     | 16     | 482    | -      |
| Mov Cap-2 Maneuver   | 37     | 16     | -      | -      |
| Stage 1              | 124    | 96     | -      | 258    |
| Stage 2              | 566    | 321    | -      | 124    |

| Approach             | EB   | WB    | NB  | SB  |
|----------------------|------|-------|-----|-----|
| HCM Control Delay, s | 30.2 | 230.7 | 0.2 | 3.4 |
| HCM LOS              | D    | F     |     |     |

| Minor Lane/Major Mvmt | NBL   | NBT | NBR | EBLn1 | EBLn2 | WBLn1 | WBLn2 | SBL   | SBT | SBR |
|-----------------------|-------|-----|-----|-------|-------|-------|-------|-------|-----|-----|
| Capacity (veh/h)      | 625   | -   | -   | 37    | 482   | 36    | 468   | 425   | -   | -   |
| HCM Lane V/C Ratio    | 0.031 | -   | -   | 0.264 | 0.126 | 1.268 | 0.081 | 0.478 | -   | -   |
| HCM Control Delay (s) | 10.9  | -   | -   | 134.2 | 13.55 | 411.7 | 13.4  | 21    | -   | -   |
| HCM Lane LOS          | B     | -   | -   | F     | B     | F     | B     | C     | -   | -   |
| HCM 95th %tile Q(veh) | 0.1   | -   | -   | 0.9   | 0.4   | 4.8   | 0.3   | 2.5   | -   | -   |

Notes  
 -: Volume exceeds capacity    \$: Delay exceeds 300s    +: Computation Not Defined    \*: All major volume in platoon

Deer Valley 30  
4: Alameda Rd & 19th Ave

2024 Total PM Scenario A  
HCM 6th TWSC

| Intersection             |       |      |      |      |      |      |      |      |      |      |      |      |
|--------------------------|-------|------|------|------|------|------|------|------|------|------|------|------|
| Int Delay, s/veh         | 176.4 |      |      |      |      |      |      |      |      |      |      |      |
| Movement                 | EBL   | EBT  | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
| Lane Configurations      | ↔     |      | ↔    |      | ↔    |      | ↔    |      | ↔    |      | ↔    |      |
| Traffic Vol, veh/h       | 14    | 0    | 62   | 197  | 0    | 162  | 85   | 1106 | 43   | 35   | 667  | 16   |
| Future Vol, veh/h        | 14    | 0    | 62   | 197  | 0    | 162  | 85   | 1106 | 43   | 35   | 667  | 16   |
| Conflicting Peds, #/hr   | 0     | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Stop  | Stop | Stop | Stop | Stop | Stop | Free | Free | Free | Free | Free | Free |
| RT Channelized           | -     | -    | None | -    | -    | None | -    | -    | None | -    | -    | None |
| Storage Length           | 0     | -    | -    | 150  | -    | -    | 150  | -    | -    | 0    | -    | -    |
| Veh in Median Storage, # | -     | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Grade, %                 | -     | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Peak Hour Factor         | 92    | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   |
| Heavy Vehicles, %        | 8     | 8    | 8    | 8    | 8    | 8    | 8    | 8    | 8    | 8    | 8    | 8    |
| Mvmt Flow                | 15    | 0    | 67   | 214  | 0    | 176  | 92   | 1202 | 47   | 38   | 725  | 17   |

| Major/Minor          | Minor2 | Minor1 | Major1 | Major2 |
|----------------------|--------|--------|--------|--------|
| Conflicting Flow All | 1475   | 2243   | 371    | 1849   |
| Stage 1              | 810    | 810    | -      | 1410   |
| Stage 2              | 665    | 1433   | -      | 439    |
| Critical Hdwy        | 7.11   | 6.66   | 7.06   | 7.11   |
| Critical Hdwy Stg 1  | 6.66   | 5.66   | -      | 7.46   |
| Critical Hdwy Stg 2  | 6.86   | 5.66   | -      | 6.66   |
| Follow-up Hdwy       | 3.73   | 4.08   | 3.38   | 3.73   |
| Pot Cap-1 Maneuver   | 102    | 38     | 609    | -      |
| Stage 1              | 319    | 377    | -      | 99     |
| Stage 2              | 376    | 188    | -      | 533    |
| Platoon blocked, %   | -      | -      | -      | -      |
| Mov Cap-1 Maneuver   | 42     | 29     | 609    | -      |
| Mov Cap-2 Maneuver   | 42     | 29     | -      | -      |
| Stage 1              | 283    | 326    | -      | 88     |
| Stage 2              | 168    | 167    | -      | 410    |

| Approach             | EB | WB        | NB  | SB |
|----------------------|----|-----------|-----|----|
| HCM Control Delay, s | 34 | \$ 1161.3 | 0.7 | 1  |
| HCM LOS              | D  | F         |     |    |

| Minor Lane/Major Mvmt | NBL   | NBT | NBR | EBLn1 | EBLn2 | WBLn1 | WBLn2 | SBL   | SBT | SBR |
|-----------------------|-------|-----|-----|-------|-------|-------|-------|-------|-----|-----|
| Capacity (veh/h)      | 822   | -   | -   | 42    | 609   | 41    | 355   | 281   | -   | -   |
| HCM Lane V/C Ratio    | 0.112 | -   | -   | 0.362 | 0.111 | 5.223 | 0.496 | 0.135 | -   | -   |
| HCM Control Delay (s) | 9.9   | -   | -   | 133.1 | 11.6  | 2096  | 24.7  | 19.8  | -   | -   |
| HCM Lane LOS          | A     | -   | -   | F     | B     | F     | C     | C     | -   | -   |
| HCM 95th %tile Q(veh) | 0.4   | -   | -   | 1.2   | 0.4   | 24.9  | 2.6   | 0.5   | -   | -   |

Notes  
 -: Volume exceeds capacity    \$: Delay exceeds 300s    +: Computation Not Defined    \*: All major volume in platoon



Deer Valley 30  
5: 19th Ave & Sarah Bass PI

2024 Total AM Scenario A  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh         | 0.5  |      |      |      |      |      |
| Movement                 | EBL  | EBR  | NBL  | NBT  | SBT  | SBR  |
| Lane Configurations      |      |      |      |      |      |      |
| Traffic Vol, veh/h       | 13   | 36   | 27   | 855  | 848  | 9    |
| Future Vol, veh/h        | 13   | 36   | 27   | 855  | 848  | 9    |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Stop | Stop | Free | Free | Free | Free |
| RT Channelized           | -    | None | -    | None | -    | None |
| Storage Length           | 0    | 0    | 150  | -    | -    | -    |
| Veh in Median Storage, # | 0    | -    | -    | 0    | 0    | -    |
| Grade, %                 | 0    | -    | -    | 0    | 0    | -    |
| Peak Hour Factor         | 92   | 92   | 92   | 92   | 92   | 92   |
| Heavy Vehicles, %        | 8    | 8    | 8    | 8    | 8    | 8    |
| Mvmt Flow                | 14   | 39   | 29   | 929  | 922  | 10   |

| Major/Minor          | Minor2 | Major1 | Major2 |   |   |   |
|----------------------|--------|--------|--------|---|---|---|
| Conflicting Flow All | 1357   | 466    | 932    | 0 | - | 0 |
| Stage 1              | 927    | -      | -      | - | - | - |
| Stage 2              | 430    | -      | -      | - | - | - |
| Critical Hdwy        | 6.41   | 7.06   | 4.26   | - | - | - |
| Critical Hdwy Stg 1  | 5.96   | -      | -      | - | - | - |
| Critical Hdwy Stg 2  | 6.16   | -      | -      | - | - | - |
| Follow-up Hdwy       | 3.73   | 3.38   | 2.28   | - | - | - |
| Pot Cap-1 Maneuver   | 160    | 527    | 694    | - | - | - |
| Stage 1              | 324    | -      | -      | - | - | - |
| Stage 2              | 573    | -      | -      | - | - | - |
| Platoon blocked, %   | -      | -      | -      | - | - | - |
| Mov Cap-1 Maneuver   | 153    | 527    | 694    | - | - | - |
| Mov Cap-2 Maneuver   | 244    | -      | -      | - | - | - |
| Stage 1              | 310    | -      | -      | - | - | - |
| Stage 2              | 573    | -      | -      | - | - | - |

| Approach             | EB   | NB  | SB |
|----------------------|------|-----|----|
| HCM Control Delay, s | 14.6 | 0.3 | 0  |
| HCM LOS              | B    |     |    |

| Minor Lane/Major Mvmt | NBL   | NBT | EBLn1 | EBLn2 | SBT | SBR |
|-----------------------|-------|-----|-------|-------|-----|-----|
| Capacity (veh/h)      | 694   | -   | 244   | 527   | -   | -   |
| HCM Lane V/C Ratio    | 0.042 | -   | 0.058 | 0.074 | -   | -   |
| HCM Control Delay (s) | 10.4  | -   | 20.7  | 12.4  | -   | -   |
| HCM Lane LOS          | B     | -   | C     | B     | -   | -   |
| HCM 95th %tile Q(veh) | 0.1   | -   | 0.2   | 0.2   | -   | -   |

Deer Valley 30  
5: 19th Ave & Sarah Bass PI

2024 Total PM Scenario A  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh         | 0.5  |      |      |      |      |      |
| Movement                 | EBL  | EBR  | NBL  | NBT  | SBT  | SBR  |
| Lane Configurations      |      |      |      |      |      |      |
| Traffic Vol, veh/h       | 16   | 37   | 10   | 1032 | 948  | 6    |
| Future Vol, veh/h        | 16   | 37   | 10   | 1032 | 948  | 6    |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Stop | Stop | Free | Free | Free | Free |
| RT Channelized           | -    | None | -    | None | -    | None |
| Storage Length           | 0    | 0    | 150  | -    | -    | -    |
| Veh in Median Storage, # | 0    | -    | -    | 0    | 0    | -    |
| Grade, %                 | 0    | -    | -    | 0    | 0    | -    |
| Peak Hour Factor         | 92   | 92   | 92   | 92   | 92   | 92   |
| Heavy Vehicles, %        | 8    | 8    | 8    | 8    | 8    | 8    |
| Mvmt Flow                | 17   | 40   | 11   | 1122 | 1030 | 7    |

| Major/Minor          | Minor2 | Major1 | Major2 |   |   |   |
|----------------------|--------|--------|--------|---|---|---|
| Conflicting Flow All | 1505   | 519    | 1037   | 0 | - | 0 |
| Stage 1              | 1034   | -      | -      | - | - | - |
| Stage 2              | 471    | -      | -      | - | - | - |
| Critical Hdwy        | 6.41   | 7.06   | 4.26   | - | - | - |
| Critical Hdwy Stg 1  | 5.96   | -      | -      | - | - | - |
| Critical Hdwy Stg 2  | 6.16   | -      | -      | - | - | - |
| Follow-up Hdwy       | 3.73   | 3.38   | 2.28   | - | - | - |
| Pot Cap-1 Maneuver   | 131    | 486    | 631    | - | - | - |
| Stage 1              | 284    | -      | -      | - | - | - |
| Stage 2              | 545    | -      | -      | - | - | - |
| Platoon blocked, %   | -      | -      | -      | - | - | - |
| Mov Cap-1 Maneuver   | 129    | 486    | 631    | - | - | - |
| Mov Cap-2 Maneuver   | 218    | -      | -      | - | - | - |
| Stage 1              | 279    | -      | -      | - | - | - |
| Stage 2              | 545    | -      | -      | - | - | - |

| Approach             | EB   | NB  | SB |
|----------------------|------|-----|----|
| HCM Control Delay, s | 16.1 | 0.1 | 0  |
| HCM LOS              | C    |     |    |

| Minor Lane/Major Mvmt | NBL   | NBT | EBLn1 | EBLn2 | SBT | SBR |
|-----------------------|-------|-----|-------|-------|-----|-----|
| Capacity (veh/h)      | 631   | -   | 218   | 486   | -   | -   |
| HCM Lane V/C Ratio    | 0.017 | -   | 0.08  | 0.083 | -   | -   |
| HCM Control Delay (s) | 10.8  | -   | 22.9  | 13.1  | -   | -   |
| HCM Lane LOS          | B     | -   | C     | B     | -   | -   |
| HCM 95th %tile Q(veh) | 0.1   | -   | 0.3   | 0.3   | -   | -   |

Deer Valley 30  
6: Pinnacle Peak Rd & 19th Ave

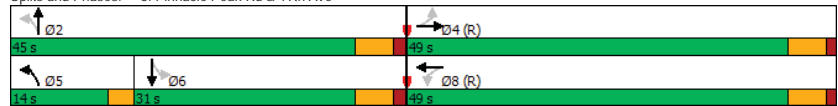
2024 Total AM Scenario A  
Timings

| Lane Group           | EBL   | EBT   | WBL   | WBT   | NBL   | NBT   | SBL   | SBT   |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations  | ↖     | ↗     | ↖     | ↗     | ↖     | ↗     | ↖     | ↗     |
| Traffic Volume (vph) | 418   | 856   | 69    | 256   | 169   | 500   | 143   | 661   |
| Future Volume (vph)  | 418   | 856   | 69    | 256   | 169   | 500   | 143   | 661   |
| Turn Type            | Perm  | NA    | Perm  | NA    | pm+pt | NA    | Perm  | NA    |
| Protected Phases     |       | 4     |       | 8     | 5     | 2     |       | 6     |
| Permitted Phases     | 4     |       | 8     |       | 2     |       | 6     |       |
| Detector Phase       | 4     | 4     | 8     | 8     | 5     | 2     | 6     | 6     |
| Switch Phase         |       |       |       |       |       |       |       |       |
| Minimum Initial (s)  | 15.0  | 15.0  | 15.0  | 15.0  | 5.0   | 15.0  | 15.0  | 15.0  |
| Minimum Split (s)    | 34.6  | 34.6  | 34.6  | 34.6  | 9.5   | 30.8  | 30.8  | 30.8  |
| Total Split (s)      | 49.0  | 49.0  | 49.0  | 49.0  | 14.0  | 45.0  | 31.0  | 31.0  |
| Total Split (%)      | 52.1% | 52.1% | 52.1% | 52.1% | 14.9% | 47.9% | 33.0% | 33.0% |
| Yellow Time (s)      | 4.3   | 4.3   | 4.3   | 4.3   | 3.0   | 4.3   | 4.3   | 4.3   |
| All-Red Time (s)     | 1.3   | 1.3   | 1.3   | 1.3   | 0.0   | 1.5   | 1.5   | 1.5   |
| Lost Time Adjust (s) | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Lost Time (s)  | 5.6   | 5.6   | 5.6   | 5.6   | 3.0   | 5.8   | 5.8   | 5.8   |
| Lead/Lag             |       |       |       |       | Lead  |       | Lag   | Lag   |
| Lead-Lag Optimize?   |       |       |       |       | Yes   |       | Yes   | Yes   |
| Recall Mode          | C-Max | C-Max | C-Max | C-Max | None  | Max   | Max   | Max   |
| Act Effct Green (s)  | 43.4  | 43.4  | 43.4  | 43.4  | 42.0  | 39.2  | 25.9  | 25.9  |
| Actuated g/C Ratio   | 0.46  | 0.46  | 0.46  | 0.46  | 0.45  | 0.42  | 0.28  | 0.28  |
| v/c Ratio            | 1.24  | 0.83  | 0.96  | 0.31  | 0.70  | 0.37  | 0.88  | 0.93  |
| Control Delay        | 154.4 | 26.8  | 124.0 | 9.5   | 32.3  | 17.4  | 77.7  | 50.5  |
| Queue Delay          | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Delay          | 154.4 | 26.8  | 124.0 | 9.5   | 32.3  | 17.4  | 77.7  | 50.5  |
| LOS                  | F     | C     | F     | A     | C     | B     | E     | D     |
| Approach Delay       |       | 60.5  |       | 25.1  |       | 20.4  |       | 54.7  |
| Approach LOS         |       | E     |       | C     |       | C     |       | D     |

Intersection Summary

Cycle Length: 94  
 Actuated Cycle Length: 94  
 Offset: 31 (33%), Referenced to phase 4:EBTL and 8:WBTL, Start of Green  
 Natural Cycle: 90  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 1.24  
 Intersection Signal Delay: 45.8  
 Intersection Capacity Utilization 95.1%  
 Intersection LOS: D  
 ICU Level of Service F  
 Analysis Period (min) 15

Splits and Phases: 6: Pinnacle Peak Rd & 19th Ave



Deer Valley 30  
6: Pinnacle Peak Rd & 19th Ave

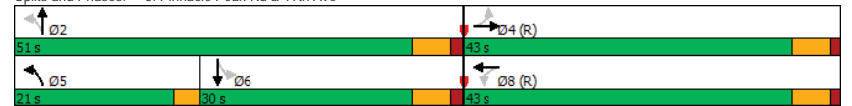
2024 Total PM Scenario A  
Timings

| Lane Group           | EBL   | EBT   | WBL   | WBT   | NBL   | NBT   | SBL   | SBT   |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations  | ↖     | ↗     | ↖     | ↗     | ↖     | ↗     | ↖     | ↗     |
| Traffic Volume (vph) | 148   | 229   | 119   | 766   | 408   | 818   | 167   | 629   |
| Future Volume (vph)  | 148   | 229   | 119   | 766   | 408   | 818   | 167   | 629   |
| Turn Type            | Perm  | NA    | Perm  | NA    | pm+pt | NA    | Perm  | NA    |
| Protected Phases     |       | 4     |       | 8     | 5     | 2     |       | 6     |
| Permitted Phases     | 4     |       | 8     |       | 2     |       | 6     |       |
| Detector Phase       | 4     | 4     | 8     | 8     | 5     | 2     | 6     | 6     |
| Switch Phase         |       |       |       |       |       |       |       |       |
| Minimum Initial (s)  | 15.0  | 15.0  | 15.0  | 15.0  | 5.0   | 15.0  | 15.0  | 15.0  |
| Minimum Split (s)    | 34.6  | 34.6  | 34.6  | 34.6  | 9.5   | 30.8  | 30.8  | 30.8  |
| Total Split (s)      | 43.0  | 43.0  | 43.0  | 43.0  | 21.0  | 51.0  | 30.0  | 30.0  |
| Total Split (%)      | 45.7% | 45.7% | 45.7% | 45.7% | 22.3% | 54.3% | 31.9% | 31.9% |
| Yellow Time (s)      | 4.3   | 4.3   | 4.3   | 4.3   | 3.0   | 4.3   | 4.3   | 4.3   |
| All-Red Time (s)     | 1.3   | 1.3   | 1.3   | 1.3   | 0.0   | 1.5   | 1.5   | 1.5   |
| Lost Time Adjust (s) | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Lost Time (s)  | 5.6   | 5.6   | 5.6   | 5.6   | 3.0   | 5.8   | 5.8   | 5.8   |
| Lead/Lag             |       |       |       |       | Lead  |       | Lag   | Lag   |
| Lead-Lag Optimize?   |       |       |       |       | Yes   |       | Yes   | Yes   |
| Recall Mode          | C-Max | C-Max | C-Max | C-Max | None  | Max   | Max   | Max   |
| Act Effct Green (s)  | 37.4  | 37.4  | 37.4  | 37.4  | 48.0  | 45.2  | 24.2  | 24.2  |
| Actuated g/C Ratio   | 0.40  | 0.40  | 0.40  | 0.40  | 0.51  | 0.48  | 0.26  | 0.26  |
| v/c Ratio            | 1.41  | 0.37  | 0.45  | 0.74  | 1.10  | 0.41  | 1.37  | 1.29  |
| Control Delay        | 257.0 | 10.0  | 27.3  | 27.6  | 100.9 | 16.2  | 237.5 | 167.6 |
| Queue Delay          | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Delay          | 257.0 | 10.0  | 27.3  | 27.6  | 100.9 | 16.2  | 237.5 | 167.6 |
| LOS                  | F     | B     | C     | C     | F     | B     | F     | F     |
| Approach Delay       |       | 68.7  |       | 27.5  |       | 43.4  |       | 177.4 |
| Approach LOS         |       | E     |       | C     |       | D     |       | F     |

Intersection Summary

Cycle Length: 94  
 Actuated Cycle Length: 94  
 Offset: 31 (33%), Referenced to phase 4:EBTL and 8:WBTL, Start of Green  
 Natural Cycle: 90  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 1.41  
 Intersection Signal Delay: 82.5  
 Intersection Capacity Utilization 107.8%  
 Intersection LOS: F  
 ICU Level of Service G  
 Analysis Period (min) 15

Splits and Phases: 6: Pinnacle Peak Rd & 19th Ave



Deer Valley 30  
6: Pinnacle Peak Rd & 19th Ave

2024 Total AM Scenario A  
HCM 6th Signalized Intersection Summary

| Movement                     | EBL   | EBT  | EBR  | WBL   | WBT  | WBR  | NBL  | NBT   | NBR  | SBL  | SBT  | SBR  |
|------------------------------|-------|------|------|-------|------|------|------|-------|------|------|------|------|
| Lane Configurations          | ↔     | ↕    | ↔    | ↔     | ↕    | ↔    | ↔    | ↕     | ↔    | ↔    | ↕    | ↔    |
| Traffic Volume (veh/h)       | 418   | 856  | 309  | 69    | 256  | 181  | 169  | 500   | 165  | 143  | 661  | 122  |
| Future Volume (veh/h)        | 418   | 856  | 309  | 69    | 256  | 181  | 169  | 500   | 165  | 143  | 661  | 122  |
| Initial Q (Ob), veh          | 0     | 0    | 0    | 0     | 0    | 0    | 0    | 0     | 0    | 0    | 0    | 0    |
| Ped-Bike Adj(A_pbT)          | 1.00  |      | 1.00 | 1.00  |      | 1.00 | 1.00 |       | 1.00 | 1.00 |      | 1.00 |
| Parking Bus, Adj             | 1.00  | 1.00 | 1.00 | 1.00  | 1.00 | 1.00 | 1.00 | 1.00  | 1.00 | 1.00 | 1.00 | 1.00 |
| Work Zone On Approach        | No    |      | No   |       | No   |      | No   |       | No   |      | No   |      |
| Adj Sat Flow, veh/h/ln       | 1781  | 1781 | 1781 | 1781  | 1781 | 1781 | 1781 | 1781  | 1781 | 1781 | 1781 | 1781 |
| Adj Flow Rate, veh/h         | 454   | 930  | 336  | 75    | 278  | 197  | 184  | 543   | 179  | 155  | 718  | 133  |
| Peak Hour Factor             | 0.92  | 0.92 | 0.92 | 0.92  | 0.92 | 0.92 | 0.92 | 0.92  | 0.92 | 0.92 | 0.92 | 0.92 |
| Percent Heavy Veh, %         | 8     | 8    | 8    | 8     | 8    | 8    | 8    | 8     | 8    | 8    | 8    | 8    |
| Cap, veh/h                   | 398   | 1126 | 405  | 130   | 886  | 608  | 268  | 1520  | 488  | 279  | 830  | 154  |
| Arrive On Green              | 0.46  | 0.46 | 0.46 | 0.46  | 0.46 | 0.46 | 0.09 | 0.42  | 0.42 | 0.29 | 0.29 | 0.29 |
| Sat Flow, veh/h              | 875   | 2440 | 876  | 417   | 1919 | 1318 | 1697 | 3644  | 1169 | 696  | 2851 | 528  |
| Grp Volume(v), veh/h         | 454   | 644  | 622  | 75    | 244  | 231  | 184  | 481   | 241  | 155  | 426  | 425  |
| Grp Sat Flow(s), veh/h/ln    | 875   | 1692 | 1624 | 417   | 1692 | 1544 | 1697 | 1621  | 1571 | 696  | 1692 | 1686 |
| Q Serve(g_s), s              | 34.5  | 31.0 | 31.5 | 11.9  | 8.5  | 8.9  | 6.8  | 9.6   | 9.9  | 19.1 | 22.4 | 22.4 |
| Cycle Q Clear(g_c), s        | 43.4  | 31.0 | 31.5 | 43.4  | 8.5  | 8.9  | 6.8  | 9.6   | 9.9  | 19.1 | 22.4 | 22.4 |
| Prop In Lane                 | 1.00  |      | 0.54 | 1.00  |      | 0.85 | 1.00 |       | 0.74 | 1.00 |      | 0.31 |
| Lane Grp Cap(c), veh/h       | 398   | 781  | 750  | 130   | 781  | 713  | 268  | 1352  | 655  | 279  | 493  | 491  |
| V/C Ratio(X)                 | 1.14  | 0.82 | 0.83 | 0.58  | 0.31 | 0.32 | 0.69 | 0.36  | 0.37 | 0.55 | 0.86 | 0.87 |
| Avail Cap(c_a), veh/h        | 398   | 781  | 750  | 130   | 781  | 713  | 308  | 1352  | 655  | 279  | 493  | 491  |
| HCM Platoon Ratio            | 1.00  | 1.00 | 1.00 | 1.00  | 1.00 | 1.00 | 1.00 | 1.00  | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(I)           | 1.00  | 1.00 | 1.00 | 1.00  | 1.00 | 1.00 | 1.00 | 1.00  | 1.00 | 1.00 | 1.00 | 1.00 |
| Uniform Delay (d), s/veh     | 33.1  | 22.0 | 22.1 | 42.8  | 15.9 | 16.0 | 22.7 | 18.8  | 18.9 | 30.4 | 31.6 | 31.6 |
| Incr Delay (d2), s/veh       | 89.4  | 9.6  | 10.3 | 17.5  | 1.0  | 1.2  | 5.2  | 0.7   | 1.6  | 7.7  | 18.0 | 18.1 |
| Initial Q Delay(d3), s/veh   | 0.0   | 0.0  | 0.0  | 0.0   | 0.0  | 0.0  | 0.0  | 0.0   | 0.0  | 0.0  | 0.0  | 0.0  |
| %ile BackOfQ(50%), veh/ln    | 19.1  | 13.7 | 13.4 | 2.4   | 3.4  | 3.3  | 3.0  | 3.6   | 3.8  | 3.7  | 11.4 | 11.3 |
| Unsig. Movement Delay, s/veh |       |      |      |       |      |      |      |       |      |      |      |      |
| LnGrp Delay(d), s/veh        | 122.5 | 31.6 | 32.4 | 60.3  | 17.0 | 17.2 | 28.0 | 19.5  | 20.4 | 38.1 | 49.5 | 49.7 |
| LnGrp LOS                    | F     | C    | C    | E     | B    | B    | C    | B     | C    | D    | D    | D    |
| Approach Vol, veh/h          |       | 1720 |      |       | 550  |      |      | 906   |      |      | 1006 |      |
| Approach Delay, s/veh        |       | 55.9 |      |       | 23.0 |      |      | 21.5  |      |      | 47.8 |      |
| Approach LOS                 |       | E    |      |       | C    |      |      | C     |      |      | D    |      |
| Timer - Assigned Phs         |       | 2    |      | 4     | 5    | 6    |      | 8     |      |      |      |      |
| Phs Duration (G+Y+Rc), s     |       | 45.0 |      | 49.0  | 11.8 | 33.2 |      | 49.0  |      |      | 43.0 |      |
| Change Period (Y+Rc), s      |       | 5.8  |      | * 5.6 | 3.0  | 5.8  |      | * 5.6 |      |      | 5.8  |      |
| Max Green Setting (Gmax), s  |       | 39.2 |      | * 43  | 11.0 | 25.2 |      | * 43  |      |      | 37   |      |
| Max Q Clear Time (g_c+I1), s |       | 11.9 |      | 45.4  | 8.8  | 24.4 |      | 45.4  |      |      | 26.6 |      |
| Green Ext Time (p_c), s      |       | 5.3  |      | 0.0   | 0.1  | 0.5  |      | 0.0   |      |      | 5.3  |      |

| Intersection Summary |      |
|----------------------|------|
| HCM 6th Ctrl Delay   | 42.2 |
| HCM 6th LOS          | D    |

Notes  
\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Deer Valley 30  
6: Pinnacle Peak Rd & 19th Ave

2024 Total PM Scenario A  
HCM 6th Signalized Intersection Summary

| Movement                     | EBL   | EBT  | EBR  | WBL   | WBT  | WBR  | NBL   | NBT   | NBR  | SBL  | SBT   | SBR   |
|------------------------------|-------|------|------|-------|------|------|-------|-------|------|------|-------|-------|
| Lane Configurations          | ↔     | ↕    | ↔    | ↔     | ↕    | ↔    | ↔     | ↕     | ↔    | ↔    | ↕     | ↔     |
| Traffic Volume (veh/h)       | 148   | 229  | 246  | 119   | 766  | 123  | 408   | 818   | 41   | 167  | 629   | 397   |
| Future Volume (veh/h)        | 148   | 229  | 246  | 119   | 766  | 123  | 408   | 818   | 41   | 167  | 629   | 397   |
| Initial Q (Ob), veh          | 0     | 0    | 0    | 0     | 0    | 0    | 0     | 0     | 0    | 0    | 0     | 0     |
| Ped-Bike Adj(A_pbT)          | 1.00  |      | 1.00 | 1.00  |      | 1.00 | 1.00  |       | 1.00 | 1.00 |       | 1.00  |
| Parking Bus, Adj             | 1.00  | 1.00 | 1.00 | 1.00  | 1.00 | 1.00 | 1.00  | 1.00  | 1.00 | 1.00 | 1.00  | 1.00  |
| Work Zone On Approach        | No    |      | No   |       | No   |      | No    |       | No   |      | No    |       |
| Adj Sat Flow, veh/h/ln       | 1781  | 1781 | 1781 | 1781  | 1781 | 1781 | 1781  | 1781  | 1781 | 1781 | 1781  | 1781  |
| Adj Flow Rate, veh/h         | 161   | 249  | 267  | 129   | 833  | 134  | 443   | 889   | 45   | 182  | 684   | 323   |
| Peak Hour Factor             | 0.92  | 0.92 | 0.92 | 0.92  | 0.92 | 0.92 | 0.92  | 0.92  | 0.92 | 0.92 | 0.92  | 0.92  |
| Percent Heavy Veh, %         | 8     | 8    | 8    | 8     | 8    | 8    | 8     | 8     | 8    | 8    | 8     | 8     |
| Cap, veh/h                   | 164   | 673  | 601  | 303   | 1162 | 187  | 401   | 2280  | 115  | 224  | 574   | 271   |
| Arrive On Green              | 0.40  | 0.40 | 0.40 | 0.40  | 0.40 | 0.40 | 0.19  | 0.48  | 0.48 | 0.26 | 0.26  | 0.26  |
| Sat Flow, veh/h              | 553   | 1692 | 1510 | 843   | 2920 | 470  | 1697  | 4741  | 239  | 571  | 2231  | 1053  |
| Grp Volume(v), veh/h         | 161   | 249  | 267  | 129   | 483  | 484  | 443   | 607   | 327  | 182  | 519   | 488   |
| Grp Sat Flow(s), veh/h/ln    | 553   | 1692 | 1510 | 843   | 1692 | 1697 | 1697  | 1621  | 1738 | 571  | 1692  | 1592  |
| Q Serve(g_s), s              | 14.8  | 9.8  | 12.2 | 12.4  | 22.6 | 22.6 | 18.0  | 11.2  | 11.3 | 24.2 | 24.2  | 24.2  |
| Cycle Q Clear(g_c), s        | 37.4  | 9.8  | 12.2 | 24.6  | 22.6 | 22.6 | 18.0  | 11.2  | 11.3 | 24.2 | 24.2  | 24.2  |
| Prop In Lane                 | 1.00  |      | 1.00 | 1.00  |      | 0.28 | 1.00  |       | 0.14 | 1.00 |       | 0.66  |
| Lane Grp Cap(c), veh/h       | 164   | 673  | 601  | 303   | 673  | 675  | 401   | 1559  | 836  | 224  | 436   | 410   |
| V/C Ratio(X)                 | 0.98  | 0.37 | 0.44 | 0.43  | 0.72 | 0.72 | 1.10  | 0.39  | 0.39 | 0.81 | 1.19  | 1.19  |
| Avail Cap(c_a), veh/h        | 164   | 673  | 601  | 303   | 673  | 675  | 401   | 1559  | 836  | 224  | 436   | 410   |
| HCM Platoon Ratio            | 1.00  | 1.00 | 1.00 | 1.00  | 1.00 | 1.00 | 1.00  | 1.00  | 1.00 | 1.00 | 1.00  | 1.00  |
| Upstream Filter(I)           | 1.00  | 1.00 | 1.00 | 1.00  | 1.00 | 1.00 | 1.00  | 1.00  | 1.00 | 1.00 | 1.00  | 1.00  |
| Uniform Delay (d), s/veh     | 43.0  | 20.0 | 20.7 | 29.7  | 23.8 | 23.8 | 26.8  | 15.6  | 15.6 | 37.2 | 34.9  | 34.9  |
| Incr Delay (d2), s/veh       | 66.0  | 1.6  | 2.4  | 4.3   | 6.4  | 6.4  | 75.9  | 0.7   | 1.4  | 26.7 | 106.7 | 107.8 |
| Initial Q Delay(d3), s/veh   | 0.0   | 0.0  | 0.0  | 0.0   | 0.0  | 0.0  | 0.0   | 0.0   | 0.0  | 0.0  | 0.0   | 0.0   |
| %ile BackOfQ(50%), veh/ln    | 6.7   | 4.0  | 4.6  | 2.8   | 9.9  | 9.9  | 14.2  | 4.1   | 4.6  | 5.9  | 22.6  | 21.4  |
| Unsig. Movement Delay, s/veh |       |      |      |       |      |      |       |       |      |      |       |       |
| LnGrp Delay(d), s/veh        | 109.0 | 21.5 | 23.1 | 34.0  | 30.3 | 30.3 | 102.7 | 16.3  | 17.0 | 63.9 | 141.6 | 142.7 |
| LnGrp LOS                    | F     | C    | C    | C     | C    | C    | F     | B     | B    | E    | F     | F     |
| Approach Vol, veh/h          |       | 677  |      |       | 1096 |      |       | 1377  |      |      | 1189  |       |
| Approach Delay, s/veh        |       | 43.0 |      |       | 30.7 |      |       | 44.3  |      |      | 130.2 |       |
| Approach LOS                 |       | D    |      |       | C    |      |       | D     |      |      | F     |       |
| Timer - Assigned Phs         |       | 2    |      | 4     | 5    | 6    |       | 8     |      |      |       |       |
| Phs Duration (G+Y+Rc), s     |       | 51.0 |      | 43.0  | 21.0 | 30.0 |       | 43.0  |      |      | 43.0  |       |
| Change Period (Y+Rc), s      |       | 5.8  |      | * 5.6 | 3.0  | 5.8  |       | * 5.6 |      |      | 5.8   |       |
| Max Green Setting (Gmax), s  |       | 45.2 |      | * 37  | 18.0 | 24.2 |       | * 37  |      |      | 37    |       |
| Max Q Clear Time (g_c+I1), s |       | 13.3 |      | 39.4  | 20.0 | 26.2 |       | 26.6  |      |      | 26.6  |       |
| Green Ext Time (p_c), s      |       | 7.3  |      | 0.0   | 0.0  | 0.0  |       | 5.3   |      |      | 5.3   |       |

| Intersection Summary |      |
|----------------------|------|
| HCM 6th Ctrl Delay   | 64.2 |
| HCM 6th LOS          | E    |

Notes  
User approved pedestrian interval to be less than phase max green.  
\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Deer Valley 30  
7: 15th Ave & Happy Valley Rd

2024 Total AM Scenario A  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Int Delay, s/veh         | 1    |      |      |      |      |      |      |      |      |      |      |      |
| Movement                 | EBL  | EBT  | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
| Lane Configurations      | ↕    |      |      | ↕    |      |      | ↕    |      |      | ↕    |      |      |
| Traffic Vol, veh/h       | 6    | 676  | 23   | 14   | 376  | 0    | 19   | 0    | 10   | 2    | 0    | 6    |
| Future Vol, veh/h        | 6    | 676  | 23   | 14   | 376  | 0    | 19   | 0    | 10   | 2    | 0    | 6    |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Free | Free | Free | Free | Free | Free | Stop | Stop | Stop | Stop | Stop | Stop |
| RT Channelized           | -    | -    | None | -    | -    | None | -    | -    | None | -    | -    | None |
| Storage Length           | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    |
| Veh in Median Storage, # | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Grade, %                 | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Peak Hour Factor         | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   |
| Heavy Vehicles, %        | 8    | 8    | 8    | 8    | 8    | 8    | 8    | 8    | 8    | 8    | 8    | 8    |
| Mvmt Flow                | 7    | 735  | 25   | 15   | 409  | 0    | 21   | 0    | 11   | 2    | 0    | 7    |

| Major/Minor          | Major1 | Major2 | Minor1 | Minor2 |
|----------------------|--------|--------|--------|--------|
| Conflicting Flow All | 409    | 0      | 760    | 0      |
| Stage 1              | -      | -      | -      | -      |
| Stage 2              | -      | -      | -      | -      |
| Critical Hdwy        | 4.18   | -      | 4.18   | -      |
| Critical Hdwy Stg 1  | -      | -      | -      | -      |
| Critical Hdwy Stg 2  | -      | -      | -      | -      |
| Follow-up Hdwy       | 2.272  | -      | 2.272  | -      |
| Pot Cap-1 Maneuver   | 1118   | -      | 825    | -      |
| Stage 1              | -      | -      | -      | -      |
| Stage 2              | -      | -      | -      | -      |
| Platoon blocked, %   | -      | -      | -      | -      |
| Mov Cap-1 Maneuver   | 1118   | -      | 825    | -      |
| Mov Cap-2 Maneuver   | -      | -      | -      | -      |
| Stage 1              | -      | -      | -      | -      |
| Stage 2              | -      | -      | -      | -      |

| Approach             | EB  | WB  | NB   | SB   |
|----------------------|-----|-----|------|------|
| HCM Control Delay, s | 0.1 | 0.3 | 27.5 | 15.6 |
| HCM LOS              |     |     | D    | C    |

| Minor Lane/Major Mvmt | NBLn1 | EBL   | EBT | EBR | WBL   | WBT | WBR | SBLn1 |
|-----------------------|-------|-------|-----|-----|-------|-----|-----|-------|
| Capacity (veh/h)      | 191   | 1118  | -   | -   | 825   | -   | -   | 347   |
| HCM Lane V/C Ratio    | 0.165 | 0.006 | -   | -   | 0.018 | -   | -   | 0.025 |
| HCM Control Delay (s) | 27.5  | 8.2   | 0   | -   | 9.4   | 0   | -   | 15.6  |
| HCM Lane LOS          | D     | A     | A   | -   | A     | A   | -   | C     |
| HCM 95th %tile Q(veh) | 0.6   | 0     | -   | -   | 0.1   | -   | -   | 0.1   |

Deer Valley 30  
7: 15th Ave & Happy Valley Rd

2024 Total PM Scenario A  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Int Delay, s/veh         | 1.6  |      |      |      |      |      |      |      |      |      |      |      |
| Movement                 | EBL  | EBT  | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
| Lane Configurations      | ↕    |      |      | ↕    |      |      | ↕    |      |      | ↕    |      |      |
| Traffic Vol, veh/h       | 2    | 527  | 3    | 8    | 1109 | 0    | 20   | 0    | 17   | 0    | 0    | 1    |
| Future Vol, veh/h        | 2    | 527  | 3    | 8    | 1109 | 0    | 20   | 0    | 17   | 0    | 0    | 1    |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Free | Free | Free | Free | Free | Free | Stop | Stop | Stop | Stop | Stop | Stop |
| RT Channelized           | -    | -    | None | -    | -    | None | -    | -    | None | -    | -    | None |
| Storage Length           | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    |
| Veh in Median Storage, # | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Grade, %                 | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Peak Hour Factor         | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   |
| Heavy Vehicles, %        | 8    | 8    | 8    | 8    | 8    | 8    | 8    | 8    | 8    | 8    | 8    | 8    |
| Mvmt Flow                | 2    | 573  | 3    | 9    | 1205 | 0    | 22   | 0    | 18   | 0    | 0    | 1    |

| Major/Minor          | Major1 | Major2 | Minor1 | Minor2 |
|----------------------|--------|--------|--------|--------|
| Conflicting Flow All | 1205   | 0      | 576    | 0      |
| Stage 1              | -      | -      | -      | -      |
| Stage 2              | -      | -      | -      | -      |
| Critical Hdwy        | 4.18   | -      | 4.18   | -      |
| Critical Hdwy Stg 1  | -      | -      | -      | -      |
| Critical Hdwy Stg 2  | -      | -      | -      | -      |
| Follow-up Hdwy       | 2.272  | -      | 2.272  | -      |
| Pot Cap-1 Maneuver   | 558    | -      | 968    | -      |
| Stage 1              | -      | -      | -      | -      |
| Stage 2              | -      | -      | -      | -      |
| Platoon blocked, %   | -      | -      | -      | -      |
| Mov Cap-1 Maneuver   | 558    | -      | 968    | -      |
| Mov Cap-2 Maneuver   | -      | -      | -      | -      |
| Stage 1              | -      | -      | -      | -      |
| Stage 2              | -      | -      | -      | -      |

| Approach             | EB | WB  | NB   | SB   |
|----------------------|----|-----|------|------|
| HCM Control Delay, s | 0  | 0.1 | 67.2 | 21.6 |
| HCM LOS              |    |     | F    | C    |

| Minor Lane/Major Mvmt | NBLn1 | EBL   | EBT | EBR | WBL   | WBT | WBR | SBLn1 |
|-----------------------|-------|-------|-----|-----|-------|-----|-----|-------|
| Capacity (veh/h)      | 96    | 558   | -   | -   | 968   | -   | -   | 218   |
| HCM Lane V/C Ratio    | 0.419 | 0.004 | -   | -   | 0.009 | -   | -   | 0.005 |
| HCM Control Delay (s) | 67.2  | 11.5  | 0   | -   | 8.8   | 0   | -   | 21.6  |
| HCM Lane LOS          | F     | B     | A   | -   | A     | A   | -   | C     |
| HCM 95th %tile Q(veh) | 1.7   | 0     | -   | -   | 0     | -   | -   | 0     |

Deer Valley 30  
8: 7th Ave & Happy Valley Rd

2024 Total AM Scenario A  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh         | 1.4  |      |      |      |      |      |
| Movement                 | EBT  | EBR  | WBL  | WBT  | NBL  | NBR  |
| Lane Configurations      | ↶    |      |      | ↷    | ↷    |      |
| Traffic Vol, veh/h       | 508  | 214  | 9    | 282  | 54   | 10   |
| Future Vol, veh/h        | 508  | 214  | 9    | 282  | 54   | 10   |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Free | Free | Free | Free | Stop | Stop |
| RT Channelized           | -    | None | -    | None | -    | None |
| Storage Length           | -    | -    | -    | -    | -    | -    |
| Veh in Median Storage, # | 0    | -    | -    | 0    | 0    | -    |
| Grade, %                 | 0    | -    | -    | 0    | 0    | -    |
| Peak Hour Factor         | 92   | 92   | 92   | 92   | 92   | 92   |
| Heavy Vehicles, %        | 8    | 8    | 8    | 8    | 8    | 8    |
| Mvmt Flow                | 552  | 233  | 10   | 307  | 59   | 11   |

| Major/Minor          | Major1 | Major2 | Minor1 |   |       |
|----------------------|--------|--------|--------|---|-------|
| Conflicting Flow All | 0      | 0      | 785    | 0 | 996   |
| Stage 1              | -      | -      | -      | - | 669   |
| Stage 2              | -      | -      | -      | - | 327   |
| Critical Hdwy        | -      | -      | 4.18   | - | 6.48  |
| Critical Hdwy Stg 1  | -      | -      | -      | - | 5.48  |
| Critical Hdwy Stg 2  | -      | -      | -      | - | 5.48  |
| Follow-up Hdwy       | -      | -      | 2.272  | - | 3.572 |
| Pot Cap-1 Maneuver   | -      | -      | 808    | - | 264   |
| Stage 1              | -      | -      | -      | - | 498   |
| Stage 2              | -      | -      | -      | - | 717   |
| Platoon blocked, %   | -      | -      | -      | - | -     |
| Mov Cap-1 Maneuver   | -      | -      | 808    | - | 260   |
| Mov Cap-2 Maneuver   | -      | -      | -      | - | 260   |
| Stage 1              | -      | -      | -      | - | 498   |
| Stage 2              | -      | -      | -      | - | 706   |

| Approach             | EB | WB  | NB   |
|----------------------|----|-----|------|
| HCM Control Delay, s | 0  | 0.3 | 22.2 |
| HCM LOS              |    |     | C    |

| Minor Lane/Major Mvmt | NBLn1 | EBT | EBR | WBL   | WBT |
|-----------------------|-------|-----|-----|-------|-----|
| Capacity (veh/h)      | 278   | -   | -   | 808   | -   |
| HCM Lane V/C Ratio    | 0.25  | -   | -   | 0.012 | -   |
| HCM Control Delay (s) | 22.2  | -   | -   | 9.5   | 0   |
| HCM Lane LOS          | C     | -   | -   | A     | A   |
| HCM 95th %tile Q(veh) | 1     | -   | -   | 0     | -   |

Deer Valley 30  
8: 7th Ave & Happy Valley Rd

2024 Total PM Scenario A  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh         | 80.9 |      |      |      |      |      |
| Movement                 | EBT  | EBR  | WBL  | WBT  | NBL  | NBR  |
| Lane Configurations      | ↶    |      |      | ↷    | ↷    |      |
| Traffic Vol, veh/h       | 479  | 77   | 19   | 854  | 223  | 11   |
| Future Vol, veh/h        | 479  | 77   | 19   | 854  | 223  | 11   |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Free | Free | Free | Free | Stop | Stop |
| RT Channelized           | -    | None | -    | None | -    | None |
| Storage Length           | -    | -    | -    | -    | -    | -    |
| Veh in Median Storage, # | 0    | -    | -    | 0    | 0    | -    |
| Grade, %                 | 0    | -    | -    | 0    | 0    | -    |
| Peak Hour Factor         | 92   | 92   | 92   | 92   | 92   | 92   |
| Heavy Vehicles, %        | 8    | 8    | 8    | 8    | 8    | 8    |
| Mvmt Flow                | 521  | 84   | 21   | 928  | 242  | 12   |

| Major/Minor          | Major1 | Major2 | Minor1 |   |       |
|----------------------|--------|--------|--------|---|-------|
| Conflicting Flow All | 0      | 0      | 605    | 0 | 1533  |
| Stage 1              | -      | -      | -      | - | 563   |
| Stage 2              | -      | -      | -      | - | 970   |
| Critical Hdwy        | -      | -      | 4.18   | - | 6.48  |
| Critical Hdwy Stg 1  | -      | -      | -      | - | 5.48  |
| Critical Hdwy Stg 2  | -      | -      | -      | - | 5.48  |
| Follow-up Hdwy       | -      | -      | 2.272  | - | 3.572 |
| Pot Cap-1 Maneuver   | -      | -      | 944    | - | 124   |
| Stage 1              | -      | -      | -      | - | 558   |
| Stage 2              | -      | -      | -      | - | 359   |
| Platoon blocked, %   | -      | -      | -      | - | -     |
| Mov Cap-1 Maneuver   | -      | -      | 944    | - | 118   |
| Mov Cap-2 Maneuver   | -      | -      | -      | - | 118   |
| Stage 1              | -      | -      | -      | - | 558   |
| Stage 2              | -      | -      | -      | - | 342   |

| Approach             | EB | WB  | NB     |
|----------------------|----|-----|--------|
| HCM Control Delay, s | 0  | 0.2 | \$ 574 |
| HCM LOS              |    |     | F      |

| Minor Lane/Major Mvmt | NBLn1  | EBT | EBR | WBL   | WBT |
|-----------------------|--------|-----|-----|-------|-----|
| Capacity (veh/h)      | 122    | -   | -   | 944   | -   |
| HCM Lane V/C Ratio    | 2.085  | -   | -   | 0.022 | -   |
| HCM Control Delay (s) | \$ 574 | -   | -   | 8.9   | 0   |
| HCM Lane LOS          | F      | -   | -   | A     | A   |
| HCM 95th %tile Q(veh) | 21.1   | -   | -   | 0.1   | -   |

Notes  
 -: Volume exceeds capacity    \$: Delay exceeds 300s    +: Computation Not Defined    \*: All major volume in platoon

Deer Valley 30  
9: 7th Ave & Pinnacle Peak Rd

2024 Total AM Scenario A  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Int Delay, s/veh         | 79.3 |      |      |      |      |      |      |      |      |      |      |      |
| Movement                 | EBL  | EBT  | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
| Lane Configurations      | ↖    | ↑    | ↗    | ↖    | ↑    | ↗    | ↖    | ↑    | ↗    | ↖    | ↑    | ↗    |
| Traffic Vol, veh/h       | 175  | 455  | 282  | 46   | 366  | 228  | 79   | 96   | 26   | 65   | 40   | 35   |
| Future Vol, veh/h        | 175  | 455  | 282  | 46   | 366  | 228  | 79   | 96   | 26   | 65   | 40   | 35   |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Free | Free | Free | Free | Free | Free | Stop | Stop | Stop | Stop | Stop | Stop |
| RT Channelized           | -    | -    | None | -    | -    | None | -    | -    | None | -    | -    | None |
| Storage Length           | 150  | -    | 170  | 150  | -    | -    | 150  | -    | -    | 150  | -    | -    |
| Veh in Median Storage, # | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Grade, %                 | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Peak Hour Factor         | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   |
| Heavy Vehicles, %        | 8    | 8    | 8    | 8    | 8    | 8    | 8    | 8    | 8    | 8    | 8    | 8    |
| Mvmt Flow                | 190  | 495  | 307  | 50   | 398  | 248  | 86   | 104  | 28   | 71   | 43   | 38   |

| Major/Minor          | Major1 | Major2 | Minor1 | Minor2 |
|----------------------|--------|--------|--------|--------|
| Conflicting Flow All | 646    | 0      | 0      | 802    |
| Stage 1              | -      | -      | -      | -      |
| Stage 2              | -      | -      | -      | -      |
| Critical Hdwy        | 4.18   | -      | -      | 4.18   |
| Critical Hdwy Stg 1  | -      | -      | -      | -      |
| Critical Hdwy Stg 2  | -      | -      | -      | -      |
| Follow-up Hdwy       | 2.272  | -      | -      | 2.272  |
| Pot Cap-1 Maneuver   | 911    | -      | -      | 796    |
| Stage 1              | -      | -      | -      | -      |
| Stage 2              | -      | -      | -      | -      |
| Platoon blocked, %   | -      | -      | -      | -      |
| Mov Cap-1 Maneuver   | 911    | -      | -      | 796    |
| Mov Cap-2 Maneuver   | -      | -      | -      | -      |
| Stage 1              | -      | -      | -      | -      |
| Stage 2              | -      | -      | -      | -      |

| Approach             | EB  | WB  | NB       | SB |
|----------------------|-----|-----|----------|----|
| HCM Control Delay, s | 1.9 | 0.7 | \$ 736.2 |    |
| HCM LOS              |     |     | F        | -  |

| Minor Lane/Major Mvmt | NBLn1      | NBLn2 | EBL   | EBT | EBR | WBL   | WBT | WBR | SBLn1 | SBLn2 |
|-----------------------|------------|-------|-------|-----|-----|-------|-----|-----|-------|-------|
| Capacity (veh/h)      | 26         | 91    | 911   | -   | -   | 796   | -   | -   | -     | 98    |
| HCM Lane V/C Ratio    | 3.303      | 1.457 | 0.209 | -   | -   | 0.063 | -   | -   | -     | 0.832 |
| HCM Control Delay (s) | \$ 1350.25 | 338.6 | 10    | -   | -   | 9.8   | -   | -   | -     | 127.1 |
| HCM Lane LOS          | F          | F     | A     | -   | -   | A     | -   | -   | -     | F     |
| HCM 95th %tile Q(veh) | 10.5       | 10.1  | 0.8   | -   | -   | 0.2   | -   | -   | -     | 4.6   |

Notes  
 -: Volume exceeds capacity    \$: Delay exceeds 300s    +: Computation Not Defined    \*: All major volume in platoon

Deer Valley 30  
9: 7th Ave & Pinnacle Peak Rd

2024 Total PM Scenario A  
HCM 6th TWSC

| Intersection             |       |      |      |      |      |      |      |      |      |      |      |      |
|--------------------------|-------|------|------|------|------|------|------|------|------|------|------|------|
| Int Delay, s/veh         | 256.9 |      |      |      |      |      |      |      |      |      |      |      |
| Movement                 | EBL   | EBT  | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
| Lane Configurations      | ↖     | ↑    | ↗    | ↖    | ↑    | ↗    | ↖    | ↑    | ↗    | ↖    | ↑    | ↗    |
| Traffic Vol, veh/h       | 39    | 389  | 74   | 30   | 440  | 66   | 207  | 39   | 40   | 211  | 90   | 170  |
| Future Vol, veh/h        | 39    | 389  | 74   | 30   | 440  | 66   | 207  | 39   | 40   | 211  | 90   | 170  |
| Conflicting Peds, #/hr   | 0     | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Free  | Free | Free | Free | Free | Free | Stop | Stop | Stop | Stop | Stop | Stop |
| RT Channelized           | -     | -    | None | -    | -    | None | -    | -    | None | -    | -    | None |
| Storage Length           | 150   | -    | 170  | 150  | -    | -    | 150  | -    | -    | 150  | -    | -    |
| Veh in Median Storage, # | -     | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Grade, %                 | -     | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Peak Hour Factor         | 92    | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   |
| Heavy Vehicles, %        | 8     | 8    | 8    | 8    | 8    | 8    | 8    | 8    | 8    | 8    | 8    | 8    |
| Mvmt Flow                | 42    | 423  | 80   | 33   | 478  | 72   | 225  | 42   | 43   | 229  | 98   | 185  |

| Major/Minor          | Major1 | Major2 | Minor1 | Minor2 |
|----------------------|--------|--------|--------|--------|
| Conflicting Flow All | 550    | 0      | 0      | 503    |
| Stage 1              | -      | -      | -      | -      |
| Stage 2              | -      | -      | -      | -      |
| Critical Hdwy        | 4.18   | -      | -      | 4.18   |
| Critical Hdwy Stg 1  | -      | -      | -      | -      |
| Critical Hdwy Stg 2  | -      | -      | -      | -      |
| Follow-up Hdwy       | 2.272  | -      | -      | 2.272  |
| Pot Cap-1 Maneuver   | 990    | -      | -      | 1031   |
| Stage 1              | -      | -      | -      | -      |
| Stage 2              | -      | -      | -      | -      |
| Platoon blocked, %   | -      | -      | -      | -      |
| Mov Cap-1 Maneuver   | 990    | -      | -      | 1031   |
| Mov Cap-2 Maneuver   | -      | -      | -      | -      |
| Stage 1              | -      | -      | -      | -      |
| Stage 2              | -      | -      | -      | -      |

| Approach             | EB  | WB  | NB        | SB    |
|----------------------|-----|-----|-----------|-------|
| HCM Control Delay, s | 0.7 | 0.5 | \$ 1176.9 | 263.1 |
| HCM LOS              |     |     | F         | F     |

| Minor Lane/Major Mvmt | NBLn1     | NBLn2 | EBL   | EBT | EBR | WBL   | WBT | WBR | SBLn1 | SBLn2  |
|-----------------------|-----------|-------|-------|-----|-----|-------|-----|-----|-------|--------|
| Capacity (veh/h)      | 53        | 287   | 990   | -   | -   | 1031  | -   | -   | -     | 119    |
| HCM Lane V/C Ratio    | 4.245     | 0.299 | 0.043 | -   | -   | 0.032 | -   | -   | -     | 1.927  |
| HCM Control Delay (s) | \$ 1617.3 | 22.8  | 8.8   | -   | -   | 8.6   | -   | -   | -     | \$ 508 |
| HCM Lane LOS          | F         | C     | A     | -   | -   | A     | -   | -   | -     | F      |
| HCM 95th %tile Q(veh) | 24.9      | 1.2   | 0.1   | -   | -   | 0.1   | -   | -   | -     | 18.5   |

Notes  
 -: Volume exceeds capacity    \$: Delay exceeds 300s    +: Computation Not Defined    \*: All major volume in platoon

Deer Valley 30  
10: 7th Ave & Alameda Rd

2024 Total AM Scenario A  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh         | 5.1  |      |      |      |      |      |
| Movement                 | EBL  | EBR  | NBL  | NBT  | SBT  | SBR  |
| Lane Configurations      | ↔    |      | ↔    | ↔    | ↔    |      |
| Traffic Vol, veh/h       | 14   | 51   | 263  | 50   | 155  | 68   |
| Future Vol, veh/h        | 14   | 51   | 263  | 50   | 155  | 68   |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Stop | Stop | Free | Free | Free | Free |
| RT Channelized           | -    | None | -    | None | -    | None |
| Storage Length           | 0    | -    | 150  | -    | -    | -    |
| Veh in Median Storage, # | 0    | -    | -    | 0    | 0    | -    |
| Grade, %                 | 0    | -    | -    | 0    | 0    | -    |
| Peak Hour Factor         | 92   | 92   | 92   | 92   | 92   | 92   |
| Heavy Vehicles, %        | 8    | 8    | 8    | 8    | 8    | 8    |
| Mvmt Flow                | 15   | 55   | 286  | 54   | 168  | 74   |

| Major/Minor          | Minor2 | Major1 | Major2 |   |   |   |
|----------------------|--------|--------|--------|---|---|---|
| Conflicting Flow All | 831    | 205    | 242    | 0 | - | 0 |
| Stage 1              | 205    | -      | -      | - | - | - |
| Stage 2              | 626    | -      | -      | - | - | - |
| Critical Hdwy        | 6.48   | 6.28   | 4.18   | - | - | - |
| Critical Hdwy Stg 1  | 5.48   | -      | -      | - | - | - |
| Critical Hdwy Stg 2  | 5.48   | -      | -      | - | - | - |
| Follow-up Hdwy       | 3.572  | 3.372  | 2.272  | - | - | - |
| Pot Cap-1 Maneuver   | 332    | 821    | 1290   | - | - | - |
| Stage 1              | 815    | -      | -      | - | - | - |
| Stage 2              | 522    | -      | -      | - | - | - |
| Platoon blocked, %   | -      | -      | -      | - | - | - |
| Mov Cap-1 Maneuver   | 258    | 821    | 1290   | - | - | - |
| Mov Cap-2 Maneuver   | 258    | -      | -      | - | - | - |
| Stage 1              | 634    | -      | -      | - | - | - |
| Stage 2              | 522    | -      | -      | - | - | - |

| Approach             | EB   | NB  | SB |
|----------------------|------|-----|----|
| HCM Control Delay, s | 12.4 | 7.2 | 0  |
| HCM LOS              | B    |     |    |

| Minor Lane/Major Mvmt | NBL   | NBT | EBLn1 | SBT | SBR |
|-----------------------|-------|-----|-------|-----|-----|
| Capacity (veh/h)      | 1290  | -   | 559   | -   | -   |
| HCM Lane V/C Ratio    | 0.222 | -   | 0.126 | -   | -   |
| HCM Control Delay (s) | 8.6   | -   | 12.4  | -   | -   |
| HCM Lane LOS          | A     | -   | B     | -   | -   |
| HCM 95th %tile Q(veh) | 0.8   | -   | 0.4   | -   | -   |

Deer Valley 30  
10: 7th Ave & Alameda Rd

2024 Total PM Scenario A  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh         | 6.7  |      |      |      |      |      |
| Movement                 | EBL  | EBR  | NBL  | NBT  | SBT  | SBR  |
| Lane Configurations      | ↔    |      | ↔    | ↔    | ↔    |      |
| Traffic Vol, veh/h       | 67   | 241  | 53   | 168  | 81   | 15   |
| Future Vol, veh/h        | 67   | 241  | 53   | 168  | 81   | 15   |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Stop | Stop | Free | Free | Free | Free |
| RT Channelized           | -    | None | -    | None | -    | None |
| Storage Length           | 0    | -    | 150  | -    | -    | -    |
| Veh in Median Storage, # | 0    | -    | -    | 0    | 0    | -    |
| Grade, %                 | 0    | -    | -    | 0    | 0    | -    |
| Peak Hour Factor         | 92   | 92   | 92   | 92   | 92   | 92   |
| Heavy Vehicles, %        | 8    | 8    | 8    | 8    | 8    | 8    |
| Mvmt Flow                | 73   | 262  | 58   | 183  | 88   | 16   |

| Major/Minor          | Minor2 | Major1 | Major2 |   |   |   |
|----------------------|--------|--------|--------|---|---|---|
| Conflicting Flow All | 395    | 96     | 104    | 0 | - | 0 |
| Stage 1              | 96     | -      | -      | - | - | - |
| Stage 2              | 299    | -      | -      | - | - | - |
| Critical Hdwy        | 6.48   | 6.28   | 4.18   | - | - | - |
| Critical Hdwy Stg 1  | 5.48   | -      | -      | - | - | - |
| Critical Hdwy Stg 2  | 5.48   | -      | -      | - | - | - |
| Follow-up Hdwy       | 3.572  | 3.372  | 2.272  | - | - | - |
| Pot Cap-1 Maneuver   | 598    | 944    | 1451   | - | - | - |
| Stage 1              | 913    | -      | -      | - | - | - |
| Stage 2              | 739    | -      | -      | - | - | - |
| Platoon blocked, %   | -      | -      | -      | - | - | - |
| Mov Cap-1 Maneuver   | 574    | 944    | 1451   | - | - | - |
| Mov Cap-2 Maneuver   | 574    | -      | -      | - | - | - |
| Stage 1              | 876    | -      | -      | - | - | - |
| Stage 2              | 739    | -      | -      | - | - | - |

| Approach             | EB   | NB  | SB |
|----------------------|------|-----|----|
| HCM Control Delay, s | 12.3 | 1.8 | 0  |
| HCM LOS              | B    |     |    |

| Minor Lane/Major Mvmt | NBL  | NBT | EBLn1 | SBT | SBR |
|-----------------------|------|-----|-------|-----|-----|
| Capacity (veh/h)      | 1451 | -   | 828   | -   | -   |
| HCM Lane V/C Ratio    | 0.04 | -   | 0.404 | -   | -   |
| HCM Control Delay (s) | 7.6  | -   | 12.3  | -   | -   |
| HCM Lane LOS          | A    | -   | B     | -   | -   |
| HCM 95th %tile Q(veh) | 0.1  | -   | 2     | -   | -   |

Deer Valley 30  
11: 15th Ave & Parkview Ln

2024 Total AM Scenario A  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh         | 0    |      |      |      |      |      |
| Movement                 | EBT  | EBR  | WBL  | WBT  | NBL  | NBR  |
| Lane Configurations      | ↻    |      |      | ↻    | ↻    |      |
| Traffic Vol, veh/h       | 0    | 0    | 0    | 0    | 0    | 0    |
| Future Vol, veh/h        | 0    | 0    | 0    | 0    | 0    | 0    |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Free | Free | Free | Free | Stop | Stop |
| RT Channelized           | -    | None | -    | None | -    | None |
| Storage Length           | -    | -    | -    | -    | 0    | -    |
| Veh in Median Storage, # | 0    | -    | -    | 0    | 0    | -    |
| Grade, %                 | 0    | -    | -    | 0    | 0    | -    |
| Peak Hour Factor         | 92   | 92   | 92   | 92   | 92   | 92   |
| Heavy Vehicles, %        | 8    | 8    | 8    | 8    | 8    | 8    |
| Mvmt Flow                | 0    | 0    | 0    | 0    | 0    | 0    |

| Major/Minor          | Major1 | Major2 | Minor1 |
|----------------------|--------|--------|--------|
| Conflicting Flow All | 0      | 0      | 1      |
| Stage 1              | -      | -      | 1      |
| Stage 2              | -      | -      | 1      |
| Critical Hdwy        | -      | 4.18   | 6.48   |
| Critical Hdwy Stg 1  | -      | -      | 5.48   |
| Critical Hdwy Stg 2  | -      | -      | 5.48   |
| Follow-up Hdwy       | -      | 2.272  | 3.372  |
| Pot Cap-1 Maneuver   | -      | 1583   | 1005   |
| Stage 1              | -      | -      | 1007   |
| Stage 2              | -      | -      | 1007   |
| Platoon blocked, %   | -      | -      | -      |
| Mov Cap-1 Maneuver   | -      | 1583   | 1005   |
| Mov Cap-2 Maneuver   | -      | -      | 1005   |
| Stage 1              | -      | -      | 1007   |
| Stage 2              | -      | -      | 1007   |

| Approach             | EB | WB | NB |
|----------------------|----|----|----|
| HCM Control Delay, s | 0  | 0  | 0  |
| HCM LOS              |    |    | A  |

| Minor Lane/Major Mvmt | NBLn1 | EBT | EBR | WBL  | WBT |
|-----------------------|-------|-----|-----|------|-----|
| Capacity (veh/h)      | -     | -   | -   | 1583 | -   |
| HCM Lane V/C Ratio    | -     | -   | -   | -    | -   |
| HCM Control Delay (s) | 0     | -   | -   | 0    | -   |
| HCM Lane LOS          | A     | -   | -   | A    | -   |
| HCM 95th %tile Q(veh) | -     | -   | -   | 0    | -   |

Deer Valley 30  
11: 15th Ave & Parkview Ln

2024 Total PM Scenario A  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh         | 0    |      |      |      |      |      |
| Movement                 | EBT  | EBR  | WBL  | WBT  | NBL  | NBR  |
| Lane Configurations      | ↻    |      |      | ↻    | ↻    |      |
| Traffic Vol, veh/h       | 0    | 0    | 0    | 0    | 0    | 0    |
| Future Vol, veh/h        | 0    | 0    | 0    | 0    | 0    | 0    |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Free | Free | Free | Free | Stop | Stop |
| RT Channelized           | -    | None | -    | None | -    | None |
| Storage Length           | -    | -    | -    | -    | 0    | -    |
| Veh in Median Storage, # | 0    | -    | -    | 0    | 0    | -    |
| Grade, %                 | 0    | -    | -    | 0    | 0    | -    |
| Peak Hour Factor         | 92   | 92   | 92   | 92   | 92   | 92   |
| Heavy Vehicles, %        | 8    | 8    | 8    | 8    | 8    | 8    |
| Mvmt Flow                | 0    | 0    | 0    | 0    | 0    | 0    |

| Major/Minor          | Major1 | Major2 | Minor1 |
|----------------------|--------|--------|--------|
| Conflicting Flow All | 0      | 0      | 1      |
| Stage 1              | -      | -      | 1      |
| Stage 2              | -      | -      | 1      |
| Critical Hdwy        | -      | 4.18   | 6.48   |
| Critical Hdwy Stg 1  | -      | -      | 5.48   |
| Critical Hdwy Stg 2  | -      | -      | 5.48   |
| Follow-up Hdwy       | -      | 2.272  | 3.372  |
| Pot Cap-1 Maneuver   | -      | 1583   | 1005   |
| Stage 1              | -      | -      | 1007   |
| Stage 2              | -      | -      | 1007   |
| Platoon blocked, %   | -      | -      | -      |
| Mov Cap-1 Maneuver   | -      | 1583   | 1005   |
| Mov Cap-2 Maneuver   | -      | -      | 1005   |
| Stage 1              | -      | -      | 1007   |
| Stage 2              | -      | -      | 1007   |

| Approach             | EB | WB | NB |
|----------------------|----|----|----|
| HCM Control Delay, s | 0  | 0  | 0  |
| HCM LOS              |    |    | A  |

| Minor Lane/Major Mvmt | NBLn1 | EBT | EBR | WBL  | WBT |
|-----------------------|-------|-----|-----|------|-----|
| Capacity (veh/h)      | -     | -   | -   | 1583 | -   |
| HCM Lane V/C Ratio    | -     | -   | -   | -    | -   |
| HCM Control Delay (s) | 0     | -   | -   | 0    | -   |
| HCM Lane LOS          | A     | -   | -   | A    | -   |
| HCM 95th %tile Q(veh) | -     | -   | -   | 0    | -   |



Deer Valley 30  
12: Alameda Rd & Access A

2024 Total AM Scenario A  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh         | 0.4  |      |      |      |      |      |
| Movement                 | EBL  | EBT  | WBT  | WBR  | SBL  | SBR  |
| Lane Configurations      |      | ↕    | ↕    |      | ↕    | ↕    |
| Traffic Vol, veh/h       | 23   | 388  | 73   | 6    | 1    | 4    |
| Future Vol, veh/h        | 23   | 388  | 73   | 6    | 1    | 4    |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Free | Free | Free | Free | Stop | Stop |
| RT Channelized           | -    | None | -    | None | -    | None |
| Storage Length           | -    | -    | -    | -    | 0    | -    |
| Veh in Median Storage, # | -    | 0    | 0    | -    | 0    | -    |
| Grade, %                 | -    | 0    | 0    | -    | 0    | -    |
| Peak Hour Factor         | 92   | 92   | 92   | 92   | 92   | 92   |
| Heavy Vehicles, %        | 8    | 8    | 8    | 8    | 8    | 8    |
| Mvmt Flow                | 25   | 422  | 79   | 7    | 1    | 4    |

| Major/Minor          | Major1 | Major2 | Minor2 |       |       |
|----------------------|--------|--------|--------|-------|-------|
| Conflicting Flow All | 86     | 0      | 0      | 555   | 83    |
| Stage 1              | -      | -      | -      | 83    | -     |
| Stage 2              | -      | -      | -      | 472   | -     |
| Critical Hdwy        | 4.18   | -      | -      | 6.48  | 6.28  |
| Critical Hdwy Stg 1  | -      | -      | -      | 5.48  | -     |
| Critical Hdwy Stg 2  | -      | -      | -      | 5.48  | -     |
| Follow-up Hdwy       | 2.272  | -      | -      | 3.572 | 3.372 |
| Pot Cap-1 Maneuver   | 1473   | -      | -      | 483   | 960   |
| Stage 1              | -      | -      | -      | 925   | -     |
| Stage 2              | -      | -      | -      | 615   | -     |
| Platoon blocked, %   | -      | -      | -      | -     | -     |
| Mov Cap-1 Maneuver   | 1473   | -      | -      | 472   | 960   |
| Mov Cap-2 Maneuver   | -      | -      | -      | 472   | -     |
| Stage 1              | -      | -      | -      | 905   | -     |
| Stage 2              | -      | -      | -      | 615   | -     |

| Approach             | EB  | WB | SB  |
|----------------------|-----|----|-----|
| HCM Control Delay, s | 0.4 | 0  | 9.6 |
| HCM LOS              |     |    | A   |

| Minor Lane/Major Mvmt | EBL   | EBT | WBT | WBR | SBLn1 |
|-----------------------|-------|-----|-----|-----|-------|
| Capacity (veh/h)      | 1473  | -   | -   | -   | 796   |
| HCM Lane V/C Ratio    | 0.017 | -   | -   | -   | 0.007 |
| HCM Control Delay (s) | 7.5   | 0   | -   | -   | 9.6   |
| HCM Lane LOS          | A     | A   | -   | -   | A     |
| HCM 95th %tile Q(veh) | 0.1   | -   | -   | -   | 0     |

Deer Valley 30  
12: Alameda Rd & Access A

2024 Total PM Scenario A  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh         | 0.4  |      |      |      |      |      |
| Movement                 | EBL  | EBT  | WBT  | WBR  | SBL  | SBR  |
| Lane Configurations      |      | ↕    | ↕    |      | ↕    | ↕    |
| Traffic Vol, veh/h       | 2    | 76   | 346  | 1    | 3    | 13   |
| Future Vol, veh/h        | 2    | 76   | 346  | 1    | 3    | 13   |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Free | Free | Free | Free | Stop | Stop |
| RT Channelized           | -    | None | -    | None | -    | None |
| Storage Length           | -    | -    | -    | -    | 0    | -    |
| Veh in Median Storage, # | -    | 0    | 0    | -    | 0    | -    |
| Grade, %                 | -    | 0    | 0    | -    | 0    | -    |
| Peak Hour Factor         | 92   | 92   | 92   | 92   | 92   | 92   |
| Heavy Vehicles, %        | 8    | 8    | 8    | 8    | 8    | 8    |
| Mvmt Flow                | 2    | 83   | 376  | 1    | 3    | 14   |

| Major/Minor          | Major1 | Major2 | Minor2 |       |       |
|----------------------|--------|--------|--------|-------|-------|
| Conflicting Flow All | 377    | 0      | 0      | 464   | 377   |
| Stage 1              | -      | -      | -      | 377   | -     |
| Stage 2              | -      | -      | -      | 87    | -     |
| Critical Hdwy        | 4.18   | -      | -      | 6.48  | 6.28  |
| Critical Hdwy Stg 1  | -      | -      | -      | 5.48  | -     |
| Critical Hdwy Stg 2  | -      | -      | -      | 5.48  | -     |
| Follow-up Hdwy       | 2.272  | -      | -      | 3.572 | 3.372 |
| Pot Cap-1 Maneuver   | 1149   | -      | -      | 546   | 656   |
| Stage 1              | -      | -      | -      | 681   | -     |
| Stage 2              | -      | -      | -      | 921   | -     |
| Platoon blocked, %   | -      | -      | -      | -     | -     |
| Mov Cap-1 Maneuver   | 1149   | -      | -      | 545   | 656   |
| Mov Cap-2 Maneuver   | -      | -      | -      | 545   | -     |
| Stage 1              | -      | -      | -      | 680   | -     |
| Stage 2              | -      | -      | -      | 921   | -     |

| Approach             | EB  | WB | SB   |
|----------------------|-----|----|------|
| HCM Control Delay, s | 0.2 | 0  | 10.9 |
| HCM LOS              |     |    | B    |

| Minor Lane/Major Mvmt | EBL   | EBT | WBT | WBR | SBLn1 |
|-----------------------|-------|-----|-----|-----|-------|
| Capacity (veh/h)      | 1149  | -   | -   | -   | 632   |
| HCM Lane V/C Ratio    | 0.002 | -   | -   | -   | 0.028 |
| HCM Control Delay (s) | 8.1   | 0   | -   | -   | 10.9  |
| HCM Lane LOS          | A     | A   | -   | -   | B     |
| HCM 95th %tile Q(veh) | 0     | -   | -   | -   | 0.1   |

Deer Valley 30  
13: Alameda Rd & Access B

2024 Total AM Scenario A  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh         | 0.4  |      |      |      |      |      |
| Movement                 | EBL  | EBT  | WBT  | WBR  | SBL  | SBR  |
| Lane Configurations      |      | ↕    | ↕    |      | ↕    | ↕    |
| Traffic Vol, veh/h       | 18   | 371  | 76   | 9    | 2    | 3    |
| Future Vol, veh/h        | 18   | 371  | 76   | 9    | 2    | 3    |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Free | Free | Free | Free | Stop | Stop |
| RT Channelized           | -    | None | -    | None | -    | None |
| Storage Length           | -    | -    | -    | -    | 0    | -    |
| Veh in Median Storage, # | -    | 0    | 0    | -    | 0    | -    |
| Grade, %                 | -    | 0    | 0    | -    | 0    | -    |
| Peak Hour Factor         | 92   | 92   | 92   | 92   | 92   | 92   |
| Heavy Vehicles, %        | 8    | 8    | 8    | 8    | 8    | 8    |
| Mvmt Flow                | 20   | 403  | 83   | 10   | 2    | 3    |

| Major/Minor          | Major1 | Major2 | Minor2 |       |       |
|----------------------|--------|--------|--------|-------|-------|
| Conflicting Flow All | 93     | 0      | 0      | 531   | 88    |
| Stage 1              | -      | -      | -      | 88    | -     |
| Stage 2              | -      | -      | -      | 443   | -     |
| Critical Hdwy        | 4.18   | -      | -      | 6.48  | 6.28  |
| Critical Hdwy Stg 1  | -      | -      | -      | 5.48  | -     |
| Critical Hdwy Stg 2  | -      | -      | -      | 5.48  | -     |
| Follow-up Hdwy       | 2.272  | -      | -      | 3.572 | 3.372 |
| Pot Cap-1 Maneuver   | 1464   | -      | -      | 499   | 954   |
| Stage 1              | -      | -      | -      | 921   | -     |
| Stage 2              | -      | -      | -      | 635   | -     |
| Platoon blocked, %   | -      | -      | -      | -     | -     |
| Mov Cap-1 Maneuver   | 1464   | -      | -      | 490   | 954   |
| Mov Cap-2 Maneuver   | -      | -      | -      | 490   | -     |
| Stage 1              | -      | -      | -      | 904   | -     |
| Stage 2              | -      | -      | -      | 635   | -     |

| Approach             | EB  | WB | SB   |
|----------------------|-----|----|------|
| HCM Control Delay, s | 0.3 | 0  | 10.2 |
| HCM LOS              |     |    | B    |

| Minor Lane/Major Mvmt | EBL   | EBT | WBT | WBR | SBLn1 |
|-----------------------|-------|-----|-----|-----|-------|
| Capacity (veh/h)      | 1464  | -   | -   | -   | 692   |
| HCM Lane V/C Ratio    | 0.013 | -   | -   | -   | 0.008 |
| HCM Control Delay (s) | 7.5   | 0   | -   | -   | 10.2  |
| HCM Lane LOS          | A     | A   | -   | -   | B     |
| HCM 95th %tile Q(veh) | 0     | -   | -   | -   | 0     |

Deer Valley 30  
13: Alameda Rd & Access B

2024 Total PM Scenario A  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh         | 0.4  |      |      |      |      |      |
| Movement                 | EBL  | EBT  | WBT  | WBR  | SBL  | SBR  |
| Lane Configurations      |      | ↕    | ↕    |      | ↕    | ↕    |
| Traffic Vol, veh/h       | 2    | 77   | 337  | 1    | 5    | 10   |
| Future Vol, veh/h        | 2    | 77   | 337  | 1    | 5    | 10   |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Free | Free | Free | Free | Stop | Stop |
| RT Channelized           | -    | None | -    | None | -    | None |
| Storage Length           | -    | -    | -    | -    | 0    | -    |
| Veh in Median Storage, # | -    | 0    | 0    | -    | 0    | -    |
| Grade, %                 | -    | 0    | 0    | -    | 0    | -    |
| Peak Hour Factor         | 92   | 92   | 92   | 92   | 92   | 92   |
| Heavy Vehicles, %        | 8    | 8    | 8    | 8    | 8    | 8    |
| Mvmt Flow                | 2    | 84   | 366  | 1    | 5    | 11   |

| Major/Minor          | Major1 | Major2 | Minor2 |       |       |
|----------------------|--------|--------|--------|-------|-------|
| Conflicting Flow All | 367    | 0      | 0      | 455   | 367   |
| Stage 1              | -      | -      | -      | 367   | -     |
| Stage 2              | -      | -      | -      | 88    | -     |
| Critical Hdwy        | 4.18   | -      | -      | 6.48  | 6.28  |
| Critical Hdwy Stg 1  | -      | -      | -      | 5.48  | -     |
| Critical Hdwy Stg 2  | -      | -      | -      | 5.48  | -     |
| Follow-up Hdwy       | 2.272  | -      | -      | 3.572 | 3.372 |
| Pot Cap-1 Maneuver   | 1159   | -      | -      | 552   | 665   |
| Stage 1              | -      | -      | -      | 688   | -     |
| Stage 2              | -      | -      | -      | 921   | -     |
| Platoon blocked, %   | -      | -      | -      | -     | -     |
| Mov Cap-1 Maneuver   | 1159   | -      | -      | 551   | 665   |
| Mov Cap-2 Maneuver   | -      | -      | -      | 551   | -     |
| Stage 1              | -      | -      | -      | 687   | -     |
| Stage 2              | -      | -      | -      | 921   | -     |

| Approach             | EB  | WB | SB   |
|----------------------|-----|----|------|
| HCM Control Delay, s | 0.2 | 0  | 10.9 |
| HCM LOS              |     |    | B    |

| Minor Lane/Major Mvmt | EBL   | EBT | WBT | WBR | SBLn1 |
|-----------------------|-------|-----|-----|-----|-------|
| Capacity (veh/h)      | 1159  | -   | -   | -   | 622   |
| HCM Lane V/C Ratio    | 0.002 | -   | -   | -   | 0.026 |
| HCM Control Delay (s) | 8.1   | 0   | -   | -   | 10.9  |
| HCM Lane LOS          | A     | A   | -   | -   | B     |
| HCM 95th %tile Q(veh) | 0     | -   | -   | -   | 0.1   |

Deer Valley 30  
14: Alameda Rd & Access C

2024 Total AM Scenario A  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh         | 0.5  |      |      |      |      |      |
| Movement                 | EBL  | EBT  | WBT  | WBR  | SBL  | SBR  |
| Lane Configurations      |      | ↕    | ↕    |      | ↕    | ↕    |
| Traffic Vol, veh/h       | 24   | 348  | 81   | 7    | 1    | 4    |
| Future Vol, veh/h        | 24   | 348  | 81   | 7    | 1    | 4    |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Free | Free | Free | Free | Stop | Stop |
| RT Channelized           | -    | None | -    | None | -    | None |
| Storage Length           | -    | -    | -    | -    | 0    | -    |
| Veh in Median Storage, # | -    | 0    | 0    | -    | 0    | -    |
| Grade, %                 | -    | 0    | 0    | -    | 0    | -    |
| Peak Hour Factor         | 92   | 92   | 92   | 92   | 92   | 92   |
| Heavy Vehicles, %        | 8    | 8    | 8    | 8    | 8    | 8    |
| Mvmt Flow                | 26   | 378  | 88   | 8    | 1    | 4    |

| Major/Minor          | Major1 | Major2 | Minor2 |
|----------------------|--------|--------|--------|
| Conflicting Flow All | 96     | 0      | 522    |
| Stage 1              | -      | -      | 92     |
| Stage 2              | -      | -      | 430    |
| Critical Hdwy        | 4.18   | -      | 6.48   |
| Critical Hdwy Stg 1  | -      | -      | 5.48   |
| Critical Hdwy Stg 2  | -      | -      | 5.48   |
| Follow-up Hdwy       | 2.272  | -      | 3.372  |
| Pot Cap-1 Maneuver   | 1461   | -      | 505    |
| Stage 1              | -      | -      | 917    |
| Stage 2              | -      | -      | 643    |
| Platoon blocked, %   | -      | -      | -      |
| Mov Cap-1 Maneuver   | 1461   | -      | 493    |
| Mov Cap-2 Maneuver   | -      | -      | 493    |
| Stage 1              | -      | -      | 896    |
| Stage 2              | -      | -      | 643    |

| Approach             | EB  | WB | SB  |
|----------------------|-----|----|-----|
| HCM Control Delay, s | 0.5 | 0  | 9.5 |
| HCM LOS              |     |    | A   |

| Minor Lane/Major Mvmt | EBL   | EBT | WBT | WBR | SBLn1 |
|-----------------------|-------|-----|-----|-----|-------|
| Capacity (veh/h)      | 1461  | -   | -   | -   | 801   |
| HCM Lane V/C Ratio    | 0.018 | -   | -   | -   | 0.007 |
| HCM Control Delay (s) | 7.5   | 0   | -   | -   | 9.5   |
| HCM Lane LOS          | A     | A   | -   | -   | A     |
| HCM 95th %tile Q(veh) | 0.1   | -   | -   | -   | 0     |

Deer Valley 30  
14: Alameda Rd & Access C

2024 Total PM Scenario A  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh         | 0.6  |      |      |      |      |      |
| Movement                 | EBL  | EBT  | WBT  | WBR  | SBL  | SBR  |
| Lane Configurations      |      | ↕    | ↕    |      | ↕    | ↕    |
| Traffic Vol, veh/h       | 3    | 80   | 320  | 1    | 5    | 18   |
| Future Vol, veh/h        | 3    | 80   | 320  | 1    | 5    | 18   |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Free | Free | Free | Free | Stop | Stop |
| RT Channelized           | -    | None | -    | None | -    | None |
| Storage Length           | -    | -    | -    | -    | 0    | -    |
| Veh in Median Storage, # | -    | 0    | 0    | -    | 0    | -    |
| Grade, %                 | -    | 0    | 0    | -    | 0    | -    |
| Peak Hour Factor         | 92   | 92   | 92   | 92   | 92   | 92   |
| Heavy Vehicles, %        | 8    | 8    | 8    | 8    | 8    | 8    |
| Mvmt Flow                | 3    | 87   | 348  | 1    | 5    | 20   |

| Major/Minor          | Major1 | Major2 | Minor2 |
|----------------------|--------|--------|--------|
| Conflicting Flow All | 349    | 0      | 442    |
| Stage 1              | -      | -      | 349    |
| Stage 2              | -      | -      | 93     |
| Critical Hdwy        | 4.18   | -      | 6.48   |
| Critical Hdwy Stg 1  | -      | -      | 5.48   |
| Critical Hdwy Stg 2  | -      | -      | 5.48   |
| Follow-up Hdwy       | 2.272  | -      | 3.372  |
| Pot Cap-1 Maneuver   | 1177   | -      | 562    |
| Stage 1              | -      | -      | 701    |
| Stage 2              | -      | -      | 916    |
| Platoon blocked, %   | -      | -      | -      |
| Mov Cap-1 Maneuver   | 1177   | -      | 560    |
| Mov Cap-2 Maneuver   | -      | -      | 560    |
| Stage 1              | -      | -      | 699    |
| Stage 2              | -      | -      | 916    |

| Approach             | EB  | WB | SB   |
|----------------------|-----|----|------|
| HCM Control Delay, s | 0.3 | 0  | 10.8 |
| HCM LOS              |     |    | B    |

| Minor Lane/Major Mvmt | EBL   | EBT | WBT | WBR | SBLn1 |
|-----------------------|-------|-----|-----|-----|-------|
| Capacity (veh/h)      | 1177  | -   | -   | -   | 650   |
| HCM Lane V/C Ratio    | 0.003 | -   | -   | -   | 0.038 |
| HCM Control Delay (s) | 8.1   | 0   | -   | -   | 10.8  |
| HCM Lane LOS          | A     | A   | -   | -   | B     |
| HCM 95th %tile Q(veh) | 0     | -   | -   | -   | 0.1   |

Deer Valley 30  
15: Alameda Rd & 15th Ave

2024 Total AM Scenario A  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh         | 0.8  |      |      |      |      |      |
| Movement                 | EBL  | EBT  | WBT  | WBR  | SBL  | SBR  |
| Lane Configurations      |      | ↕    | ↕    |      | ↕    |      |
| Traffic Vol, veh/h       | 38   | 311  | 82   | 10   | 2    | 6    |
| Future Vol, veh/h        | 38   | 311  | 82   | 10   | 2    | 6    |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Free | Free | Free | Free | Stop | Stop |
| RT Channelized           | -    | None | -    | None | -    | None |
| Storage Length           | -    | -    | -    | -    | 0    | -    |
| Veh in Median Storage, # | -    | 0    | 0    | -    | 0    | -    |
| Grade, %                 | -    | 0    | 0    | -    | 0    | -    |
| Peak Hour Factor         | 92   | 92   | 92   | 92   | 92   | 92   |
| Heavy Vehicles, %        | 8    | 8    | 8    | 8    | 8    | 8    |
| Mvmt Flow                | 41   | 338  | 89   | 11   | 2    | 7    |

| Major/Minor          | Major1 | Major2 | Minor2 |       |       |
|----------------------|--------|--------|--------|-------|-------|
| Conflicting Flow All | 100    | 0      | 0      | 515   | 95    |
| Stage 1              | -      | -      | -      | 95    | -     |
| Stage 2              | -      | -      | -      | 420   | -     |
| Critical Hdwy        | 4.18   | -      | -      | 6.48  | 6.28  |
| Critical Hdwy Stg 1  | -      | -      | -      | 5.48  | -     |
| Critical Hdwy Stg 2  | -      | -      | -      | 5.48  | -     |
| Follow-up Hdwy       | 2.272  | -      | -      | 3.572 | 3.372 |
| Pot Cap-1 Maneuver   | 1456   | -      | -      | 509   | 945   |
| Stage 1              | -      | -      | -      | 914   | -     |
| Stage 2              | -      | -      | -      | 650   | -     |
| Platoon blocked, %   | -      | -      | -      | -     | -     |
| Mov Cap-1 Maneuver   | 1456   | -      | -      | 491   | 945   |
| Mov Cap-2 Maneuver   | -      | -      | -      | 491   | -     |
| Stage 1              | -      | -      | -      | 882   | -     |
| Stage 2              | -      | -      | -      | 650   | -     |

| Approach             | EB  | WB | SB  |
|----------------------|-----|----|-----|
| HCM Control Delay, s | 0.8 | 0  | 9.7 |
| HCM LOS              |     |    | A   |

| Minor Lane/Major Mvmt | EBL   | EBT | WBT | WBR | SBLn1 |
|-----------------------|-------|-----|-----|-----|-------|
| Capacity (veh/h)      | 1456  | -   | -   | -   | 768   |
| HCM Lane V/C Ratio    | 0.028 | -   | -   | -   | 0.011 |
| HCM Control Delay (s) | 7.5   | 0   | -   | -   | 9.7   |
| HCM Lane LOS          | A     | A   | -   | -   | A     |
| HCM 95th %tile Q(veh) | 0.1   | -   | -   | -   | 0     |

Deer Valley 30  
15: Alameda Rd & 15th Ave

2024 Total PM Scenario A  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh         | 1    |      |      |      |      |      |
| Movement                 | EBL  | EBT  | WBT  | WBR  | SBL  | SBR  |
| Lane Configurations      |      | ↕    | ↕    |      | ↕    |      |
| Traffic Vol, veh/h       | 5    | 80   | 293  | 1    | 7    | 28   |
| Future Vol, veh/h        | 5    | 80   | 293  | 1    | 7    | 28   |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Free | Free | Free | Free | Stop | Stop |
| RT Channelized           | -    | None | -    | None | -    | None |
| Storage Length           | -    | -    | -    | -    | 0    | -    |
| Veh in Median Storage, # | -    | 0    | 0    | -    | 0    | -    |
| Grade, %                 | -    | 0    | 0    | -    | 0    | -    |
| Peak Hour Factor         | 92   | 92   | 92   | 92   | 92   | 92   |
| Heavy Vehicles, %        | 8    | 8    | 8    | 8    | 8    | 8    |
| Mvmt Flow                | 5    | 87   | 318  | 1    | 8    | 30   |

| Major/Minor          | Major1 | Major2 | Minor2 |       |       |
|----------------------|--------|--------|--------|-------|-------|
| Conflicting Flow All | 319    | 0      | 0      | 416   | 319   |
| Stage 1              | -      | -      | -      | 319   | -     |
| Stage 2              | -      | -      | -      | 97    | -     |
| Critical Hdwy        | 4.18   | -      | -      | 6.48  | 6.28  |
| Critical Hdwy Stg 1  | -      | -      | -      | 5.48  | -     |
| Critical Hdwy Stg 2  | -      | -      | -      | 5.48  | -     |
| Follow-up Hdwy       | 2.272  | -      | -      | 3.572 | 3.372 |
| Pot Cap-1 Maneuver   | 1208   | -      | -      | 582   | 708   |
| Stage 1              | -      | -      | -      | 723   | -     |
| Stage 2              | -      | -      | -      | 912   | -     |
| Platoon blocked, %   | -      | -      | -      | -     | -     |
| Mov Cap-1 Maneuver   | 1208   | -      | -      | 580   | 708   |
| Mov Cap-2 Maneuver   | -      | -      | -      | 580   | -     |
| Stage 1              | -      | -      | -      | 720   | -     |
| Stage 2              | -      | -      | -      | 912   | -     |

| Approach             | EB  | WB | SB   |
|----------------------|-----|----|------|
| HCM Control Delay, s | 0.5 | 0  | 10.6 |
| HCM LOS              |     |    | B    |

| Minor Lane/Major Mvmt | EBL   | EBT | WBT | WBR | SBLn1 |
|-----------------------|-------|-----|-----|-----|-------|
| Capacity (veh/h)      | 1208  | -   | -   | -   | 678   |
| HCM Lane V/C Ratio    | 0.004 | -   | -   | -   | 0.056 |
| HCM Control Delay (s) | 8     | 0   | -   | -   | 10.6  |
| HCM Lane LOS          | A     | A   | -   | -   | B     |
| HCM 95th %tile Q(veh) | 0     | -   | -   | -   | 0.2   |

Deer Valley 30  
16: Alameda Rd & Access D

2024 Total AM Scenario A  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh         | 0.7  |      |      |      |      |      |
| Movement                 | EBL  | EBT  | WBT  | WBR  | SBL  | SBR  |
| Lane Configurations      |      | ↕    | ↕    |      | ↕    | ↕    |
| Traffic Vol, veh/h       | 30   | 283  | 88   | 17   | 2    | 4    |
| Future Vol, veh/h        | 30   | 283  | 88   | 17   | 2    | 4    |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Free | Free | Free | Free | Stop | Stop |
| RT Channelized           | -    | None | -    | None | -    | None |
| Storage Length           | -    | -    | -    | -    | 0    | -    |
| Veh in Median Storage, # | -    | 0    | 0    | -    | 0    | -    |
| Grade, %                 | -    | 0    | 0    | -    | 0    | -    |
| Peak Hour Factor         | 92   | 92   | 92   | 92   | 92   | 92   |
| Heavy Vehicles, %        | 8    | 8    | 8    | 8    | 8    | 8    |
| Mvmt Flow                | 33   | 308  | 96   | 18   | 2    | 4    |

| Major/Minor          | Major1 | Major2 | Minor2 |       |       |
|----------------------|--------|--------|--------|-------|-------|
| Conflicting Flow All | 114    | 0      | 0      | 479   | 105   |
| Stage 1              | -      | -      | -      | 105   | -     |
| Stage 2              | -      | -      | -      | 374   | -     |
| Critical Hdwy        | 4.18   | -      | -      | 6.48  | 6.28  |
| Critical Hdwy Stg 1  | -      | -      | -      | 5.48  | -     |
| Critical Hdwy Stg 2  | -      | -      | -      | 5.48  | -     |
| Follow-up Hdwy       | 2.272  | -      | -      | 3.572 | 3.372 |
| Pot Cap-1 Maneuver   | 1439   | -      | -      | 535   | 933   |
| Stage 1              | -      | -      | -      | 904   | -     |
| Stage 2              | -      | -      | -      | 683   | -     |
| Platoon blocked, %   | -      | -      | -      | -     | -     |
| Mov Cap-1 Maneuver   | 1439   | -      | -      | 520   | 933   |
| Mov Cap-2 Maneuver   | -      | -      | -      | 520   | -     |
| Stage 1              | -      | -      | -      | 879   | -     |
| Stage 2              | -      | -      | -      | 683   | -     |

| Approach             | EB  | WB | SB  |
|----------------------|-----|----|-----|
| HCM Control Delay, s | 0.7 | 0  | 9.9 |
| HCM LOS              |     |    | A   |

| Minor Lane/Major Mvmt | EBL   | EBT | WBT | WBR | SBLn1 |
|-----------------------|-------|-----|-----|-----|-------|
| Capacity (veh/h)      | 1439  | -   | -   | -   | 738   |
| HCM Lane V/C Ratio    | 0.023 | -   | -   | -   | 0.009 |
| HCM Control Delay (s) | 7.6   | 0   | -   | -   | 9.9   |
| HCM Lane LOS          | A     | A   | -   | -   | A     |
| HCM 95th %tile Q(veh) | 0.1   | -   | -   | -   | 0     |

Deer Valley 30  
16: Alameda Rd & Access D

2024 Total PM Scenario A  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh         | 1    |      |      |      |      |      |
| Movement                 | EBL  | EBT  | WBT  | WBR  | SBL  | SBR  |
| Lane Configurations      |      | ↕    | ↕    |      | ↕    | ↕    |
| Traffic Vol, veh/h       | 4    | 84   | 272  | 2    | 12   | 22   |
| Future Vol, veh/h        | 4    | 84   | 272  | 2    | 12   | 22   |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Free | Free | Free | Free | Stop | Stop |
| RT Channelized           | -    | None | -    | None | -    | None |
| Storage Length           | -    | -    | -    | -    | 0    | -    |
| Veh in Median Storage, # | -    | 0    | 0    | -    | 0    | -    |
| Grade, %                 | -    | 0    | 0    | -    | 0    | -    |
| Peak Hour Factor         | 92   | 92   | 92   | 92   | 92   | 92   |
| Heavy Vehicles, %        | 8    | 8    | 8    | 8    | 8    | 8    |
| Mvmt Flow                | 4    | 91   | 296  | 2    | 13   | 24   |

| Major/Minor          | Major1 | Major2 | Minor2 |       |       |
|----------------------|--------|--------|--------|-------|-------|
| Conflicting Flow All | 298    | 0      | 0      | 396   | 297   |
| Stage 1              | -      | -      | -      | 297   | -     |
| Stage 2              | -      | -      | -      | 99    | -     |
| Critical Hdwy        | 4.18   | -      | -      | 6.48  | 6.28  |
| Critical Hdwy Stg 1  | -      | -      | -      | 5.48  | -     |
| Critical Hdwy Stg 2  | -      | -      | -      | 5.48  | -     |
| Follow-up Hdwy       | 2.272  | -      | -      | 3.572 | 3.372 |
| Pot Cap-1 Maneuver   | 1230   | -      | -      | 598   | 728   |
| Stage 1              | -      | -      | -      | 740   | -     |
| Stage 2              | -      | -      | -      | 910   | -     |
| Platoon blocked, %   | -      | -      | -      | -     | -     |
| Mov Cap-1 Maneuver   | 1230   | -      | -      | 596   | 728   |
| Mov Cap-2 Maneuver   | -      | -      | -      | 596   | -     |
| Stage 1              | -      | -      | -      | 738   | -     |
| Stage 2              | -      | -      | -      | 910   | -     |

| Approach             | EB  | WB | SB   |
|----------------------|-----|----|------|
| HCM Control Delay, s | 0.4 | 0  | 10.6 |
| HCM LOS              |     |    | B    |

| Minor Lane/Major Mvmt | EBL   | EBT | WBT | WBR | SBLn1 |
|-----------------------|-------|-----|-----|-----|-------|
| Capacity (veh/h)      | 1230  | -   | -   | -   | 675   |
| HCM Lane V/C Ratio    | 0.004 | -   | -   | -   | 0.055 |
| HCM Control Delay (s) | 7.9   | 0   | -   | -   | 10.6  |
| HCM Lane LOS          | A     | A   | -   | -   | B     |
| HCM 95th %tile Q(veh) | 0     | -   | -   | -   | 0.2   |

Deer Valley 30  
2: 19th Ave & Optum Drwy

2024 Total AM Scenario A Mitigated  
HCM 6th TWSC

| Intersection             |      |      |       |      |      |      |
|--------------------------|------|------|-------|------|------|------|
| Int Delay, s/veh         | 0.1  |      |       |      |      |      |
| Movement                 | EBL  | EBR  | NBL   | NBT  | SBT  | SBR  |
| Lane Configurations      | ↔    |      | ↔ ↑↑↑ |      | ↔ ↑↑ |      |
| Traffic Vol, veh/h       | 0    | 4    | 7     | 593  | 1142 | 2    |
| Future Vol, veh/h        | 0    | 4    | 7     | 593  | 1142 | 2    |
| Conflicting Peds, #/hr   | 0    | 0    | 0     | 0    | 0    | 0    |
| Sign Control             | Stop | Stop | Free  | Free | Free | Free |
| RT Channelized           | -    | None | -     | None | -    | None |
| Storage Length           | 0    | -    | 50    | -    | -    | -    |
| Veh in Median Storage, # | 0    | -    | -     | 0    | 0    | -    |
| Grade, %                 | 0    | -    | -     | 0    | 0    | -    |
| Peak Hour Factor         | 92   | 92   | 92    | 92   | 92   | 92   |
| Heavy Vehicles, %        | 8    | 8    | 8     | 8    | 8    | 8    |
| Mvmt Flow                | 0    | 4    | 8     | 645  | 1241 | 2    |

| Major/Minor          | Minor2 | Major1 | Major2 |   |   |   |
|----------------------|--------|--------|--------|---|---|---|
| Conflicting Flow All | 1516   | 622    | 1243   | 0 | - | 0 |
| Stage 1              | 1242   | -      | -      | - | - | - |
| Stage 2              | 274    | -      | -      | - | - | - |
| Critical Hdwy        | 6.41   | 7.06   | 4.26   | - | - | - |
| Critical Hdwy Stg 1  | 5.96   | -      | -      | - | - | - |
| Critical Hdwy Stg 2  | 6.16   | -      | -      | - | - | - |
| Follow-up Hdwy       | 3.73   | 3.38   | 2.28   | - | - | - |
| Pot Cap-1 Maneuver   | *217   | 415    | 524    | - | - | - |
| Stage 1              | *220   | -      | -      | - | - | - |
| Stage 2              | *828   | -      | -      | - | - | - |
| Platoon blocked, %   | 1      | -      | -      | - | - | - |
| Mov Cap-1 Maneuver   | *213   | 415    | 524    | - | - | - |
| Mov Cap-2 Maneuver   | *198   | -      | -      | - | - | - |
| Stage 1              | *217   | -      | -      | - | - | - |
| Stage 2              | *828   | -      | -      | - | - | - |

| Approach             | EB   | NB  | SB |
|----------------------|------|-----|----|
| HCM Control Delay, s | 13.8 | 0.1 | 0  |
| HCM LOS              | B    |     |    |

| Minor Lane/Major Mvmt | NBL   | NBT | EBLn1 | SBT | SBR |
|-----------------------|-------|-----|-------|-----|-----|
| Capacity (veh/h)      | 524   | -   | 415   | -   | -   |
| HCM Lane V/C Ratio    | 0.015 | -   | 0.01  | -   | -   |
| HCM Control Delay (s) | 12    | -   | 13.8  | -   | -   |
| HCM Lane LOS          | B     | -   | B     | -   | -   |
| HCM 95th %tile Q(veh) | 0     | -   | 0     | -   | -   |

Notes  
 -: Volume exceeds capacity    \$: Delay exceeds 300s    +: Computation Not Defined    \*: All major volume in platoon

Deer Valley 30  
2: 19th Ave & Optum Drwy

2024 Total PM Scenario A Mitigated  
HCM 6th TWSC

| Intersection             |      |      |       |      |      |      |
|--------------------------|------|------|-------|------|------|------|
| Int Delay, s/veh         | 0.1  |      |       |      |      |      |
| Movement                 | EBL  | EBR  | NBL   | NBT  | SBT  | SBR  |
| Lane Configurations      | ↔    |      | ↔ ↑↑↑ |      | ↔ ↑↑ |      |
| Traffic Vol, veh/h       | 0    | 4    | 7     | 1292 | 707  | 2    |
| Future Vol, veh/h        | 0    | 4    | 7     | 1292 | 707  | 2    |
| Conflicting Peds, #/hr   | 0    | 0    | 0     | 0    | 0    | 0    |
| Sign Control             | Stop | Stop | Free  | Free | Free | Free |
| RT Channelized           | -    | None | -     | None | -    | None |
| Storage Length           | 0    | -    | 50    | -    | -    | -    |
| Veh in Median Storage, # | 0    | -    | -     | 0    | 0    | -    |
| Grade, %                 | 0    | -    | -     | 0    | 0    | -    |
| Peak Hour Factor         | 92   | 92   | 92    | 92   | 92   | 92   |
| Heavy Vehicles, %        | 8    | 8    | 8     | 8    | 8    | 8    |
| Mvmt Flow                | 0    | 4    | 8     | 1404 | 768  | 2    |

| Major/Minor          | Minor2 | Major1 | Major2 |   |   |   |
|----------------------|--------|--------|--------|---|---|---|
| Conflicting Flow All | 1347   | 385    | 770    | 0 | - | 0 |
| Stage 1              | 769    | -      | -      | - | - | - |
| Stage 2              | 578    | -      | -      | - | - | - |
| Critical Hdwy        | 6.41   | 7.06   | 4.26   | - | - | - |
| Critical Hdwy Stg 1  | 5.96   | -      | -      | - | - | - |
| Critical Hdwy Stg 2  | 6.16   | -      | -      | - | - | - |
| Follow-up Hdwy       | 3.73   | 3.38   | 2.28   | - | - | - |
| Pot Cap-1 Maneuver   | *650   | 597    | 802    | - | - | - |
| Stage 1              | *392   | -      | -      | - | - | - |
| Stage 2              | *650   | -      | -      | - | - | - |
| Platoon blocked, %   | 1      | -      | -      | - | - | - |
| Mov Cap-1 Maneuver   | *643   | 597    | 802    | - | - | - |
| Mov Cap-2 Maneuver   | *593   | -      | -      | - | - | - |
| Stage 1              | *388   | -      | -      | - | - | - |
| Stage 2              | *650   | -      | -      | - | - | - |

| Approach             | EB   | NB  | SB |
|----------------------|------|-----|----|
| HCM Control Delay, s | 11.1 | 0.1 | 0  |
| HCM LOS              | B    |     |    |

| Minor Lane/Major Mvmt | NBL   | NBT | EBLn1 | SBT | SBR |
|-----------------------|-------|-----|-------|-----|-----|
| Capacity (veh/h)      | 802   | -   | 597   | -   | -   |
| HCM Lane V/C Ratio    | 0.009 | -   | 0.007 | -   | -   |
| HCM Control Delay (s) | 9.5   | -   | 11.1  | -   | -   |
| HCM Lane LOS          | A     | -   | B     | -   | -   |
| HCM 95th %tile Q(veh) | 0     | -   | 0     | -   | -   |

Notes  
 -: Volume exceeds capacity    \$: Delay exceeds 300s    +: Computation Not Defined    \*: All major volume in platoon

Deer Valley 30  
3: 19th Ave & Patio Drwy/Parkview Ln

2024 Total AM Scenario A Mitigated  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Int Delay, s/veh         | 0.6  |      |      |      |      |      |      |      |      |      |      |      |
| Movement                 | EBL  | EBT  | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
| Lane Configurations      |      |      | ↕    |      | ↕    |      |      | ↕↕↕  |      | ↕    | ↕    |      |
| Traffic Vol, veh/h       | 0    | 0    | 6    | 26   | 0    | 13   | 1    | 586  | 41   | 26   | 1121 | 0    |
| Future Vol, veh/h        | 0    | 0    | 6    | 26   | 0    | 13   | 1    | 586  | 41   | 26   | 1121 | 0    |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Stop | Stop | Stop | Stop | Stop | Free | Free | Free | Free | Free | Free | Free |
| RT Channelized           | -    | -    | None | -    | -    | None | -    | -    | None | -    | -    | None |
| Storage Length           | -    | -    | 0    | -    | -    | -    | -    | -    | -    | 50   | -    | -    |
| Veh in Median Storage, # | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Grade, %                 | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Peak Hour Factor         | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   |
| Heavy Vehicles, %        | 8    | 8    | 8    | 8    | 8    | 8    | 8    | 8    | 8    | 8    | 8    | 8    |
| Mvmt Flow                | 0    | 0    | 7    | 28   | 0    | 14   | 1    | 637  | 45   | 28   | 1218 | 0    |

| Major/Minor          | Minor2 | Minor1 | Major1 | Major2 |
|----------------------|--------|--------|--------|--------|
| Conflicting Flow All | -      | -      | 609    | 1327   |
| Stage 1              | -      | -      | 662    | 662    |
| Stage 2              | -      | -      | 665    | 1274   |
| Critical Hdwy        | -      | -      | 7.06   | 7.11   |
| Critical Hdwy Stg 1  | -      | -      | 7.46   | 5.66   |
| Critical Hdwy Stg 2  | -      | -      | 6.66   | 5.66   |
| Follow-up Hdwy       | -      | -      | 3.38   | 3.73   |
| Pot Cap-1 Maneuver   | 0      | 0      | 424    | 248    |
| Stage 1              | 0      | 0      | 787    | 733    |
| Stage 2              | 0      | 0      | 390    | 225    |
| Platoon blocked, %   | -      | -      | 1      | 1      |
| Mov Cap-1 Maneuver   | -      | -      | 424    | 238    |
| Mov Cap-2 Maneuver   | -      | -      | 238    | 93     |
| Stage 1              | -      | -      | 785    | 731    |
| Stage 2              | -      | -      | 372    | 218    |

| Approach             | EB   | WB   | NB | SB  |
|----------------------|------|------|----|-----|
| HCM Control Delay, s | 13.6 | 18.4 | 0  | 0.2 |
| HCM LOS              | B    | C    |    |     |

| Minor Lane/Major Mvmt | NBL   | NBT | NBR | EBLn1 | WBLn1 | SBL   | SBT |
|-----------------------|-------|-----|-----|-------|-------|-------|-----|
| Capacity (veh/h)      | 536   | -   | -   | 424   | 310   | 915   | -   |
| HCM Lane V/C Ratio    | 0.002 | -   | -   | 0.015 | 0.137 | 0.031 | -   |
| HCM Control Delay (s) | 11.7  | -   | -   | 13.6  | 18.4  | 9.1   | -   |
| HCM Lane LOS          | B     | -   | -   | B     | C     | A     | -   |
| HCM 95th %tile Q(veh) | 0     | -   | -   | 0     | 0.5   | 0.1   | -   |

Notes  
 -: Volume exceeds capacity    \$: Delay exceeds 300s    +: Computation Not Defined    \*: All major volume in platoon

Deer Valley 30  
3: 19th Ave & Patio Drwy/Parkview Ln

2024 Total PM Scenario A Mitigated  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Int Delay, s/veh         | 0.5  |      |      |      |      |      |      |      |      |      |      |      |
| Movement                 | EBL  | EBT  | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
| Lane Configurations      |      |      | ↕    |      | ↕    |      |      | ↕↕↕  |      | ↕    | ↕    |      |
| Traffic Vol, veh/h       | 0    | 0    | 6    | 26   | 0    | 13   | 1    | 939  | 41   | 26   | 686  | 0    |
| Future Vol, veh/h        | 0    | 0    | 6    | 26   | 0    | 13   | 1    | 939  | 41   | 26   | 686  | 0    |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Stop | Stop | Stop | Stop | Stop | Free | Free | Free | Free | Free | Free | Free |
| RT Channelized           | -    | -    | None | -    | -    | None | -    | -    | None | -    | -    | None |
| Storage Length           | -    | -    | 0    | -    | -    | -    | -    | -    | -    | 50   | -    | -    |
| Veh in Median Storage, # | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Grade, %                 | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Peak Hour Factor         | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   |
| Heavy Vehicles, %        | 8    | 8    | 8    | 8    | 8    | 8    | 8    | 8    | 8    | 8    | 8    | 8    |
| Mvmt Flow                | 0    | 0    | 7    | 28   | 0    | 14   | 1    | 1021 | 45   | 28   | 746  | 0    |

| Major/Minor          | Minor2 | Minor1 | Major1 | Major2 |
|----------------------|--------|--------|--------|--------|
| Conflicting Flow All | -      | -      | 373    | 1475   |
| Stage 1              | -      | -      | 1046   | 1046   |
| Stage 2              | -      | -      | 429    | 802    |
| Critical Hdwy        | -      | -      | 7.06   | 7.11   |
| Critical Hdwy Stg 1  | -      | -      | 7.46   | 5.66   |
| Critical Hdwy Stg 2  | -      | -      | 6.66   | 5.66   |
| Follow-up Hdwy       | -      | -      | 3.38   | 3.73   |
| Pot Cap-1 Maneuver   | 0      | 0      | 607    | 339    |
| Stage 1              | 0      | 0      | 733    | 670    |
| Stage 2              | 0      | 0      | 541    | 381    |
| Platoon blocked, %   | -      | -      | 1      | 1      |
| Mov Cap-1 Maneuver   | -      | -      | 607    | 326    |
| Mov Cap-2 Maneuver   | -      | -      | 326    | 166    |
| Stage 1              | -      | -      | 731    | 668    |
| Stage 2              | -      | -      | 518    | 368    |

| Approach             | EB | WB   | NB | SB  |
|----------------------|----|------|----|-----|
| HCM Control Delay, s | 11 | 15.2 | 0  | 0.3 |
| HCM LOS              | B  | C    |    |     |

| Minor Lane/Major Mvmt | NBL   | NBT | NBR | EBLn1 | WBLn1 | SBL   | SBT |
|-----------------------|-------|-----|-----|-------|-------|-------|-----|
| Capacity (veh/h)      | 820   | -   | -   | 607   | 395   | 860   | -   |
| HCM Lane V/C Ratio    | 0.001 | -   | -   | 0.011 | 0.107 | 0.033 | -   |
| HCM Control Delay (s) | 9.4   | -   | -   | 11    | 15.2  | 9.3   | -   |
| HCM Lane LOS          | A     | -   | -   | B     | C     | A     | -   |
| HCM 95th %tile Q(veh) | 0     | -   | -   | 0     | 0.4   | 0.1   | -   |

Notes  
 -: Volume exceeds capacity    \$: Delay exceeds 300s    +: Computation Not Defined    \*: All major volume in platoon

Deer Valley 30  
4: Alameda Rd & 19th Ave

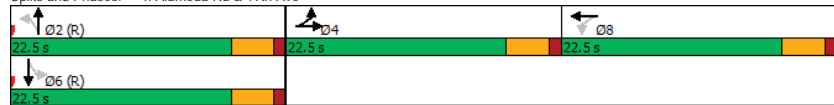
2024 Total AM Scenario A Mitigated  
Timings

| Lane Group           | EBL   | EBT   | WBL   | WBT   | NBL   | NBT   | SBL   | SBT   |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations  | ↔     | ↔     | ↔     | ↔     | ↔     | ↔     | ↔     | ↔     |
| Traffic Volume (vph) | 9     | 0     | 42    | 0     | 18    | 593   | 187   | 951   |
| Future Volume (vph)  | 9     | 0     | 42    | 0     | 18    | 593   | 187   | 951   |
| Turn Type            | Split | NA    | Perm  | NA    | Perm  | NA    | Perm  | NA    |
| Protected Phases     | 4     | 4     |       | 8     |       | 2     |       | 6     |
| Permitted Phases     |       |       | 8     |       | 2     |       | 6     |       |
| Detector Phase       | 4     | 4     | 8     | 8     | 2     | 2     | 6     | 6     |
| Switch Phase         |       |       |       |       |       |       |       |       |
| Minimum Initial (s)  | 5.0   | 5.0   | 5.0   | 5.0   | 5.0   | 5.0   | 5.0   | 5.0   |
| Minimum Split (s)    | 22.5  | 22.5  | 22.5  | 22.5  | 22.5  | 22.5  | 22.5  | 22.5  |
| Total Split (s)      | 22.5  | 22.5  | 22.5  | 22.5  | 22.5  | 22.5  | 22.5  | 22.5  |
| Total Split (%)      | 33.3% | 33.3% | 33.3% | 33.3% | 33.3% | 33.3% | 33.3% | 33.3% |
| Yellow Time (s)      | 3.5   | 3.5   | 3.5   | 3.5   | 3.5   | 3.5   | 3.5   | 3.5   |
| All-Red Time (s)     | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   |
| Lost Time Adjust (s) | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Lost Time (s)  | 4.5   | 4.5   | 4.5   | 4.5   | 4.5   | 4.5   | 4.5   | 4.5   |
| Lead/Lag             |       |       |       |       |       |       |       |       |
| Lead-Lag Optimize?   |       |       |       |       |       |       |       |       |
| Recall Mode          | None  | None  | None  | None  | C-Max | C-Max | C-Max | C-Max |
| Act Effct Green (s)  | 6.0   | 6.0   | 8.0   | 8.0   | 50.0  | 50.0  | 50.0  | 50.0  |
| Actuated g/C Ratio   | 0.09  | 0.09  | 0.12  | 0.12  | 0.74  | 0.74  | 0.74  | 0.74  |
| v/c Ratio            | 0.07  | 0.11  | 0.31  | 0.06  | 0.06  | 0.26  | 0.51  | 0.42  |
| Control Delay        | 28.8  | 0.4   | 31.8  | 0.2   | 7.8   | 5.0   | 17.0  | 7.5   |
| Queue Delay          | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Delay          | 28.8  | 0.4   | 31.8  | 0.2   | 7.8   | 5.0   | 17.0  | 7.5   |
| LOS                  | C     | A     | C     | A     | A     | A     | B     | A     |
| Approach Delay       |       | 4.4   |       | 17.5  |       | 5.1   |       | 9.0   |
| Approach LOS         |       | A     |       | B     |       | A     |       | A     |

Intersection Summary

Cycle Length: 67.5  
 Actuated Cycle Length: 67.5  
 Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green  
 Natural Cycle: 90  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.51  
 Intersection Signal Delay: 7.6  
 Intersection Capacity Utilization 51.1%  
 Analysis Period (min) 15  
 Intersection LOS: A  
 ICU Level of Service A

Splits and Phases: 4: Alameda Rd & 19th Ave



Deer Valley 30  
4: Alameda Rd & 19th Ave

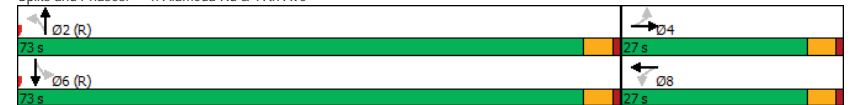
2024 Total PM Scenario A Mitigated  
Timings

| Lane Group           | EBL   | EBT   | WBL   | WBT   | NBL   | NBT   | SBL   | SBT   |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations  | ↔     | ↔     | ↔     | ↔     | ↔     | ↔     | ↔     | ↔     |
| Traffic Volume (vph) | 14    | 0     | 197   | 0     | 85    | 1106  | 35    | 667   |
| Future Volume (vph)  | 14    | 0     | 197   | 0     | 85    | 1106  | 35    | 667   |
| Turn Type            | Perm  | NA    | Perm  | NA    | Perm  | NA    | Perm  | NA    |
| Protected Phases     |       | 4     |       | 8     |       | 2     |       | 6     |
| Permitted Phases     | 4     |       | 8     |       | 2     |       | 6     |       |
| Detector Phase       | 4     | 4     | 8     | 8     | 2     | 2     | 6     | 6     |
| Switch Phase         |       |       |       |       |       |       |       |       |
| Minimum Initial (s)  | 5.0   | 5.0   | 5.0   | 5.0   | 5.0   | 5.0   | 5.0   | 5.0   |
| Minimum Split (s)    | 22.5  | 22.5  | 22.5  | 22.5  | 22.5  | 22.5  | 22.5  | 22.5  |
| Total Split (s)      | 27.0  | 27.0  | 27.0  | 27.0  | 73.0  | 73.0  | 73.0  | 73.0  |
| Total Split (%)      | 27.0% | 27.0% | 27.0% | 27.0% | 73.0% | 73.0% | 73.0% | 73.0% |
| Yellow Time (s)      | 3.5   | 3.5   | 3.5   | 3.5   | 3.5   | 3.5   | 3.5   | 3.5   |
| All-Red Time (s)     | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   |
| Lost Time Adjust (s) | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Lost Time (s)  | 4.5   | 4.5   | 4.5   | 4.5   | 4.5   | 4.5   | 4.5   | 4.5   |
| Lead/Lag             |       |       |       |       |       |       |       |       |
| Lead-Lag Optimize?   |       |       |       |       |       |       |       |       |
| Recall Mode          | None  | None  | None  | None  | C-Max | C-Max | C-Max | C-Max |
| Act Effct Green (s)  | 20.2  | 20.2  | 20.2  | 20.2  | 70.8  | 70.8  | 70.8  | 70.8  |
| Actuated g/C Ratio   | 0.20  | 0.20  | 0.20  | 0.20  | 0.71  | 0.71  | 0.71  | 0.71  |
| v/c Ratio            | 0.08  | 0.13  | 0.85  | 0.45  | 0.21  | 0.37  | 0.16  | 0.31  |
| Control Delay        | 32.1  | 0.5   | 66.5  | 18.1  | 7.0   | 6.3   | 7.4   | 6.2   |
| Queue Delay          | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Delay          | 32.1  | 0.5   | 66.5  | 18.1  | 7.0   | 6.3   | 7.4   | 6.2   |
| LOS                  | C     | A     | E     | B     | A     | A     | A     | A     |
| Approach Delay       |       | 6.3   |       | 44.6  |       | 6.4   |       | 6.2   |
| Approach LOS         |       | A     |       | D     |       | A     |       | A     |

Intersection Summary

Cycle Length: 100  
 Actuated Cycle Length: 100  
 Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green  
 Natural Cycle: 50  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.85  
 Intersection Signal Delay: 12.1  
 Intersection Capacity Utilization 55.3%  
 Analysis Period (min) 15  
 Intersection LOS: B  
 ICU Level of Service B

Splits and Phases: 4: Alameda Rd & 19th Ave





Deer Valley 30  
4: Alameda Rd & 19th Ave

2024 Total AM Scenario A Mitigated  
HCM 6th Signalized Intersection Summary

| Movement                     | EBL  | EBT  | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
|------------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Lane Configurations          | ↔    | ↔    | ↔    | ↔    | ↔    | ↔    | ↔    | ↔    | ↔    | ↔    | ↔    | ↔    |
| Traffic Volume (veh/h)       | 9    | 0    | 56   | 42   | 0    | 35   | 18   | 593  | 224  | 187  | 951  | 14   |
| Future Volume (veh/h)        | 9    | 0    | 56   | 42   | 0    | 35   | 18   | 593  | 224  | 187  | 951  | 14   |
| Initial Q (Ob), veh          | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Ped-Bike Adj(A_pbT)          | 1.00 |      | 1.00 | 1.00 |      | 1.00 | 1.00 |      | 1.00 | 1.00 |      | 1.00 |
| Parking Bus, Adj             | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Work Zone On Approach        | No   |      | No   |      | No   |      | No   |      | No   |      | No   |      |
| Adj Sat Flow, veh/h/ln       | 1781 | 1781 | 1781 | 1781 | 1781 | 1781 | 1781 | 1781 | 1781 | 1781 | 1781 | 1781 |
| Adj Flow Rate, veh/h         | 10   | 0    | 61   | 46   | 0    | 38   | 20   | 645  | 243  | 203  | 1034 | 15   |
| Peak Hour Factor             | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Percent Heavy Veh, %         | 8    | 8    | 8    | 8    | 8    | 8    | 8    | 8    | 8    | 8    | 8    | 8    |
| Cap, veh/h                   | 92   | 0    | 82   | 99   | 0    | 88   | 389  | 2409 | 891  | 474  | 2352 | 34   |
| Arrive On Green              | 0.05 | 0.00 | 0.05 | 0.06 | 0.00 | 0.06 | 0.69 | 0.69 | 0.69 | 0.69 | 0.69 | 0.69 |
| Sat Flow, veh/h              | 1697 | 0    | 1510 | 1697 | 0    | 1510 | 512  | 3498 | 1293 | 596  | 3415 | 50   |
| Grp Volume(v), veh/h         | 10   | 0    | 61   | 46   | 0    | 38   | 20   | 597  | 291  | 203  | 512  | 537  |
| Grp Sat Flow(s), veh/h/ln    | 1697 | 0    | 1510 | 1697 | 0    | 1510 | 512  | 1621 | 1549 | 596  | 1692 | 1773 |
| Q Serve(g_s), s              | 0.4  | 0.0  | 2.7  | 1.8  | 0.0  | 1.7  | 1.2  | 4.8  | 4.9  | 13.5 | 9.2  | 9.2  |
| Cycle Q Clear(g_c), s        | 0.4  | 0.0  | 2.7  | 1.8  | 0.0  | 1.7  | 10.4 | 4.8  | 4.9  | 18.4 | 9.2  | 9.2  |
| Prop In Lane                 | 1.00 |      | 1.00 | 1.00 |      | 1.00 | 1.00 |      | 0.84 | 1.00 |      | 0.03 |
| Lane Grp Cap(c), veh/h       | 92   | 0    | 82   | 99   | 0    | 88   | 389  | 2233 | 1067 | 474  | 1166 | 1221 |
| V/C Ratio(X)                 | 0.11 | 0.00 | 0.74 | 0.46 | 0.00 | 0.43 | 0.05 | 0.27 | 0.27 | 0.43 | 0.44 | 0.44 |
| Avail Cap(c_a), veh/h        | 449  | 0    | 400  | 449  | 0    | 400  | 389  | 2233 | 1067 | 474  | 1166 | 1221 |
| HCM Platoon Ratio            | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(I)           | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Uniform Delay (d), s/veh     | 30.6 | 0.0  | 31.7 | 31.0 | 0.0  | 30.9 | 7.1  | 4.0  | 4.1  | 7.6  | 4.7  | 4.7  |
| Incr Delay (d2), s/veh       | 0.5  | 0.0  | 12.5 | 3.3  | 0.0  | 3.3  | 0.3  | 0.3  | 0.6  | 2.8  | 1.2  | 1.2  |
| Initial Q Delay(d3), s/veh   | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| %ile BackOfQ(50%), veh/ln    | 0.2  | 0.0  | 1.2  | 0.8  | 0.0  | 0.7  | 0.1  | 1.2  | 1.3  | 1.7  | 2.6  | 2.7  |
| Unsig. Movement Delay, s/veh |      |      |      |      |      |      |      |      |      |      |      |      |
| LnGrp Delay(d), s/veh        | 31.1 | 0.0  | 44.1 | 34.3 | 0.0  | 34.2 | 7.3  | 4.3  | 4.7  | 10.4 | 5.9  | 5.9  |
| LnGrp LOS                    | C    | A    | D    | C    | A    | C    | A    | A    | A    | B    | A    | A    |
| Approach Vol, veh/h          |      | 71   |      |      | 84   |      |      | 908  |      |      | 1252 |      |
| Approach Delay, s/veh        |      | 42.3 |      |      | 34.3 |      |      | 4.5  |      |      | 6.6  |      |
| Approach LOS                 |      | D    |      |      | C    |      |      | A    |      |      | A    |      |
| Timer - Assigned Phs         |      | 2    |      | 4    |      | 6    |      | 8    |      |      |      |      |
| Phs Duration (G+Y+Rc), s     |      | 51.3 |      | 8.2  |      | 51.3 |      | 8.5  |      |      | 26.7 |      |
| Change Period (Y+Rc), s      |      | 4.5  |      | 4.5  |      | 4.5  |      | 4.5  |      |      | 4.5  |      |
| Max Green Setting (Gmax), s  |      | 18.0 |      | 18.0 |      | 18.0 |      | 18.0 |      |      | 22.5 |      |
| Max Q Clear Time (g_c+I1), s |      | 12.4 |      | 4.7  |      | 20.4 |      | 3.8  |      |      | 16.5 |      |
| Green Ext Time (p_c), s      |      | 2.8  |      | 0.2  |      | 0.0  |      | 0.2  |      |      | 0.1  |      |
| <b>Intersection Summary</b>  |      |      |      |      |      |      |      |      |      |      |      |      |
| HCM 6th Ctrl Delay           | 7.9  |      |      |      |      |      |      |      |      |      |      |      |
| HCM 6th LOS                  | A    |      |      |      |      |      |      |      |      |      |      |      |

Deer Valley 30  
4: Alameda Rd & 19th Ave

2024 Total PM Scenario A Mitigated  
HCM 6th Signalized Intersection Summary

| Movement                     | EBL  | EBT  | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
|------------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Lane Configurations          | ↔    | ↔    | ↔    | ↔    | ↔    | ↔    | ↔    | ↔    | ↔    | ↔    | ↔    | ↔    |
| Traffic Volume (veh/h)       | 14   | 0    | 62   | 197  | 0    | 162  | 85   | 1106 | 43   | 35   | 667  | 16   |
| Future Volume (veh/h)        | 14   | 0    | 62   | 197  | 0    | 162  | 85   | 1106 | 43   | 35   | 667  | 16   |
| Initial Q (Ob), veh          | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Ped-Bike Adj(A_pbT)          | 1.00 |      | 1.00 | 1.00 |      | 1.00 | 1.00 |      | 1.00 | 1.00 |      | 1.00 |
| Parking Bus, Adj             | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Work Zone On Approach        | No   |      | No   |      | No   |      | No   |      | No   |      | No   |      |
| Adj Sat Flow, veh/h/ln       | 1781 | 1781 | 1781 | 1781 | 1781 | 1781 | 1781 | 1781 | 1781 | 1781 | 1781 | 1781 |
| Adj Flow Rate, veh/h         | 15   | 0    | 67   | 214  | 0    | 176  | 92   | 1202 | 47   | 38   | 725  | 17   |
| Peak Hour Factor             | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Percent Heavy Veh, %         | 8    | 8    | 8    | 8    | 8    | 8    | 8    | 8    | 8    | 8    | 8    | 8    |
| Cap, veh/h                   | 209  | 0    | 335  | 308  | 0    | 335  | 484  | 3305 | 129  | 319  | 2326 | 55   |
| Arrive On Green              | 0.22 | 0.00 | 0.22 | 0.22 | 0.00 | 0.22 | 0.69 | 0.69 | 0.69 | 0.69 | 0.69 | 0.69 |
| Sat Flow, veh/h              | 1151 | 0    | 1510 | 1271 | 0    | 1510 | 683  | 4802 | 188  | 424  | 3380 | 79   |
| Grp Volume(v), veh/h         | 15   | 0    | 67   | 214  | 0    | 176  | 92   | 811  | 438  | 38   | 363  | 379  |
| Grp Sat Flow(s), veh/h/ln    | 1151 | 0    | 1510 | 1271 | 0    | 1510 | 683  | 1621 | 1748 | 424  | 1692 | 1767 |
| Q Serve(g_s), s              | 1.2  | 0.0  | 3.6  | 16.5 | 0.0  | 10.3 | 6.2  | 10.4 | 10.4 | 4.1  | 8.5  | 8.5  |
| Cycle Q Clear(g_c), s        | 11.4 | 0.0  | 3.6  | 20.1 | 0.0  | 10.3 | 14.7 | 10.4 | 10.4 | 14.5 | 8.5  | 8.5  |
| Prop In Lane                 | 1.00 |      | 1.00 | 1.00 |      | 1.00 | 1.00 |      | 0.11 | 1.00 |      | 0.04 |
| Lane Grp Cap(c), veh/h       | 209  | 0    | 335  | 308  | 0    | 335  | 484  | 2231 | 1203 | 319  | 1165 | 1216 |
| V/C Ratio(X)                 | 0.07 | 0.00 | 0.20 | 0.69 | 0.00 | 0.53 | 0.19 | 0.36 | 0.36 | 0.12 | 0.31 | 0.31 |
| Avail Cap(c_a), veh/h        | 213  | 0    | 340  | 312  | 0    | 340  | 484  | 2231 | 1203 | 319  | 1165 | 1216 |
| HCM Platoon Ratio            | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(I)           | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Uniform Delay (d), s/veh     | 39.3 | 0.0  | 31.7 | 39.9 | 0.0  | 34.3 | 9.1  | 6.5  | 6.5  | 9.5  | 6.2  | 6.2  |
| Incr Delay (d2), s/veh       | 0.1  | 0.0  | 0.3  | 6.4  | 0.0  | 1.4  | 0.9  | 0.5  | 0.9  | 0.8  | 0.7  | 0.7  |
| Initial Q Delay(d3), s/veh   | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| %ile BackOfQ(50%), veh/ln    | 0.3  | 0.0  | 1.3  | 5.6  | 0.0  | 3.9  | 1.0  | 3.3  | 3.7  | 0.4  | 2.9  | 3.0  |
| Unsig. Movement Delay, s/veh |      |      |      |      |      |      |      |      |      |      |      |      |
| LnGrp Delay(d), s/veh        | 39.4 | 0.0  | 32.0 | 46.3 | 0.0  | 35.7 | 10.0 | 6.9  | 7.3  | 10.3 | 6.9  | 6.9  |
| LnGrp LOS                    | D    | A    | C    | D    | A    | D    | A    | A    | A    | B    | A    | A    |
| Approach Vol, veh/h          |      | 82   |      |      | 390  |      |      | 1341 |      |      | 780  |      |
| Approach Delay, s/veh        |      | 33.3 |      |      | 41.5 |      |      | 7.3  |      |      | 7.0  |      |
| Approach LOS                 |      | C    |      |      | D    |      |      | A    |      |      | A    |      |
| Timer - Assigned Phs         |      | 2    |      | 4    |      | 6    |      | 8    |      |      |      |      |
| Phs Duration (G+Y+Rc), s     |      | 73.3 |      | 26.7 |      | 73.3 |      | 26.7 |      |      | 4.5  |      |
| Change Period (Y+Rc), s      |      | 4.5  |      | 4.5  |      | 4.5  |      | 4.5  |      |      | 4.5  |      |
| Max Green Setting (Gmax), s  |      | 68.5 |      | 22.5 |      | 68.5 |      | 22.5 |      |      | 22.1 |      |
| Max Q Clear Time (g_c+I1), s |      | 16.7 |      | 13.4 |      | 16.5 |      | 22.1 |      |      | 16.5 |      |
| Green Ext Time (p_c), s      |      | 13.4 |      | 0.2  |      | 6.4  |      | 0.1  |      |      | 0.1  |      |
| <b>Intersection Summary</b>  |      |      |      |      |      |      |      |      |      |      |      |      |
| HCM 6th Ctrl Delay           | 13.2 |      |      |      |      |      |      |      |      |      |      |      |
| HCM 6th LOS                  | B    |      |      |      |      |      |      |      |      |      |      |      |

Deer Valley 30  
5: 19th Ave & Sarah Bass PI

2024 Total AM Scenario A Mitigated  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh         | 0.5  |      |      |      |      |      |
| Movement                 | EBL  | EBR  | NBL  | NBT  | SBT  | SBR  |
| Lane Configurations      | ↔    | ↔    | ↔    | ↔↔   | ↔↔   | ↔↔   |
| Traffic Vol, veh/h       | 13   | 36   | 27   | 855  | 848  | 9    |
| Future Vol, veh/h        | 13   | 36   | 27   | 855  | 848  | 9    |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Stop | Stop | Free | Free | Free | Free |
| RT Channelized           | -    | None | -    | None | -    | None |
| Storage Length           | 0    | 0    | 150  | -    | -    | -    |
| Veh in Median Storage, # | 0    | -    | -    | 0    | 0    | -    |
| Grade, %                 | 0    | -    | -    | 0    | 0    | -    |
| Peak Hour Factor         | 92   | 92   | 92   | 92   | 92   | 92   |
| Heavy Vehicles, %        | 8    | 8    | 8    | 8    | 8    | 8    |
| Mvmt Flow                | 14   | 39   | 29   | 929  | 922  | 10   |

| Major/Minor          | Minor2 | Major1 | Major2 |   |   |   |
|----------------------|--------|--------|--------|---|---|---|
| Conflicting Flow All | 1357   | 466    | 932    | 0 | - | 0 |
| Stage 1              | 927    | -      | -      | - | - | - |
| Stage 2              | 430    | -      | -      | - | - | - |
| Critical Hdwy        | 6.41   | 7.06   | 4.26   | - | - | - |
| Critical Hdwy Stg 1  | 5.96   | -      | -      | - | - | - |
| Critical Hdwy Stg 2  | 6.16   | -      | -      | - | - | - |
| Follow-up Hdwy       | 3.73   | 3.38   | 2.28   | - | - | - |
| Pot Cap-1 Maneuver   | 160    | 527    | 694    | - | - | - |
| Stage 1              | 324    | -      | -      | - | - | - |
| Stage 2              | 573    | -      | -      | - | - | - |
| Platoon blocked, %   | -      | -      | -      | - | - | - |
| Mov Cap-1 Maneuver   | 153    | 527    | 694    | - | - | - |
| Mov Cap-2 Maneuver   | 244    | -      | -      | - | - | - |
| Stage 1              | 310    | -      | -      | - | - | - |
| Stage 2              | 573    | -      | -      | - | - | - |

| Approach             | EB   | NB  | SB |
|----------------------|------|-----|----|
| HCM Control Delay, s | 14.6 | 0.3 | 0  |
| HCM LOS              | B    |     |    |

| Minor Lane/Major Mvmt | NBL   | NBT | EBLn1 | EBLn2 | SBT | SBR |
|-----------------------|-------|-----|-------|-------|-----|-----|
| Capacity (veh/h)      | 694   | -   | 244   | 527   | -   | -   |
| HCM Lane V/C Ratio    | 0.042 | -   | 0.058 | 0.074 | -   | -   |
| HCM Control Delay (s) | 10.4  | -   | 20.7  | 12.4  | -   | -   |
| HCM Lane LOS          | B     | -   | C     | B     | -   | -   |
| HCM 95th %tile Q(veh) | 0.1   | -   | 0.2   | 0.2   | -   | -   |

Deer Valley 30  
5: 19th Ave & Sarah Bass PI

2024 Total PM Scenario A Mitigated  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh         | 0.5  |      |      |      |      |      |
| Movement                 | EBL  | EBR  | NBL  | NBT  | SBT  | SBR  |
| Lane Configurations      | ↔    | ↔    | ↔    | ↔↔   | ↔↔   | ↔↔   |
| Traffic Vol, veh/h       | 16   | 37   | 10   | 1032 | 948  | 6    |
| Future Vol, veh/h        | 16   | 37   | 10   | 1032 | 948  | 6    |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Stop | Stop | Free | Free | Free | Free |
| RT Channelized           | -    | None | -    | None | -    | None |
| Storage Length           | 0    | 0    | 150  | -    | -    | -    |
| Veh in Median Storage, # | 0    | -    | -    | 0    | 0    | -    |
| Grade, %                 | 0    | -    | -    | 0    | 0    | -    |
| Peak Hour Factor         | 92   | 92   | 92   | 92   | 92   | 92   |
| Heavy Vehicles, %        | 8    | 8    | 8    | 8    | 8    | 8    |
| Mvmt Flow                | 17   | 40   | 11   | 1122 | 1030 | 7    |

| Major/Minor          | Minor2 | Major1 | Major2 |   |   |   |
|----------------------|--------|--------|--------|---|---|---|
| Conflicting Flow All | 1505   | 519    | 1037   | 0 | - | 0 |
| Stage 1              | 1034   | -      | -      | - | - | - |
| Stage 2              | 471    | -      | -      | - | - | - |
| Critical Hdwy        | 6.41   | 7.06   | 4.26   | - | - | - |
| Critical Hdwy Stg 1  | 5.96   | -      | -      | - | - | - |
| Critical Hdwy Stg 2  | 6.16   | -      | -      | - | - | - |
| Follow-up Hdwy       | 3.73   | 3.38   | 2.28   | - | - | - |
| Pot Cap-1 Maneuver   | 131    | 486    | 631    | - | - | - |
| Stage 1              | 284    | -      | -      | - | - | - |
| Stage 2              | 545    | -      | -      | - | - | - |
| Platoon blocked, %   | -      | -      | -      | - | - | - |
| Mov Cap-1 Maneuver   | 129    | 486    | 631    | - | - | - |
| Mov Cap-2 Maneuver   | 218    | -      | -      | - | - | - |
| Stage 1              | 279    | -      | -      | - | - | - |
| Stage 2              | 545    | -      | -      | - | - | - |

| Approach             | EB   | NB  | SB |
|----------------------|------|-----|----|
| HCM Control Delay, s | 16.1 | 0.1 | 0  |
| HCM LOS              | C    |     |    |

| Minor Lane/Major Mvmt | NBL   | NBT | EBLn1 | EBLn2 | SBT | SBR |
|-----------------------|-------|-----|-------|-------|-----|-----|
| Capacity (veh/h)      | 631   | -   | 218   | 486   | -   | -   |
| HCM Lane V/C Ratio    | 0.017 | -   | 0.08  | 0.083 | -   | -   |
| HCM Control Delay (s) | 10.8  | -   | 22.9  | 13.1  | -   | -   |
| HCM Lane LOS          | B     | -   | C     | B     | -   | -   |
| HCM 95th %tile Q(veh) | 0.1   | -   | 0.3   | 0.3   | -   | -   |

Deer Valley 30  
6: Pinnacle Peak Rd & 19th Ave

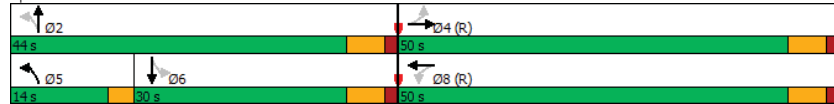
2024 Total AM Scenario A Mitigated  
Timings

| Lane Group           | EBL   | EBT   | WBL   | WBT   | NBL   | NBT   | SBL   | SBT   |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations  | ↖     | ↗     | ↖     | ↗     | ↖     | ↗     | ↖     | ↗     |
| Traffic Volume (vph) | 418   | 856   | 69    | 256   | 169   | 500   | 143   | 661   |
| Future Volume (vph)  | 418   | 856   | 69    | 256   | 169   | 500   | 143   | 661   |
| Turn Type            | Perm  | NA    | Perm  | NA    | pm+pt | NA    | Perm  | NA    |
| Protected Phases     |       | 4     |       | 8     |       | 5     |       | 2     |
| Permitted Phases     | 4     |       | 8     |       | 2     |       | 6     |       |
| Detector Phase       | 4     | 4     | 8     | 8     | 5     | 2     | 6     | 6     |
| Switch Phase         |       |       |       |       |       |       |       |       |
| Minimum Initial (s)  | 15.0  | 15.0  | 15.0  | 15.0  | 5.0   | 15.0  | 15.0  | 15.0  |
| Minimum Split (s)    | 34.6  | 34.6  | 34.6  | 34.6  | 9.5   | 30.8  | 30.8  | 30.8  |
| Total Split (s)      | 50.0  | 50.0  | 50.0  | 50.0  | 14.0  | 44.0  | 30.0  | 30.0  |
| Total Split (%)      | 53.2% | 53.2% | 53.2% | 53.2% | 14.9% | 46.8% | 31.9% | 31.9% |
| Yellow Time (s)      | 4.3   | 4.3   | 4.3   | 4.3   | 3.0   | 4.3   | 4.3   | 4.3   |
| All-Red Time (s)     | 1.3   | 1.3   | 1.3   | 1.3   | 0.0   | 1.5   | 1.5   | 1.5   |
| Lost Time Adjust (s) | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Lost Time (s)  | 5.6   | 5.6   | 5.6   | 5.6   | 3.0   | 5.8   | 5.8   | 5.8   |
| Lead/Lag             |       |       |       |       | Lead  |       | Lag   | Lag   |
| Lead-Lag Optimize?   |       |       |       |       | Yes   |       | Yes   | Yes   |
| Recall Mode          | C-Max | C-Max | C-Max | C-Max | None  | Max   | Max   | Max   |
| Act Effct Green (s)  | 44.4  | 44.4  | 44.4  | 44.4  | 41.0  | 38.2  | 24.9  | 24.9  |
| Actuated g/C Ratio   | 0.47  | 0.47  | 0.47  | 0.47  | 0.44  | 0.41  | 0.26  | 0.26  |
| v/c Ratio            | 1.20  | 0.81  | 0.88  | 0.30  | 0.69  | 0.37  | 0.91  | 0.97  |
| Control Delay        | 140.8 | 25.2  | 99.4  | 9.4   | 32.5  | 17.9  | 86.8  | 58.1  |
| Queue Delay          | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Delay          | 140.8 | 25.2  | 99.4  | 9.4   | 32.5  | 17.9  | 86.8  | 58.1  |
| LOS                  | F     | C     | F     | A     | C     | B     | F     | E     |
| Approach Delay       |       | 55.7  |       | 21.7  |       | 20.8  |       | 62.5  |
| Approach LOS         |       | E     |       | C     |       | C     |       | E     |

Intersection Summary

Cycle Length: 94  
 Actuated Cycle Length: 94  
 Offset: 31 (33%), Referenced to phase 4:EBTL and 8:WBTL, Start of Green  
 Natural Cycle: 90  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 1.20  
 Intersection Signal Delay: 45.3  
 Intersection Capacity Utilization 95.1%  
 Intersection LOS: D  
 ICU Level of Service F  
 Analysis Period (min) 15

Splits and Phases: 6: Pinnacle Peak Rd & 19th Ave



Deer Valley 30  
6: Pinnacle Peak Rd & 19th Ave

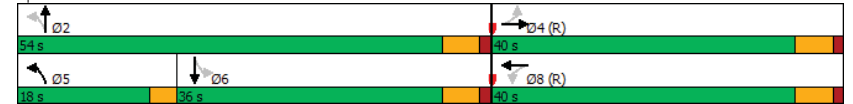
2024 Total PM Scenario A Mitigated  
Timings

| Lane Group           | EBL   | EBT   | WBL   | WBT   | NBL   | NBT   | SBL   | SBT   |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations  | ↖     | ↗     | ↖     | ↗     | ↖     | ↗     | ↖     | ↗     |
| Traffic Volume (vph) | 148   | 229   | 119   | 766   | 408   | 818   | 167   | 629   |
| Future Volume (vph)  | 148   | 229   | 119   | 766   | 408   | 818   | 167   | 629   |
| Turn Type            | Perm  | NA    | Perm  | NA    | pm+pt | NA    | Perm  | NA    |
| Protected Phases     |       | 4     |       | 8     |       | 5     |       | 2     |
| Permitted Phases     | 4     |       | 8     |       | 2     |       | 6     |       |
| Detector Phase       | 4     | 4     | 8     | 8     | 5     | 2     | 6     | 6     |
| Switch Phase         |       |       |       |       |       |       |       |       |
| Minimum Initial (s)  | 15.0  | 15.0  | 15.0  | 15.0  | 5.0   | 15.0  | 15.0  | 15.0  |
| Minimum Split (s)    | 34.6  | 34.6  | 34.6  | 34.6  | 9.5   | 30.8  | 30.8  | 30.8  |
| Total Split (s)      | 40.0  | 40.0  | 40.0  | 40.0  | 18.0  | 54.0  | 36.0  | 36.0  |
| Total Split (%)      | 42.6% | 42.6% | 42.6% | 42.6% | 19.1% | 57.4% | 38.3% | 38.3% |
| Yellow Time (s)      | 4.3   | 4.3   | 4.3   | 4.3   | 3.0   | 4.3   | 4.3   | 4.3   |
| All-Red Time (s)     | 1.3   | 1.3   | 1.3   | 1.3   | 0.0   | 1.5   | 1.5   | 1.5   |
| Lost Time Adjust (s) | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Lost Time (s)  | 5.6   | 5.6   | 5.6   | 5.6   | 3.0   | 5.8   | 5.8   | 5.8   |
| Lead/Lag             |       |       |       |       | Lead  |       | Lag   | Lag   |
| Lead-Lag Optimize?   |       |       |       |       | Yes   |       | Yes   | Yes   |
| Recall Mode          | C-Max | C-Max | C-Max | C-Max | None  | Max   | Max   | Max   |
| Act Effct Green (s)  | 34.4  | 34.4  | 34.4  | 34.4  | 51.0  | 48.2  | 30.2  | 30.2  |
| Actuated g/C Ratio   | 0.37  | 0.37  | 0.37  | 0.37  | 0.54  | 0.51  | 0.32  | 0.32  |
| v/c Ratio            | 1.77  | 0.40  | 0.51  | 0.80  | 1.28  | 0.38  | 1.10  | 1.06  |
| Control Delay        | 411.5 | 11.2  | 31.9  | 32.1  | 170.0 | 14.2  | 131.8 | 77.2  |
| Queue Delay          | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Delay          | 411.5 | 11.2  | 31.9  | 32.1  | 170.0 | 14.2  | 131.8 | 77.2  |
| LOS                  | F     | B     | C     | C     | F     | B     | F     | E     |
| Approach Delay       |       | 106.4 |       | 32.0  |       | 64.4  |       | 84.8  |
| Approach LOS         |       | F     |       | C     |       | E     |       | F     |

Intersection Summary

Cycle Length: 94  
 Actuated Cycle Length: 94  
 Offset: 31 (33%), Referenced to phase 4:EBTL and 8:WBTL, Start of Green  
 Natural Cycle: 90  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 1.77  
 Intersection Signal Delay: 68.8  
 Intersection Capacity Utilization 107.8%  
 Intersection LOS: E  
 ICU Level of Service G  
 Analysis Period (min) 15

Splits and Phases: 6: Pinnacle Peak Rd & 19th Ave



Deer Valley 30  
6: Pinnacle Peak Rd & 19th Ave

2024 Total AM Scenario A Mitigated  
HCM 6th Signalized Intersection Summary

| Movement                     | EBL   | EBT  | EBR  | WBL   | WBT  | WBR  | NBL  | NBT   | NBR  | SBL  | SBT   | SBR  |
|------------------------------|-------|------|------|-------|------|------|------|-------|------|------|-------|------|
| Lane Configurations          | ↔     | ↕    | ↕    | ↔     | ↕    | ↕    | ↔    | ↕     | ↕    | ↔    | ↕     | ↕    |
| Traffic Volume (veh/h)       | 418   | 856  | 309  | 69    | 256  | 181  | 169  | 500   | 165  | 143  | 661   | 122  |
| Future Volume (veh/h)        | 418   | 856  | 309  | 69    | 256  | 181  | 169  | 500   | 165  | 143  | 661   | 122  |
| Initial Q (Ob), veh          | 0     | 0    | 0    | 0     | 0    | 0    | 0    | 0     | 0    | 0    | 0     | 0    |
| Ped-Bike Adj(A_pbT)          | 1.00  |      | 1.00 | 1.00  |      | 1.00 | 1.00 |       | 1.00 | 1.00 |       | 1.00 |
| Parking Bus, Adj             | 1.00  | 1.00 | 1.00 | 1.00  | 1.00 | 1.00 | 1.00 | 1.00  | 1.00 | 1.00 | 1.00  | 1.00 |
| Work Zone On Approach        | No    |      | No   |       | No   |      | No   |       | No   |      | No    |      |
| Adj Sat Flow, veh/h/ln       | 1781  | 1781 | 1781 | 1781  | 1781 | 1781 | 1781 | 1781  | 1781 | 1781 | 1781  | 1781 |
| Adj Flow Rate, veh/h         | 454   | 930  | 336  | 75    | 278  | 197  | 184  | 543   | 179  | 155  | 718   | 133  |
| Peak Hour Factor             | 0.92  | 0.92 | 0.92 | 0.92  | 0.92 | 0.92 | 0.92 | 0.92  | 0.92 | 0.92 | 0.92  | 0.92 |
| Percent Heavy Veh, %         | 8     | 8    | 8    | 8     | 8    | 8    | 8    | 8     | 8    | 8    | 8     | 8    |
| Cap, veh/h                   | 409   | 1152 | 414  | 137   | 906  | 622  | 261  | 1481  | 475  | 271  | 797   | 147  |
| Arrive On Green              | 0.47  | 0.47 | 0.47 | 0.47  | 0.47 | 0.47 | 0.10 | 0.41  | 0.41 | 0.28 | 0.28  | 0.28 |
| Sat Flow, veh/h              | 875   | 2440 | 876  | 417   | 1919 | 1318 | 1697 | 3644  | 1169 | 696  | 2851  | 528  |
| Grp Volume(v), veh/h         | 454   | 644  | 622  | 75    | 244  | 231  | 184  | 481   | 241  | 155  | 426   | 425  |
| Grp Sat Flow(s), veh/h/ln    | 875   | 1692 | 1624 | 417   | 1692 | 1544 | 1697 | 1621  | 1571 | 696  | 1692  | 1686 |
| Q Serve(g_s), s              | 35.7  | 30.4 | 30.8 | 13.6  | 8.4  | 8.7  | 6.9  | 9.7   | 10.1 | 19.4 | 22.8  | 22.8 |
| Cycle Q Clear(g_c), s        | 44.4  | 30.4 | 30.8 | 44.4  | 8.4  | 8.7  | 6.9  | 9.7   | 10.1 | 19.4 | 22.8  | 22.8 |
| Prop In Lane                 | 1.00  |      | 0.54 | 1.00  |      | 0.85 | 1.00 |       | 0.74 | 1.00 |       | 0.31 |
| Lane Grp Cap(c), veh/h       | 409   | 799  | 767  | 137   | 799  | 729  | 261  | 1318  | 638  | 271  | 473   | 471  |
| V/C Ratio(X)                 | 1.11  | 0.81 | 0.81 | 0.55  | 0.31 | 0.32 | 0.71 | 0.37  | 0.38 | 0.57 | 0.90  | 0.90 |
| Avail Cap(c_a), veh/h        | 409   | 799  | 767  | 137   | 799  | 729  | 298  | 1318  | 638  | 271  | 473   | 471  |
| HCM Platoon Ratio            | 1.00  | 1.00 | 1.00 | 1.00  | 1.00 | 1.00 | 1.00 | 1.00  | 1.00 | 1.00 | 1.00  | 1.00 |
| Upstream Filter(I)           | 1.00  | 1.00 | 1.00 | 0.57  | 0.57 | 0.57 | 1.00 | 1.00  | 1.00 | 1.00 | 1.00  | 1.00 |
| Uniform Delay (d), s/veh     | 32.5  | 21.1 | 21.2 | 41.6  | 15.3 | 15.4 | 23.3 | 19.5  | 19.6 | 31.4 | 32.6  | 32.6 |
| Incr Delay (d2), s/veh       | 77.9  | 8.5  | 9.1  | 8.7   | 0.6  | 0.6  | 6.4  | 0.8   | 1.7  | 8.5  | 22.9  | 23.1 |
| Initial Q Delay(d3), s/veh   | 0.0   | 0.0  | 0.0  | 0.0   | 0.0  | 0.0  | 0.0  | 0.0   | 0.0  | 0.0  | 0.0   | 0.0  |
| %ile BackOfQ(50%), veh/ln    | 18.3  | 13.2 | 12.9 | 2.1   | 3.2  | 3.1  | 3.1  | 3.7   | 3.9  | 3.8  | 12.1  | 12.1 |
| Unsig. Movement Delay, s/veh |       |      |      |       |      |      |      |       |      |      |       |      |
| LnGrp Delay(d), s/veh        | 110.4 | 29.6 | 30.3 | 50.3  | 15.9 | 16.0 | 29.6 | 20.2  | 21.3 | 39.9 | 55.5  | 55.7 |
| LnGrp LOS                    | F     | C    | C    | D     | B    | B    | C    | C     | C    | D    | E     | E    |
| Approach Vol, veh/h          |       | 1720 |      |       | 550  |      |      | 906   |      |      | 1006  |      |
| Approach Delay, s/veh        |       | 51.2 |      |       | 20.6 |      |      | 22.4  |      |      | 53.2  |      |
| Approach LOS                 |       | D    |      |       | C    |      |      | C     |      |      | D     |      |
| Timer - Assigned Phs         |       | 2    |      | 4     | 5    | 6    |      | 8     |      |      |       |      |
| Phs Duration (G+Y+Rc), s     |       | 44.0 |      | 50.0  | 11.9 | 32.1 |      | 50.0  |      |      | 40.0  |      |
| Change Period (Y+Rc), s      |       | 5.8  |      | * 5.6 | 3.0  | 5.8  |      | * 5.6 |      |      | * 5.6 |      |
| Max Green Setting (Gmax), s  |       | 38.2 |      | * 44  | 11.0 | 24.2 |      | * 44  |      |      | * 34  |      |
| Max Q Clear Time (g_c+I1), s |       | 12.1 |      | 46.4  | 8.9  | 24.8 |      | 46.4  |      |      | 24.1  |      |
| Green Ext Time (p_c), s      |       | 5.2  |      | 0.0   | 0.1  | 0.0  |      | 0.0   |      |      | 4.8   |      |

**Intersection Summary**  
 HCM 6th Ctrl Delay 41.4  
 HCM 6th LOS D

**Notes**  
 User approved pedestrian interval to be less than phase max green.  
 \* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Deer Valley 30  
6: Pinnacle Peak Rd & 19th Ave

2024 Total PM Scenario A Mitigated  
HCM 6th Signalized Intersection Summary

| Movement                     | EBL   | EBT  | EBR  | WBL   | WBT  | WBR  | NBL   | NBT   | NBR  | SBL  | SBT   | SBR  |
|------------------------------|-------|------|------|-------|------|------|-------|-------|------|------|-------|------|
| Lane Configurations          | ↔     | ↕    | ↕    | ↔     | ↕    | ↕    | ↔     | ↕     | ↕    | ↔    | ↕     | ↕    |
| Traffic Volume (veh/h)       | 148   | 229  | 246  | 119   | 766  | 123  | 408   | 818   | 41   | 167  | 629   | 397  |
| Future Volume (veh/h)        | 148   | 229  | 246  | 119   | 766  | 123  | 408   | 818   | 41   | 167  | 629   | 397  |
| Initial Q (Ob), veh          | 0     | 0    | 0    | 0     | 0    | 0    | 0     | 0     | 0    | 0    | 0     | 0    |
| Ped-Bike Adj(A_pbT)          | 1.00  |      | 1.00 | 1.00  |      | 1.00 | 1.00  |       | 1.00 | 1.00 |       | 1.00 |
| Parking Bus, Adj             | 1.00  | 1.00 | 1.00 | 1.00  | 1.00 | 1.00 | 1.00  | 1.00  | 1.00 | 1.00 | 1.00  | 1.00 |
| Work Zone On Approach        | No    |      | No   |       | No   |      | No    |       | No   |      | No    |      |
| Adj Sat Flow, veh/h/ln       | 1781  | 1781 | 1781 | 1781  | 1781 | 1781 | 1781  | 1781  | 1781 | 1781 | 1781  | 1781 |
| Adj Flow Rate, veh/h         | 161   | 249  | 185  | 129   | 833  | 91   | 443   | 889   | 29   | 182  | 684   | 269  |
| Peak Hour Factor             | 0.92  | 0.92 | 0.92 | 0.92  | 0.92 | 0.92 | 0.92  | 0.92  | 0.92 | 0.92 | 0.92  | 0.92 |
| Percent Heavy Veh, %         | 8     | 8    | 8    | 8     | 8    | 8    | 8     | 8     | 8    | 8    | 8     | 8    |
| Cap, veh/h                   | 152   | 689  | 493  | 318   | 1126 | 123  | 373   | 2481  | 81   | 263  | 762   | 300  |
| Arrive On Green              | 0.37  | 0.37 | 0.37 | 0.37  | 0.37 | 0.37 | 0.16  | 0.51  | 0.51 | 0.32 | 0.32  | 0.32 |
| Sat Flow, veh/h              | 576   | 1884 | 1347 | 909   | 3077 | 336  | 1697  | 4838  | 158  | 580  | 2373  | 933  |
| Grp Volume(v), veh/h         | 161   | 223  | 211  | 129   | 458  | 466  | 443   | 595   | 323  | 182  | 488   | 465  |
| Grp Sat Flow(s), veh/h/ln    | 576   | 1692 | 1539 | 909   | 1692 | 1721 | 1697  | 1621  | 1753 | 580  | 1692  | 1613 |
| Q Serve(g_s), s              | 12.3  | 9.0  | 9.5  | 11.4  | 22.1 | 22.1 | 15.0  | 10.3  | 10.3 | 29.2 | 25.8  | 25.8 |
| Cycle Q Clear(g_c), s        | 34.4  | 9.0  | 9.5  | 20.9  | 22.1 | 22.1 | 15.0  | 10.3  | 10.3 | 29.2 | 25.8  | 25.8 |
| Prop In Lane                 | 1.00  |      | 0.88 | 1.00  |      | 0.20 | 1.00  |       | 0.09 | 1.00 |       | 0.58 |
| Lane Grp Cap(c), veh/h       | 152   | 619  | 563  | 318   | 619  | 630  | 373   | 1663  | 899  | 263  | 544   | 518  |
| V/C Ratio(X)                 | 1.06  | 0.36 | 0.38 | 0.41  | 0.74 | 0.74 | 1.19  | 0.36  | 0.36 | 0.69 | 0.90  | 0.90 |
| Avail Cap(c_a), veh/h        | 152   | 619  | 563  | 318   | 619  | 630  | 373   | 1663  | 899  | 263  | 544   | 518  |
| HCM Platoon Ratio            | 1.00  | 1.00 | 1.00 | 1.00  | 1.00 | 1.00 | 1.00  | 1.00  | 1.00 | 1.00 | 1.00  | 1.00 |
| Upstream Filter(I)           | 1.00  | 1.00 | 1.00 | 0.61  | 0.61 | 0.61 | 1.00  | 1.00  | 1.00 | 1.00 | 1.00  | 1.00 |
| Uniform Delay (d), s/veh     | 44.0  | 21.8 | 21.9 | 29.6  | 25.9 | 25.9 | 24.4  | 13.7  | 13.7 | 31.6 | 30.4  | 30.4 |
| Incr Delay (d2), s/veh       | 89.9  | 1.6  | 1.9  | 2.3   | 4.8  | 4.8  | 107.8 | 0.6   | 1.1  | 14.0 | 20.1  | 20.9 |
| Initial Q Delay(d3), s/veh   | 0.0   | 0.0  | 0.0  | 0.0   | 0.0  | 0.0  | 0.0   | 0.0   | 0.0  | 0.0  | 0.0   | 0.0  |
| %ile BackOfQ(50%), veh/ln    | 7.3   | 3.8  | 3.6  | 2.7   | 9.4  | 9.6  | 16.0  | 3.7   | 4.2  | 5.0  | 13.2  | 12.7 |
| Unsig. Movement Delay, s/veh |       |      |      |       |      |      |       |       |      |      |       |      |
| LnGrp Delay(d), s/veh        | 133.9 | 23.4 | 23.8 | 31.9  | 30.7 | 30.7 | 132.3 | 14.3  | 14.8 | 45.6 | 50.6  | 51.3 |
| LnGrp LOS                    | F     | C    | C    | C     | C    | C    | F     | B     | B    | D    | D     | D    |
| Approach Vol, veh/h          |       | 595  |      |       | 1053 |      |       | 1361  |      |      | 1135  |      |
| Approach Delay, s/veh        |       | 53.4 |      |       | 30.9 |      |       | 52.8  |      |      | 50.1  |      |
| Approach LOS                 |       | D    |      |       | C    |      |       | D     |      |      | D     |      |
| Timer - Assigned Phs         |       | 2    |      | 4     | 5    | 6    |       | 8     |      |      |       |      |
| Phs Duration (G+Y+Rc), s     |       | 54.0 |      | 40.0  | 18.0 | 36.0 |       | 40.0  |      |      | 40.0  |      |
| Change Period (Y+Rc), s      |       | 5.8  |      | * 5.6 | 3.0  | 5.8  |       | * 5.6 |      |      | * 5.6 |      |
| Max Green Setting (Gmax), s  |       | 48.2 |      | * 34  | 15.0 | 30.2 |       | * 34  |      |      | * 34  |      |
| Max Q Clear Time (g_c+I1), s |       | 12.3 |      | 36.4  | 17.0 | 31.2 |       | 24.1  |      |      | 24.1  |      |
| Green Ext Time (p_c), s      |       | 7.3  |      | 0.0   | 0.0  | 0.0  |       | 4.8   |      |      | 4.8   |      |

**Intersection Summary**  
 HCM 6th Ctrl Delay 46.6  
 HCM 6th LOS D

**Notes**  
 User approved pedestrian interval to be less than phase max green.  
 \* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Deer Valley 30  
7: 15th Ave & Happy Valley Rd

2024 Total AM Scenario A Mitigated  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Int Delay, s/veh 1.1     |      |      |      |      |      |      |      |      |      |      |      |      |
| Movement                 | EBL  | EBT  | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
| Lane Configurations      | ↕    |      |      | ↕    |      |      | ↕    |      |      | ↕    |      |      |
| Traffic Vol, veh/h       | 6    | 676  | 23   | 14   | 376  | 0    | 19   | 0    | 10   | 2    | 0    | 6    |
| Future Vol, veh/h        | 6    | 676  | 23   | 14   | 376  | 0    | 19   | 0    | 10   | 2    | 0    | 6    |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Free | Free | Free | Free | Free | Free | Stop | Stop | Stop | Stop | Stop | Stop |
| RT Channelized           | -    | -    | None | -    | -    | None | -    | -    | None | -    | -    | None |
| Storage Length           | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    |
| Veh in Median Storage, # | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Grade, %                 | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Peak Hour Factor         | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   |
| Heavy Vehicles, %        | 8    | 8    | 8    | 8    | 8    | 8    | 8    | 8    | 8    | 8    | 8    | 8    |
| Mvmt Flow                | 7    | 735  | 25   | 15   | 409  | 0    | 21   | 0    | 11   | 2    | 0    | 7    |

| Major/Minor          | Major1 | Major2 | Minor1 | Minor2 |
|----------------------|--------|--------|--------|--------|
| Conflicting Flow All | 409    | 0      | 760    | 0      |
| Stage 1              | -      | -      | -      | -      |
| Stage 2              | -      | -      | -      | -      |
| Critical Hdwy        | 4.18   | -      | 4.18   | -      |
| Critical Hdwy Stg 1  | -      | -      | -      | -      |
| Critical Hdwy Stg 2  | -      | -      | -      | -      |
| Follow-up Hdwy       | 2.272  | -      | 2.272  | -      |
| Pot Cap-1 Maneuver   | 1150   | -      | 825    | -      |
| Stage 1              | -      | -      | -      | -      |
| Stage 2              | -      | -      | -      | -      |
| Platoon blocked, %   | 1      | -      | -      | 1      |
| Mov Cap-1 Maneuver   | 1150   | -      | 825    | -      |
| Mov Cap-2 Maneuver   | -      | -      | -      | -      |
| Stage 1              | -      | -      | -      | -      |
| Stage 2              | -      | -      | -      | -      |

| Approach             | EB  | WB  | NB   | SB   |
|----------------------|-----|-----|------|------|
| HCM Control Delay, s | 0.1 | 0.3 | 30.8 | 15.8 |
| HCM LOS              |     |     | D    | C    |

| Minor Lane/Major Mvmt | NBLn1 | EBL   | EBT | EBR | WBL   | WBT | WBR | SBLn1 |
|-----------------------|-------|-------|-----|-----|-------|-----|-----|-------|
| Capacity (veh/h)      | 171   | 1150  | -   | -   | 825   | -   | -   | 342   |
| HCM Lane V/C Ratio    | 0.184 | 0.006 | -   | -   | 0.018 | -   | -   | 0.025 |
| HCM Control Delay (s) | 30.8  | 8.1   | 0   | -   | 9.4   | 0   | -   | 15.8  |
| HCM Lane LOS          | D     | A     | A   | -   | A     | A   | -   | C     |
| HCM 95th %tile Q(veh) | 0.7   | 0     | -   | -   | 0.1   | -   | -   | 0.1   |

Deer Valley 30  
7: 15th Ave & Happy Valley Rd

2024 Total PM Scenario A Mitigated  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Int Delay, s/veh 0.4     |      |      |      |      |      |      |      |      |      |      |      |      |
| Movement                 | EBL  | EBT  | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
| Lane Configurations      | ↕    |      |      | ↕    |      |      | ↕    |      |      | ↕    |      |      |
| Traffic Vol, veh/h       | 2    | 527  | 3    | 8    | 1109 | 0    | 20   | 0    | 17   | 0    | 0    | 1    |
| Future Vol, veh/h        | 2    | 527  | 3    | 8    | 1109 | 0    | 20   | 0    | 17   | 0    | 0    | 1    |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Free | Free | Free | Free | Free | Free | Stop | Stop | Stop | Stop | Stop | Stop |
| RT Channelized           | -    | -    | None | -    | -    | None | -    | -    | None | -    | -    | None |
| Storage Length           | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    |
| Veh in Median Storage, # | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Grade, %                 | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Peak Hour Factor         | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   |
| Heavy Vehicles, %        | 8    | 8    | 8    | 8    | 8    | 8    | 8    | 8    | 8    | 8    | 8    | 8    |
| Mvmt Flow                | 2    | 573  | 3    | 9    | 1205 | 0    | 22   | 0    | 18   | 0    | 0    | 1    |

| Major/Minor          | Major1 | Major2 | Minor1 | Minor2 |
|----------------------|--------|--------|--------|--------|
| Conflicting Flow All | 1205   | 0      | 576    | 0      |
| Stage 1              | -      | -      | -      | -      |
| Stage 2              | -      | -      | -      | -      |
| Critical Hdwy        | 4.18   | -      | 4.18   | -      |
| Critical Hdwy Stg 1  | -      | -      | -      | -      |
| Critical Hdwy Stg 2  | -      | -      | -      | -      |
| Follow-up Hdwy       | 2.272  | -      | 2.272  | -      |
| Pot Cap-1 Maneuver   | *199   | -      | 968    | -      |
| Stage 1              | -      | -      | -      | -      |
| Stage 2              | -      | -      | -      | -      |
| Platoon blocked, %   | 1      | -      | -      | 1      |
| Mov Cap-1 Maneuver   | *199   | -      | 968    | -      |
| Mov Cap-2 Maneuver   | -      | -      | -      | -      |
| Stage 1              | -      | -      | -      | -      |
| Stage 2              | -      | -      | -      | -      |

| Approach             | EB  | WB  | NB   | SB   |
|----------------------|-----|-----|------|------|
| HCM Control Delay, s | 0.1 | 0.1 | 12.7 | 32.1 |
| HCM LOS              |     |     | B    | D    |

| Minor Lane/Major Mvmt | NBLn1 | EBL   | EBT | EBR | WBL   | WBT | WBR | SBLn1 |
|-----------------------|-------|-------|-----|-----|-------|-----|-----|-------|
| Capacity (veh/h)      | 506   | *199  | -   | -   | 968   | -   | -   | 134   |
| HCM Lane V/C Ratio    | 0.079 | 0.011 | -   | -   | 0.009 | -   | -   | 0.008 |
| HCM Control Delay (s) | 12.7  | 23.3  | 0   | -   | 8.8   | 0   | -   | 32.1  |
| HCM Lane LOS          | B     | C     | A   | -   | A     | A   | -   | D     |
| HCM 95th %tile Q(veh) | 0.3   | 0     | -   | -   | 0     | -   | -   | 0     |

Notes  
 -: Volume exceeds capacity    \$: Delay exceeds 300s    +: Computation Not Defined    \*: All major volume in platoon

Deer Valley 30  
8: 7th Ave & Happy Valley Rd

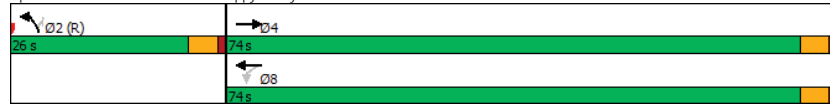
2024 Total AM Scenario A Mitigated  
Timings

|                      | →     | ↖     | ←     | ↙     | ↗     |
|----------------------|-------|-------|-------|-------|-------|
| Lane Group           | EBT   | WBL   | WBT   | NBL   | NBR   |
| Lane Configurations  | ↖     | ↖     | ↖     | ↖     | ↖     |
| Traffic Volume (vph) | 508   | 9     | 282   | 54    | 10    |
| Future Volume (vph)  | 508   | 9     | 282   | 54    | 10    |
| Turn Type            | NA    | Perm  | NA    | Prot  | Perm  |
| Protected Phases     | 4     |       | 8     | 2     |       |
| Permitted Phases     |       | 8     |       |       | 2     |
| Detector Phase       | 4     | 8     | 8     | 2     | 2     |
| Switch Phase         |       |       |       |       |       |
| Minimum Initial (s)  | 5.0   | 5.0   | 5.0   | 5.0   | 5.0   |
| Minimum Split (s)    | 22.5  | 22.5  | 22.5  | 22.5  | 22.5  |
| Total Split (s)      | 74.0  | 74.0  | 74.0  | 26.0  | 26.0  |
| Total Split (%)      | 74.0% | 74.0% | 74.0% | 26.0% | 26.0% |
| Yellow Time (s)      | 3.5   | 3.5   | 3.5   | 3.5   | 3.5   |
| All-Red Time (s)     | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   |
| Lost Time Adjust (s) | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Lost Time (s)  | 4.5   | 4.5   | 4.5   | 4.5   | 4.5   |
| Lead/Lag             |       |       |       |       |       |
| Lead-Lag Optimize?   |       |       |       |       |       |
| Recall Mode          | None  | None  | None  | C-Max | C-Max |
| Act Effct Green (s)  | 60.3  | 60.3  | 60.3  | 30.7  | 30.7  |
| Actuated g/C Ratio   | 0.60  | 0.60  | 0.60  | 0.31  | 0.31  |
| v/c Ratio            | 0.76  | 0.05  | 0.29  | 0.12  | 0.02  |
| Control Delay        | 17.8  | 5.8   | 9.4   | 23.1  | 10.5  |
| Queue Delay          | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Delay          | 17.8  | 5.8   | 9.4   | 23.1  | 10.5  |
| LOS                  | B     | A     | A     | C     | B     |
| Approach Delay       | 17.8  |       | 9.3   | 21.1  |       |
| Approach LOS         | B     |       | A     | C     |       |

Intersection Summary

Cycle Length: 100  
 Actuated Cycle Length: 100  
 Offset: 0 (0%), Referenced to phase 2:NBL and 6.: Start of Green  
 Natural Cycle: 60  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.76  
 Intersection Signal Delay: 15.7  
 Intersection Capacity Utilization 51.4%  
 Analysis Period (min) 15  
 Intersection LOS: B  
 ICU Level of Service A

Splits and Phases: 8: 7th Ave & Happy Valley Rd



Deer Valley 30  
8: 7th Ave & Happy Valley Rd

2024 Total PM Scenario A Mitigated  
Timings

|                      | →     | ↖     | ←     | ↙     | ↗     |
|----------------------|-------|-------|-------|-------|-------|
| Lane Group           | EBT   | WBL   | WBT   | NBL   | NBR   |
| Lane Configurations  | ↖     | ↖     | ↖     | ↖     | ↖     |
| Traffic Volume (vph) | 479   | 19    | 854   | 223   | 11    |
| Future Volume (vph)  | 479   | 19    | 854   | 223   | 11    |
| Turn Type            | NA    | Perm  | NA    | Prot  | Perm  |
| Protected Phases     | 4     |       | 8     | 2     |       |
| Permitted Phases     |       | 8     |       |       | 2     |
| Detector Phase       | 4     | 8     | 8     | 2     | 2     |
| Switch Phase         |       |       |       |       |       |
| Minimum Initial (s)  | 5.0   | 5.0   | 5.0   | 5.0   | 5.0   |
| Minimum Split (s)    | 22.5  | 22.5  | 22.5  | 22.5  | 22.5  |
| Total Split (s)      | 75.0  | 75.0  | 75.0  | 25.0  | 25.0  |
| Total Split (%)      | 75.0% | 75.0% | 75.0% | 25.0% | 25.0% |
| Yellow Time (s)      | 3.5   | 3.5   | 3.5   | 3.5   | 3.5   |
| All-Red Time (s)     | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   |
| Lost Time Adjust (s) | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Lost Time (s)  | 4.5   | 4.5   | 4.5   | 4.5   | 4.5   |
| Lead/Lag             |       |       |       |       |       |
| Lead-Lag Optimize?   |       |       |       |       |       |
| Recall Mode          | None  | None  | None  | C-Max | C-Max |
| Act Effct Green (s)  | 66.9  | 66.9  | 66.9  | 24.1  | 24.1  |
| Actuated g/C Ratio   | 0.67  | 0.67  | 0.67  | 0.24  | 0.24  |
| v/c Ratio            | 0.52  | 0.05  | 0.79  | 0.60  | 0.03  |
| Control Delay        | 9.5   | 4.9   | 17.0  | 38.5  | 14.0  |
| Queue Delay          | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Delay          | 9.5   | 4.9   | 17.0  | 38.5  | 14.0  |
| LOS                  | A     | A     | B     | D     | B     |
| Approach Delay       | 9.5   |       | 16.7  | 37.3  |       |
| Approach LOS         | A     |       | B     | D     |       |

Intersection Summary

Cycle Length: 100  
 Actuated Cycle Length: 100  
 Offset: 0 (0%), Referenced to phase 2:NBL and 6.: Start of Green  
 Natural Cycle: 70  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.79  
 Intersection Signal Delay: 17.2  
 Intersection Capacity Utilization 64.8%  
 Analysis Period (min) 15  
 Intersection LOS: B  
 ICU Level of Service C

Splits and Phases: 8: 7th Ave & Happy Valley Rd



Deer Valley 30  
8: 7th Ave & Happy Valley Rd

2024 Total AM Scenario A Mitigated  
HCM 6th Signalized Intersection Summary

| Movement                     | EBT  | EBR  | WBL  | WBT  | NBL  | NBR  |
|------------------------------|------|------|------|------|------|------|
| Lane Configurations          |      |      |      |      |      |      |
| Traffic Volume (veh/h)       | 508  | 214  | 9    | 282  | 54   | 10   |
| Future Volume (veh/h)        | 508  | 214  | 9    | 282  | 54   | 10   |
| Initial Q (Qb), veh          | 0    | 0    | 0    | 0    | 0    | 0    |
| Ped-Bike Adj(A_pbT)          | 1.00 |      | 1.00 |      | 1.00 |      |
| Parking Bus, Adj             | 1.00 |      | 1.00 |      | 1.00 |      |
| Work Zone On Approach        | No   |      | No   |      | No   |      |
| Adj Sat Flow, veh/h/ln       | 1781 | 1781 | 1781 | 1781 | 1781 | 1781 |
| Adj Flow Rate, veh/h         | 552  | 233  | 10   | 307  | 59   | 11   |
| Peak Hour Factor             | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Percent Heavy Veh, %         | 8    | 8    | 8    | 8    | 8    | 8    |
| Cap, veh/h                   | 607  | 256  | 129  | 909  | 678  | 603  |
| Arrive On Green              | 0.51 | 0.51 | 0.51 | 0.51 | 0.40 | 0.40 |
| Sat Flow, veh/h              | 1189 | 502  | 657  | 1781 | 1697 | 1510 |
| Grp Volume(v), veh/h         | 0    | 785  | 10   | 307  | 59   | 11   |
| Grp Sat Flow(s),veh/h/ln     | 0    | 1691 | 657  | 1781 | 1697 | 1510 |
| Q Serve(g_s), s              | 0.0  | 42.4 | 1.4  | 10.2 | 2.2  | 0.4  |
| Cycle Q Clear(g_c), s        | 0.0  | 42.4 | 43.8 | 10.2 | 2.2  | 0.4  |
| Prop In Lane                 | 0.30 |      | 1.00 |      | 1.00 |      |
| Lane Grp Cap(c), veh/h       | 0    | 863  | 129  | 909  | 678  | 603  |
| V/C Ratio(X)                 | 0.00 | 0.91 | 0.08 | 0.34 | 0.09 | 0.02 |
| Avail Cap(c_a), veh/h        | 0    | 1175 | 250  | 1238 | 678  | 603  |
| HCM Platoon Ratio            | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(I)           | 0.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Uniform Delay (d), s/veh     | 0.0  | 22.4 | 42.4 | 14.5 | 18.7 | 18.2 |
| Incr Delay (d2), s/veh       | 0.0  | 8.3  | 0.3  | 0.2  | 0.3  | 0.1  |
| Initial Q Delay(d3),s/veh    | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| %ile BackOfQ(50%),veh/ln     | 0.0  | 17.7 | 0.2  | 4.0  | 0.9  | 0.2  |
| Unsig. Movement Delay, s/veh |      |      |      |      |      |      |
| LnGrp Delay(d),s/veh         | 0.0  | 30.7 | 42.6 | 14.7 | 18.9 | 18.2 |
| LnGrp LOS                    | A    | C    | D    | B    | B    | B    |
| Approach Vol, veh/h          | 785  |      | 317  |      | 70   |      |
| Approach Delay, s/veh        | 30.7 |      | 15.6 |      | 18.8 |      |
| Approach LOS                 | C    |      | B    |      | B    |      |
| Timer - Assigned Phs         | 2    |      | 4    |      | 8    |      |
| Phs Duration (G+Y+Rc), s     | 44.5 |      | 55.5 |      | 55.5 |      |
| Change Period (Y+Rc), s      | 4.5  |      | 4.5  |      | 4.5  |      |
| Max Green Setting (Gmax), s  | 21.5 |      | 69.5 |      | 69.5 |      |
| Max Q Clear Time (g_c+I1), s | 4.2  |      | 44.4 |      | 45.8 |      |
| Green Ext Time (p_c), s      | 0.1  |      | 6.6  |      | 1.9  |      |
| <b>Intersection Summary</b>  |      |      |      |      |      |      |
| HCM 6th Ctrl Delay           |      |      | 25.9 |      |      |      |
| HCM 6th LOS                  |      |      | C    |      |      |      |

Deer Valley 30  
8: 7th Ave & Happy Valley Rd

2024 Total PM Scenario A Mitigated  
HCM 6th Signalized Intersection Summary

| Movement                     | EBT  | EBR  | WBL  | WBT  | NBL  | NBR  |
|------------------------------|------|------|------|------|------|------|
| Lane Configurations          |      |      |      |      |      |      |
| Traffic Volume (veh/h)       | 479  | 77   | 19   | 854  | 223  | 11   |
| Future Volume (veh/h)        | 479  | 77   | 19   | 854  | 223  | 11   |
| Initial Q (Qb), veh          | 0    | 0    | 0    | 0    | 0    | 0    |
| Ped-Bike Adj(A_pbT)          | 1.00 |      | 1.00 |      | 1.00 |      |
| Parking Bus, Adj             | 1.00 |      | 1.00 |      | 1.00 |      |
| Work Zone On Approach        | No   |      | No   |      | No   |      |
| Adj Sat Flow, veh/h/ln       | 1781 | 1781 | 1781 | 1781 | 1781 | 1781 |
| Adj Flow Rate, veh/h         | 521  | 84   | 21   | 928  | 242  | 12   |
| Peak Hour Factor             | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Percent Heavy Veh, %         | 8    | 8    | 8    | 8    | 8    | 8    |
| Cap, veh/h                   | 851  | 137  | 335  | 1013 | 579  | 515  |
| Arrive On Green              | 0.57 | 0.57 | 0.57 | 0.57 | 0.34 | 0.34 |
| Sat Flow, veh/h              | 1497 | 241  | 776  | 1781 | 1697 | 1510 |
| Grp Volume(v), veh/h         | 0    | 605  | 21   | 928  | 242  | 12   |
| Grp Sat Flow(s),veh/h/ln     | 0    | 1738 | 776  | 1781 | 1697 | 1510 |
| Q Serve(g_s), s              | 0.0  | 23.0 | 1.8  | 46.9 | 11.0 | 0.5  |
| Cycle Q Clear(g_c), s        | 0.0  | 23.0 | 24.9 | 46.9 | 11.0 | 0.5  |
| Prop In Lane                 | 0.14 |      | 1.00 |      | 1.00 |      |
| Lane Grp Cap(c), veh/h       | 0    | 988  | 335  | 1013 | 579  | 515  |
| V/C Ratio(X)                 | 0.00 | 0.61 | 0.06 | 0.92 | 0.42 | 0.02 |
| Avail Cap(c_a), veh/h        | 0    | 1225 | 440  | 1256 | 579  | 515  |
| HCM Platoon Ratio            | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(I)           | 0.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Uniform Delay (d), s/veh     | 0.0  | 14.3 | 22.5 | 19.4 | 25.3 | 21.9 |
| Incr Delay (d2), s/veh       | 0.0  | 0.6  | 0.1  | 9.2  | 2.2  | 0.1  |
| Initial Q Delay(d3),s/veh    | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| %ile BackOfQ(50%),veh/ln     | 0.0  | 8.6  | 0.3  | 20.2 | 4.7  | 0.2  |
| Unsig. Movement Delay, s/veh |      |      |      |      |      |      |
| LnGrp Delay(d),s/veh         | 0.0  | 14.9 | 22.6 | 28.6 | 27.5 | 21.9 |
| LnGrp LOS                    | A    | B    | C    | C    | C    | C    |
| Approach Vol, veh/h          | 605  |      | 949  |      | 254  |      |
| Approach Delay, s/veh        | 14.9 |      | 28.5 |      | 27.3 |      |
| Approach LOS                 | B    |      | C    |      | C    |      |
| Timer - Assigned Phs         | 2    |      | 4    |      | 8    |      |
| Phs Duration (G+Y+Rc), s     | 38.6 |      | 61.4 |      | 61.4 |      |
| Change Period (Y+Rc), s      | 4.5  |      | 4.5  |      | 4.5  |      |
| Max Green Setting (Gmax), s  | 20.5 |      | 70.5 |      | 70.5 |      |
| Max Q Clear Time (g_c+I1), s | 13.0 |      | 25.0 |      | 48.9 |      |
| Green Ext Time (p_c), s      | 0.4  |      | 4.9  |      | 8.0  |      |
| <b>Intersection Summary</b>  |      |      |      |      |      |      |
| HCM 6th Ctrl Delay           |      |      | 23.8 |      |      |      |
| HCM 6th LOS                  |      |      | C    |      |      |      |

Deer Valley 30  
9: 7th Ave & Pinnacle Peak Rd

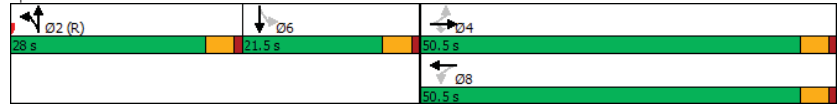
2024 Total AM Scenario A Mitigated  
Timings

| Lane Group           | EBL   | EBT   | EBR   | WBL   | WBT   | NBL   | NBT   | SBL   | SBT   |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations  | ↖     | ↗     | ↘     | ↖     | ↗     | ↖     | ↗     | ↖     | ↗     |
| Traffic Volume (vph) | 175   | 455   | 282   | 46    | 366   | 79    | 96    | 65    | 40    |
| Future Volume (vph)  | 175   | 455   | 282   | 46    | 366   | 79    | 96    | 65    | 40    |
| Turn Type            | Perm  | NA    | Perm  | Perm  | NA    | Split | NA    | Perm  | NA    |
| Protected Phases     |       | 4     |       |       |       | 8     | 2     | 2     | 6     |
| Permitted Phases     | 4     |       | 4     | 8     |       |       |       | 6     |       |
| Detector Phase       | 4     | 4     | 4     | 8     | 8     | 2     | 2     | 6     | 6     |
| Switch Phase         |       |       |       |       |       |       |       |       |       |
| Minimum Initial (s)  | 5.0   | 5.0   | 5.0   | 5.0   | 5.0   | 5.0   | 5.0   | 5.0   | 5.0   |
| Minimum Split (s)    | 22.5  | 22.5  | 22.5  | 22.5  | 22.5  | 22.5  | 22.5  | 22.5  | 22.5  |
| Total Split (s)      | 50.5  | 50.5  | 50.5  | 50.5  | 50.5  | 28.0  | 28.0  | 21.5  | 21.5  |
| Total Split (%)      | 50.5% | 50.5% | 50.5% | 50.5% | 50.5% | 28.0% | 28.0% | 21.5% | 21.5% |
| Yellow Time (s)      | 3.5   | 3.5   | 3.5   | 3.5   | 3.5   | 3.5   | 3.5   | 3.5   | 3.5   |
| All-Red Time (s)     | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   |
| Lost Time Adjust (s) | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Lost Time (s)  | 4.5   | 4.5   | 4.5   | 4.5   | 4.5   | 4.5   | 4.5   | 4.5   | 4.5   |
| Lead/Lag             |       |       |       |       |       |       |       |       |       |
| Lead-Lag Optimize?   |       |       |       |       |       |       |       |       |       |
| Recall Mode          | None  | None  | None  | None  | None  | C-Max | C-Max | Max   | Max   |
| Act Effct Green (s)  | 46.0  | 46.0  | 46.0  | 46.0  | 46.0  | 23.5  | 23.5  | 17.0  | 17.0  |
| Actuated g/C Ratio   | 0.46  | 0.46  | 0.46  | 0.46  | 0.46  | 0.24  | 0.24  | 0.17  | 0.17  |
| v/c Ratio            | 1.28  | 0.61  | 0.36  | 0.20  | 0.82  | 0.22  | 0.32  | 0.35  | 0.26  |
| Control Delay        | 193.7 | 24.3  | 3.2   | 18.7  | 32.5  | 32.7  | 31.0  | 56.6  | 37.5  |
| Queue Delay          | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Delay          | 193.7 | 24.3  | 3.2   | 18.7  | 32.5  | 32.7  | 31.0  | 56.6  | 37.5  |
| LOS                  | F     | C     | A     | B     | C     | C     | C     | E     | D     |
| Approach Delay       |       | 50.2  |       |       | 31.5  |       | 31.7  |       | 46.4  |
| Approach LOS         |       | D     |       |       | C     |       | C     |       | D     |

Intersection Summary

|  |                        |
|--|------------------------|
| Cycle Length: 100  |                        |
| Actuated Cycle Length: 100                                 |                        |
| Offset: 0 (0%), Referenced to phase 2:NBTL, Start of Green |                        |
| Natural Cycle: 90  |                        |
| Control Type: Actuated-Coordinated                         |                        |
| Maximum v/c Ratio: 1.28                                    |                        |
| Intersection Signal Delay: 41.7                            | Intersection LOS: D    |
| Intersection Capacity Utilization 68.7%                    | ICU Level of Service C |
| Analysis Period (min) 15                                   |                        |

Splits and Phases: 9: 7th Ave & Pinnacle Peak Rd



Deer Valley 30  
9: 7th Ave & Pinnacle Peak Rd

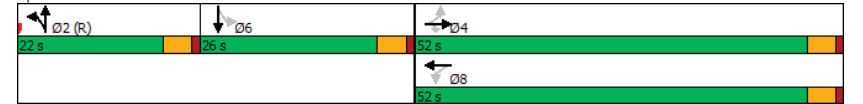
2024 Total PM Scenario A Mitigated  
Timings

| Lane Group           | EBL   | EBT   | EBR   | WBL   | WBT   | NBL   | NBT   | SBL   | SBT   |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations  | ↖     | ↗     | ↘     | ↖     | ↗     | ↖     | ↗     | ↖     | ↗     |
| Traffic Volume (vph) | 39    | 389   | 74    | 30    | 440   | 207   | 39    | 211   | 90    |
| Future Volume (vph)  | 39    | 389   | 74    | 30    | 440   | 207   | 39    | 211   | 90    |
| Turn Type            | Perm  | NA    | Perm  | Perm  | NA    | Split | NA    | Perm  | NA    |
| Protected Phases     |       | 4     |       |       |       | 8     | 2     | 2     | 6     |
| Permitted Phases     | 4     |       | 4     | 8     |       |       |       | 6     |       |
| Detector Phase       | 4     | 4     | 4     | 8     | 8     | 2     | 2     | 6     | 6     |
| Switch Phase         |       |       |       |       |       |       |       |       |       |
| Minimum Initial (s)  | 5.0   | 5.0   | 5.0   | 5.0   | 5.0   | 5.0   | 5.0   | 5.0   | 5.0   |
| Minimum Split (s)    | 22.5  | 22.5  | 22.5  | 22.5  | 22.5  | 22.5  | 22.5  | 22.5  | 22.5  |
| Total Split (s)      | 52.0  | 52.0  | 52.0  | 52.0  | 52.0  | 22.0  | 22.0  | 26.0  | 26.0  |
| Total Split (%)      | 52.0% | 52.0% | 52.0% | 52.0% | 52.0% | 22.0% | 22.0% | 26.0% | 26.0% |
| Yellow Time (s)      | 3.5   | 3.5   | 3.5   | 3.5   | 3.5   | 3.5   | 3.5   | 3.5   | 3.5   |
| All-Red Time (s)     | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   |
| Lost Time Adjust (s) | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Lost Time (s)  | 4.5   | 4.5   | 4.5   | 4.5   | 4.5   | 4.5   | 4.5   | 4.5   | 4.5   |
| Lead/Lag             |       |       |       |       |       |       |       |       |       |
| Lead-Lag Optimize?   |       |       |       |       |       |       |       |       |       |
| Recall Mode          | None  | None  | None  | None  | None  | C-Max | C-Max | Max   | Max   |
| Act Effct Green (s)  | 38.4  | 38.4  | 38.4  | 38.4  | 38.4  | 26.6  | 26.6  | 21.5  | 21.5  |
| Actuated g/C Ratio   | 0.38  | 0.38  | 0.38  | 0.38  | 0.38  | 0.27  | 0.27  | 0.22  | 0.22  |
| v/c Ratio            | 0.33  | 0.63  | 0.13  | 0.15  | 0.82  | 0.51  | 0.18  | 0.86  | 0.69  |
| Control Delay        | 26.8  | 28.5  | 4.1   | 19.1  | 37.6  | 38.8  | 19.5  | 72.2  | 38.2  |
| Queue Delay          | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Delay          | 26.8  | 28.5  | 4.1   | 19.1  | 37.6  | 38.8  | 19.5  | 72.2  | 38.2  |
| LOS                  | C     | C     | A     | B     | D     | D     | B     | E     | D     |
| Approach Delay       |       | 24.8  |       |       | 36.5  |       | 33.5  |       | 53.4  |
| Approach LOS         |       | C     |       |       | D     |       | C     |       | D     |

Intersection Summary

|  |                        |
|--|------------------------|
| Cycle Length: 100  |                        |
| Actuated Cycle Length: 100                                 |                        |
| Offset: 0 (0%), Referenced to phase 2:NBTL, Start of Green |                        |
| Natural Cycle: 80  |                        |
| Control Type: Actuated-Coordinated                         |                        |
| Maximum v/c Ratio: 0.86                                    |                        |
| Intersection Signal Delay: 37.2                            | Intersection LOS: D    |
| Intersection Capacity Utilization 70.3%                    | ICU Level of Service C |
| Analysis Period (min) 15                                   |                        |

Splits and Phases: 9: 7th Ave & Pinnacle Peak Rd





Deer Valley 30  
9: 7th Ave & Pinnacle Peak Rd

2024 Total AM Scenario A Mitigated  
HCM 6th Signalized Intersection Summary

| Movement                     | EBL   | EBT  | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
|------------------------------|-------|------|------|------|------|------|------|------|------|------|------|------|
| Lane Configurations          | ↔     | ↗    | ↘    | ↔    | ↗    | ↘    | ↔    | ↗    | ↘    | ↔    | ↗    | ↘    |
| Traffic Volume (veh/h)       | 175   | 455  | 282  | 46   | 366  | 228  | 79   | 96   | 26   | 65   | 40   | 35   |
| Future Volume (veh/h)        | 175   | 455  | 282  | 46   | 366  | 228  | 79   | 96   | 26   | 65   | 40   | 35   |
| Initial Q (Ob), veh          | 0     | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Ped-Bike Adj(A_pbT)          | 1.00  |      | 1.00 | 1.00 |      | 1.00 | 1.00 |      | 1.00 | 1.00 |      | 1.00 |
| Parking Bus, Adj             | 1.00  | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Work Zone On Approach        | No    |      | No   |      | No   |      | No   |      | No   |      | No   |      |
| Adj Sat Flow, veh/h/ln       | 1781  | 1781 | 1781 | 1781 | 1781 | 1781 | 1781 | 1781 | 1781 | 1781 | 1781 | 1781 |
| Adj Flow Rate, veh/h         | 190   | 495  | 307  | 50   | 398  | 248  | 86   | 104  | 28   | 71   | 43   | 38   |
| Peak Hour Factor             | 0.92  | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Percent Heavy Veh, %         | 8     | 8    | 8    | 8    | 8    | 8    | 8    | 8    | 8    | 8    | 8    | 8    |
| Cap, veh/h                   | 160   | 819  | 694  | 235  | 472  | 294  | 399  | 318  | 86   | 288  | 148  | 131  |
| Arrive On Green              | 0.46  | 0.46 | 0.46 | 0.46 | 0.46 | 0.46 | 0.23 | 0.23 | 0.23 | 0.17 | 0.17 | 0.17 |
| Sat Flow, veh/h              | 747   | 1781 | 1510 | 646  | 1027 | 640  | 1697 | 1352 | 364  | 1697 | 872  | 771  |
| Grp Volume(v), veh/h         | 190   | 495  | 307  | 50   | 0    | 646  | 86   | 0    | 132  | 71   | 0    | 81   |
| Grp Sat Flow(s), veh/h/ln    | 747   | 1781 | 1510 | 646  | 0    | 1666 | 1697 | 0    | 1716 | 1697 | 0    | 1643 |
| Q Serve(g_s), s              | 11.8  | 20.8 | 13.8 | 6.3  | 0.0  | 34.2 | 4.1  | 0.0  | 6.4  | 3.6  | 0.0  | 4.3  |
| Cycle Q Clear(g_c), s        | 46.0  | 20.8 | 13.8 | 27.0 | 0.0  | 34.2 | 4.1  | 0.0  | 6.4  | 3.6  | 0.0  | 4.3  |
| Prop In Lane                 | 1.00  |      | 1.00 | 1.00 |      | 0.38 | 1.00 |      | 0.21 | 1.00 |      | 0.47 |
| Lane Grp Cap(c), veh/h       | 160   | 819  | 694  | 235  | 0    | 766  | 399  | 0    | 403  | 288  | 0    | 279  |
| V/C Ratio(X)                 | 1.19  | 0.60 | 0.44 | 0.21 | 0.00 | 0.84 | 0.22 | 0.00 | 0.33 | 0.25 | 0.00 | 0.29 |
| Avail Cap(c_a), veh/h        | 160   | 819  | 694  | 235  | 0    | 766  | 399  | 0    | 403  | 288  | 0    | 279  |
| HCM Platoon Ratio            | 1.00  | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(I)           | 0.46  | 0.46 | 0.46 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 | 1.00 |
| Uniform Delay (d), s/veh     | 46.7  | 20.2 | 18.3 | 30.3 | 0.0  | 23.8 | 30.8 | 0.0  | 31.7 | 35.9 | 0.0  | 36.2 |
| Incr Delay (d2), s/veh       | 108.9 | 0.6  | 0.2  | 0.4  | 0.0  | 8.5  | 1.2  | 0.0  | 2.2  | 2.0  | 0.0  | 2.6  |
| Initial Q Delay(d3), s/veh   | 0.0   | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| %ile BackOfQ(50%), veh/ln    | 8.8   | 8.4  | 4.7  | 1.0  | 0.0  | 14.6 | 1.8  | 0.0  | 2.9  | 1.7  | 0.0  | 1.9  |
| Unsig. Movement Delay, s/veh |       |      |      |      |      |      |      |      |      |      |      |      |
| LnGrp Delay(d), s/veh        | 155.6 | 20.8 | 18.5 | 30.8 | 0.0  | 32.3 | 32.1 | 0.0  | 33.9 | 38.0 | 0.0  | 38.8 |
| LnGrp LOS                    | F     | C    | B    | C    | A    | C    | C    | A    | C    | D    | A    | D    |
| Approach Vol, veh/h          |       | 992  |      |      | 696  |      |      | 218  |      |      | 152  |      |
| Approach Delay, s/veh        |       | 45.9 |      |      | 32.2 |      |      | 33.1 |      |      | 38.4 |      |
| Approach LOS                 |       | D    |      |      | C    |      |      | C    |      |      | D    |      |
| Timer - Assigned Phs         |       | 2    |      | 4    |      | 6    |      | 8    |      |      |      |      |
| Phs Duration (G+Y+Rc), s     |       | 28.0 |      | 50.5 |      | 21.5 |      | 50.5 |      |      | 42.6 |      |
| Change Period (Y+Rc), s      |       | 4.5  |      | 4.5  |      | 4.5  |      | 4.5  |      |      | 4.5  |      |
| Max Green Setting (Gmax), s  |       | 23.5 |      | 46.0 |      | 17.0 |      | 46.0 |      |      | 47.5 |      |
| Max Q Clear Time (g_c+I1), s |       | 8.4  |      | 48.0 |      | 6.3  |      | 36.2 |      |      | 30.6 |      |
| Green Ext Time (p_c), s      |       | 0.8  |      | 0.0  |      | 0.4  |      | 3.5  |      |      | 3.6  |      |

| Intersection Summary |  |      |
|----------------------|--|------|
| HCM 6th Ctrl Delay   |  | 39.4 |
| HCM 6th LOS          |  | D    |

Notes  
User approved pedestrian interval to be less than phase max green.

Deer Valley 30  
9: 7th Ave & Pinnacle Peak Rd

2024 Total PM Scenario A Mitigated  
HCM 6th Signalized Intersection Summary

| Movement                     | EBL  | EBT  | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
|------------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Lane Configurations          | ↔    | ↗    | ↘    | ↔    | ↗    | ↘    | ↔    | ↗    | ↘    | ↔    | ↗    | ↘    |
| Traffic Volume (veh/h)       | 39   | 389  | 74   | 30   | 440  | 66   | 207  | 39   | 40   | 211  | 90   | 170  |
| Future Volume (veh/h)        | 39   | 389  | 74   | 30   | 440  | 66   | 207  | 39   | 40   | 211  | 90   | 170  |
| Initial Q (Ob), veh          | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Ped-Bike Adj(A_pbT)          | 1.00 |      | 1.00 | 1.00 |      | 1.00 | 1.00 |      | 1.00 | 1.00 |      | 1.00 |
| Parking Bus, Adj             | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Work Zone On Approach        | No   |      | No   |      | No   |      | No   |      | No   |      | No   |      |
| Adj Sat Flow, veh/h/ln       | 1781 | 1781 | 1781 | 1781 | 1781 | 1781 | 1781 | 1781 | 1781 | 1781 | 1781 | 1781 |
| Adj Flow Rate, veh/h         | 42   | 423  | 80   | 33   | 478  | 72   | 225  | 42   | 43   | 229  | 98   | 131  |
| Peak Hour Factor             | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Percent Heavy Veh, %         | 8    | 8    | 8    | 8    | 8    | 8    | 8    | 8    | 8    | 8    | 8    | 8    |
| Cap, veh/h                   | 149  | 678  | 575  | 232  | 576  | 87   | 457  | 217  | 222  | 365  | 149  | 199  |
| Arrive On Green              | 0.38 | 0.38 | 0.38 | 0.38 | 0.38 | 0.38 | 0.27 | 0.27 | 0.27 | 0.22 | 0.22 | 0.22 |
| Sat Flow, veh/h              | 817  | 1781 | 1510 | 853  | 1513 | 228  | 1697 | 807  | 826  | 1697 | 691  | 924  |
| Grp Volume(v), veh/h         | 42   | 423  | 80   | 33   | 0    | 550  | 225  | 0    | 85   | 229  | 0    | 229  |
| Grp Sat Flow(s), veh/h/ln    | 817  | 1781 | 1510 | 853  | 0    | 1740 | 1697 | 0    | 1633 | 1697 | 0    | 1615 |
| Q Serve(g_s), s              | 4.9  | 19.3 | 3.5  | 3.3  | 0.0  | 28.6 | 11.2 | 0.0  | 4.0  | 12.2 | 0.0  | 13.0 |
| Cycle Q Clear(g_c), s        | 33.5 | 19.3 | 3.5  | 22.6 | 0.0  | 28.6 | 11.2 | 0.0  | 4.0  | 12.2 | 0.0  | 13.0 |
| Prop In Lane                 | 1.00 |      | 1.00 | 1.00 |      | 0.13 | 1.00 |      | 0.51 | 1.00 |      | 0.57 |
| Lane Grp Cap(c), veh/h       | 149  | 678  | 575  | 232  | 0    | 662  | 457  | 0    | 440  | 365  | 0    | 347  |
| V/C Ratio(X)                 | 0.28 | 0.62 | 0.14 | 0.14 | 0.00 | 0.83 | 0.49 | 0.00 | 0.19 | 0.63 | 0.00 | 0.66 |
| Avail Cap(c_a), veh/h        | 226  | 846  | 717  | 313  | 0    | 827  | 457  | 0    | 440  | 365  | 0    | 347  |
| HCM Platoon Ratio            | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(I)           | 0.79 | 0.79 | 0.79 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 | 1.00 |
| Uniform Delay (d), s/veh     | 43.2 | 25.2 | 20.3 | 34.3 | 0.0  | 28.0 | 30.8 | 0.0  | 28.2 | 35.6 | 0.0  | 35.9 |
| Incr Delay (d2), s/veh       | 0.8  | 0.7  | 0.1  | 0.3  | 0.0  | 5.9  | 3.8  | 0.0  | 1.0  | 7.9  | 0.0  | 9.5  |
| Initial Q Delay(d3), s/veh   | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| %ile BackOfQ(50%), veh/ln    | 1.0  | 8.1  | 1.2  | 0.7  | 0.0  | 12.6 | 5.0  | 0.0  | 1.7  | 5.8  | 0.0  | 6.0  |
| Unsig. Movement Delay, s/veh |      |      |      |      |      |      |      |      |      |      |      |      |
| LnGrp Delay(d), s/veh        | 44.0 | 25.9 | 20.3 | 34.6 | 0.0  | 33.9 | 34.5 | 0.0  | 29.1 | 43.6 | 0.0  | 45.4 |
| LnGrp LOS                    | D    | C    | C    | C    | A    | C    | C    | A    | C    | D    | A    | D    |
| Approach Vol, veh/h          |      | 545  |      |      | 583  |      |      | 310  |      |      | 458  |      |
| Approach Delay, s/veh        |      | 26.5 |      |      | 33.9 |      |      | 33.1 |      |      | 44.5 |      |
| Approach LOS                 |      | C    |      |      | C    |      |      | C    |      |      | D    |      |
| Timer - Assigned Phs         |      | 2    |      | 4    |      | 6    |      | 8    |      |      |      |      |
| Phs Duration (G+Y+Rc), s     |      | 31.4 |      | 42.6 |      | 26.0 |      | 42.6 |      |      | 47.5 |      |
| Change Period (Y+Rc), s      |      | 4.5  |      | 4.5  |      | 4.5  |      | 4.5  |      |      | 4.5  |      |
| Max Green Setting (Gmax), s  |      | 17.5 |      | 47.5 |      | 21.5 |      | 47.5 |      |      | 47.5 |      |
| Max Q Clear Time (g_c+I1), s |      | 13.2 |      | 35.5 |      | 15.0 |      | 30.6 |      |      | 30.6 |      |
| Green Ext Time (p_c), s      |      | 0.5  |      | 2.5  |      | 1.2  |      | 3.6  |      |      | 3.6  |      |

| Intersection Summary |  |      |
|----------------------|--|------|
| HCM 6th Ctrl Delay   |  | 34.2 |
| HCM 6th LOS          |  | C    |

Notes  
User approved pedestrian interval to be less than phase max green.

Deer Valley 30  
10: 7th Ave & Alameda Rd

2024 Total AM Scenario A Mitigated  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh         | 5.1  |      |      |      |      |      |
| Movement                 | EBL  | EBR  | NBL  | NBT  | SBT  | SBR  |
| Lane Configurations      | ↔    |      | ↔    | ↔    | ↔    |      |
| Traffic Vol, veh/h       | 14   | 51   | 263  | 50   | 155  | 68   |
| Future Vol, veh/h        | 14   | 51   | 263  | 50   | 155  | 68   |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Stop | Stop | Free | Free | Free | Free |
| RT Channelized           | -    | None | -    | None | -    | None |
| Storage Length           | 0    | -    | 150  | -    | -    | -    |
| Veh in Median Storage, # | 0    | -    | -    | 0    | 0    | -    |
| Grade, %                 | 0    | -    | -    | 0    | 0    | -    |
| Peak Hour Factor         | 92   | 92   | 92   | 92   | 92   | 92   |
| Heavy Vehicles, %        | 8    | 8    | 8    | 8    | 8    | 8    |
| Mvmt Flow                | 15   | 55   | 286  | 54   | 168  | 74   |

| Major/Minor          | Minor2 | Major1 | Major2 |   |   |   |
|----------------------|--------|--------|--------|---|---|---|
| Conflicting Flow All | 831    | 205    | 242    | 0 | - | 0 |
| Stage 1              | 205    | -      | -      | - | - | - |
| Stage 2              | 626    | -      | -      | - | - | - |
| Critical Hdwy        | 6.48   | 6.28   | 4.18   | - | - | - |
| Critical Hdwy Stg 1  | 5.48   | -      | -      | - | - | - |
| Critical Hdwy Stg 2  | 5.48   | -      | -      | - | - | - |
| Follow-up Hdwy       | 3.572  | 3.372  | 2.272  | - | - | - |
| Pot Cap-1 Maneuver   | 332    | 821    | 1290   | - | - | - |
| Stage 1              | 815    | -      | -      | - | - | - |
| Stage 2              | 522    | -      | -      | - | - | - |
| Platoon blocked, %   | -      | -      | -      | - | - | - |
| Mov Cap-1 Maneuver   | 258    | 821    | 1290   | - | - | - |
| Mov Cap-2 Maneuver   | 258    | -      | -      | - | - | - |
| Stage 1              | 634    | -      | -      | - | - | - |
| Stage 2              | 522    | -      | -      | - | - | - |

| Approach             | EB   | NB  | SB |
|----------------------|------|-----|----|
| HCM Control Delay, s | 12.4 | 7.2 | 0  |
| HCM LOS              | B    |     |    |

| Minor Lane/Major Mvmt | NBL   | NBT | EBLn1 | SBT | SBR |
|-----------------------|-------|-----|-------|-----|-----|
| Capacity (veh/h)      | 1290  | -   | 559   | -   | -   |
| HCM Lane V/C Ratio    | 0.222 | -   | 0.126 | -   | -   |
| HCM Control Delay (s) | 8.6   | -   | 12.4  | -   | -   |
| HCM Lane LOS          | A     | -   | B     | -   | -   |
| HCM 95th %tile Q(veh) | 0.8   | -   | 0.4   | -   | -   |

Deer Valley 30  
10: 7th Ave & Alameda Rd

2024 Total PM Scenario A Mitigated  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh         | 6.7  |      |      |      |      |      |
| Movement                 | EBL  | EBR  | NBL  | NBT  | SBT  | SBR  |
| Lane Configurations      | ↔    |      | ↔    | ↔    | ↔    |      |
| Traffic Vol, veh/h       | 67   | 241  | 53   | 168  | 81   | 15   |
| Future Vol, veh/h        | 67   | 241  | 53   | 168  | 81   | 15   |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Stop | Stop | Free | Free | Free | Free |
| RT Channelized           | -    | None | -    | None | -    | None |
| Storage Length           | 0    | -    | 150  | -    | -    | -    |
| Veh in Median Storage, # | 0    | -    | -    | 0    | 0    | -    |
| Grade, %                 | 0    | -    | -    | 0    | 0    | -    |
| Peak Hour Factor         | 92   | 92   | 92   | 92   | 92   | 92   |
| Heavy Vehicles, %        | 8    | 8    | 8    | 8    | 8    | 8    |
| Mvmt Flow                | 73   | 262  | 58   | 183  | 88   | 16   |

| Major/Minor          | Minor2 | Major1 | Major2 |   |   |   |
|----------------------|--------|--------|--------|---|---|---|
| Conflicting Flow All | 395    | 96     | 104    | 0 | - | 0 |
| Stage 1              | 96     | -      | -      | - | - | - |
| Stage 2              | 299    | -      | -      | - | - | - |
| Critical Hdwy        | 6.48   | 6.28   | 4.18   | - | - | - |
| Critical Hdwy Stg 1  | 5.48   | -      | -      | - | - | - |
| Critical Hdwy Stg 2  | 5.48   | -      | -      | - | - | - |
| Follow-up Hdwy       | 3.572  | 3.372  | 2.272  | - | - | - |
| Pot Cap-1 Maneuver   | 598    | 944    | 1451   | - | - | - |
| Stage 1              | 913    | -      | -      | - | - | - |
| Stage 2              | 739    | -      | -      | - | - | - |
| Platoon blocked, %   | -      | -      | -      | - | - | - |
| Mov Cap-1 Maneuver   | 574    | 944    | 1451   | - | - | - |
| Mov Cap-2 Maneuver   | 574    | -      | -      | - | - | - |
| Stage 1              | 876    | -      | -      | - | - | - |
| Stage 2              | 739    | -      | -      | - | - | - |

| Approach             | EB   | NB  | SB |
|----------------------|------|-----|----|
| HCM Control Delay, s | 12.3 | 1.8 | 0  |
| HCM LOS              | B    |     |    |

| Minor Lane/Major Mvmt | NBL  | NBT | EBLn1 | SBT | SBR |
|-----------------------|------|-----|-------|-----|-----|
| Capacity (veh/h)      | 1451 | -   | 828   | -   | -   |
| HCM Lane V/C Ratio    | 0.04 | -   | 0.404 | -   | -   |
| HCM Control Delay (s) | 7.6  | -   | 12.3  | -   | -   |
| HCM Lane LOS          | A    | -   | B     | -   | -   |
| HCM 95th %tile Q(veh) | 0.1  | -   | 2     | -   | -   |

Deer Valley 30  
11: 15th Ave & Parkview Ln

2024 Total AM Scenario A Mitigated  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh         | 0    |      |      |      |      |      |
| Movement                 | EBT  | EBR  | WBL  | WBT  | NBL  | NBR  |
| Lane Configurations      | ↶    |      |      | ↷    | ↶    | ↷    |
| Traffic Vol, veh/h       | 0    | 0    | 0    | 0    | 0    | 0    |
| Future Vol, veh/h        | 0    | 0    | 0    | 0    | 0    | 0    |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Free | Free | Free | Free | Stop | Stop |
| RT Channelized           | -    | None | -    | None | -    | None |
| Storage Length           | -    | -    | -    | -    | 0    | -    |
| Veh in Median Storage, # | 0    | -    | -    | 0    | 0    | -    |
| Grade, %                 | 0    | -    | -    | 0    | 0    | -    |
| Peak Hour Factor         | 92   | 92   | 92   | 92   | 92   | 92   |
| Heavy Vehicles, %        | 8    | 8    | 8    | 8    | 8    | 8    |
| Mvmt Flow                | 0    | 0    | 0    | 0    | 0    | 0    |

| Major/Minor          | Major1 | Major2 | Minor1 |
|----------------------|--------|--------|--------|
| Conflicting Flow All | 0      | 0      | 1      |
| Stage 1              | -      | -      | 1      |
| Stage 2              | -      | -      | 1      |
| Critical Hdwy        | -      | 4.18   | 6.48   |
| Critical Hdwy Stg 1  | -      | -      | 5.48   |
| Critical Hdwy Stg 2  | -      | -      | 5.48   |
| Follow-up Hdwy       | -      | 2.272  | 3.372  |
| Pot Cap-1 Maneuver   | -      | 1583   | 1005   |
| Stage 1              | -      | -      | 1007   |
| Stage 2              | -      | -      | 1007   |
| Platoon blocked, %   | -      | -      | -      |
| Mov Cap-1 Maneuver   | -      | 1583   | 1005   |
| Mov Cap-2 Maneuver   | -      | -      | 1005   |
| Stage 1              | -      | -      | 1007   |
| Stage 2              | -      | -      | 1007   |

| Approach             | EB | WB | NB |
|----------------------|----|----|----|
| HCM Control Delay, s | 0  | 0  | 0  |
| HCM LOS              |    |    | A  |

| Minor Lane/Major Mvmt | NBLn1 | EBT | EBR | WBL  | WBT |
|-----------------------|-------|-----|-----|------|-----|
| Capacity (veh/h)      | -     | -   | -   | 1583 | -   |
| HCM Lane V/C Ratio    | -     | -   | -   | -    | -   |
| HCM Control Delay (s) | 0     | -   | -   | 0    | -   |
| HCM Lane LOS          | A     | -   | -   | A    | -   |
| HCM 95th %tile Q(veh) | -     | -   | -   | 0    | -   |

Deer Valley 30  
11: 15th Ave & Parkview Ln

2024 Total PM Scenario A Mitigated  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh         | 0    |      |      |      |      |      |
| Movement                 | EBT  | EBR  | WBL  | WBT  | NBL  | NBR  |
| Lane Configurations      | ↶    |      |      | ↷    | ↶    | ↷    |
| Traffic Vol, veh/h       | 0    | 0    | 0    | 0    | 0    | 0    |
| Future Vol, veh/h        | 0    | 0    | 0    | 0    | 0    | 0    |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Free | Free | Free | Free | Stop | Stop |
| RT Channelized           | -    | None | -    | None | -    | None |
| Storage Length           | -    | -    | -    | -    | 0    | -    |
| Veh in Median Storage, # | 0    | -    | -    | 0    | 0    | -    |
| Grade, %                 | 0    | -    | -    | 0    | 0    | -    |
| Peak Hour Factor         | 92   | 92   | 92   | 92   | 92   | 92   |
| Heavy Vehicles, %        | 8    | 8    | 8    | 8    | 8    | 8    |
| Mvmt Flow                | 0    | 0    | 0    | 0    | 0    | 0    |

| Major/Minor          | Major1 | Major2 | Minor1 |
|----------------------|--------|--------|--------|
| Conflicting Flow All | 0      | 0      | 1      |
| Stage 1              | -      | -      | 1      |
| Stage 2              | -      | -      | 1      |
| Critical Hdwy        | -      | 4.18   | 6.48   |
| Critical Hdwy Stg 1  | -      | -      | 5.48   |
| Critical Hdwy Stg 2  | -      | -      | 5.48   |
| Follow-up Hdwy       | -      | 2.272  | 3.372  |
| Pot Cap-1 Maneuver   | -      | 1583   | 1005   |
| Stage 1              | -      | -      | 1007   |
| Stage 2              | -      | -      | 1007   |
| Platoon blocked, %   | -      | -      | -      |
| Mov Cap-1 Maneuver   | -      | 1583   | 1005   |
| Mov Cap-2 Maneuver   | -      | -      | 1005   |
| Stage 1              | -      | -      | 1007   |
| Stage 2              | -      | -      | 1007   |

| Approach             | EB | WB | NB |
|----------------------|----|----|----|
| HCM Control Delay, s | 0  | 0  | 0  |
| HCM LOS              |    |    | A  |

| Minor Lane/Major Mvmt | NBLn1 | EBT | EBR | WBL  | WBT |
|-----------------------|-------|-----|-----|------|-----|
| Capacity (veh/h)      | -     | -   | -   | 1583 | -   |
| HCM Lane V/C Ratio    | -     | -   | -   | -    | -   |
| HCM Control Delay (s) | 0     | -   | -   | 0    | -   |
| HCM Lane LOS          | A     | -   | -   | A    | -   |
| HCM 95th %tile Q(veh) | -     | -   | -   | 0    | -   |

Deer Valley 30  
12: Alameda Rd & Access A

2024 Total AM Scenario A Mitigated  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh         | 0.4  |      |      |      |      |      |
| Movement                 | EBL  | EBT  | WBT  | WBR  | SBL  | SBR  |
| Lane Configurations      |      | ↕    | ↕    |      | ↕    | ↕    |
| Traffic Vol, veh/h       | 23   | 388  | 73   | 6    | 1    | 4    |
| Future Vol, veh/h        | 23   | 388  | 73   | 6    | 1    | 4    |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Free | Free | Free | Free | Stop | Stop |
| RT Channelized           | -    | None | -    | None | -    | None |
| Storage Length           | -    | -    | -    | -    | 0    | -    |
| Veh in Median Storage, # | -    | 0    | 0    | -    | 0    | -    |
| Grade, %                 | -    | 0    | 0    | -    | 0    | -    |
| Peak Hour Factor         | 92   | 92   | 92   | 92   | 92   | 92   |
| Heavy Vehicles, %        | 8    | 8    | 8    | 8    | 8    | 8    |
| Mvmt Flow                | 25   | 422  | 79   | 7    | 1    | 4    |

| Major/Minor          | Major1 | Major2 | Minor2 |       |       |
|----------------------|--------|--------|--------|-------|-------|
| Conflicting Flow All | 86     | 0      | 0      | 555   | 83    |
| Stage 1              | -      | -      | -      | 83    | -     |
| Stage 2              | -      | -      | -      | 472   | -     |
| Critical Hdwy        | 4.18   | -      | -      | 6.48  | 6.28  |
| Critical Hdwy Stg 1  | -      | -      | -      | 5.48  | -     |
| Critical Hdwy Stg 2  | -      | -      | -      | 5.48  | -     |
| Follow-up Hdwy       | 2.272  | -      | -      | 3.572 | 3.372 |
| Pot Cap-1 Maneuver   | 1473   | -      | -      | 483   | 960   |
| Stage 1              | -      | -      | -      | 925   | -     |
| Stage 2              | -      | -      | -      | 615   | -     |
| Platoon blocked, %   | -      | -      | -      | -     | -     |
| Mov Cap-1 Maneuver   | 1473   | -      | -      | 472   | 960   |
| Mov Cap-2 Maneuver   | -      | -      | -      | 472   | -     |
| Stage 1              | -      | -      | -      | 905   | -     |
| Stage 2              | -      | -      | -      | 615   | -     |

| Approach             | EB  | WB | SB  |
|----------------------|-----|----|-----|
| HCM Control Delay, s | 0.4 | 0  | 9.6 |
| HCM LOS              |     |    | A   |

| Minor Lane/Major Mvmt | EBL   | EBT | WBT | WBR | SBLn1 |
|-----------------------|-------|-----|-----|-----|-------|
| Capacity (veh/h)      | 1473  | -   | -   | -   | 796   |
| HCM Lane V/C Ratio    | 0.017 | -   | -   | -   | 0.007 |
| HCM Control Delay (s) | 7.5   | 0   | -   | -   | 9.6   |
| HCM Lane LOS          | A     | A   | -   | -   | A     |
| HCM 95th %tile Q(veh) | 0.1   | -   | -   | -   | 0     |

Deer Valley 30  
12: Alameda Rd & Access A

2024 Total PM Scenario A Mitigated  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh         | 0.4  |      |      |      |      |      |
| Movement                 | EBL  | EBT  | WBT  | WBR  | SBL  | SBR  |
| Lane Configurations      |      | ↕    | ↕    |      | ↕    | ↕    |
| Traffic Vol, veh/h       | 2    | 76   | 346  | 1    | 3    | 13   |
| Future Vol, veh/h        | 2    | 76   | 346  | 1    | 3    | 13   |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Free | Free | Free | Free | Stop | Stop |
| RT Channelized           | -    | None | -    | None | -    | None |
| Storage Length           | -    | -    | -    | -    | 0    | -    |
| Veh in Median Storage, # | -    | 0    | 0    | -    | 0    | -    |
| Grade, %                 | -    | 0    | 0    | -    | 0    | -    |
| Peak Hour Factor         | 92   | 92   | 92   | 92   | 92   | 92   |
| Heavy Vehicles, %        | 8    | 8    | 8    | 8    | 8    | 8    |
| Mvmt Flow                | 2    | 83   | 376  | 1    | 3    | 14   |

| Major/Minor          | Major1 | Major2 | Minor2 |       |       |
|----------------------|--------|--------|--------|-------|-------|
| Conflicting Flow All | 377    | 0      | 0      | 464   | 377   |
| Stage 1              | -      | -      | -      | 377   | -     |
| Stage 2              | -      | -      | -      | 87    | -     |
| Critical Hdwy        | 4.18   | -      | -      | 6.48  | 6.28  |
| Critical Hdwy Stg 1  | -      | -      | -      | 5.48  | -     |
| Critical Hdwy Stg 2  | -      | -      | -      | 5.48  | -     |
| Follow-up Hdwy       | 2.272  | -      | -      | 3.572 | 3.372 |
| Pot Cap-1 Maneuver   | 1149   | -      | -      | 546   | 656   |
| Stage 1              | -      | -      | -      | 681   | -     |
| Stage 2              | -      | -      | -      | 921   | -     |
| Platoon blocked, %   | -      | -      | -      | -     | -     |
| Mov Cap-1 Maneuver   | 1149   | -      | -      | 545   | 656   |
| Mov Cap-2 Maneuver   | -      | -      | -      | 545   | -     |
| Stage 1              | -      | -      | -      | 680   | -     |
| Stage 2              | -      | -      | -      | 921   | -     |

| Approach             | EB  | WB | SB   |
|----------------------|-----|----|------|
| HCM Control Delay, s | 0.2 | 0  | 10.9 |
| HCM LOS              |     |    | B    |

| Minor Lane/Major Mvmt | EBL   | EBT | WBT | WBR | SBLn1 |
|-----------------------|-------|-----|-----|-----|-------|
| Capacity (veh/h)      | 1149  | -   | -   | -   | 632   |
| HCM Lane V/C Ratio    | 0.002 | -   | -   | -   | 0.028 |
| HCM Control Delay (s) | 8.1   | 0   | -   | -   | 10.9  |
| HCM Lane LOS          | A     | A   | -   | -   | B     |
| HCM 95th %tile Q(veh) | 0     | -   | -   | -   | 0.1   |

Deer Valley 30  
13: Alameda Rd & Access B

2024 Total AM Scenario A Mitigated  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh         | 0.4  |      |      |      |      |      |
| Movement                 | EBL  | EBT  | WBT  | WBR  | SBL  | SBR  |
| Lane Configurations      |      | ↕    | ↕    |      | ↕    | ↕    |
| Traffic Vol, veh/h       | 18   | 371  | 76   | 9    | 2    | 3    |
| Future Vol, veh/h        | 18   | 371  | 76   | 9    | 2    | 3    |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Free | Free | Free | Free | Stop | Stop |
| RT Channelized           | -    | None | -    | None | -    | None |
| Storage Length           | -    | -    | -    | -    | 0    | -    |
| Veh in Median Storage, # | -    | 0    | 0    | -    | 0    | -    |
| Grade, %                 | -    | 0    | 0    | -    | 0    | -    |
| Peak Hour Factor         | 92   | 92   | 92   | 92   | 92   | 92   |
| Heavy Vehicles, %        | 8    | 8    | 8    | 8    | 8    | 8    |
| Mvmt Flow                | 20   | 403  | 83   | 10   | 2    | 3    |

| Major/Minor          | Major1 | Major2 | Minor2 |       |       |
|----------------------|--------|--------|--------|-------|-------|
| Conflicting Flow All | 93     | 0      | 0      | 531   | 88    |
| Stage 1              | -      | -      | -      | 88    | -     |
| Stage 2              | -      | -      | -      | 443   | -     |
| Critical Hdwy        | 4.18   | -      | -      | 6.48  | 6.28  |
| Critical Hdwy Stg 1  | -      | -      | -      | 5.48  | -     |
| Critical Hdwy Stg 2  | -      | -      | -      | 5.48  | -     |
| Follow-up Hdwy       | 2.272  | -      | -      | 3.572 | 3.372 |
| Pot Cap-1 Maneuver   | 1464   | -      | -      | 499   | 954   |
| Stage 1              | -      | -      | -      | 921   | -     |
| Stage 2              | -      | -      | -      | 635   | -     |
| Platoon blocked, %   | -      | -      | -      | -     | -     |
| Mov Cap-1 Maneuver   | 1464   | -      | -      | 490   | 954   |
| Mov Cap-2 Maneuver   | -      | -      | -      | 490   | -     |
| Stage 1              | -      | -      | -      | 904   | -     |
| Stage 2              | -      | -      | -      | 635   | -     |

| Approach             | EB  | WB | SB   |
|----------------------|-----|----|------|
| HCM Control Delay, s | 0.3 | 0  | 10.2 |
| HCM LOS              |     |    | B    |

| Minor Lane/Major Mvmt | EBL   | EBT | WBT | WBR | SBLn1 |
|-----------------------|-------|-----|-----|-----|-------|
| Capacity (veh/h)      | 1464  | -   | -   | -   | 692   |
| HCM Lane V/C Ratio    | 0.013 | -   | -   | -   | 0.008 |
| HCM Control Delay (s) | 7.5   | 0   | -   | -   | 10.2  |
| HCM Lane LOS          | A     | A   | -   | -   | B     |
| HCM 95th %tile Q(veh) | 0     | -   | -   | -   | 0     |

Deer Valley 30  
13: Alameda Rd & Access B

2024 Total PM Scenario A Mitigated  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh         | 0.4  |      |      |      |      |      |
| Movement                 | EBL  | EBT  | WBT  | WBR  | SBL  | SBR  |
| Lane Configurations      |      | ↕    | ↕    |      | ↕    | ↕    |
| Traffic Vol, veh/h       | 2    | 77   | 337  | 1    | 5    | 10   |
| Future Vol, veh/h        | 2    | 77   | 337  | 1    | 5    | 10   |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Free | Free | Free | Free | Stop | Stop |
| RT Channelized           | -    | None | -    | None | -    | None |
| Storage Length           | -    | -    | -    | -    | 0    | -    |
| Veh in Median Storage, # | -    | 0    | 0    | -    | 0    | -    |
| Grade, %                 | -    | 0    | 0    | -    | 0    | -    |
| Peak Hour Factor         | 92   | 92   | 92   | 92   | 92   | 92   |
| Heavy Vehicles, %        | 8    | 8    | 8    | 8    | 8    | 8    |
| Mvmt Flow                | 2    | 84   | 366  | 1    | 5    | 11   |

| Major/Minor          | Major1 | Major2 | Minor2 |       |       |
|----------------------|--------|--------|--------|-------|-------|
| Conflicting Flow All | 367    | 0      | 0      | 455   | 367   |
| Stage 1              | -      | -      | -      | 367   | -     |
| Stage 2              | -      | -      | -      | 88    | -     |
| Critical Hdwy        | 4.18   | -      | -      | 6.48  | 6.28  |
| Critical Hdwy Stg 1  | -      | -      | -      | 5.48  | -     |
| Critical Hdwy Stg 2  | -      | -      | -      | 5.48  | -     |
| Follow-up Hdwy       | 2.272  | -      | -      | 3.572 | 3.372 |
| Pot Cap-1 Maneuver   | 1159   | -      | -      | 552   | 665   |
| Stage 1              | -      | -      | -      | 688   | -     |
| Stage 2              | -      | -      | -      | 921   | -     |
| Platoon blocked, %   | -      | -      | -      | -     | -     |
| Mov Cap-1 Maneuver   | 1159   | -      | -      | 551   | 665   |
| Mov Cap-2 Maneuver   | -      | -      | -      | 551   | -     |
| Stage 1              | -      | -      | -      | 687   | -     |
| Stage 2              | -      | -      | -      | 921   | -     |

| Approach             | EB  | WB | SB   |
|----------------------|-----|----|------|
| HCM Control Delay, s | 0.2 | 0  | 10.9 |
| HCM LOS              |     |    | B    |

| Minor Lane/Major Mvmt | EBL   | EBT | WBT | WBR | SBLn1 |
|-----------------------|-------|-----|-----|-----|-------|
| Capacity (veh/h)      | 1159  | -   | -   | -   | 622   |
| HCM Lane V/C Ratio    | 0.002 | -   | -   | -   | 0.026 |
| HCM Control Delay (s) | 8.1   | 0   | -   | -   | 10.9  |
| HCM Lane LOS          | A     | A   | -   | -   | B     |
| HCM 95th %tile Q(veh) | 0     | -   | -   | -   | 0.1   |

Deer Valley 30  
14: Alameda Rd & Access C

2024 Total AM Scenario A Mitigated  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh         | 0.5  |      |      |      |      |      |
| Movement                 | EBL  | EBT  | WBT  | WBR  | SBL  | SBR  |
| Lane Configurations      |      | ↕    | ↕    |      | ↕    | ↕    |
| Traffic Vol, veh/h       | 24   | 348  | 81   | 7    | 1    | 4    |
| Future Vol, veh/h        | 24   | 348  | 81   | 7    | 1    | 4    |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Free | Free | Free | Free | Stop | Stop |
| RT Channelized           | -    | None | -    | None | -    | None |
| Storage Length           | -    | -    | -    | -    | 0    | -    |
| Veh in Median Storage, # | -    | 0    | 0    | -    | 0    | -    |
| Grade, %                 | -    | 0    | 0    | -    | 0    | -    |
| Peak Hour Factor         | 92   | 92   | 92   | 92   | 92   | 92   |
| Heavy Vehicles, %        | 8    | 8    | 8    | 8    | 8    | 8    |
| Mvmt Flow                | 26   | 378  | 88   | 8    | 1    | 4    |

| Major/Minor          | Major1 | Major2 | Minor2 |
|----------------------|--------|--------|--------|
| Conflicting Flow All | 96     | 0      | 522    |
| Stage 1              | -      | -      | 92     |
| Stage 2              | -      | -      | 430    |
| Critical Hdwy        | 4.18   | -      | 6.48   |
| Critical Hdwy Stg 1  | -      | -      | 5.48   |
| Critical Hdwy Stg 2  | -      | -      | 5.48   |
| Follow-up Hdwy       | 2.272  | -      | 3.372  |
| Pot Cap-1 Maneuver   | 1461   | -      | 505    |
| Stage 1              | -      | -      | 917    |
| Stage 2              | -      | -      | 643    |
| Platoon blocked, %   | -      | -      | -      |
| Mov Cap-1 Maneuver   | 1461   | -      | 493    |
| Mov Cap-2 Maneuver   | -      | -      | 493    |
| Stage 1              | -      | -      | 896    |
| Stage 2              | -      | -      | 643    |

| Approach             | EB  | WB | SB  |
|----------------------|-----|----|-----|
| HCM Control Delay, s | 0.5 | 0  | 9.5 |
| HCM LOS              |     |    | A   |

| Minor Lane/Major Mvmt | EBL   | EBT | WBT | WBR | SBLn1 |
|-----------------------|-------|-----|-----|-----|-------|
| Capacity (veh/h)      | 1461  | -   | -   | -   | 801   |
| HCM Lane V/C Ratio    | 0.018 | -   | -   | -   | 0.007 |
| HCM Control Delay (s) | 7.5   | 0   | -   | -   | 9.5   |
| HCM Lane LOS          | A     | A   | -   | -   | A     |
| HCM 95th %tile Q(veh) | 0.1   | -   | -   | -   | 0     |

Deer Valley 30  
14: Alameda Rd & Access C

2024 Total PM Scenario A Mitigated  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh         | 0.6  |      |      |      |      |      |
| Movement                 | EBL  | EBT  | WBT  | WBR  | SBL  | SBR  |
| Lane Configurations      |      | ↕    | ↕    |      | ↕    | ↕    |
| Traffic Vol, veh/h       | 3    | 80   | 320  | 1    | 5    | 18   |
| Future Vol, veh/h        | 3    | 80   | 320  | 1    | 5    | 18   |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Free | Free | Free | Free | Stop | Stop |
| RT Channelized           | -    | None | -    | None | -    | None |
| Storage Length           | -    | -    | -    | -    | 0    | -    |
| Veh in Median Storage, # | -    | 0    | 0    | -    | 0    | -    |
| Grade, %                 | -    | 0    | 0    | -    | 0    | -    |
| Peak Hour Factor         | 92   | 92   | 92   | 92   | 92   | 92   |
| Heavy Vehicles, %        | 8    | 8    | 8    | 8    | 8    | 8    |
| Mvmt Flow                | 3    | 87   | 348  | 1    | 5    | 20   |

| Major/Minor          | Major1 | Major2 | Minor2 |
|----------------------|--------|--------|--------|
| Conflicting Flow All | 349    | 0      | 442    |
| Stage 1              | -      | -      | 349    |
| Stage 2              | -      | -      | 93     |
| Critical Hdwy        | 4.18   | -      | 6.48   |
| Critical Hdwy Stg 1  | -      | -      | 5.48   |
| Critical Hdwy Stg 2  | -      | -      | 5.48   |
| Follow-up Hdwy       | 2.272  | -      | 3.372  |
| Pot Cap-1 Maneuver   | 1177   | -      | 562    |
| Stage 1              | -      | -      | 701    |
| Stage 2              | -      | -      | 916    |
| Platoon blocked, %   | -      | -      | -      |
| Mov Cap-1 Maneuver   | 1177   | -      | 560    |
| Mov Cap-2 Maneuver   | -      | -      | 560    |
| Stage 1              | -      | -      | 699    |
| Stage 2              | -      | -      | 916    |

| Approach             | EB  | WB | SB   |
|----------------------|-----|----|------|
| HCM Control Delay, s | 0.3 | 0  | 10.8 |
| HCM LOS              |     |    | B    |

| Minor Lane/Major Mvmt | EBL   | EBT | WBT | WBR | SBLn1 |
|-----------------------|-------|-----|-----|-----|-------|
| Capacity (veh/h)      | 1177  | -   | -   | -   | 650   |
| HCM Lane V/C Ratio    | 0.003 | -   | -   | -   | 0.038 |
| HCM Control Delay (s) | 8.1   | 0   | -   | -   | 10.8  |
| HCM Lane LOS          | A     | A   | -   | -   | B     |
| HCM 95th %tile Q(veh) | 0     | -   | -   | -   | 0.1   |

Deer Valley 30  
15: Alameda Rd & 15th Ave

2024 Total AM Scenario A Mitigated  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh         | 0.8  |      |      |      |      |      |
| Movement                 | EBL  | EBT  | WBT  | WBR  | SBL  | SBR  |
| Lane Configurations      |      | ↕    | ↕    |      | ↕    | ↕    |
| Traffic Vol, veh/h       | 38   | 311  | 82   | 10   | 2    | 6    |
| Future Vol, veh/h        | 38   | 311  | 82   | 10   | 2    | 6    |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Free | Free | Free | Free | Stop | Stop |
| RT Channelized           | -    | None | -    | None | -    | None |
| Storage Length           | -    | -    | -    | -    | 0    | -    |
| Veh in Median Storage, # | -    | 0    | 0    | -    | 0    | -    |
| Grade, %                 | -    | 0    | 0    | -    | 0    | -    |
| Peak Hour Factor         | 92   | 92   | 92   | 92   | 92   | 92   |
| Heavy Vehicles, %        | 8    | 8    | 8    | 8    | 8    | 8    |
| Mvmt Flow                | 41   | 338  | 89   | 11   | 2    | 7    |

| Major/Minor          | Major1 | Major2 | Minor2 |       |       |
|----------------------|--------|--------|--------|-------|-------|
| Conflicting Flow All | 100    | 0      | 0      | 515   | 95    |
| Stage 1              | -      | -      | -      | 95    | -     |
| Stage 2              | -      | -      | -      | 420   | -     |
| Critical Hdwy        | 4.18   | -      | -      | 6.48  | 6.28  |
| Critical Hdwy Stg 1  | -      | -      | -      | 5.48  | -     |
| Critical Hdwy Stg 2  | -      | -      | -      | 5.48  | -     |
| Follow-up Hdwy       | 2.272  | -      | -      | 3.572 | 3.372 |
| Pot Cap-1 Maneuver   | 1456   | -      | -      | 509   | 945   |
| Stage 1              | -      | -      | -      | 914   | -     |
| Stage 2              | -      | -      | -      | 650   | -     |
| Platoon blocked, %   | -      | -      | -      | -     | -     |
| Mov Cap-1 Maneuver   | 1456   | -      | -      | 491   | 945   |
| Mov Cap-2 Maneuver   | -      | -      | -      | 491   | -     |
| Stage 1              | -      | -      | -      | 882   | -     |
| Stage 2              | -      | -      | -      | 650   | -     |

| Approach             | EB  | WB | SB  |
|----------------------|-----|----|-----|
| HCM Control Delay, s | 0.8 | 0  | 9.7 |
| HCM LOS              |     |    | A   |

| Minor Lane/Major Mvmt | EBL   | EBT | WBT | WBR | SBLn1 |
|-----------------------|-------|-----|-----|-----|-------|
| Capacity (veh/h)      | 1456  | -   | -   | -   | 768   |
| HCM Lane V/C Ratio    | 0.028 | -   | -   | -   | 0.011 |
| HCM Control Delay (s) | 7.5   | 0   | -   | -   | 9.7   |
| HCM Lane LOS          | A     | A   | -   | -   | A     |
| HCM 95th %tile Q(veh) | 0.1   | -   | -   | -   | 0     |

Deer Valley 30  
15: Alameda Rd & 15th Ave

2024 Total PM Scenario A Mitigated  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh         | 1    |      |      |      |      |      |
| Movement                 | EBL  | EBT  | WBT  | WBR  | SBL  | SBR  |
| Lane Configurations      |      | ↕    | ↕    |      | ↕    | ↕    |
| Traffic Vol, veh/h       | 5    | 80   | 293  | 1    | 7    | 28   |
| Future Vol, veh/h        | 5    | 80   | 293  | 1    | 7    | 28   |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Free | Free | Free | Free | Stop | Stop |
| RT Channelized           | -    | None | -    | None | -    | None |
| Storage Length           | -    | -    | -    | -    | 0    | -    |
| Veh in Median Storage, # | -    | 0    | 0    | -    | 0    | -    |
| Grade, %                 | -    | 0    | 0    | -    | 0    | -    |
| Peak Hour Factor         | 92   | 92   | 92   | 92   | 92   | 92   |
| Heavy Vehicles, %        | 8    | 8    | 8    | 8    | 8    | 8    |
| Mvmt Flow                | 5    | 87   | 318  | 1    | 8    | 30   |

| Major/Minor          | Major1 | Major2 | Minor2 |       |       |
|----------------------|--------|--------|--------|-------|-------|
| Conflicting Flow All | 319    | 0      | 0      | 416   | 319   |
| Stage 1              | -      | -      | -      | 319   | -     |
| Stage 2              | -      | -      | -      | 97    | -     |
| Critical Hdwy        | 4.18   | -      | -      | 6.48  | 6.28  |
| Critical Hdwy Stg 1  | -      | -      | -      | 5.48  | -     |
| Critical Hdwy Stg 2  | -      | -      | -      | 5.48  | -     |
| Follow-up Hdwy       | 2.272  | -      | -      | 3.572 | 3.372 |
| Pot Cap-1 Maneuver   | 1208   | -      | -      | 582   | 708   |
| Stage 1              | -      | -      | -      | 723   | -     |
| Stage 2              | -      | -      | -      | 912   | -     |
| Platoon blocked, %   | -      | -      | -      | -     | -     |
| Mov Cap-1 Maneuver   | 1208   | -      | -      | 580   | 708   |
| Mov Cap-2 Maneuver   | -      | -      | -      | 580   | -     |
| Stage 1              | -      | -      | -      | 720   | -     |
| Stage 2              | -      | -      | -      | 912   | -     |

| Approach             | EB  | WB | SB   |
|----------------------|-----|----|------|
| HCM Control Delay, s | 0.5 | 0  | 10.6 |
| HCM LOS              |     |    | B    |

| Minor Lane/Major Mvmt | EBL   | EBT | WBT | WBR | SBLn1 |
|-----------------------|-------|-----|-----|-----|-------|
| Capacity (veh/h)      | 1208  | -   | -   | -   | 678   |
| HCM Lane V/C Ratio    | 0.004 | -   | -   | -   | 0.056 |
| HCM Control Delay (s) | 8     | 0   | -   | -   | 10.6  |
| HCM Lane LOS          | A     | A   | -   | -   | B     |
| HCM 95th %tile Q(veh) | 0     | -   | -   | -   | 0.2   |

Deer Valley 30  
16: Alameda Rd & Access D

2024 Total AM Scenario A Mitigated  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh         | 0.7  |      |      |      |      |      |
| Movement                 | EBL  | EBT  | WBT  | WBR  | SBL  | SBR  |
| Lane Configurations      |      | ↕    | ↕    |      | ↕    | ↕    |
| Traffic Vol, veh/h       | 30   | 283  | 88   | 17   | 2    | 4    |
| Future Vol, veh/h        | 30   | 283  | 88   | 17   | 2    | 4    |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Free | Free | Free | Free | Stop | Stop |
| RT Channelized           | -    | None | -    | None | -    | None |
| Storage Length           | -    | -    | -    | -    | 0    | -    |
| Veh in Median Storage, # | -    | 0    | 0    | -    | 0    | -    |
| Grade, %                 | -    | 0    | 0    | -    | 0    | -    |
| Peak Hour Factor         | 92   | 92   | 92   | 92   | 92   | 92   |
| Heavy Vehicles, %        | 8    | 8    | 8    | 8    | 8    | 8    |
| Mvmt Flow                | 33   | 308  | 96   | 18   | 2    | 4    |

| Major/Minor          | Major1 | Major2 | Minor2 |       |       |
|----------------------|--------|--------|--------|-------|-------|
| Conflicting Flow All | 114    | 0      | 0      | 479   | 105   |
| Stage 1              | -      | -      | -      | 105   | -     |
| Stage 2              | -      | -      | -      | 374   | -     |
| Critical Hdwy        | 4.18   | -      | -      | 6.48  | 6.28  |
| Critical Hdwy Stg 1  | -      | -      | -      | 5.48  | -     |
| Critical Hdwy Stg 2  | -      | -      | -      | 5.48  | -     |
| Follow-up Hdwy       | 2.272  | -      | -      | 3.572 | 3.372 |
| Pot Cap-1 Maneuver   | 1439   | -      | -      | 535   | 933   |
| Stage 1              | -      | -      | -      | 904   | -     |
| Stage 2              | -      | -      | -      | 683   | -     |
| Platoon blocked, %   | -      | -      | -      | -     | -     |
| Mov Cap-1 Maneuver   | 1439   | -      | -      | 520   | 933   |
| Mov Cap-2 Maneuver   | -      | -      | -      | 520   | -     |
| Stage 1              | -      | -      | -      | 879   | -     |
| Stage 2              | -      | -      | -      | 683   | -     |

| Approach             | EB  | WB | SB  |
|----------------------|-----|----|-----|
| HCM Control Delay, s | 0.7 | 0  | 9.9 |
| HCM LOS              |     |    | A   |

| Minor Lane/Major Mvmt | EBL   | EBT | WBT | WBR | SBLn1 |
|-----------------------|-------|-----|-----|-----|-------|
| Capacity (veh/h)      | 1439  | -   | -   | -   | 738   |
| HCM Lane V/C Ratio    | 0.023 | -   | -   | -   | 0.009 |
| HCM Control Delay (s) | 7.6   | 0   | -   | -   | 9.9   |
| HCM Lane LOS          | A     | A   | -   | -   | A     |
| HCM 95th %tile Q(veh) | 0.1   | -   | -   | -   | 0     |

Deer Valley 30  
16: Alameda Rd & Access D

2024 Total PM Scenario A Mitigated  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh         | 1    |      |      |      |      |      |
| Movement                 | EBL  | EBT  | WBT  | WBR  | SBL  | SBR  |
| Lane Configurations      |      | ↕    | ↕    |      | ↕    | ↕    |
| Traffic Vol, veh/h       | 4    | 84   | 272  | 2    | 12   | 22   |
| Future Vol, veh/h        | 4    | 84   | 272  | 2    | 12   | 22   |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Free | Free | Free | Free | Stop | Stop |
| RT Channelized           | -    | None | -    | None | -    | None |
| Storage Length           | -    | -    | -    | -    | 0    | -    |
| Veh in Median Storage, # | -    | 0    | 0    | -    | 0    | -    |
| Grade, %                 | -    | 0    | 0    | -    | 0    | -    |
| Peak Hour Factor         | 92   | 92   | 92   | 92   | 92   | 92   |
| Heavy Vehicles, %        | 8    | 8    | 8    | 8    | 8    | 8    |
| Mvmt Flow                | 4    | 91   | 296  | 2    | 13   | 24   |

| Major/Minor          | Major1 | Major2 | Minor2 |       |       |
|----------------------|--------|--------|--------|-------|-------|
| Conflicting Flow All | 298    | 0      | 0      | 396   | 297   |
| Stage 1              | -      | -      | -      | 297   | -     |
| Stage 2              | -      | -      | -      | 99    | -     |
| Critical Hdwy        | 4.18   | -      | -      | 6.48  | 6.28  |
| Critical Hdwy Stg 1  | -      | -      | -      | 5.48  | -     |
| Critical Hdwy Stg 2  | -      | -      | -      | 5.48  | -     |
| Follow-up Hdwy       | 2.272  | -      | -      | 3.572 | 3.372 |
| Pot Cap-1 Maneuver   | 1230   | -      | -      | 598   | 728   |
| Stage 1              | -      | -      | -      | 740   | -     |
| Stage 2              | -      | -      | -      | 910   | -     |
| Platoon blocked, %   | -      | -      | -      | -     | -     |
| Mov Cap-1 Maneuver   | 1230   | -      | -      | 596   | 728   |
| Mov Cap-2 Maneuver   | -      | -      | -      | 596   | -     |
| Stage 1              | -      | -      | -      | 738   | -     |
| Stage 2              | -      | -      | -      | 910   | -     |

| Approach             | EB  | WB | SB   |
|----------------------|-----|----|------|
| HCM Control Delay, s | 0.4 | 0  | 10.6 |
| HCM LOS              |     |    | B    |

| Minor Lane/Major Mvmt | EBL   | EBT | WBT | WBR | SBLn1 |
|-----------------------|-------|-----|-----|-----|-------|
| Capacity (veh/h)      | 1230  | -   | -   | -   | 675   |
| HCM Lane V/C Ratio    | 0.004 | -   | -   | -   | 0.055 |
| HCM Control Delay (s) | 7.9   | 0   | -   | -   | 10.6  |
| HCM Lane LOS          | A     | A   | -   | -   | B     |
| HCM 95th %tile Q(veh) | 0     | -   | -   | -   | 0.2   |



Deer Valley 30  
1: 19th Ave & Happy Valley Rd

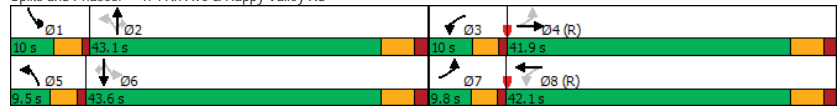
2024 Total AM Scenario B  
Timings

| Lane Group           | EBL   | EBT   | WBL   | WBT   | NBL   | NBT   | NBR   | SBL   | SBT   | SBR   |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations  | ↔     | ↔↔    | ↔     | ↔↔    | ↔     | ↔↔    | ↔     | ↔↔    | ↔↔    | ↔     |
| Traffic Volume (vph) | 87    | 348   | 181   | 295   | 162   | 258   | 107   | 267   | 415   | 96    |
| Future Volume (vph)  | 87    | 348   | 181   | 295   | 162   | 258   | 107   | 267   | 415   | 96    |
| Turn Type            | pm+pt | NA    | pm+pt | NA    | pm+pt | NA    | Perm  | pm+pt | NA    | Perm  |
| Protected Phases     | 7     | 4     | 3     | 8     | 5     | 2     |       | 1     | 6     |       |
| Permitted Phases     | 4     |       | 8     |       | 2     |       | 2     | 6     |       | 6     |
| Detector Phase       | 7     | 4     | 3     | 8     | 5     | 2     | 2     | 1     | 6     | 6     |
| Switch Phase         |       |       |       |       |       |       |       |       |       |       |
| Minimum Initial (s)  | 5.0   | 15.0  | 5.0   | 15.0  | 5.0   | 5.0   | 5.0   | 5.0   | 5.0   | 5.0   |
| Minimum Split (s)    | 9.5   | 41.0  | 9.5   | 41.0  | 9.5   | 43.1  | 43.1  | 9.5   | 43.1  | 43.1  |
| Total Split (s)      | 9.8   | 41.9  | 10.0  | 42.1  | 9.5   | 43.1  | 43.1  | 10.0  | 43.6  | 43.6  |
| Total Split (%)      | 9.3%  | 39.9% | 9.5%  | 40.1% | 9.0%  | 41.0% | 41.0% | 9.5%  | 41.5% | 41.5% |
| Yellow Time (s)      | 3.5   | 4.3   | 3.5   | 4.3   | 3.5   | 4.3   | 4.3   | 3.5   | 4.3   | 4.3   |
| All-Red Time (s)     | 1.0   | 1.7   | 1.0   | 1.7   | 1.0   | 1.8   | 1.8   | 1.0   | 1.8   | 1.8   |
| Lost Time Adjust (s) | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Lost Time (s)  | 4.5   | 6.0   | 4.5   | 6.0   | 4.5   | 6.1   | 6.1   | 4.5   | 6.1   | 6.1   |
| Lead/Lag             | Lead  | Lag   | Lead  | Lag   | Lead  | Lag   | Lead  | Lag   | Lag   | Lag   |
| Lead-Lag Optimize?   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   |
| Recall Mode          | None  | C-Max | None  | C-Max | None  | Max   | Max   | None  | Max   | Max   |
| Act Effct Green (s)  | 42.7  | 35.9  | 44.0  | 38.1  | 43.6  | 37.0  | 37.0  | 44.6  | 37.5  | 37.5  |
| Actuated g/C Ratio   | 0.41  | 0.34  | 0.42  | 0.36  | 0.42  | 0.35  | 0.35  | 0.42  | 0.36  | 0.36  |
| v/c Ratio            | 0.24  | 0.38  | 0.64  | 0.25  | 0.45  | 0.24  | 0.19  | 0.63  | 0.26  | 0.17  |
| Control Delay        | 18.9  | 19.3  | 31.2  | 19.0  | 23.0  | 24.7  | 4.5   | 28.4  | 24.5  | 3.4   |
| Queue Delay          | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Delay          | 18.9  | 19.3  | 31.2  | 19.0  | 23.0  | 24.7  | 4.5   | 28.4  | 24.5  | 3.4   |
| LOS                  | B     | B     | C     | B     | C     | C     | A     | C     | C     | A     |
| Approach Delay       |       | 19.2  |       | 22.8  |       | 20.1  |       | 23.2  |       |       |
| Approach LOS         |       | B     |       | C     |       | C     |       | C     |       |       |

Intersection Summary

|   |                        |
|---|------------------------|
| Cycle Length: 105   |                        |
| Actuated Cycle Length: 105  |                        |
| Offset: 0 (0%), Referenced to phase 4:EBTL and 8:WBTL, Start of Green |                        |
| Natural Cycle: 105  |                        |
| Control Type: Actuated-Coordinated                                    |                        |
| Maximum v/c Ratio: 0.64   |                        |
| Intersection Signal Delay: 21.4                                       | Intersection LOS: C    |
| Intersection Capacity Utilization 62.0%                               | ICU Level of Service B |
| Analysis Period (min) 15  |                        |

Splits and Phases: 1: 19th Ave & Happy Valley Rd



Deer Valley 30  
1: 19th Ave & Happy Valley Rd

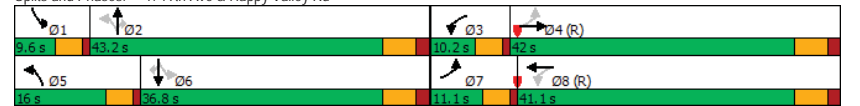
2024 Total PM Scenario B  
Timings

| Lane Group           | EBL   | EBT   | WBL   | WBT   | NBL   | NBT   | NBR   | SBL   | SBT   | SBR   |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations  | ↔     | ↔↔    | ↔     | ↔↔    | ↔     | ↔↔    | ↔     | ↔↔    | ↔↔    | ↔     |
| Traffic Volume (vph) | 167   | 383   | 168   | 747   | 342   | 486   | 145   | 177   | 229   | 122   |
| Future Volume (vph)  | 167   | 383   | 168   | 747   | 342   | 486   | 145   | 177   | 229   | 122   |
| Turn Type            | pm+pt | NA    | pm+pt | NA    | pm+pt | NA    | Perm  | pm+pt | NA    | Perm  |
| Protected Phases     | 7     | 4     | 3     | 8     | 5     | 2     |       | 1     | 6     |       |
| Permitted Phases     | 4     |       | 8     |       | 2     |       | 2     | 6     |       | 6     |
| Detector Phase       | 7     | 4     | 3     | 8     | 5     | 2     | 2     | 1     | 6     | 6     |
| Switch Phase         |       |       |       |       |       |       |       |       |       |       |
| Minimum Initial (s)  | 5.0   | 15.0  | 5.0   | 15.0  | 5.0   | 5.0   | 5.0   | 5.0   | 5.0   | 5.0   |
| Minimum Split (s)    | 9.5   | 41.0  | 9.5   | 41.0  | 9.5   | 43.1  | 43.1  | 9.5   | 43.1  | 43.1  |
| Total Split (s)      | 11.1  | 42.0  | 10.2  | 41.1  | 16.0  | 43.2  | 43.2  | 9.6   | 36.8  | 36.8  |
| Total Split (%)      | 10.6% | 40.0% | 9.7%  | 39.1% | 15.2% | 41.1% | 41.1% | 9.1%  | 35.0% | 35.0% |
| Yellow Time (s)      | 3.5   | 4.3   | 3.5   | 4.3   | 3.5   | 4.3   | 4.3   | 3.5   | 4.3   | 4.3   |
| All-Red Time (s)     | 1.0   | 1.7   | 1.0   | 1.7   | 1.0   | 1.8   | 1.8   | 1.0   | 1.8   | 1.8   |
| Lost Time Adjust (s) | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Lost Time (s)  | 4.5   | 6.0   | 4.5   | 6.0   | 4.5   | 6.1   | 6.1   | 4.5   | 6.1   | 6.1   |
| Lead/Lag             | Lead  | Lag   | Lead  | Lag   | Lead  | Lag   | Lead  | Lag   | Lag   | Lag   |
| Lead-Lag Optimize?   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   |
| Recall Mode          | None  | C-Max | None  | C-Max | None  | Max   | Max   | None  | Max   | Max   |
| Act Effct Green (s)  | 44.1  | 36.0  | 42.3  | 35.1  | 48.3  | 37.1  | 37.1  | 37.4  | 30.7  | 30.7  |
| Actuated g/C Ratio   | 0.42  | 0.34  | 0.40  | 0.33  | 0.46  | 0.35  | 0.35  | 0.36  | 0.29  | 0.29  |
| v/c Ratio            | 1.02  | 0.41  | 0.61  | 0.74  | 0.74  | 0.45  | 0.25  | 0.59  | 0.18  | 0.24  |
| Control Delay        | 98.1  | 20.4  | 29.9  | 30.9  | 31.4  | 27.6  | 4.9   | 29.9  | 28.2  | 3.0   |
| Queue Delay          | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Delay          | 98.1  | 20.4  | 29.9  | 30.9  | 31.4  | 27.6  | 4.9   | 29.9  | 28.2  | 3.0   |
| LOS                  | F     | C     | C     | C     | C     | C     | A     | C     | C     | A     |
| Approach Delay       |       | 36.9  |       | 30.8  |       | 25.5  |       | 22.9  |       |       |
| Approach LOS         |       | D     |       | C     |       | C     |       | C     |       |       |

Intersection Summary

|   |                        |
|---|------------------------|
| Cycle Length: 105   |                        |
| Actuated Cycle Length: 105  |                        |
| Offset: 0 (0%), Referenced to phase 4:EBTL and 8:WBTL, Start of Green |                        |
| Natural Cycle: 105  |                        |
| Control Type: Actuated-Coordinated                                    |                        |
| Maximum v/c Ratio: 1.02   |                        |
| Intersection Signal Delay: 29.5                                       | Intersection LOS: C    |
| Intersection Capacity Utilization 72.4%                               | ICU Level of Service C |
| Analysis Period (min) 15  |                        |

Splits and Phases: 1: 19th Ave & Happy Valley Rd



Deer Valley 30  
1: 19th Ave & Happy Valley Rd

2024 Total AM Scenario B  
HCM 6th Signalized Intersection Summary

| Movement                     | EBL  | EBT   | EBR  | WBL  | WBT  | WBR   | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
|------------------------------|------|-------|------|------|------|-------|------|------|------|------|------|------|
| Lane Configurations          | ↔    | ↔     | ↔    | ↔    | ↔    | ↔     | ↔    | ↔    | ↔    | ↔    | ↔    | ↔    |
| Traffic Volume (veh/h)       | 87   | 348   | 228  | 181  | 295  | 110   | 162  | 258  | 107  | 267  | 415  | 96   |
| Future Volume (veh/h)        | 87   | 348   | 228  | 181  | 295  | 110   | 162  | 258  | 107  | 267  | 415  | 96   |
| Initial Q (Ob), veh          | 0    | 0     | 0    | 0    | 0    | 0     | 0    | 0    | 0    | 0    | 0    | 0    |
| Ped-Bike Adj(A_pbT)          | 1.00 |       | 1.00 | 1.00 |      | 1.00  | 1.00 |      | 1.00 | 1.00 |      | 1.00 |
| Parking Bus, Adj             | 1.00 | 1.00  | 1.00 | 1.00 | 1.00 | 1.00  | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Work Zone On Approach        | No   |       | No   |      | No   |       | No   |      | No   |      | No   |      |
| Adj Sat Flow, veh/h/ln       | 1781 | 1781  | 1781 | 1781 | 1781 | 1781  | 1781 | 1781 | 1781 | 1781 | 1781 | 1781 |
| Adj Flow Rate, veh/h         | 95   | 378   | 248  | 197  | 321  | 120   | 176  | 280  | 116  | 290  | 451  | 104  |
| Peak Hour Factor             | 0.92 | 0.92  | 0.92 | 0.92 | 0.92 | 0.92  | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Percent Heavy Veh, %         | 8    | 8     | 8    | 8    | 8    | 8     | 8    | 8    | 8    | 8    | 8    | 8    |
| Cap, veh/h                   | 402  | 1109  | 516  | 319  | 1220 | 430   | 386  | 1193 | 532  | 434  | 1737 | 539  |
| Arrive On Green              | 0.05 | 0.34  | 0.34 | 0.05 | 0.34 | 0.34  | 0.05 | 0.35 | 0.35 | 0.05 | 0.36 | 0.36 |
| Sat Flow, veh/h              | 1697 | 3242  | 1510 | 1697 | 3547 | 1251  | 1697 | 3385 | 1510 | 1697 | 4863 | 1510 |
| Grp Volume(v), veh/h         | 95   | 378   | 248  | 197  | 292  | 149   | 176  | 280  | 116  | 290  | 451  | 104  |
| Grp Sat Flow(s),veh/h/ln     | 1697 | 1621  | 1510 | 1697 | 1621 | 1556  | 1697 | 1692 | 1510 | 1697 | 1621 | 1510 |
| Q Serve(g_s), s              | 3.8  | 9.1   | 13.6 | 5.5  | 6.8  | 7.3   | 5.0  | 6.1  | 5.7  | 5.5  | 6.9  | 5.0  |
| Cycle Q Clear(g_c), s        | 3.8  | 9.1   | 13.6 | 5.5  | 6.8  | 7.3   | 5.0  | 6.1  | 5.7  | 5.5  | 6.9  | 5.0  |
| Prop In Lane                 | 1.00 |       | 1.00 | 1.00 |      | 0.80  | 1.00 |      | 1.00 | 1.00 |      | 1.00 |
| Lane Grp Cap(c), veh/h       | 402  | 1109  | 516  | 319  | 1115 | 535   | 386  | 1193 | 532  | 434  | 1737 | 539  |
| V/C Ratio(X)                 | 0.24 | 0.34  | 0.48 | 0.62 | 0.26 | 0.28  | 0.46 | 0.23 | 0.22 | 0.67 | 0.26 | 0.19 |
| Avail Cap(c_a), veh/h        | 402  | 1109  | 516  | 319  | 1115 | 535   | 386  | 1193 | 532  | 434  | 1737 | 539  |
| HCM Platoon Ratio            | 1.00 | 1.00  | 1.00 | 1.00 | 1.00 | 1.00  | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(I)           | 1.00 | 1.00  | 1.00 | 1.00 | 1.00 | 1.00  | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Uniform Delay (d), s/veh     | 20.8 | 25.7  | 27.2 | 27.3 | 24.8 | 25.0  | 23.2 | 24.0 | 23.9 | 27.2 | 23.9 | 23.3 |
| Incr Delay (d2), s/veh       | 0.3  | 0.8   | 3.2  | 3.6  | 0.6  | 1.3   | 0.8  | 0.5  | 0.9  | 3.9  | 0.4  | 0.8  |
| Initial Q Delay(d3),s/veh    | 0.0  | 0.0   | 0.0  | 0.0  | 0.0  | 0.0   | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| %ile BackOfQ(50%),veh/ln     | 1.5  | 3.6   | 5.3  | 2.2  | 2.7  | 2.9   | 1.1  | 2.5  | 2.1  | 4.1  | 2.7  | 1.9  |
| Unsig. Movement Delay, s/veh |      |       |      |      |      |       |      |      |      |      |      |      |
| LnGrp Delay(d),s/veh         | 21.1 | 26.6  | 30.4 | 30.8 | 25.4 | 26.3  | 24.0 | 24.5 | 24.8 | 31.1 | 24.3 | 24.1 |
| LnGrp LOS                    | C    | C     | C    | C    | C    | C     | C    | C    | C    | C    | C    | C    |
| Approach Vol, veh/h          |      | 721   |      |      | 638  |       |      | 572  |      |      | 845  |      |
| Approach Delay, s/veh        |      | 27.2  |      |      | 27.3 |       |      | 24.4 |      |      | 26.6 |      |
| Approach LOS                 |      | C     |      |      | C    |       |      | C    |      |      | C    |      |
| Timer - Assigned Phs         | 1    | 2     | 3    | 4    | 5    | 6     | 7    | 8    |      |      |      |      |
| Phs Duration (G+Y+Rc), s     | 10.0 | 43.1  | 10.0 | 41.9 | 9.5  | 43.6  | 9.8  | 42.1 |      |      |      |      |
| Change Period (Y+Rc), s      | 4.5  | * 6.1 | 4.5  | * 6  | 4.5  | * 6.1 | 4.5  | * 6  |      |      |      |      |
| Max Green Setting (Gmax), s  | 5.5  | * 37  | 5.5  | * 36 | 5.0  | * 38  | 5.3  | * 36 |      |      |      |      |
| Max Q Clear Time (g_c+I1), s | 7.5  | 8.1   | 7.5  | 15.6 | 7.0  | 8.9   | 5.8  | 9.3  |      |      |      |      |
| Green Ext Time (p_c), s      | 0.0  | 2.3   | 0.0  | 4.2  | 0.0  | 3.7   | 0.0  | 3.0  |      |      |      |      |

| Intersection Summary |      |
|----------------------|------|
| HCM 6th Ctrl Delay   | 26.4 |
| HCM 6th LOS          | C    |

Notes  
User approved pedestrian interval to be less than phase max green.  
\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Deer Valley 30  
1: 19th Ave & Happy Valley Rd

2024 Total PM Scenario B  
HCM 6th Signalized Intersection Summary

| Movement                     | EBL  | EBT   | EBR  | WBL  | WBT  | WBR   | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
|------------------------------|------|-------|------|------|------|-------|------|------|------|------|------|------|
| Lane Configurations          | ↔    | ↔     | ↔    | ↔    | ↔    | ↔     | ↔    | ↔    | ↔    | ↔    | ↔    | ↔    |
| Traffic Volume (veh/h)       | 167  | 383   | 238  | 168  | 747  | 348   | 342  | 486  | 145  | 177  | 229  | 122  |
| Future Volume (veh/h)        | 167  | 383   | 238  | 168  | 747  | 348   | 342  | 486  | 145  | 177  | 229  | 122  |
| Initial Q (Ob), veh          | 0    | 0     | 0    | 0    | 0    | 0     | 0    | 0    | 0    | 0    | 0    | 0    |
| Ped-Bike Adj(A_pbT)          | 1.00 |       | 1.00 | 1.00 |      | 1.00  | 1.00 |      | 1.00 | 1.00 |      | 1.00 |
| Parking Bus, Adj             | 1.00 | 1.00  | 1.00 | 1.00 | 1.00 | 1.00  | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Work Zone On Approach        | No   |       | No   |      | No   |       | No   |      | No   |      | No   |      |
| Adj Sat Flow, veh/h/ln       | 1781 | 1781  | 1781 | 1781 | 1781 | 1781  | 1781 | 1781 | 1781 | 1781 | 1781 | 1781 |
| Adj Flow Rate, veh/h         | 182  | 416   | 259  | 183  | 812  | 378   | 372  | 528  | 158  | 192  | 249  | 133  |
| Peak Hour Factor             | 0.92 | 0.92  | 0.92 | 0.92 | 0.92 | 0.92  | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Percent Heavy Veh, %         | 8    | 8     | 8    | 8    | 8    | 8     | 8    | 8    | 8    | 8    | 8    | 8    |
| Cap, veh/h                   | 225  | 1112  | 518  | 311  | 1086 | 503   | 497  | 1196 | 533  | 319  | 1422 | 441  |
| Arrive On Green              | 0.06 | 0.34  | 0.34 | 0.05 | 0.33 | 0.33  | 0.11 | 0.35 | 0.35 | 0.05 | 0.29 | 0.29 |
| Sat Flow, veh/h              | 1697 | 3242  | 1510 | 1697 | 3248 | 1504  | 1697 | 3385 | 1510 | 1697 | 4863 | 1510 |
| Grp Volume(v), veh/h         | 182  | 416   | 259  | 183  | 810  | 380   | 372  | 528  | 158  | 192  | 249  | 133  |
| Grp Sat Flow(s),veh/h/ln     | 1697 | 1621  | 1510 | 1697 | 1621 | 1511  | 1697 | 1692 | 1510 | 1697 | 1621 | 1510 |
| Q Serve(g_s), s              | 6.6  | 10.2  | 14.3 | 5.7  | 23.3 | 23.5  | 11.5 | 12.5 | 7.9  | 5.1  | 4.0  | 7.2  |
| Cycle Q Clear(g_c), s        | 6.6  | 10.2  | 14.3 | 5.7  | 23.3 | 23.5  | 11.5 | 12.5 | 7.9  | 5.1  | 4.0  | 7.2  |
| Prop In Lane                 | 1.00 |       | 1.00 | 1.00 |      | 1.00  | 1.00 |      | 1.00 | 1.00 |      | 1.00 |
| Lane Grp Cap(c), veh/h       | 225  | 1112  | 518  | 311  | 1084 | 505   | 497  | 1196 | 533  | 319  | 1422 | 441  |
| V/C Ratio(X)                 | 0.81 | 0.37  | 0.50 | 0.59 | 0.75 | 0.75  | 0.75 | 0.44 | 0.30 | 0.60 | 0.18 | 0.30 |
| Avail Cap(c_a), veh/h        | 225  | 1112  | 518  | 311  | 1084 | 505   | 497  | 1196 | 533  | 319  | 1422 | 441  |
| HCM Platoon Ratio            | 1.00 | 1.00  | 1.00 | 1.00 | 1.00 | 1.00  | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(I)           | 1.00 | 1.00  | 1.00 | 1.00 | 1.00 | 1.00  | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Uniform Delay (d), s/veh     | 28.4 | 26.0  | 27.4 | 26.3 | 31.0 | 31.1  | 25.4 | 26.0 | 24.5 | 29.3 | 27.7 | 28.8 |
| Incr Delay (d2), s/veh       | 19.4 | 1.0   | 3.4  | 2.9  | 4.7  | 9.9   | 6.2  | 1.2  | 1.4  | 3.1  | 0.3  | 1.7  |
| Initial Q Delay(d3),s/veh    | 0.0  | 0.0   | 0.0  | 0.0  | 0.0  | 0.0   | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| %ile BackOfQ(50%),veh/ln     | 4.2  | 4.0   | 5.6  | 1.6  | 9.6  | 9.8   | 3.5  | 5.2  | 3.0  | 2.1  | 1.6  | 2.8  |
| Unsig. Movement Delay, s/veh |      |       |      |      |      |       |      |      |      |      |      |      |
| LnGrp Delay(d),s/veh         | 47.8 | 27.0  | 30.8 | 29.2 | 35.7 | 41.0  | 31.6 | 27.2 | 25.9 | 32.4 | 28.0 | 30.6 |
| LnGrp LOS                    | D    | C     | C    | C    | D    | D     | C    | C    | C    | C    | C    | C    |
| Approach Vol, veh/h          |      | 857   |      |      | 1373 |       |      | 1058 |      |      | 574  |      |
| Approach Delay, s/veh        |      | 32.6  |      |      | 36.3 |       |      | 28.5 |      |      | 30.1 |      |
| Approach LOS                 |      | C     |      |      | D    |       |      | C    |      |      | C    |      |
| Timer - Assigned Phs         | 1    | 2     | 3    | 4    | 5    | 6     | 7    | 8    |      |      |      |      |
| Phs Duration (G+Y+Rc), s     | 9.6  | 43.2  | 10.2 | 42.0 | 16.0 | 36.8  | 11.1 | 41.1 |      |      |      |      |
| Change Period (Y+Rc), s      | 4.5  | * 6.1 | 4.5  | * 6  | 4.5  | * 6.1 | 4.5  | * 6  |      |      |      |      |
| Max Green Setting (Gmax), s  | 5.1  | * 37  | 5.7  | * 36 | 11.5 | * 31  | 6.6  | * 35 |      |      |      |      |
| Max Q Clear Time (g_c+I1), s | 7.1  | 14.5  | 7.7  | 16.3 | 13.5 | 9.2   | 8.6  | 25.5 |      |      |      |      |
| Green Ext Time (p_c), s      | 0.0  | 4.2   | 0.0  | 4.5  | 0.0  | 2.0   | 0.0  | 5.5  |      |      |      |      |

| Intersection Summary |      |
|----------------------|------|
| HCM 6th Ctrl Delay   | 32.4 |
| HCM 6th LOS          | C    |

Notes  
User approved pedestrian interval to be less than phase max green.  
\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Deer Valley 30  
2: 19th Ave & Optum Drwy

2024 Total AM Scenario B  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh         | 0.1  |      |      |      |      |      |
| Movement                 | EBL  | EBR  | NBL  | NBT  | SBT  | SBR  |
| Lane Configurations      | W    |      | T    | T    | T    | T    |
| Traffic Vol, veh/h       | 0    | 4    | 7    | 528  | 823  | 2    |
| Future Vol, veh/h        | 0    | 4    | 7    | 528  | 823  | 2    |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Stop | Stop | Free | Free | Free | Free |
| RT Channelized           | -    | None | -    | None | -    | None |
| Storage Length           | 0    | -    | 50   | -    | -    | -    |
| Veh in Median Storage, # | 0    | -    | -    | 0    | 0    | -    |
| Grade, %                 | 0    | -    | -    | 0    | 0    | -    |
| Peak Hour Factor         | 92   | 92   | 92   | 92   | 92   | 92   |
| Heavy Vehicles, %        | 8    | 8    | 8    | 8    | 8    | 8    |
| Mvmt Flow                | 0    | 4    | 8    | 574  | 895  | 2    |

| Major/Minor          | Minor2 | Major1 | Major2 |
|----------------------|--------|--------|--------|
| Conflicting Flow All | 1142   | 449    | 897    |
| Stage 1              | 896    | -      | -      |
| Stage 2              | 246    | -      | -      |
| Critical Hdwy        | 6.41   | 7.06   | 4.26   |
| Critical Hdwy Stg 1  | 5.96   | -      | -      |
| Critical Hdwy Stg 2  | 6.16   | -      | -      |
| Follow-up Hdwy       | 3.73   | 3.38   | 2.28   |
| Pot Cap-1 Maneuver   | 215    | 541    | 716    |
| Stage 1              | 336    | -      | -      |
| Stage 2              | 718    | -      | -      |
| Platoon blocked, %   | -      | -      | -      |
| Mov Cap-1 Maneuver   | 213    | 541    | 716    |
| Mov Cap-2 Maneuver   | 282    | -      | -      |
| Stage 1              | 332    | -      | -      |
| Stage 2              | 718    | -      | -      |

| Approach             | EB   | NB  | SB |
|----------------------|------|-----|----|
| HCM Control Delay, s | 11.7 | 0.1 | 0  |
| HCM LOS              | B    |     |    |

| Minor Lane/Major Mvmt | NBL   | NBT | EBLn1 | SBT | SBR |
|-----------------------|-------|-----|-------|-----|-----|
| Capacity (veh/h)      | 716   | -   | 541   | -   | -   |
| HCM Lane V/C Ratio    | 0.011 | -   | 0.008 | -   | -   |
| HCM Control Delay (s) | 10.1  | -   | 11.7  | -   | -   |
| HCM Lane LOS          | B     | -   | B     | -   | -   |
| HCM 95th %tile Q(veh) | 0     | -   | 0     | -   | -   |

Deer Valley 30  
2: 19th Ave & Optum Drwy

2024 Total PM Scenario B  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh         | 0.1  |      |      |      |      |      |
| Movement                 | EBL  | EBR  | NBL  | NBT  | SBT  | SBR  |
| Lane Configurations      | W    |      | T    | T    | T    | T    |
| Traffic Vol, veh/h       | 0    | 4    | 7    | 974  | 633  | 2    |
| Future Vol, veh/h        | 0    | 4    | 7    | 974  | 633  | 2    |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Stop | Stop | Free | Free | Free | Free |
| RT Channelized           | -    | None | -    | None | -    | None |
| Storage Length           | 0    | -    | 50   | -    | -    | -    |
| Veh in Median Storage, # | 0    | -    | -    | 0    | 0    | -    |
| Grade, %                 | 0    | -    | -    | 0    | 0    | -    |
| Peak Hour Factor         | 92   | 92   | 92   | 92   | 92   | 92   |
| Heavy Vehicles, %        | 8    | 8    | 8    | 8    | 8    | 8    |
| Mvmt Flow                | 0    | 4    | 8    | 1059 | 688  | 2    |

| Major/Minor          | Minor2 | Major1 | Major2 |
|----------------------|--------|--------|--------|
| Conflicting Flow All | 1129   | 345    | 690    |
| Stage 1              | 689    | -      | -      |
| Stage 2              | 440    | -      | -      |
| Critical Hdwy        | 6.41   | 7.06   | 4.26   |
| Critical Hdwy Stg 1  | 5.96   | -      | -      |
| Critical Hdwy Stg 2  | 6.16   | -      | -      |
| Follow-up Hdwy       | 3.73   | 3.38   | 2.28   |
| Pot Cap-1 Maneuver   | 219    | 634    | 861    |
| Stage 1              | 432    | -      | -      |
| Stage 2              | 566    | -      | -      |
| Platoon blocked, %   | -      | -      | -      |
| Mov Cap-1 Maneuver   | 217    | 634    | 861    |
| Mov Cap-2 Maneuver   | 318    | -      | -      |
| Stage 1              | 428    | -      | -      |
| Stage 2              | 566    | -      | -      |

| Approach             | EB   | NB  | SB |
|----------------------|------|-----|----|
| HCM Control Delay, s | 10.7 | 0.1 | 0  |
| HCM LOS              | B    |     |    |

| Minor Lane/Major Mvmt | NBL   | NBT | EBLn1 | SBT | SBR |
|-----------------------|-------|-----|-------|-----|-----|
| Capacity (veh/h)      | 861   | -   | 634   | -   | -   |
| HCM Lane V/C Ratio    | 0.009 | -   | 0.007 | -   | -   |
| HCM Control Delay (s) | 9.2   | -   | 10.7  | -   | -   |
| HCM Lane LOS          | A     | -   | B     | -   | -   |
| HCM 95th %tile Q(veh) | 0     | -   | 0     | -   | -   |

Deer Valley 30  
3: 19th Ave & Patio Drwy/Parkview Ln

2024 Total AM Scenario B  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Int Delay, s/veh 0.9     |      |      |      |      |      |      |      |      |      |      |      |      |
| Movement                 | EBL  | EBT  | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
| Lane Configurations      |      |      | ↕    |      | ↕    |      |      | ↕↕↕  |      | ↕    | ↕↕   |      |
| Traffic Vol, veh/h       | 0    | 0    | 6    | 26   | 0    | 13   | 1    | 521  | 41   | 26   | 802  | 0    |
| Future Vol, veh/h        | 0    | 0    | 6    | 26   | 0    | 13   | 1    | 521  | 41   | 26   | 802  | 0    |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Stop | Stop | Stop | Stop | Stop | Stop | Free | Free | Free | Free | Free | Free |
| RT Channelized           | -    | -    | None | -    | -    | None | -    | -    | None | -    | -    | None |
| Storage Length           | -    | -    | 0    | -    | -    | -    | -    | -    | -    | 50   | -    | -    |
| Veh in Median Storage, # | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Grade, %                 | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Peak Hour Factor         | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   |
| Heavy Vehicles, %        | 8    | 8    | 8    | 8    | 8    | 8    | 8    | 8    | 8    | 8    | 8    | 8    |
| Mvmt Flow                | 0    | 0    | 7    | 28   | 0    | 14   | 1    | 566  | 45   | 28   | 872  | 0    |

| Major/Minor          | Minor2 | Minor1 | Major1 | Major2 |
|----------------------|--------|--------|--------|--------|
| Conflicting Flow All | -      | -      | 436    | 1083   |
| Stage 1              | -      | -      | 591    | 591    |
| Stage 2              | -      | -      | 492    | 928    |
| Critical Hdwy        | -      | -      | 7.06   | 7.11   |
| Critical Hdwy Stg 1  | -      | -      | 7.46   | 5.66   |
| Critical Hdwy Stg 2  | -      | -      | 6.66   | 5.66   |
| Follow-up Hdwy       | -      | -      | 3.38   | 3.73   |
| Pot Cap-1 Maneuver   | 0      | 0      | 552    | 189    |
| Stage 1              | 0      | 0      | 379    | 478    |
| Stage 2              | 0      | 0      | 496    | 332    |
| Platoon blocked, %   | -      | -      | -      | -      |
| Mov Cap-1 Maneuver   | -      | -      | 552    | 180    |
| Mov Cap-2 Maneuver   | -      | -      | 180    | 105    |
| Stage 1              | -      | -      | 378    | 477    |
| Stage 2              | -      | -      | 466    | 316    |

| Approach             | EB   | WB   | NB | SB  |
|----------------------|------|------|----|-----|
| HCM Control Delay, s | 11.6 | 23.9 | 0  | 0.4 |
| HCM LOS              | B    | C    |    |     |

| Minor Lane/Major Mvmt | NBL   | NBT | NBR | EBLn1 | WBLn1 | SBL   | SBT |
|-----------------------|-------|-----|-----|-------|-------|-------|-----|
| Capacity (veh/h)      | 732   | -   | -   | 552   | 233   | 580   | -   |
| HCM Lane V/C Ratio    | 0.001 | -   | -   | 0.012 | 0.182 | 0.049 | -   |
| HCM Control Delay (s) | 9.9   | -   | -   | 11.6  | 23.9  | 11.5  | -   |
| HCM Lane LOS          | A     | -   | -   | B     | C     | B     | -   |
| HCM 95th %tile Q(veh) | 0     | -   | -   | 0     | 0.6   | 0.2   | -   |

Deer Valley 30  
3: 19th Ave & Patio Drwy/Parkview Ln

2024 Total PM Scenario B  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Int Delay, s/veh 1       |      |      |      |      |      |      |      |      |      |      |      |      |
| Movement                 | EBL  | EBT  | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
| Lane Configurations      |      |      | ↕    |      | ↕    |      |      | ↕↕↕  |      | ↕    | ↕↕   |      |
| Traffic Vol, veh/h       | 0    | 0    | 6    | 26   | 0    | 13   | 1    | 621  | 41   | 26   | 612  | 0    |
| Future Vol, veh/h        | 0    | 0    | 6    | 26   | 0    | 13   | 1    | 621  | 41   | 26   | 612  | 0    |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Stop | Stop | Stop | Stop | Stop | Stop | Free | Free | Free | Free | Free | Free |
| RT Channelized           | -    | -    | None | -    | -    | None | -    | -    | None | -    | -    | None |
| Storage Length           | -    | -    | 0    | -    | -    | -    | -    | -    | -    | 50   | -    | -    |
| Veh in Median Storage, # | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Grade, %                 | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Peak Hour Factor         | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   |
| Heavy Vehicles, %        | 8    | 8    | 8    | 8    | 8    | 8    | 8    | 8    | 8    | 8    | 8    | 8    |
| Mvmt Flow                | 0    | 0    | 7    | 28   | 0    | 14   | 1    | 675  | 45   | 28   | 665  | 0    |

| Major/Minor          | Minor2 | Minor1 | Major1 | Major2 |
|----------------------|--------|--------|--------|--------|
| Conflicting Flow All | -      | -      | 333    | 1089   |
| Stage 1              | -      | -      | 700    | 700    |
| Stage 2              | -      | -      | 389    | 721    |
| Critical Hdwy        | -      | -      | 7.06   | 7.11   |
| Critical Hdwy Stg 1  | -      | -      | 7.46   | 5.66   |
| Critical Hdwy Stg 2  | -      | -      | 6.66   | 5.66   |
| Follow-up Hdwy       | -      | -      | 3.38   | 3.73   |
| Pot Cap-1 Maneuver   | 0      | 0      | 645    | 187    |
| Stage 1              | 0      | 0      | 318    | 425    |
| Stage 2              | 0      | 0      | 571    | 416    |
| Platoon blocked, %   | -      | -      | -      | -      |
| Mov Cap-1 Maneuver   | -      | -      | 645    | 177    |
| Mov Cap-2 Maneuver   | -      | -      | 177    | 121    |
| Stage 1              | -      | -      | 317    | 424    |
| Stage 2              | -      | -      | 534    | 393    |

| Approach             | EB   | WB   | NB | SB  |
|----------------------|------|------|----|-----|
| HCM Control Delay, s | 10.6 | 24.4 | 0  | 0.5 |
| HCM LOS              | B    | C    |    |     |

| Minor Lane/Major Mvmt | NBL   | NBT | NBR | EBLn1 | WBLn1 | SBL   | SBT |
|-----------------------|-------|-----|-----|-------|-------|-------|-----|
| Capacity (veh/h)      | 881   | -   | -   | 645   | 228   | 513   | -   |
| HCM Lane V/C Ratio    | 0.001 | -   | -   | 0.01  | 0.186 | 0.055 | -   |
| HCM Control Delay (s) | 9.1   | -   | -   | 10.6  | 24.4  | 12.4  | -   |
| HCM Lane LOS          | A     | -   | -   | B     | C     | B     | -   |
| HCM 95th %tile Q(veh) | 0     | -   | -   | 0     | 0.7   | 0.2   | -   |

Deer Valley 30  
4: Alameda Rd & 19th Ave

2024 Total AM Scenario B  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |       |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|-------|------|------|------|------|------|
| Int Delay, s/veh         | 1.5  |      |      |      |      |      |       |      |      |      |      |      |
| Movement                 | EBL  | EBT  | EBR  | WBL  | WBT  | WBR  | NBL   | NBT  | NBR  | SBL  | SBT  | SBR  |
| Lane Configurations      | ↔ ↗  |      | ↔ ↗  |      | ↔ ↗  |      | ↔ ↗ ↘ |      | ↔ ↗  |      | ↔ ↗  |      |
| Traffic Vol, veh/h       | 9    | 0    | 54   | 13   | 0    | 15   | 18    | 548  | 87   | 95   | 724  | 14   |
| Future Vol, veh/h        | 9    | 0    | 54   | 13   | 0    | 15   | 18    | 548  | 87   | 95   | 724  | 14   |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    | 0     | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Stop | Stop | Stop | Stop | Stop | Stop | Free  | Free | Free | Free | Free | Free |
| RT Channelized           | -    | -    | None | -    | -    | None | -     | -    | None | -    | -    | None |
| Storage Length           | 0    | -    | -    | 150  | -    | -    | 150   | -    | -    | 0    | -    | -    |
| Veh in Median Storage, # | -    | 1    | -    | -    | 1    | -    | -     | 0    | -    | -    | 0    | -    |
| Grade, %                 | -    | 0    | -    | -    | 0    | -    | -     | 0    | -    | -    | 0    | -    |
| Peak Hour Factor         | 92   | 92   | 92   | 92   | 92   | 92   | 92    | 92   | 92   | 92   | 92   | 92   |
| Heavy Vehicles, %        | 8    | 8    | 8    | 8    | 8    | 8    | 8     | 8    | 8    | 8    | 8    | 8    |
| Mvmt Flow                | 10   | 0    | 59   | 14   | 0    | 16   | 20    | 596  | 95   | 103  | 787  | 15   |

| Major/Minor          | Minor2 | Minor1 | Major1 | Major2 |
|----------------------|--------|--------|--------|--------|
| Conflicting Flow All | 1279   | 1732   | 401    | 1284   |
| Stage 1              | 1001   | 1001   | -      | 684    |
| Stage 2              | 278    | 731    | -      | 600    |
| Critical Hdwy        | 7.11   | 6.66   | 7.06   | 7.11   |
| Critical Hdwy Stg 1  | 6.66   | 5.66   | -      | 7.46   |
| Critical Hdwy Stg 2  | 6.86   | 5.66   | -      | 6.66   |
| Follow-up Hdwy       | 3.73   | 4.08   | 3.38   | 3.73   |
| Pot Cap-1 Maneuver   | *258   | 130    | 582    | 255    |
| Stage 1              | *243   | 306    | -      | 711    |
| Stage 2              | *837   | 652    | -      | 427    |
| Platoon blocked, %   | 1      | 1      | -      | 1      |
| Mov Cap-1 Maneuver   | *225   | 112    | 582    | 205    |
| Mov Cap-2 Maneuver   | *216   | 207    | -      | 271    |
| Stage 1              | *237   | 270    | -      | 693    |
| Stage 2              | *799   | 635    | -      | 338    |

| Approach             | EB   | WB | NB  | SB  |
|----------------------|------|----|-----|-----|
| HCM Control Delay, s | 13.4 | 14 | 0.3 | 1.1 |
| HCM LOS              | B    | B  |     |     |

| Minor Lane/Major Mvmt | NBL   | NBT | NBR | EBLn1 | EBLn2 | WBLn1 | WBLn2 | SBL   | SBT | SBR |
|-----------------------|-------|-----|-----|-------|-------|-------|-------|-------|-----|-----|
| Capacity (veh/h)      | 780   | -   | -   | 216   | 582   | 271   | 784   | 870   | -   | -   |
| HCM Lane V/C Ratio    | 0.025 | -   | -   | 0.045 | 0.101 | 0.052 | 0.021 | 0.119 | -   | -   |
| HCM Control Delay (s) | 9.7   | -   | -   | 22.5  | 11.9  | 19    | 9.7   | 9.7   | -   | -   |
| HCM Lane LOS          | A     | -   | -   | C     | B     | C     | A     | A     | -   | -   |
| HCM 95th %tile Q(veh) | 0.1   | -   | -   | 0.1   | 0.3   | 0.2   | 0.1   | 0.4   | -   | -   |

Notes  
 -: Volume exceeds capacity    \$: Delay exceeds 300s    +: Computation Not Defined    \*: All major volume in platoon

Deer Valley 30  
4: Alameda Rd & 19th Ave

2024 Total PM Scenario B  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |       |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|-------|------|------|------|------|------|
| Int Delay, s/veh         | 2    |      |      |      |      |      |       |      |      |      |      |      |
| Movement                 | EBL  | EBT  | EBR  | WBL  | WBT  | WBR  | NBL   | NBT  | NBR  | SBL  | SBT  | SBR  |
| Lane Configurations      | ↔ ↗  |      | ↔ ↗  |      | ↔ ↗  |      | ↔ ↗ ↘ |      | ↔ ↗  |      | ↔ ↗  |      |
| Traffic Vol, veh/h       | 14   | 0    | 62   | 59   | 0    | 64   | 83    | 886  | 10   | 10   | 617  | 16   |
| Future Vol, veh/h        | 14   | 0    | 62   | 59   | 0    | 64   | 83    | 886  | 10   | 10   | 617  | 16   |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    | 0     | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Stop | Stop | Stop | Stop | Stop | Stop | Free  | Free | Free | Free | Free | Free |
| RT Channelized           | -    | -    | None | -    | -    | None | -     | -    | None | -    | -    | None |
| Storage Length           | 0    | -    | -    | 150  | -    | -    | 150   | -    | -    | 0    | -    | -    |
| Veh in Median Storage, # | -    | 1    | -    | -    | 1    | -    | -     | 0    | -    | -    | 0    | -    |
| Grade, %                 | -    | 0    | -    | -    | 0    | -    | -     | 0    | -    | -    | 0    | -    |
| Peak Hour Factor         | 92   | 92   | 92   | 92   | 92   | 92   | 92    | 92   | 92   | 92   | 92   | 92   |
| Heavy Vehicles, %        | 8    | 8    | 8    | 8    | 8    | 8    | 8     | 8    | 8    | 8    | 8    | 8    |
| Mvmt Flow                | 15   | 0    | 67   | 64   | 0    | 70   | 90    | 963  | 11   | 11   | 671  | 17   |

| Major/Minor          | Minor2 | Minor1 | Major1 | Major2 |
|----------------------|--------|--------|--------|--------|
| Conflicting Flow All | 1267   | 1856   | 344    | 1507   |
| Stage 1              | 702    | 702    | -      | 1149   |
| Stage 2              | 565    | 1154   | -      | 358    |
| Critical Hdwy        | 7.11   | 6.66   | 7.06   | 7.11   |
| Critical Hdwy Stg 1  | 6.66   | 5.66   | -      | 7.46   |
| Critical Hdwy Stg 2  | 6.86   | 5.66   | -      | 6.66   |
| Follow-up Hdwy       | 3.73   | 4.08   | 3.38   | 3.73   |
| Pot Cap-1 Maneuver   | *458   | 158    | 635    | 288    |
| Stage 1              | *371   | 424    | -      | 563    |
| Stage 2              | *748   | 565    | -      | 596    |
| Platoon blocked, %   | 1      | 1      | -      | 1      |
| Mov Cap-1 Maneuver   | *376   | 140    | 635    | 235    |
| Mov Cap-2 Maneuver   | *293   | 270    | -      | 320    |
| Stage 1              | *332   | 418    | -      | 505    |
| Stage 2              | *604   | 506    | -      | 526    |

| Approach             | EB   | WB   | NB  | SB  |
|----------------------|------|------|-----|-----|
| HCM Control Delay, s | 12.5 | 14.7 | 0.8 | 0.1 |
| HCM LOS              | B    | B    |     |     |

| Minor Lane/Major Mvmt | NBL   | NBT | NBR | EBLn1 | EBLn2 | WBLn1 | WBLn2 | SBL   | SBT | SBR |
|-----------------------|-------|-----|-----|-------|-------|-------|-------|-------|-----|-----|
| Capacity (veh/h)      | 863   | -   | -   | 293   | 635   | 320   | 701   | *878  | -   | -   |
| HCM Lane V/C Ratio    | 0.105 | -   | -   | 0.052 | 0.106 | 0.2   | 0.099 | 0.012 | -   | -   |
| HCM Control Delay (s) | 9.7   | -   | -   | 18    | 11.3  | 19    | 10.7  | 9.2   | -   | -   |
| HCM Lane LOS          | A     | -   | -   | C     | B     | C     | B     | A     | -   | -   |
| HCM 95th %tile Q(veh) | 0.3   | -   | -   | 0.2   | 0.4   | 0.7   | 0.3   | 0     | -   | -   |

Notes  
 -: Volume exceeds capacity    \$: Delay exceeds 300s    +: Computation Not Defined    \*: All major volume in platoon

Deer Valley 30  
5: 19th Ave & Sarah Bass PI

2024 Total AM Scenario B  
HCM 6th TWSC

| Intersection             |        |        |        |       |      |      |
|--------------------------|--------|--------|--------|-------|------|------|
| Int Delay, s/veh         | 0.6    |        |        |       |      |      |
| Movement                 | EBL    | EBR    | NBL    | NBT   | SBT  | SBR  |
| Lane Configurations      | ↔      | ↔      | ↔      | ↔↔    | ↔↔   | ↔↔   |
| Traffic Vol, veh/h       | 13     | 36     | 27     | 640   | 783  | 9    |
| Future Vol, veh/h        | 13     | 36     | 27     | 640   | 783  | 9    |
| Conflicting Peds, #/hr   | 0      | 0      | 0      | 0     | 0    | 0    |
| Sign Control             | Stop   | Stop   | Free   | Free  | Free | Free |
| RT Channelized           | -      | None   | -      | None  | -    | None |
| Storage Length           | 0      | 0      | 150    | -     | -    | -    |
| Veh in Median Storage, # | 0      | -      | -      | 0     | 0    | -    |
| Grade, %                 | 0      | -      | -      | 0     | 0    | -    |
| Peak Hour Factor         | 92     | 92     | 92     | 92    | 92   | 92   |
| Heavy Vehicles, %        | 8      | 8      | 8      | 8     | 8    | 8    |
| Mvmt Flow                | 14     | 39     | 29     | 696   | 851  | 10   |
| Major/Minor              | Minor2 | Major1 | Major2 |       |      |      |
| Conflicting Flow All     | 1192   | 431    | 861    | 0     | -    | 0    |
| Stage 1                  | 856    | -      | -      | -     | -    | -    |
| Stage 2                  | 336    | -      | -      | -     | -    | -    |
| Critical Hdwy            | 6.41   | 7.06   | 4.26   | -     | -    | -    |
| Critical Hdwy Stg 1      | 5.96   | -      | -      | -     | -    | -    |
| Critical Hdwy Stg 2      | 6.16   | -      | -      | -     | -    | -    |
| Follow-up Hdwy           | 3.73   | 3.38   | 2.28   | -     | -    | -    |
| Pot Cap-1 Maneuver       | 201    | 556    | 739    | -     | -    | -    |
| Stage 1                  | 353    | -      | -      | -     | -    | -    |
| Stage 2                  | 643    | -      | -      | -     | -    | -    |
| Platoon blocked, %       | -      | -      | -      | -     | -    | -    |
| Mov Cap-1 Maneuver       | 193    | 556    | 739    | -     | -    | -    |
| Mov Cap-2 Maneuver       | 277    | -      | -      | -     | -    | -    |
| Stage 1                  | 339    | -      | -      | -     | -    | -    |
| Stage 2                  | 643    | -      | -      | -     | -    | -    |
| Approach                 | EB     | NB     | SB     |       |      |      |
| HCM Control Delay, s     | 13.8   | 0.4    | 0      |       |      |      |
| HCM LOS                  | B      |        |        |       |      |      |
| Minor Lane/Major Mvmt    | NBL    | NBT    | EBLn1  | EBLn2 | SBT  | SBR  |
| Capacity (veh/h)         | 739    | -      | 277    | 556   | -    | -    |
| HCM Lane V/C Ratio       | 0.04   | -      | 0.051  | 0.07  | -    | -    |
| HCM Control Delay (s)    | 10.1   | -      | 18.7   | 12    | -    | -    |
| HCM Lane LOS             | B      | -      | C      | B     | -    | -    |
| HCM 95th %tile Q(veh)    | 0.1    | -      | 0.2    | 0.2   | -    | -    |

Deer Valley 30  
5: 19th Ave & Sarah Bass PI

2024 Total PM Scenario B  
HCM 6th TWSC

| Intersection             |        |        |        |       |      |      |
|--------------------------|--------|--------|--------|-------|------|------|
| Int Delay, s/veh         | 0.5    |        |        |       |      |      |
| Movement                 | EBL    | EBR    | NBL    | NBT   | SBT  | SBR  |
| Lane Configurations      | ↔      | ↔      | ↔      | ↔↔    | ↔↔   | ↔↔   |
| Traffic Vol, veh/h       | 16     | 37     | 10     | 964   | 733  | 6    |
| Future Vol, veh/h        | 16     | 37     | 10     | 964   | 733  | 6    |
| Conflicting Peds, #/hr   | 0      | 0      | 0      | 0     | 0    | 0    |
| Sign Control             | Stop   | Stop   | Free   | Free  | Free | Free |
| RT Channelized           | -      | None   | -      | None  | -    | None |
| Storage Length           | 0      | 0      | 150    | -     | -    | -    |
| Veh in Median Storage, # | 0      | -      | -      | 0     | 0    | -    |
| Grade, %                 | 0      | -      | -      | 0     | 0    | -    |
| Peak Hour Factor         | 92     | 92     | 92     | 92    | 92   | 92   |
| Heavy Vehicles, %        | 8      | 8      | 8      | 8     | 8    | 8    |
| Mvmt Flow                | 17     | 40     | 11     | 1048  | 797  | 7    |
| Major/Minor              | Minor2 | Major1 | Major2 |       |      |      |
| Conflicting Flow All     | 1242   | 402    | 804    | 0     | -    | 0    |
| Stage 1                  | 801    | -      | -      | -     | -    | -    |
| Stage 2                  | 441    | -      | -      | -     | -    | -    |
| Critical Hdwy            | 6.41   | 7.06   | 4.26   | -     | -    | -    |
| Critical Hdwy Stg 1      | 5.96   | -      | -      | -     | -    | -    |
| Critical Hdwy Stg 2      | 6.16   | -      | -      | -     | -    | -    |
| Follow-up Hdwy           | 3.73   | 3.38   | 2.28   | -     | -    | -    |
| Pot Cap-1 Maneuver       | 188    | 581    | 778    | -     | -    | -    |
| Stage 1                  | 377    | -      | -      | -     | -    | -    |
| Stage 2                  | 565    | -      | -      | -     | -    | -    |
| Platoon blocked, %       | -      | -      | -      | -     | -    | -    |
| Mov Cap-1 Maneuver       | 185    | 581    | 778    | -     | -    | -    |
| Mov Cap-2 Maneuver       | 283    | -      | -      | -     | -    | -    |
| Stage 1                  | 372    | -      | -      | -     | -    | -    |
| Stage 2                  | 565    | -      | -      | -     | -    | -    |
| Approach                 | EB     | NB     | SB     |       |      |      |
| HCM Control Delay, s     | 13.8   | 0.1    | 0      |       |      |      |
| HCM LOS                  | B      |        |        |       |      |      |
| Minor Lane/Major Mvmt    | NBL    | NBT    | EBLn1  | EBLn2 | SBT  | SBR  |
| Capacity (veh/h)         | 778    | -      | 283    | 581   | -    | -    |
| HCM Lane V/C Ratio       | 0.014  | -      | 0.061  | 0.069 | -    | -    |
| HCM Control Delay (s)    | 9.7    | -      | 18.6   | 11.7  | -    | -    |
| HCM Lane LOS             | A      | -      | C      | B     | -    | -    |
| HCM 95th %tile Q(veh)    | 0      | -      | 0.2    | 0.2   | -    | -    |

Deer Valley 30  
6: Pinnacle Peak Rd & 19th Ave

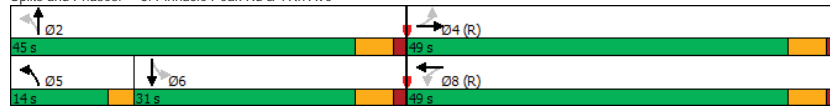
2024 Total AM Scenario B  
Timings

| Lane Group           | EBL   | EBT   | WBL   | WBT   | NBL   | NBT   | SBL   | SBT   |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations  | ↖     | ↗     | ↖     | ↗     | ↖     | ↗     | ↖     | ↗     |
| Traffic Volume (vph) | 141   | 387   | 57    | 176   | 169   | 447   | 102   | 650   |
| Future Volume (vph)  | 141   | 387   | 57    | 176   | 169   | 447   | 102   | 650   |
| Turn Type            | Perm  | NA    | Perm  | NA    | pm+pt | NA    | Perm  | NA    |
| Protected Phases     |       | 4     |       | 8     | 5     | 2     |       | 6     |
| Permitted Phases     | 4     |       | 8     |       | 2     |       | 6     |       |
| Detector Phase       | 4     | 4     | 8     | 8     | 5     | 2     | 6     | 6     |
| Switch Phase         |       |       |       |       |       |       |       |       |
| Minimum Initial (s)  | 15.0  | 15.0  | 15.0  | 15.0  | 5.0   | 15.0  | 15.0  | 15.0  |
| Minimum Split (s)    | 34.6  | 34.6  | 34.6  | 34.6  | 9.5   | 30.8  | 30.8  | 30.8  |
| Total Split (s)      | 49.0  | 49.0  | 49.0  | 49.0  | 14.0  | 45.0  | 31.0  | 31.0  |
| Total Split (%)      | 52.1% | 52.1% | 52.1% | 52.1% | 14.9% | 47.9% | 33.0% | 33.0% |
| Yellow Time (s)      | 4.3   | 4.3   | 4.3   | 4.3   | 3.0   | 4.3   | 4.3   | 4.3   |
| All-Red Time (s)     | 1.3   | 1.3   | 1.3   | 1.3   | 0.0   | 1.5   | 1.5   | 1.5   |
| Lost Time Adjust (s) | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Lost Time (s)  | 5.6   | 5.6   | 5.6   | 5.6   | 3.0   | 5.8   | 5.8   | 5.8   |
| Lead/Lag             |       |       |       |       | Lead  |       | Lag   | Lag   |
| Lead-Lag Optimize?   |       |       |       |       | Yes   |       | Yes   | Yes   |
| Recall Mode          | C-Max | C-Max | C-Max | C-Max | None  | Max   | Max   | Max   |
| Act Effct Green (s)  | 43.4  | 43.4  | 43.4  | 43.4  | 42.0  | 39.2  | 25.9  | 25.9  |
| Actuated g/C Ratio   | 0.46  | 0.46  | 0.46  | 0.46  | 0.45  | 0.42  | 0.28  | 0.28  |
| v/c Ratio            | 0.32  | 0.48  | 0.26  | 0.18  | 0.69  | 0.30  | 0.55  | 0.85  |
| Control Delay        | 18.5  | 11.4  | 19.3  | 10.4  | 31.4  | 16.6  | 41.6  | 42.5  |
| Queue Delay          | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Delay          | 18.5  | 11.4  | 19.3  | 10.4  | 31.4  | 16.6  | 41.6  | 42.5  |
| LOS                  | B     | B     | B     | B     | C     | B     | D     | D     |
| Approach Delay       |       | 12.6  |       | 12.0  |       | 20.1  |       | 42.4  |
| Approach LOS         |       | B     |       | B     |       | C     |       | D     |

Intersection Summary

|   |                        |
|---|------------------------|
| Cycle Length: 94  |                        |
| Actuated Cycle Length: 94   |                        |
| Offset: 31 (33%), Referenced to phase 4:EBTL and 8:WBTL, Start of Green |                        |
| Natural Cycle: 75   |                        |
| Control Type: Actuated-Coordinated                                      |                        |
| Maximum v/c Ratio: 0.85   |                        |
| Intersection Signal Delay: 23.6   | Intersection LOS: C    |
| Intersection Capacity Utilization 80.0%                                 | ICU Level of Service D |
| Analysis Period (min) 15  |                        |

Splits and Phases: 6: Pinnacle Peak Rd & 19th Ave



Deer Valley 30  
6: Pinnacle Peak Rd & 19th Ave

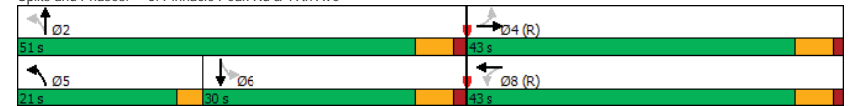
2024 Total PM Scenario B  
Timings

| Lane Group           | EBL   | EBT   | WBL   | WBT   | NBL   | NBT   | SBL   | SBT   |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations  | ↖     | ↗     | ↖     | ↗     | ↖     | ↗     | ↖     | ↗     |
| Traffic Volume (vph) | 86    | 145   | 57    | 327   | 408   | 806   | 65    | 577   |
| Future Volume (vph)  | 86    | 145   | 57    | 327   | 408   | 806   | 65    | 577   |
| Turn Type            | Perm  | NA    | Perm  | NA    | pm+pt | NA    | Perm  | NA    |
| Protected Phases     |       | 4     |       | 8     | 5     | 2     |       | 6     |
| Permitted Phases     | 4     |       | 8     |       | 2     |       | 6     |       |
| Detector Phase       | 4     | 4     | 8     | 8     | 5     | 2     | 6     | 6     |
| Switch Phase         |       |       |       |       |       |       |       |       |
| Minimum Initial (s)  | 15.0  | 15.0  | 15.0  | 15.0  | 5.0   | 15.0  | 15.0  | 15.0  |
| Minimum Split (s)    | 34.6  | 34.6  | 34.6  | 34.6  | 9.5   | 30.8  | 30.8  | 30.8  |
| Total Split (s)      | 43.0  | 43.0  | 43.0  | 43.0  | 21.0  | 51.0  | 30.0  | 30.0  |
| Total Split (%)      | 45.7% | 45.7% | 45.7% | 45.7% | 22.3% | 54.3% | 31.9% | 31.9% |
| Yellow Time (s)      | 4.3   | 4.3   | 4.3   | 4.3   | 3.0   | 4.3   | 4.3   | 4.3   |
| All-Red Time (s)     | 1.3   | 1.3   | 1.3   | 1.3   | 0.0   | 1.5   | 1.5   | 1.5   |
| Lost Time Adjust (s) | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Lost Time (s)  | 5.6   | 5.6   | 5.6   | 5.6   | 3.0   | 5.8   | 5.8   | 5.8   |
| Lead/Lag             |       |       |       |       | Lead  |       | Lag   | Lag   |
| Lead-Lag Optimize?   |       |       |       |       | Yes   |       | Yes   | Yes   |
| Recall Mode          | C-Max | C-Max | C-Max | C-Max | None  | Max   | Max   | Max   |
| Act Effct Green (s)  | 37.4  | 37.4  | 37.4  | 37.4  | 48.0  | 45.2  | 24.2  | 24.2  |
| Actuated g/C Ratio   | 0.40  | 0.40  | 0.40  | 0.40  | 0.51  | 0.48  | 0.26  | 0.26  |
| v/c Ratio            | 0.29  | 0.31  | 0.19  | 0.34  | 1.10  | 0.39  | 0.52  | 0.89  |
| Control Delay        | 22.5  | 7.6   | 20.4  | 18.7  | 100.9 | 16.1  | 45.8  | 46.9  |
| Queue Delay          | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Delay          | 22.5  | 7.6   | 20.4  | 18.7  | 100.9 | 16.1  | 45.8  | 46.9  |
| LOS                  | C     | A     | C     | B     | F     | B     | D     | D     |
| Approach Delay       |       | 10.2  |       | 18.9  |       | 43.9  |       | 46.8  |
| Approach LOS         |       | B     |       | B     |       | D     |       | D     |

Intersection Summary

|   |                        |
|---|------------------------|
| Cycle Length: 94  |                        |
| Actuated Cycle Length: 94   |                        |
| Offset: 31 (33%), Referenced to phase 4:EBTL and 8:WBTL, Start of Green |                        |
| Natural Cycle: 90   |                        |
| Control Type: Actuated-Coordinated                                      |                        |
| Maximum v/c Ratio: 1.10   |                        |
| Intersection Signal Delay: 35.3   | Intersection LOS: D    |
| Intersection Capacity Utilization 85.1%                                 | ICU Level of Service E |
| Analysis Period (min) 15  |                        |

Splits and Phases: 6: Pinnacle Peak Rd & 19th Ave



Deer Valley 30  
6: Pinnacle Peak Rd & 19th Ave

2024 Total AM Scenario B  
HCM 6th Signalized Intersection Summary

| Movement                     | EBL  | EBT  | EBR  | WBL   | WBT  | WBR  | NBL  | NBT   | NBR  | SBL  | SBT  | SBR  |
|------------------------------|------|------|------|-------|------|------|------|-------|------|------|------|------|
| Lane Configurations          | ↔    | ↕    | ↔    | ↔     | ↕    | ↔    | ↔    | ↕     | ↔    | ↔    | ↕    | ↔    |
| Traffic Volume (veh/h)       | 141  | 387  | 309  | 57    | 176  | 80   | 169  | 447   | 99   | 102  | 650  | 66   |
| Future Volume (veh/h)        | 141  | 387  | 309  | 57    | 176  | 80   | 169  | 447   | 99   | 102  | 650  | 66   |
| Initial Q (Ob), veh          | 0    | 0    | 0    | 0     | 0    | 0    | 0    | 0     | 0    | 0    | 0    | 0    |
| Ped-Bike Adj(A_pbT)          | 1.00 |      | 1.00 | 1.00  |      | 1.00 | 1.00 |       | 1.00 | 1.00 |      | 1.00 |
| Parking Bus, Adj             | 1.00 | 1.00 | 1.00 | 1.00  | 1.00 | 1.00 | 1.00 | 1.00  | 1.00 | 1.00 | 1.00 | 1.00 |
| Work Zone On Approach        | No   |      | No   |       | No   |      | No   |       | No   |      | No   |      |
| Adj Sat Flow, veh/h/ln       | 1781 | 1781 | 1781 | 1781  | 1781 | 1781 | 1781 | 1781  | 1781 | 1781 | 1781 | 1781 |
| Adj Flow Rate, veh/h         | 153  | 421  | 336  | 62    | 191  | 87   | 184  | 486   | 108  | 111  | 707  | 72   |
| Peak Hour Factor             | 0.92 | 0.92 | 0.92 | 0.92  | 0.92 | 0.92 | 0.92 | 0.92  | 0.92 | 0.92 | 0.92 | 0.92 |
| Percent Heavy Veh, %         | 8    | 8    | 8    | 8     | 8    | 8    | 8    | 8     | 8    | 8    | 8    | 8    |
| Cap, veh/h                   | 507  | 829  | 657  | 276   | 1057 | 463  | 290  | 1668  | 362  | 305  | 903  | 92   |
| Arrive On Green              | 0.46 | 0.46 | 0.46 | 0.46  | 0.46 | 0.46 | 0.09 | 0.42  | 0.42 | 0.29 | 0.29 | 0.29 |
| Sat Flow, veh/h              | 1049 | 1795 | 1423 | 674   | 2290 | 1003 | 1697 | 4001  | 867  | 784  | 3101 | 316  |
| Grp Volume(v), veh/h         | 153  | 397  | 360  | 62    | 139  | 139  | 184  | 391   | 203  | 111  | 386  | 393  |
| Grp Sat Flow(s),veh/h/ln     | 1049 | 1692 | 1525 | 674   | 1692 | 1601 | 1697 | 1621  | 1625 | 784  | 1692 | 1725 |
| Q Serve(g_s), s              | 9.5  | 15.5 | 15.6 | 6.7   | 4.5  | 4.8  | 6.8  | 7.5   | 7.8  | 11.0 | 19.7 | 19.7 |
| Cycle Q Clear(g_c), s        | 14.3 | 15.5 | 15.6 | 22.4  | 4.5  | 4.8  | 6.8  | 7.5   | 7.8  | 11.0 | 19.7 | 19.7 |
| Prop In Lane                 | 1.00 |      | 0.93 | 1.00  |      | 0.63 | 1.00 |       | 0.53 | 1.00 |      | 0.18 |
| Lane Grp Cap(c), veh/h       | 507  | 781  | 704  | 276   | 781  | 739  | 290  | 1352  | 678  | 305  | 493  | 502  |
| V/C Ratio(X)                 | 0.30 | 0.51 | 0.51 | 0.22  | 0.18 | 0.19 | 0.63 | 0.29  | 0.30 | 0.36 | 0.78 | 0.78 |
| Avail Cap(c_a), veh/h        | 507  | 781  | 704  | 276   | 781  | 739  | 329  | 1352  | 678  | 305  | 493  | 502  |
| HCM Platoon Ratio            | 1.00 | 1.00 | 1.00 | 1.00  | 1.00 | 1.00 | 1.00 | 1.00  | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(I)           | 1.00 | 1.00 | 1.00 | 1.00  | 1.00 | 1.00 | 1.00 | 1.00  | 1.00 | 1.00 | 1.00 | 1.00 |
| Uniform Delay (d), s/veh     | 19.1 | 17.8 | 17.8 | 25.7  | 14.8 | 14.9 | 22.0 | 18.2  | 18.2 | 27.5 | 30.6 | 30.6 |
| Incr Delay (d2), s/veh       | 1.5  | 2.4  | 2.6  | 1.9   | 0.5  | 0.6  | 3.3  | 0.5   | 1.1  | 3.3  | 11.7 | 11.6 |
| Initial Q Delay(d3),s/veh    | 0.0  | 0.0  | 0.0  | 0.0   | 0.0  | 0.0  | 0.0  | 0.0   | 0.0  | 0.0  | 0.0  | 0.0  |
| %ile BackOfQ(50%),veh/ln     | 2.5  | 6.3  | 5.8  | 1.2   | 1.8  | 1.8  | 2.9  | 2.8   | 3.1  | 2.3  | 9.4  | 9.6  |
| Unsig. Movement Delay, s/veh |      |      |      |       |      |      |      |       |      |      |      |      |
| LnGrp Delay(d),s/veh         | 20.6 | 20.1 | 20.5 | 27.6  | 15.3 | 15.5 | 25.3 | 18.7  | 19.4 | 30.8 | 42.3 | 42.2 |
| LnGrp LOS                    | C    | C    | C    | C     | B    | B    | C    | B     | B    | C    | D    | D    |
| Approach Vol, veh/h          |      | 910  |      |       | 340  |      |      | 778   |      |      | 890  |      |
| Approach Delay, s/veh        |      | 20.4 |      |       | 17.6 |      |      | 20.4  |      |      | 40.8 |      |
| Approach LOS                 |      | C    |      |       | B    |      |      | C     |      |      | D    |      |
| Timer - Assigned Phs         |      | 2    |      | 4     | 5    | 6    |      | 8     |      |      |      |      |
| Phs Duration (G+Y+Rc), s     |      | 45.0 |      |       | 49.0 | 11.8 |      | 33.2  |      |      | 49.0 |      |
| Change Period (Y+Rc), s      |      | 5.8  |      | * 5.6 | 3.0  | 5.8  |      | * 5.6 |      |      | 5.8  |      |
| Max Green Setting (Gmax), s  |      | 39.2 |      | * 43  | 11.0 | 25.2 |      | * 43  |      |      | 37   |      |
| Max Q Clear Time (g_c+I1), s |      | 9.8  |      | 17.6  | 8.8  | 21.7 |      | 24.4  |      |      | 19.1 |      |
| Green Ext Time (p_c), s      |      | 4.3  |      | 6.3   | 0.1  | 1.8  |      | 2.0   |      |      | 2.9  |      |

| Intersection Summary |      |
|----------------------|------|
| HCM 6th Ctrl Delay   | 26.3 |
| HCM 6th LOS          | C    |

Notes  
\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Deer Valley 30  
6: Pinnacle Peak Rd & 19th Ave

2024 Total PM Scenario B  
HCM 6th Signalized Intersection Summary

| Movement                     | EBL  | EBT  | EBR  | WBL   | WBT  | WBR  | NBL  | NBT   | NBR  | SBL  | SBT  | SBR  |
|------------------------------|------|------|------|-------|------|------|------|-------|------|------|------|------|
| Lane Configurations          | ↔    | ↕    | ↔    | ↔     | ↕    | ↔    | ↔    | ↕     | ↔    | ↔    | ↕    | ↔    |
| Traffic Volume (veh/h)       | 86   | 145  | 246  | 57    | 327  | 81   | 408  | 806   | 29   | 65   | 577  | 127  |
| Future Volume (veh/h)        | 86   | 145  | 246  | 57    | 327  | 81   | 408  | 806   | 29   | 65   | 577  | 127  |
| Initial Q (Ob), veh          | 0    | 0    | 0    | 0     | 0    | 0    | 0    | 0     | 0    | 0    | 0    | 0    |
| Ped-Bike Adj(A_pbT)          | 1.00 |      | 1.00 | 1.00  |      | 1.00 | 1.00 |       | 1.00 | 1.00 |      | 1.00 |
| Parking Bus, Adj             | 1.00 | 1.00 | 1.00 | 1.00  | 1.00 | 1.00 | 1.00 | 1.00  | 1.00 | 1.00 | 1.00 | 1.00 |
| Work Zone On Approach        | No   |      | No   |       | No   |      | No   |       | No   |      | No   |      |
| Adj Sat Flow, veh/h/ln       | 1781 | 1781 | 1781 | 1781  | 1781 | 1781 | 1781 | 1781  | 1781 | 1781 | 1781 | 1781 |
| Adj Flow Rate, veh/h         | 93   | 158  | 267  | 62    | 355  | 88   | 443  | 876   | 32   | 71   | 627  | 29   |
| Peak Hour Factor             | 0.92 | 0.92 | 0.92 | 0.92  | 0.92 | 0.92 | 0.92 | 0.92  | 0.92 | 0.92 | 0.92 | 0.92 |
| Percent Heavy Veh, %         | 8    | 8    | 8    | 8     | 8    | 8    | 8    | 8     | 8    | 8    | 8    | 8    |
| Cap, veh/h                   | 352  | 673  | 601  | 323   | 1072 | 263  | 463  | 2316  | 84   | 227  | 848  | 39   |
| Arrive On Green              | 0.40 | 0.40 | 0.40 | 0.40  | 0.40 | 0.40 | 0.19 | 0.48  | 0.48 | 0.26 | 0.26 | 0.26 |
| Sat Flow, veh/h              | 902  | 1692 | 1510 | 917   | 2695 | 660  | 1697 | 4816  | 176  | 585  | 3294 | 152  |
| Grp Volume(v), veh/h         | 93   | 158  | 267  | 62    | 221  | 222  | 443  | 589   | 319  | 71   | 322  | 334  |
| Grp Sat Flow(s),veh/h/ln     | 902  | 1692 | 1510 | 917   | 1692 | 1663 | 1697 | 1621  | 1750 | 585  | 1692 | 1754 |
| Q Serve(g_s), s              | 7.5  | 5.8  | 12.2 | 5.0   | 8.5  | 8.7  | 17.6 | 10.8  | 10.9 | 9.6  | 16.4 | 16.4 |
| Cycle Q Clear(g_c), s        | 16.2 | 5.8  | 12.2 | 17.1  | 8.5  | 8.7  | 17.6 | 10.8  | 10.9 | 9.6  | 16.4 | 16.4 |
| Prop In Lane                 | 1.00 |      | 1.00 | 1.00  |      | 0.40 | 1.00 |       | 0.10 | 1.00 |      | 0.09 |
| Lane Grp Cap(c), veh/h       | 352  | 673  | 601  | 323   | 673  | 662  | 463  | 1559  | 841  | 227  | 436  | 452  |
| V/C Ratio(X)                 | 0.26 | 0.23 | 0.44 | 0.19  | 0.33 | 0.34 | 0.96 | 0.38  | 0.38 | 0.31 | 0.74 | 0.74 |
| Avail Cap(c_a), veh/h        | 352  | 673  | 601  | 323   | 673  | 662  | 463  | 1559  | 841  | 227  | 436  | 452  |
| HCM Platoon Ratio            | 1.00 | 1.00 | 1.00 | 1.00  | 1.00 | 1.00 | 1.00 | 1.00  | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(I)           | 1.00 | 1.00 | 1.00 | 1.00  | 1.00 | 1.00 | 1.00 | 1.00  | 1.00 | 1.00 | 1.00 | 1.00 |
| Uniform Delay (d), s/veh     | 25.3 | 18.8 | 20.7 | 27.0  | 19.6 | 19.7 | 21.0 | 15.5  | 15.5 | 29.5 | 32.0 | 32.0 |
| Incr Delay (d2), s/veh       | 1.8  | 0.8  | 2.4  | 1.3   | 1.3  | 1.4  | 3.1  | 0.7   | 1.3  | 3.6  | 10.7 | 10.4 |
| Initial Q Delay(d3),s/veh    | 0.0  | 0.0  | 0.0  | 0.0   | 0.0  | 0.0  | 0.0  | 0.0   | 0.0  | 0.0  | 0.0  | 0.0  |
| %ile BackOfQ(50%),veh/ln     | 1.8  | 2.4  | 4.6  | 1.2   | 3.5  | 3.5  | 10.5 | 4.0   | 4.5  | 1.6  | 7.8  | 8.1  |
| Unsig. Movement Delay, s/veh |      |      |      |       |      |      |      |       |      |      |      |      |
| LnGrp Delay(d),s/veh         | 27.1 | 19.6 | 23.1 | 28.3  | 20.9 | 21.0 | 52.1 | 16.2  | 16.8 | 33.1 | 42.7 | 42.4 |
| LnGrp LOS                    | C    | B    | C    | C     | C    | C    | D    | B     | B    | C    | D    | D    |
| Approach Vol, veh/h          |      | 518  |      |       | 505  |      |      | 1351  |      |      | 727  |      |
| Approach Delay, s/veh        |      | 22.7 |      |       | 21.9 |      |      | 28.1  |      |      | 41.6 |      |
| Approach LOS                 |      | C    |      |       | C    |      |      | C     |      |      | D    |      |
| Timer - Assigned Phs         |      | 2    |      | 4     | 5    | 6    |      | 8     |      |      |      |      |
| Phs Duration (G+Y+Rc), s     |      | 51.0 |      |       | 43.0 | 21.0 |      | 30.0  |      |      | 43.0 |      |
| Change Period (Y+Rc), s      |      | 5.8  |      | * 5.6 | 3.0  | 5.8  |      | * 5.6 |      |      | 5.8  |      |
| Max Green Setting (Gmax), s  |      | 45.2 |      | * 37  | 18.0 | 24.2 |      | * 37  |      |      | 37   |      |
| Max Q Clear Time (g_c+I1), s |      | 12.9 |      | 18.2  | 19.6 | 18.4 |      | 19.1  |      |      | 19.1 |      |
| Green Ext Time (p_c), s      |      | 7.1  |      | 3.1   | 0.0  | 2.3  |      | 2.9   |      |      | 2.9  |      |

| Intersection Summary |      |
|----------------------|------|
| HCM 6th Ctrl Delay   | 29.4 |
| HCM 6th LOS          | C    |

Notes  
User approved pedestrian interval to be less than phase max green.  
\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Deer Valley 30  
7: 15th Ave & Happy Valley Rd

2024 Total AM Scenario B  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Int Delay, s/veh         | 0.9  |      |      |      |      |      |      |      |      |      |      |      |
| Movement                 | EBL  | EBT  | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
| Lane Configurations      | ↕    |      | ↕    |      | ↕    |      | ↕    |      | ↕    |      | ↕    |      |
| Traffic Vol, veh/h       | 6    | 491  | 23   | 14   | 370  | 0    | 19   | 0    | 10   | 2    | 0    | 6    |
| Future Vol, veh/h        | 6    | 491  | 23   | 14   | 370  | 0    | 19   | 0    | 10   | 2    | 0    | 6    |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Free | Free | Free | Free | Free | Free | Stop | Stop | Stop | Stop | Stop | Stop |
| RT Channelized           | -    | -    | None | -    | -    | None | -    | -    | None | -    | -    | None |
| Storage Length           | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    |
| Veh in Median Storage, # | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Grade, %                 | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Peak Hour Factor         | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   |
| Heavy Vehicles, %        | 8    | 8    | 8    | 8    | 8    | 8    | 8    | 8    | 8    | 8    | 8    | 8    |
| Mvmt Flow                | 7    | 534  | 25   | 15   | 402  | 0    | 21   | 0    | 11   | 2    | 0    | 7    |

| Major/Minor          | Major1 | Major2 | Minor1 | Minor2 |
|----------------------|--------|--------|--------|--------|
| Conflicting Flow All | 402    | 0      | 559    | 0      |
| Stage 1              | -      | -      | -      | -      |
| Stage 2              | -      | -      | -      | -      |
| Critical Hdwy        | 4.18   | -      | 4.18   | -      |
| Critical Hdwy Stg 1  | -      | -      | -      | -      |
| Critical Hdwy Stg 2  | -      | -      | -      | -      |
| Follow-up Hdwy       | 2.272  | -      | 2.272  | -      |
| Pot Cap-1 Maneuver   | 1125   | -      | 983    | -      |
| Stage 1              | -      | -      | -      | -      |
| Stage 2              | -      | -      | -      | -      |
| Platoon blocked, %   | -      | -      | -      | -      |
| Mov Cap-1 Maneuver   | 1125   | -      | 983    | -      |
| Mov Cap-2 Maneuver   | -      | -      | -      | -      |
| Stage 1              | -      | -      | -      | -      |
| Stage 2              | -      | -      | -      | -      |

| Approach             | EB  | WB  | NB   | SB   |
|----------------------|-----|-----|------|------|
| HCM Control Delay, s | 0.1 | 0.3 | 20.4 | 13.8 |
| HCM LOS              | C   |     | B    |      |

| Minor Lane/Major Mvmt | NBLn1 | EBL   | EBT | EBR | WBL   | WBT | WBR | SBLn1 |
|-----------------------|-------|-------|-----|-----|-------|-----|-----|-------|
| Capacity (veh/h)      | 265   | 1125  | -   | -   | 983   | -   | -   | 420   |
| HCM Lane V/C Ratio    | 0.119 | 0.006 | -   | -   | 0.015 | -   | -   | 0.021 |
| HCM Control Delay (s) | 20.4  | 8.2   | 0   | -   | 8.7   | 0   | -   | 13.8  |
| HCM Lane LOS          | C     | A     | A   | -   | A     | A   | -   | B     |
| HCM 95th %tile Q(veh) | 0.4   | 0     | -   | -   | 0     | -   | -   | 0.1   |

Deer Valley 30  
7: 15th Ave & Happy Valley Rd

2024 Total PM Scenario B  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Int Delay, s/veh         | 1.1  |      |      |      |      |      |      |      |      |      |      |      |
| Movement                 | EBL  | EBT  | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
| Lane Configurations      | ↕    |      | ↕    |      | ↕    |      | ↕    |      | ↕    |      | ↕    |      |
| Traffic Vol, veh/h       | 2    | 507  | 3    | 8    | 930  | 0    | 20   | 0    | 17   | 0    | 0    | 1    |
| Future Vol, veh/h        | 2    | 507  | 3    | 8    | 930  | 0    | 20   | 0    | 17   | 0    | 0    | 1    |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Free | Free | Free | Free | Free | Free | Stop | Stop | Stop | Stop | Stop | Stop |
| RT Channelized           | -    | -    | None | -    | -    | None | -    | -    | None | -    | -    | None |
| Storage Length           | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    |
| Veh in Median Storage, # | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Grade, %                 | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Peak Hour Factor         | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   |
| Heavy Vehicles, %        | 8    | 8    | 8    | 8    | 8    | 8    | 8    | 8    | 8    | 8    | 8    | 8    |
| Mvmt Flow                | 2    | 551  | 3    | 9    | 1011 | 0    | 22   | 0    | 18   | 0    | 0    | 1    |

| Major/Minor          | Major1 | Major2 | Minor1 | Minor2 |
|----------------------|--------|--------|--------|--------|
| Conflicting Flow All | 1011   | 0      | 554    | 0      |
| Stage 1              | -      | -      | -      | -      |
| Stage 2              | -      | -      | -      | -      |
| Critical Hdwy        | 4.18   | -      | 4.18   | -      |
| Critical Hdwy Stg 1  | -      | -      | -      | -      |
| Critical Hdwy Stg 2  | -      | -      | -      | -      |
| Follow-up Hdwy       | 2.272  | -      | 2.272  | -      |
| Pot Cap-1 Maneuver   | 663    | -      | 987    | -      |
| Stage 1              | -      | -      | -      | -      |
| Stage 2              | -      | -      | -      | -      |
| Platoon blocked, %   | -      | -      | -      | -      |
| Mov Cap-1 Maneuver   | 663    | -      | 987    | -      |
| Mov Cap-2 Maneuver   | -      | -      | -      | -      |
| Stage 1              | -      | -      | -      | -      |
| Stage 2              | -      | -      | -      | -      |

| Approach             | EB | WB  | NB | SB   |
|----------------------|----|-----|----|------|
| HCM Control Delay, s | 0  | 0.1 | 43 | 17.8 |
| HCM LOS              | E  |     | C  |      |

| Minor Lane/Major Mvmt | NBLn1 | EBL   | EBT | EBR | WBL   | WBT | WBR | SBLn1 |
|-----------------------|-------|-------|-----|-----|-------|-----|-----|-------|
| Capacity (veh/h)      | 134   | 663   | -   | -   | 987   | -   | -   | 283   |
| HCM Lane V/C Ratio    | 0.3   | 0.003 | -   | -   | 0.009 | -   | -   | 0.004 |
| HCM Control Delay (s) | 43    | 10.4  | 0   | -   | 8.7   | 0   | -   | 17.8  |
| HCM Lane LOS          | E     | B     | A   | -   | A     | A   | -   | C     |
| HCM 95th %tile Q(veh) | 1.2   | 0     | -   | -   | 0     | -   | -   | 0     |

Deer Valley 30  
8: 7th Ave & Happy Valley Rd

2024 Total AM Scenario B  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh         | 0.6  |      |      |      |      |      |
| Movement                 | EBT  | EBR  | WBL  | WBT  | NBL  | NBR  |
| Lane Configurations      | ↻    |      |      | ↻    | ↻    | ↻    |
| Traffic Vol, veh/h       | 513  | 24   | 9    | 313  | 17   | 10   |
| Future Vol, veh/h        | 513  | 24   | 9    | 313  | 17   | 10   |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Free | Free | Free | Free | Stop | Stop |
| RT Channelized           | -    | None | -    | None | -    | None |
| Storage Length           | -    | -    | -    | -    | -    | -    |
| Veh in Median Storage, # | 0    | -    | -    | 0    | 0    | -    |
| Grade, %                 | 0    | -    | -    | 0    | 0    | -    |
| Peak Hour Factor         | 92   | 92   | 92   | 92   | 92   | 92   |
| Heavy Vehicles, %        | 8    | 8    | 8    | 8    | 8    | 8    |
| Mvmt Flow                | 558  | 26   | 10   | 340  | 18   | 11   |

| Major/Minor          | Major1 | Major2 | Minor1 |   |       |
|----------------------|--------|--------|--------|---|-------|
| Conflicting Flow All | 0      | 0      | 584    | 0 | 931   |
| Stage 1              | -      | -      | -      | - | 571   |
| Stage 2              | -      | -      | -      | - | 360   |
| Critical Hdwy        | -      | -      | 4.18   | - | 6.48  |
| Critical Hdwy Stg 1  | -      | -      | -      | - | 5.48  |
| Critical Hdwy Stg 2  | -      | -      | -      | - | 5.48  |
| Follow-up Hdwy       | -      | -      | 2.272  | - | 3.572 |
| Pot Cap-1 Maneuver   | -      | -      | 962    | - | 289   |
| Stage 1              | -      | -      | -      | - | 554   |
| Stage 2              | -      | -      | -      | - | 693   |
| Platoon blocked, %   | -      | -      | -      | - | -     |
| Mov Cap-1 Maneuver   | -      | -      | 962    | - | 285   |
| Mov Cap-2 Maneuver   | -      | -      | -      | - | 285   |
| Stage 1              | -      | -      | -      | - | 554   |
| Stage 2              | -      | -      | -      | - | 684   |

| Approach             | EB | WB  | NB   |
|----------------------|----|-----|------|
| HCM Control Delay, s | 0  | 0.2 | 16.6 |
| HCM LOS              |    |     | C    |

| Minor Lane/Major Mvmt | NBLn1 | EBT | EBR | WBL  | WBT |
|-----------------------|-------|-----|-----|------|-----|
| Capacity (veh/h)      | 340   | -   | -   | 962  | -   |
| HCM Lane V/C Ratio    | 0.086 | -   | -   | 0.01 | -   |
| HCM Control Delay (s) | 16.6  | -   | -   | 8.8  | 0   |
| HCM Lane LOS          | C     | -   | -   | A    | A   |
| HCM 95th %tile Q(veh) | 0.3   | -   | -   | 0    | -   |

Deer Valley 30  
8: 7th Ave & Happy Valley Rd

2024 Total PM Scenario B  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh         | 1.8  |      |      |      |      |      |
| Movement                 | EBT  | EBR  | WBL  | WBT  | NBL  | NBR  |
| Lane Configurations      | ↻    |      |      | ↻    | ↻    | ↻    |
| Traffic Vol, veh/h       | 499  | 37   | 19   | 857  | 41   | 11   |
| Future Vol, veh/h        | 499  | 37   | 19   | 857  | 41   | 11   |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Free | Free | Free | Free | Stop | Stop |
| RT Channelized           | -    | None | -    | None | -    | None |
| Storage Length           | -    | -    | -    | -    | -    | -    |
| Veh in Median Storage, # | 0    | -    | -    | 0    | 0    | -    |
| Grade, %                 | 0    | -    | -    | 0    | 0    | -    |
| Peak Hour Factor         | 92   | 92   | 92   | 92   | 92   | 92   |
| Heavy Vehicles, %        | 8    | 8    | 8    | 8    | 8    | 8    |
| Mvmt Flow                | 542  | 40   | 21   | 932  | 45   | 12   |

| Major/Minor          | Major1 | Major2 | Minor1 |   |       |
|----------------------|--------|--------|--------|---|-------|
| Conflicting Flow All | 0      | 0      | 582    | 0 | 1536  |
| Stage 1              | -      | -      | -      | - | 562   |
| Stage 2              | -      | -      | -      | - | 974   |
| Critical Hdwy        | -      | -      | 4.18   | - | 6.48  |
| Critical Hdwy Stg 1  | -      | -      | -      | - | 5.48  |
| Critical Hdwy Stg 2  | -      | -      | -      | - | 5.48  |
| Follow-up Hdwy       | -      | -      | 2.272  | - | 3.572 |
| Pot Cap-1 Maneuver   | -      | -      | 963    | - | 124   |
| Stage 1              | -      | -      | -      | - | 559   |
| Stage 2              | -      | -      | -      | - | 357   |
| Platoon blocked, %   | -      | -      | -      | - | -     |
| Mov Cap-1 Maneuver   | -      | -      | 963    | - | 118   |
| Mov Cap-2 Maneuver   | -      | -      | -      | - | 118   |
| Stage 1              | -      | -      | -      | - | 559   |
| Stage 2              | -      | -      | -      | - | 341   |

| Approach             | EB | WB  | NB   |
|----------------------|----|-----|------|
| HCM Control Delay, s | 0  | 0.2 | 46.7 |
| HCM LOS              |    |     | E    |

| Minor Lane/Major Mvmt | NBLn1 | EBT | EBR | WBL   | WBT |
|-----------------------|-------|-----|-----|-------|-----|
| Capacity (veh/h)      | 141   | -   | -   | 963   | -   |
| HCM Lane V/C Ratio    | 0.401 | -   | -   | 0.021 | -   |
| HCM Control Delay (s) | 46.7  | -   | -   | 8.8   | 0   |
| HCM Lane LOS          | E     | -   | -   | A     | A   |
| HCM 95th %tile Q(veh) | 1.7   | -   | -   | 0.1   | -   |

Deer Valley 30  
9: 7th Ave & Pinnacle Peak Rd

2024 Total AM Scenario B  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Int Delay, s/veh         | 2.1  |      |      |      |      |      |      |      |      |      |      |      |
| Movement                 | EBL  | EBT  | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
| Lane Configurations      | ↔    | ↕    | ↔    | ↔    | ↔    | ↔    | ↔    | ↔    | ↔    | ↔    | ↔    | ↔    |
| Traffic Vol, veh/h       | 0    | 194  | 120  | 34   | 239  | 0    | 60   | 0    | 29   | 0    | 0    | 0    |
| Future Vol, veh/h        | 0    | 194  | 120  | 34   | 239  | 0    | 60   | 0    | 29   | 0    | 0    | 0    |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Free | Free | Free | Free | Free | Free | Stop | Stop | Stop | Stop | Stop | Stop |
| RT Channelized           | -    | -    | None | -    | -    | None | -    | -    | None | -    | -    | None |
| Storage Length           | 150  | -    | 170  | 150  | -    | -    | 150  | -    | -    | 150  | -    | -    |
| Veh in Median Storage, # | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Grade, %                 | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Peak Hour Factor         | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   |
| Heavy Vehicles, %        | 8    | 8    | 8    | 8    | 8    | 8    | 8    | 8    | 8    | 8    | 8    | 8    |
| Mvmt Flow                | 0    | 211  | 130  | 37   | 260  | 0    | 65   | 0    | 32   | 0    | 0    | 0    |

| Major/Minor          | Major1 | Major2 | Minor1 | Minor2 |
|----------------------|--------|--------|--------|--------|
| Conflicting Flow All | 260    | 0      | 0      | 341    |
| Stage 1              | -      | -      | -      | -      |
| Stage 2              | -      | -      | -      | -      |
| Critical Hdwy        | 4.18   | -      | -      | 4.18   |
| Critical Hdwy Stg 1  | -      | -      | -      | -      |
| Critical Hdwy Stg 2  | -      | -      | -      | -      |
| Follow-up Hdwy       | 2.272  | -      | -      | 2.272  |
| Pot Cap-1 Maneuver   | 1270   | -      | -      | 1185   |
| Stage 1              | -      | -      | -      | -      |
| Stage 2              | -      | -      | -      | -      |
| Platoon blocked, %   | -      | -      | -      | -      |
| Mov Cap-1 Maneuver   | 1270   | -      | -      | 1185   |
| Mov Cap-2 Maneuver   | -      | -      | -      | -      |
| Stage 1              | -      | -      | -      | -      |
| Stage 2              | -      | -      | -      | -      |

| Approach             | EB | WB | NB   | SB |
|----------------------|----|----|------|----|
| HCM Control Delay, s | 0  | 1  | 13.2 | 0  |
| HCM LOS              |    |    | B    | A  |

| Minor Lane/Major Mvmt | NBLn1 | NBLn2 | EBL  | EBT | EBR | WBL   | WBT | WBR | SBLn1 | SBLn2 |
|-----------------------|-------|-------|------|-----|-----|-------|-----|-----|-------|-------|
| Capacity (veh/h)      | 429   | 814   | 1270 | -   | -   | 1185  | -   | -   | -     | -     |
| HCM Lane V/C Ratio    | 0.152 | 0.039 | -    | -   | -   | 0.031 | -   | -   | -     | -     |
| HCM Control Delay (s) | 14.9  | 9.6   | 0    | -   | -   | 8.1   | -   | -   | 0     | 0     |
| HCM Lane LOS          | B     | A     | A    | -   | -   | A     | -   | -   | A     | A     |
| HCM 95th %tile Q(veh) | 0.5   | 0.1   | 0    | -   | -   | 0.1   | -   | -   | -     | -     |

Deer Valley 30  
9: 7th Ave & Pinnacle Peak Rd

2024 Total PM Scenario B  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Int Delay, s/veh         | 2.3  |      |      |      |      |      |      |      |      |      |      |      |
| Movement                 | EBL  | EBT  | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
| Lane Configurations      | ↔    | ↕    | ↔    | ↔    | ↔    | ↔    | ↔    | ↔    | ↔    | ↔    | ↔    | ↔    |
| Traffic Vol, veh/h       | 0    | 261  | 52   | 31   | 196  | 0    | 59   | 0    | 29   | 0    | 0    | 0    |
| Future Vol, veh/h        | 0    | 261  | 52   | 31   | 196  | 0    | 59   | 0    | 29   | 0    | 0    | 0    |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Free | Free | Free | Free | Free | Free | Stop | Stop | Stop | Stop | Stop | Stop |
| RT Channelized           | -    | -    | None | -    | -    | None | -    | -    | None | -    | -    | None |
| Storage Length           | 150  | -    | 170  | 150  | -    | -    | 150  | -    | -    | 150  | -    | -    |
| Veh in Median Storage, # | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Grade, %                 | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Peak Hour Factor         | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   |
| Heavy Vehicles, %        | 8    | 8    | 8    | 8    | 8    | 8    | 8    | 8    | 8    | 8    | 8    | 8    |
| Mvmt Flow                | 0    | 284  | 57   | 34   | 213  | 0    | 64   | 0    | 32   | 0    | 0    | 0    |

| Major/Minor          | Major1 | Major2 | Minor1 | Minor2 |
|----------------------|--------|--------|--------|--------|
| Conflicting Flow All | 213    | 0      | 0      | 341    |
| Stage 1              | -      | -      | -      | -      |
| Stage 2              | -      | -      | -      | -      |
| Critical Hdwy        | 4.18   | -      | -      | 4.18   |
| Critical Hdwy Stg 1  | -      | -      | -      | -      |
| Critical Hdwy Stg 2  | -      | -      | -      | -      |
| Follow-up Hdwy       | 2.272  | -      | -      | 2.272  |
| Pot Cap-1 Maneuver   | 1322   | -      | -      | 1185   |
| Stage 1              | -      | -      | -      | -      |
| Stage 2              | -      | -      | -      | -      |
| Platoon blocked, %   | -      | -      | -      | -      |
| Mov Cap-1 Maneuver   | 1322   | -      | -      | 1185   |
| Mov Cap-2 Maneuver   | -      | -      | -      | -      |
| Stage 1              | -      | -      | -      | -      |
| Stage 2              | -      | -      | -      | -      |

| Approach             | EB | WB  | NB   | SB |
|----------------------|----|-----|------|----|
| HCM Control Delay, s | 0  | 1.1 | 13.5 | 0  |
| HCM LOS              |    |     | B    | A  |

| Minor Lane/Major Mvmt | NBLn1 | NBLn2 | EBL  | EBT | EBR | WBL   | WBT | WBR | SBLn1 | SBLn2 |
|-----------------------|-------|-------|------|-----|-----|-------|-----|-----|-------|-------|
| Capacity (veh/h)      | 418   | 741   | 1322 | -   | -   | 1185  | -   | -   | -     | -     |
| HCM Lane V/C Ratio    | 0.153 | 0.043 | -    | -   | -   | 0.028 | -   | -   | -     | -     |
| HCM Control Delay (s) | 15.2  | 10.1  | 0    | -   | -   | 8.1   | -   | -   | 0     | 0     |
| HCM Lane LOS          | C     | B     | A    | -   | -   | A     | -   | -   | A     | A     |
| HCM 95th %tile Q(veh) | 0.5   | 0.1   | 0    | -   | -   | 0.1   | -   | -   | -     | -     |

Deer Valley 30  
11: 15th Ave & Parkview Ln

2024 Total AM Scenario B  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh         | 0    |      |      |      |      |      |
| Movement                 | EBT  | EBR  | WBL  | WBT  | NBL  | NBR  |
| Lane Configurations      | ↻    |      |      | ↻    | ↻    |      |
| Traffic Vol, veh/h       | 0    | 0    | 0    | 0    | 0    | 0    |
| Future Vol, veh/h        | 0    | 0    | 0    | 0    | 0    | 0    |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Free | Free | Free | Free | Stop | Stop |
| RT Channelized           | -    | None | -    | None | -    | None |
| Storage Length           | -    | -    | -    | -    | 0    | -    |
| Veh in Median Storage, # | 0    | -    | -    | 0    | 0    | -    |
| Grade, %                 | 0    | -    | -    | 0    | 0    | -    |
| Peak Hour Factor         | 92   | 92   | 92   | 92   | 92   | 92   |
| Heavy Vehicles, %        | 8    | 8    | 8    | 8    | 8    | 8    |
| Mvmt Flow                | 0    | 0    | 0    | 0    | 0    | 0    |

| Major/Minor          | Major1 | Major2 | Minor1 |   |       |
|----------------------|--------|--------|--------|---|-------|
| Conflicting Flow All | 0      | 0      | 1      | 0 | 2     |
| Stage 1              | -      | -      | -      | - | 1     |
| Stage 2              | -      | -      | -      | - | 1     |
| Critical Hdwy        | -      | -      | 4.18   | - | 6.48  |
| Critical Hdwy Stg 1  | -      | -      | -      | - | 5.48  |
| Critical Hdwy Stg 2  | -      | -      | -      | - | 5.48  |
| Follow-up Hdwy       | -      | -      | 2.272  | - | 3.372 |
| Pot Cap-1 Maneuver   | -      | -      | 1583   | - | 1005  |
| Stage 1              | -      | -      | -      | - | 1007  |
| Stage 2              | -      | -      | -      | - | 1007  |
| Platoon blocked, %   | -      | -      | -      | - | -     |
| Mov Cap-1 Maneuver   | -      | -      | 1583   | - | 1005  |
| Mov Cap-2 Maneuver   | -      | -      | -      | - | 1005  |
| Stage 1              | -      | -      | -      | - | 1007  |
| Stage 2              | -      | -      | -      | - | 1007  |

| Approach             | EB | WB | NB |
|----------------------|----|----|----|
| HCM Control Delay, s | 0  | 0  | 0  |
| HCM LOS              |    |    | A  |

| Minor Lane/Major Mvmt | NBLn1 | EBT | EBR | WBL  | WBT |
|-----------------------|-------|-----|-----|------|-----|
| Capacity (veh/h)      | -     | -   | -   | 1583 | -   |
| HCM Lane V/C Ratio    | -     | -   | -   | -    | -   |
| HCM Control Delay (s) | 0     | -   | -   | 0    | -   |
| HCM Lane LOS          | A     | -   | -   | A    | -   |
| HCM 95th %tile Q(veh) | -     | -   | -   | 0    | -   |

Deer Valley 30  
11: 15th Ave & Parkview Ln

2024 Total PM Scenario B  
HCM 6th TWSC

| Intersection             |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh         | 0    |      |      |      |      |      |
| Movement                 | EBT  | EBR  | WBL  | WBT  | NBL  | NBR  |
| Lane Configurations      | ↻    |      |      | ↻    | ↻    |      |
| Traffic Vol, veh/h       | 0    | 0    | 0    | 0    | 0    | 0    |
| Future Vol, veh/h        | 0    | 0    | 0    | 0    | 0    | 0    |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Free | Free | Free | Free | Stop | Stop |
| RT Channelized           | -    | None | -    | None | -    | None |
| Storage Length           | -    | -    | -    | -    | 0    | -    |
| Veh in Median Storage, # | 0    | -    | -    | 0    | 0    | -    |
| Grade, %                 | 0    | -    | -    | 0    | 0    | -    |
| Peak Hour Factor         | 92   | 92   | 92   | 92   | 92   | 92   |
| Heavy Vehicles, %        | 8    | 8    | 8    | 8    | 8    | 8    |
| Mvmt Flow                | 0    | 0    | 0    | 0    | 0    | 0    |

| Major/Minor          | Major1 | Major2 | Minor1 |   |       |
|----------------------|--------|--------|--------|---|-------|
| Conflicting Flow All | 0      | 0      | 1      | 0 | 2     |
| Stage 1              | -      | -      | -      | - | 1     |
| Stage 2              | -      | -      | -      | - | 1     |
| Critical Hdwy        | -      | -      | 4.18   | - | 6.48  |
| Critical Hdwy Stg 1  | -      | -      | -      | - | 5.48  |
| Critical Hdwy Stg 2  | -      | -      | -      | - | 5.48  |
| Follow-up Hdwy       | -      | -      | 2.272  | - | 3.372 |
| Pot Cap-1 Maneuver   | -      | -      | 1583   | - | 1005  |
| Stage 1              | -      | -      | -      | - | 1007  |
| Stage 2              | -      | -      | -      | - | 1007  |
| Platoon blocked, %   | -      | -      | -      | - | -     |
| Mov Cap-1 Maneuver   | -      | -      | 1583   | - | 1005  |
| Mov Cap-2 Maneuver   | -      | -      | -      | - | 1005  |
| Stage 1              | -      | -      | -      | - | 1007  |
| Stage 2              | -      | -      | -      | - | 1007  |

| Approach             | EB | WB | NB |
|----------------------|----|----|----|
| HCM Control Delay, s | 0  | 0  | 0  |
| HCM LOS              |    |    | A  |

| Minor Lane/Major Mvmt | NBLn1 | EBT | EBR | WBL  | WBT |
|-----------------------|-------|-----|-----|------|-----|
| Capacity (veh/h)      | -     | -   | -   | 1583 | -   |
| HCM Lane V/C Ratio    | -     | -   | -   | -    | -   |
| HCM Control Delay (s) | 0     | -   | -   | 0    | -   |
| HCM Lane LOS          | A     | -   | -   | A    | -   |
| HCM 95th %tile Q(veh) | -     | -   | -   | 0    | -   |

Deer Valley 30  
12: Alameda Rd & Access A

2024 Total AM Scenario B  
HCM 6th TWSC

| Intersection             |        |        |        |       |       |       |
|--------------------------|--------|--------|--------|-------|-------|-------|
| Int Delay, s/veh         | 1.2    |        |        |       |       |       |
| Movement                 | EBL    | EBT    | WBT    | WBR   | SBL   | SBR   |
| Lane Configurations      |        | ↕      | ↕      |       | ↕     | ↕     |
| Traffic Vol, veh/h       | 30     | 152    | 23     | 0     | 0     | 5     |
| Future Vol, veh/h        | 30     | 152    | 23     | 0     | 0     | 5     |
| Conflicting Peds, #/hr   | 0      | 0      | 0      | 0     | 0     | 0     |
| Sign Control             | Free   | Free   | Free   | Free  | Stop  | Stop  |
| RT Channelized           | -      | None   | -      | None  | -     | None  |
| Storage Length           | -      | -      | -      | -     | 0     | -     |
| Veh in Median Storage, # | -      | 0      | 0      | -     | 0     | -     |
| Grade, %                 | -      | 0      | 0      | -     | 0     | -     |
| Peak Hour Factor         | 92     | 92     | 92     | 92    | 92    | 92    |
| Heavy Vehicles, %        | 8      | 8      | 8      | 8     | 8     | 8     |
| Mvmt Flow                | 33     | 165    | 25     | 0     | 0     | 5     |
| Major/Minor              | Major1 | Major2 | Minor2 |       |       |       |
| Conflicting Flow All     | 25     | 0      | 0      | 256   | 25    |       |
| Stage 1                  | -      | -      | -      | 25    | -     |       |
| Stage 2                  | -      | -      | -      | 231   | -     |       |
| Critical Hdwy            | 4.18   | -      | -      | 6.48  | 6.28  |       |
| Critical Hdwy Stg 1      | -      | -      | -      | 5.48  | -     |       |
| Critical Hdwy Stg 2      | -      | -      | -      | 5.48  | -     |       |
| Follow-up Hdwy           | 2.272  | -      | -      | 3.572 | 3.372 |       |
| Pot Cap-1 Maneuver       | 1551   | -      | -      | 720   | 1034  |       |
| Stage 1                  | -      | -      | -      | 982   | -     |       |
| Stage 2                  | -      | -      | -      | 793   | -     |       |
| Platoon blocked, %       | -      | -      | -      | -     | -     |       |
| Mov Cap-1 Maneuver       | 1551   | -      | -      | 703   | 1034  |       |
| Mov Cap-2 Maneuver       | -      | -      | -      | 703   | -     |       |
| Stage 1                  | -      | -      | -      | 959   | -     |       |
| Stage 2                  | -      | -      | -      | 793   | -     |       |
| Approach                 | EB     | WB     | SB     |       |       |       |
| HCM Control Delay, s     | 1.2    | 0      | 8.5    |       |       |       |
| HCM LOS                  |        |        | A      |       |       |       |
| Minor Lane/Major Mvmt    | EBL    | EBT    | WBT    | WBR   | SBLn1 | SBRn1 |
| Capacity (veh/h)         | 1551   | -      | -      | -     | 1034  |       |
| HCM Lane V/C Ratio       | 0.021  | -      | -      | -     | 0.005 |       |
| HCM Control Delay (s)    | 7.4    | 0      | -      | -     | 8.5   |       |
| HCM Lane LOS             | A      | A      | -      | -     | A     |       |
| HCM 95th %tile Q(veh)    | 0.1    | -      | -      | -     | 0     |       |

Deer Valley 30  
12: Alameda Rd & Access A

2024 Total PM Scenario B  
HCM 6th TWSC

| Intersection             |        |        |        |       |       |       |
|--------------------------|--------|--------|--------|-------|-------|-------|
| Int Delay, s/veh         | 1.2    |        |        |       |       |       |
| Movement                 | EBL    | EBT    | WBT    | WBR   | SBL   | SBR   |
| Lane Configurations      |        | ↕      | ↕      |       | ↕     | ↕     |
| Traffic Vol, veh/h       | 3      | 17     | 106    | 0     | 0     | 17    |
| Future Vol, veh/h        | 3      | 17     | 106    | 0     | 0     | 17    |
| Conflicting Peds, #/hr   | 0      | 0      | 0      | 0     | 0     | 0     |
| Sign Control             | Free   | Free   | Free   | Free  | Stop  | Stop  |
| RT Channelized           | -      | None   | -      | None  | -     | None  |
| Storage Length           | -      | -      | -      | -     | 0     | -     |
| Veh in Median Storage, # | -      | 0      | 0      | -     | 0     | -     |
| Grade, %                 | -      | 0      | 0      | -     | 0     | -     |
| Peak Hour Factor         | 92     | 92     | 92     | 92    | 92    | 92    |
| Heavy Vehicles, %        | 8      | 8      | 8      | 8     | 8     | 8     |
| Mvmt Flow                | 3      | 18     | 115    | 0     | 0     | 18    |
| Major/Minor              | Major1 | Major2 | Minor2 |       |       |       |
| Conflicting Flow All     | 115    | 0      | 0      | 139   | 115   |       |
| Stage 1                  | -      | -      | -      | 115   | -     |       |
| Stage 2                  | -      | -      | -      | 24    | -     |       |
| Critical Hdwy            | 4.18   | -      | -      | 6.48  | 6.28  |       |
| Critical Hdwy Stg 1      | -      | -      | -      | 5.48  | -     |       |
| Critical Hdwy Stg 2      | -      | -      | -      | 5.48  | -     |       |
| Follow-up Hdwy           | 2.272  | -      | -      | 3.572 | 3.372 |       |
| Pot Cap-1 Maneuver       | 1437   | -      | -      | 840   | 921   |       |
| Stage 1                  | -      | -      | -      | 895   | -     |       |
| Stage 2                  | -      | -      | -      | 983   | -     |       |
| Platoon blocked, %       | -      | -      | -      | -     | -     |       |
| Mov Cap-1 Maneuver       | 1437   | -      | -      | 838   | 921   |       |
| Mov Cap-2 Maneuver       | -      | -      | -      | 838   | -     |       |
| Stage 1                  | -      | -      | -      | 893   | -     |       |
| Stage 2                  | -      | -      | -      | 983   | -     |       |
| Approach                 | EB     | WB     | SB     |       |       |       |
| HCM Control Delay, s     | 1.1    | 0      | 9      |       |       |       |
| HCM LOS                  |        |        | A      |       |       |       |
| Minor Lane/Major Mvmt    | EBL    | EBT    | WBT    | WBR   | SBLn1 | SBRn1 |
| Capacity (veh/h)         | 1437   | -      | -      | -     | 921   |       |
| HCM Lane V/C Ratio       | 0.002  | -      | -      | -     | 0.02  |       |
| HCM Control Delay (s)    | 7.5    | 0      | -      | -     | 9     |       |
| HCM Lane LOS             | A      | A      | -      | -     | A     |       |
| HCM 95th %tile Q(veh)    | 0      | -      | -      | -     | 0.1   |       |

Deer Valley 30  
13: Alameda Rd & Access B

2024 Total AM Scenario B  
HCM 6th TWSC

| Intersection             |        |        |        |      |       |       |
|--------------------------|--------|--------|--------|------|-------|-------|
| Int Delay, s/veh         | 1.3    |        |        |      |       |       |
| Movement                 | EBL    | EBT    | WBT    | WBR  | SBL   | SBR   |
| Lane Configurations      |        | ↕      | ↕      |      | ↕     |       |
| Traffic Vol, veh/h       | 26     | 126    | 19     | 0    | 0     | 4     |
| Future Vol, veh/h        | 26     | 126    | 19     | 0    | 0     | 4     |
| Conflicting Peds, #/hr   | 0      | 0      | 0      | 0    | 0     | 0     |
| Sign Control             | Free   | Free   | Free   | Free | Stop  | Stop  |
| RT Channelized           | -      | None   | -      | None | -     | None  |
| Storage Length           | -      | -      | -      | -    | 0     | -     |
| Veh in Median Storage, # | -      | 0      | 0      | -    | 0     | -     |
| Grade, %                 | -      | 0      | 0      | -    | 0     | -     |
| Peak Hour Factor         | 92     | 92     | 92     | 92   | 92    | 92    |
| Heavy Vehicles, %        | 8      | 8      | 8      | 8    | 8     | 8     |
| Mvmt Flow                | 28     | 137    | 21     | 0    | 0     | 4     |
| Major/Minor              | Major1 | Major2 | Minor2 |      |       |       |
| Conflicting Flow All     | 21     | 0      | -      | 0    | 214   | 21    |
| Stage 1                  | -      | -      | -      | -    | 21    | -     |
| Stage 2                  | -      | -      | -      | -    | 193   | -     |
| Critical Hdwy            | 4.18   | -      | -      | -    | 6.48  | 6.28  |
| Critical Hdwy Stg 1      | -      | -      | -      | -    | 5.48  | -     |
| Critical Hdwy Stg 2      | -      | -      | -      | -    | 5.48  | -     |
| Follow-up Hdwy           | 2.272  | -      | -      | -    | 3.572 | 3.372 |
| Pot Cap-1 Maneuver       | 1557   | -      | -      | -    | 761   | 1039  |
| Stage 1                  | -      | -      | -      | -    | 986   | -     |
| Stage 2                  | -      | -      | -      | -    | 826   | -     |
| Platoon blocked, %       | -      | -      | -      | -    | -     | -     |
| Mov Cap-1 Maneuver       | 1557   | -      | -      | -    | 747   | 1039  |
| Mov Cap-2 Maneuver       | -      | -      | -      | -    | 747   | -     |
| Stage 1                  | -      | -      | -      | -    | 967   | -     |
| Stage 2                  | -      | -      | -      | -    | 826   | -     |
| Approach                 | EB     | WB     | SB     |      |       |       |
| HCM Control Delay, s     | 1.3    | 0      | 8.5    |      |       |       |
| HCM LOS                  |        |        | A      |      |       |       |
| Minor Lane/Major Mvmt    | EBL    | EBT    | WBT    | WBR  | SBLn1 | SBRn1 |
| Capacity (veh/h)         | 1557   | -      | -      | -    | 1039  | -     |
| HCM Lane V/C Ratio       | 0.018  | -      | -      | -    | 0.004 | -     |
| HCM Control Delay (s)    | 7.4    | 0      | -      | -    | 8.5   | -     |
| HCM Lane LOS             | A      | A      | -      | -    | A     | -     |
| HCM 95th %tile Q(veh)    | 0.1    | -      | -      | -    | 0     | -     |

Deer Valley 30  
13: Alameda Rd & Access B

2024 Total PM Scenario B  
HCM 6th TWSC

| Intersection             |        |        |        |      |       |       |
|--------------------------|--------|--------|--------|------|-------|-------|
| Int Delay, s/veh         | 1.1    |        |        |      |       |       |
| Movement                 | EBL    | EBT    | WBT    | WBR  | SBL   | SBR   |
| Lane Configurations      |        | ↕      | ↕      |      | ↕     |       |
| Traffic Vol, veh/h       | 2      | 15     | 92     | 0    | 0     | 14    |
| Future Vol, veh/h        | 2      | 15     | 92     | 0    | 0     | 14    |
| Conflicting Peds, #/hr   | 0      | 0      | 0      | 0    | 0     | 0     |
| Sign Control             | Free   | Free   | Free   | Free | Stop  | Stop  |
| RT Channelized           | -      | None   | -      | None | -     | None  |
| Storage Length           | -      | -      | -      | -    | 0     | -     |
| Veh in Median Storage, # | -      | 0      | 0      | -    | 0     | -     |
| Grade, %                 | -      | 0      | 0      | -    | 0     | -     |
| Peak Hour Factor         | 92     | 92     | 92     | 92   | 92    | 92    |
| Heavy Vehicles, %        | 8      | 8      | 8      | 8    | 8     | 8     |
| Mvmt Flow                | 2      | 16     | 100    | 0    | 0     | 15    |
| Major/Minor              | Major1 | Major2 | Minor2 |      |       |       |
| Conflicting Flow All     | 100    | 0      | -      | 0    | 120   | 100   |
| Stage 1                  | -      | -      | -      | -    | 100   | -     |
| Stage 2                  | -      | -      | -      | -    | 20    | -     |
| Critical Hdwy            | 4.18   | -      | -      | -    | 6.48  | 6.28  |
| Critical Hdwy Stg 1      | -      | -      | -      | -    | 5.48  | -     |
| Critical Hdwy Stg 2      | -      | -      | -      | -    | 5.48  | -     |
| Follow-up Hdwy           | 2.272  | -      | -      | -    | 3.572 | 3.372 |
| Pot Cap-1 Maneuver       | 1456   | -      | -      | -    | 861   | 939   |
| Stage 1                  | -      | -      | -      | -    | 909   | -     |
| Stage 2                  | -      | -      | -      | -    | 987   | -     |
| Platoon blocked, %       | -      | -      | -      | -    | -     | -     |
| Mov Cap-1 Maneuver       | 1456   | -      | -      | -    | 860   | 939   |
| Mov Cap-2 Maneuver       | -      | -      | -      | -    | 860   | -     |
| Stage 1                  | -      | -      | -      | -    | 908   | -     |
| Stage 2                  | -      | -      | -      | -    | 987   | -     |
| Approach                 | EB     | WB     | SB     |      |       |       |
| HCM Control Delay, s     | 0.9    | 0      | 8.9    |      |       |       |
| HCM LOS                  |        |        | A      |      |       |       |
| Minor Lane/Major Mvmt    | EBL    | EBT    | WBT    | WBR  | SBLn1 | SBRn1 |
| Capacity (veh/h)         | 1456   | -      | -      | -    | 939   | -     |
| HCM Lane V/C Ratio       | 0.001  | -      | -      | -    | 0.016 | -     |
| HCM Control Delay (s)    | 7.5    | 0      | -      | -    | 8.9   | -     |
| HCM Lane LOS             | A      | A      | -      | -    | A     | -     |
| HCM 95th %tile Q(veh)    | 0      | -      | -      | -    | 0     | -     |

Deer Valley 30  
14: Alameda Rd & Access C

2024 Total AM Scenario B  
HCM 6th TWSC

| Intersection             |        |        |        |      |       |       |
|--------------------------|--------|--------|--------|------|-------|-------|
| Int Delay, s/veh         | 1.9    |        |        |      |       |       |
| Movement                 | EBL    | EBT    | WBT    | WBR  | SBL   | SBR   |
| Lane Configurations      |        | ↕      | ↕      |      | ↕     |       |
| Traffic Vol, veh/h       | 33     | 93     | 14     | 0    | 0     | 5     |
| Future Vol, veh/h        | 33     | 93     | 14     | 0    | 0     | 5     |
| Conflicting Peds, #/hr   | 0      | 0      | 0      | 0    | 0     | 0     |
| Sign Control             | Free   | Free   | Free   | Free | Stop  | Stop  |
| RT Channelized           | -      | None   | -      | None | -     | None  |
| Storage Length           | -      | -      | -      | -    | 0     | -     |
| Veh in Median Storage, # | -      | 0      | 0      | -    | 0     | -     |
| Grade, %                 | -      | 0      | 0      | -    | 0     | -     |
| Peak Hour Factor         | 92     | 92     | 92     | 92   | 92    | 92    |
| Heavy Vehicles, %        | 8      | 8      | 8      | 8    | 8     | 8     |
| Mvmt Flow                | 36     | 101    | 15     | 0    | 0     | 5     |
| Major/Minor              | Major1 | Major2 | Minor2 |      |       |       |
| Conflicting Flow All     | 15     | 0      | -      | 0    | 188   | 15    |
| Stage 1                  | -      | -      | -      | -    | 15    | -     |
| Stage 2                  | -      | -      | -      | -    | 173   | -     |
| Critical Hdwy            | 4.18   | -      | -      | -    | 6.48  | 6.28  |
| Critical Hdwy Stg 1      | -      | -      | -      | -    | 5.48  | -     |
| Critical Hdwy Stg 2      | -      | -      | -      | -    | 5.48  | -     |
| Follow-up Hdwy           | 2.272  | -      | -      | -    | 3.572 | 3.372 |
| Pot Cap-1 Maneuver       | 1565   | -      | -      | -    | 788   | 1047  |
| Stage 1                  | -      | -      | -      | -    | 992   | -     |
| Stage 2                  | -      | -      | -      | -    | 843   | -     |
| Platoon blocked, %       | -      | -      | -      | -    | -     | -     |
| Mov Cap-1 Maneuver       | 1565   | -      | -      | -    | 769   | 1047  |
| Mov Cap-2 Maneuver       | -      | -      | -      | -    | 769   | -     |
| Stage 1                  | -      | -      | -      | -    | 968   | -     |
| Stage 2                  | -      | -      | -      | -    | 843   | -     |
| Approach                 | EB     | WB     | SB     |      |       |       |
| HCM Control Delay, s     | 1.9    | 0      | 8.5    |      |       |       |
| HCM LOS                  |        |        | A      |      |       |       |
| Minor Lane/Major Mvmt    | EBL    | EBT    | WBT    | WBR  | SBLn1 | SBRn1 |
| Capacity (veh/h)         | 1565   | -      | -      | -    | 1047  | -     |
| HCM Lane V/C Ratio       | 0.023  | -      | -      | -    | 0.005 | -     |
| HCM Control Delay (s)    | 7.4    | 0      | -      | -    | 8.5   | -     |
| HCM Lane LOS             | A      | A      | -      | -    | A     | -     |
| HCM 95th %tile Q(veh)    | 0.1    | -      | -      | -    | 0     | -     |

Deer Valley 30  
14: Alameda Rd & Access C

2024 Total PM Scenario B  
HCM 6th TWSC

| Intersection             |        |        |        |      |       |       |
|--------------------------|--------|--------|--------|------|-------|-------|
| Int Delay, s/veh         | 2.3    |        |        |      |       |       |
| Movement                 | EBL    | EBT    | WBT    | WBR  | SBL   | SBR   |
| Lane Configurations      |        | ↕      | ↕      |      | ↕     |       |
| Traffic Vol, veh/h       | 4      | 11     | 68     | 0    | 0     | 24    |
| Future Vol, veh/h        | 4      | 11     | 68     | 0    | 0     | 24    |
| Conflicting Peds, #/hr   | 0      | 0      | 0      | 0    | 0     | 0     |
| Sign Control             | Free   | Free   | Free   | Free | Stop  | Stop  |
| RT Channelized           | -      | None   | -      | None | -     | None  |
| Storage Length           | -      | -      | -      | -    | 0     | -     |
| Veh in Median Storage, # | -      | 0      | 0      | -    | 0     | -     |
| Grade, %                 | -      | 0      | 0      | -    | 0     | -     |
| Peak Hour Factor         | 92     | 92     | 92     | 92   | 92    | 92    |
| Heavy Vehicles, %        | 8      | 8      | 8      | 8    | 8     | 8     |
| Mvmt Flow                | 4      | 12     | 74     | 0    | 0     | 26    |
| Major/Minor              | Major1 | Major2 | Minor2 |      |       |       |
| Conflicting Flow All     | 74     | 0      | -      | 0    | 94    | 74    |
| Stage 1                  | -      | -      | -      | -    | 74    | -     |
| Stage 2                  | -      | -      | -      | -    | 20    | -     |
| Critical Hdwy            | 4.18   | -      | -      | -    | 6.48  | 6.28  |
| Critical Hdwy Stg 1      | -      | -      | -      | -    | 5.48  | -     |
| Critical Hdwy Stg 2      | -      | -      | -      | -    | 5.48  | -     |
| Follow-up Hdwy           | 2.272  | -      | -      | -    | 3.572 | 3.372 |
| Pot Cap-1 Maneuver       | 1488   | -      | -      | -    | 891   | 971   |
| Stage 1                  | -      | -      | -      | -    | 934   | -     |
| Stage 2                  | -      | -      | -      | -    | 987   | -     |
| Platoon blocked, %       | -      | -      | -      | -    | -     | -     |
| Mov Cap-1 Maneuver       | 1488   | -      | -      | -    | 888   | 971   |
| Mov Cap-2 Maneuver       | -      | -      | -      | -    | 888   | -     |
| Stage 1                  | -      | -      | -      | -    | 931   | -     |
| Stage 2                  | -      | -      | -      | -    | 987   | -     |
| Approach                 | EB     | WB     | SB     |      |       |       |
| HCM Control Delay, s     | 2      | 0      | 8.8    |      |       |       |
| HCM LOS                  |        |        | A      |      |       |       |
| Minor Lane/Major Mvmt    | EBL    | EBT    | WBT    | WBR  | SBLn1 | SBRn1 |
| Capacity (veh/h)         | 1488   | -      | -      | -    | 971   | -     |
| HCM Lane V/C Ratio       | 0.003  | -      | -      | -    | 0.027 | -     |
| HCM Control Delay (s)    | 7.4    | 0      | -      | -    | 8.8   | -     |
| HCM Lane LOS             | A      | A      | -      | -    | A     | -     |
| HCM 95th %tile Q(veh)    | 0      | -      | -      | -    | 0.1   | -     |

Deer Valley 30  
15: Alameda Rd & 15th Ave

2024 Total AM Scenario B  
HCM 6th TWSC

| Intersection             |        |        |        |      |       |       |
|--------------------------|--------|--------|--------|------|-------|-------|
| Int Delay, s/veh         | 4.1    |        |        |      |       |       |
| Movement                 | EBL    | EBT    | WBT    | WBR  | SBL   | SBR   |
| Lane Configurations      |        | ↕      | ↕      |      | ↕     |       |
| Traffic Vol, veh/h       | 51     | 42     | 6      | 0    | 0     | 8     |
| Future Vol, veh/h        | 51     | 42     | 6      | 0    | 0     | 8     |
| Conflicting Peds, #/hr   | 0      | 0      | 0      | 0    | 0     | 0     |
| Sign Control             | Free   | Free   | Free   | Free | Stop  | Stop  |
| RT Channelized           | -      | None   | -      | None | -     | None  |
| Storage Length           | -      | -      | -      | -    | 0     | -     |
| Veh in Median Storage, # | -      | 0      | 0      | -    | 0     | -     |
| Grade, %                 | -      | 0      | 0      | -    | 0     | -     |
| Peak Hour Factor         | 92     | 92     | 92     | 92   | 92    | 92    |
| Heavy Vehicles, %        | 8      | 8      | 8      | 8    | 8     | 8     |
| Mvmt Flow                | 55     | 46     | 7      | 0    | 0     | 9     |
| Major/Minor              | Major1 | Major2 | Minor2 |      |       |       |
| Conflicting Flow All     | 7      | 0      | -      | 0    | 163   | 7     |
| Stage 1                  | -      | -      | -      | -    | 7     | -     |
| Stage 2                  | -      | -      | -      | -    | 156   | -     |
| Critical Hdwy            | 4.18   | -      | -      | -    | 6.48  | 6.28  |
| Critical Hdwy Stg 1      | -      | -      | -      | -    | 5.48  | -     |
| Critical Hdwy Stg 2      | -      | -      | -      | -    | 5.48  | -     |
| Follow-up Hdwy           | 2.272  | -      | -      | -    | 3.572 | 3.372 |
| Pot Cap-1 Maneuver       | 1575   | -      | -      | -    | 814   | 1058  |
| Stage 1                  | -      | -      | -      | -    | 1001  | -     |
| Stage 2                  | -      | -      | -      | -    | 858   | -     |
| Platoon blocked, %       | -      | -      | -      | -    | -     | -     |
| Mov Cap-1 Maneuver       | 1575   | -      | -      | -    | 785   | 1058  |
| Mov Cap-2 Maneuver       | -      | -      | -      | -    | 785   | -     |
| Stage 1                  | -      | -      | -      | -    | 965   | -     |
| Stage 2                  | -      | -      | -      | -    | 858   | -     |
| Approach                 | EB     | WB     | SB     |      |       |       |
| HCM Control Delay, s     | 4      | 0      | 8.4    |      |       |       |
| HCM LOS                  | A      |        |        |      |       |       |
| Minor Lane/Major Mvmt    | EBL    | EBT    | WBT    | WBR  | SBLn1 |       |
| Capacity (veh/h)         | 1575   | -      | -      | -    | 1058  |       |
| HCM Lane V/C Ratio       | 0.035  | -      | -      | -    | 0.008 |       |
| HCM Control Delay (s)    | 7.4    | 0      | -      | -    | 8.4   |       |
| HCM Lane LOS             | A      | A      | -      | -    | A     |       |
| HCM 95th %tile Q(veh)    | 0.1    | -      | -      | -    | 0     |       |

Deer Valley 30  
15: Alameda Rd & 15th Ave

2024 Total PM Scenario B  
HCM 6th TWSC

| Intersection             |        |        |        |      |       |       |
|--------------------------|--------|--------|--------|------|-------|-------|
| Int Delay, s/veh         | 4.6    |        |        |      |       |       |
| Movement                 | EBL    | EBT    | WBT    | WBR  | SBL   | SBR   |
| Lane Configurations      |        | ↕      | ↕      |      | ↕     |       |
| Traffic Vol, veh/h       | 6      | 5      | 31     | 0    | 0     | 37    |
| Future Vol, veh/h        | 6      | 5      | 31     | 0    | 0     | 37    |
| Conflicting Peds, #/hr   | 0      | 0      | 0      | 0    | 0     | 0     |
| Sign Control             | Free   | Free   | Free   | Free | Stop  | Stop  |
| RT Channelized           | -      | None   | -      | None | -     | None  |
| Storage Length           | -      | -      | -      | -    | 0     | -     |
| Veh in Median Storage, # | -      | 0      | 0      | -    | 0     | -     |
| Grade, %                 | -      | 0      | 0      | -    | 0     | -     |
| Peak Hour Factor         | 92     | 92     | 92     | 92   | 92    | 92    |
| Heavy Vehicles, %        | 8      | 8      | 8      | 8    | 8     | 8     |
| Mvmt Flow                | 7      | 5      | 34     | 0    | 0     | 40    |
| Major/Minor              | Major1 | Major2 | Minor2 |      |       |       |
| Conflicting Flow All     | 34     | 0      | -      | 0    | 53    | 34    |
| Stage 1                  | -      | -      | -      | -    | 34    | -     |
| Stage 2                  | -      | -      | -      | -    | 19    | -     |
| Critical Hdwy            | 4.18   | -      | -      | -    | 6.48  | 6.28  |
| Critical Hdwy Stg 1      | -      | -      | -      | -    | 5.48  | -     |
| Critical Hdwy Stg 2      | -      | -      | -      | -    | 5.48  | -     |
| Follow-up Hdwy           | 2.272  | -      | -      | -    | 3.572 | 3.372 |
| Pot Cap-1 Maneuver       | 1540   | -      | -      | -    | 940   | 1022  |
| Stage 1                  | -      | -      | -      | -    | 973   | -     |
| Stage 2                  | -      | -      | -      | -    | 988   | -     |
| Platoon blocked, %       | -      | -      | -      | -    | -     | -     |
| Mov Cap-1 Maneuver       | 1540   | -      | -      | -    | 935   | 1022  |
| Mov Cap-2 Maneuver       | -      | -      | -      | -    | 935   | -     |
| Stage 1                  | -      | -      | -      | -    | 968   | -     |
| Stage 2                  | -      | -      | -      | -    | 988   | -     |
| Approach                 | EB     | WB     | SB     |      |       |       |
| HCM Control Delay, s     | 4      | 0      | 8.7    |      |       |       |
| HCM LOS                  | A      |        |        |      |       |       |
| Minor Lane/Major Mvmt    | EBL    | EBT    | WBT    | WBR  | SBLn1 |       |
| Capacity (veh/h)         | 1540   | -      | -      | -    | 1022  |       |
| HCM Lane V/C Ratio       | 0.004  | -      | -      | -    | 0.039 |       |
| HCM Control Delay (s)    | 7.3    | 0      | -      | -    | 8.7   |       |
| HCM Lane LOS             | A      | A      | -      | -    | A     |       |
| HCM 95th %tile Q(veh)    | 0      | -      | -      | -    | 0.1   |       |



Deer Valley 30  
16: Access D

2024 Total AM Scenario B  
HCM 6th TWSC

| Intersection             |        |        |        |       |      |       |
|--------------------------|--------|--------|--------|-------|------|-------|
| Int Delay, s/veh         | 7.3    |        |        |       |      |       |
| Movement                 | EBL    | EBT    | WBT    | WBR   | SBL  | SBR   |
| Lane Configurations      |        | ↕      | ↑      |       |      | ↕     |
| Traffic Vol, veh/h       | 42     | 0      | 0      | 0     | 0    | 6     |
| Future Vol, veh/h        | 42     | 0      | 0      | 0     | 0    | 6     |
| Conflicting Peds, #/hr   | 0      | 0      | 0      | 0     | 0    | 0     |
| Sign Control             | Free   | Free   | Free   | Free  | Stop | Stop  |
| RT Channelized           | -      | None   | -      | None  | -    | None  |
| Storage Length           | -      | -      | -      | -     | -    | 0     |
| Veh in Median Storage, # | -      | 0      | 0      | -     | 0    | -     |
| Grade, %                 | -      | 0      | 0      | -     | 0    | -     |
| Peak Hour Factor         | 92     | 92     | 92     | 92    | 92   | 92    |
| Heavy Vehicles, %        | 8      | 8      | 8      | 8     | 8    | 8     |
| Mvmt Flow                | 46     | 0      | 0      | 0     | 0    | 7     |
| Major/Minor              | Major1 | Major2 | Minor2 |       |      |       |
| Conflicting Flow All     | 1      | 0      | -      | 0     | -    | 1     |
| Stage 1                  | -      | -      | -      | -     | -    | -     |
| Stage 2                  | -      | -      | -      | -     | -    | -     |
| Critical Hdwy            | 4.18   | -      | -      | -     | -    | 6.28  |
| Critical Hdwy Stg 1      | -      | -      | -      | -     | -    | -     |
| Critical Hdwy Stg 2      | -      | -      | -      | -     | -    | -     |
| Follow-up Hdwy           | 2.272  | -      | -      | -     | -    | 3.372 |
| Pot Cap-1 Maneuver       | 1583   | -      | -      | 0     | 0    | 1066  |
| Stage 1                  | -      | -      | -      | 0     | 0    | -     |
| Stage 2                  | -      | -      | -      | 0     | 0    | -     |
| Platoon blocked, %       | -      | -      | -      | -     | -    | -     |
| Mov Cap-1 Maneuver       | 1583   | -      | -      | -     | -    | 1066  |
| Mov Cap-2 Maneuver       | -      | -      | -      | -     | -    | -     |
| Stage 1                  | -      | -      | -      | -     | -    | -     |
| Stage 2                  | -      | -      | -      | -     | -    | -     |
| Approach                 | EB     | WB     | SB     |       |      |       |
| HCM Control Delay, s     | 7.3    | 0      | 8.4    |       |      |       |
| HCM LOS                  |        |        | A      |       |      |       |
| Minor Lane/Major Mvmt    | EBL    | EBT    | WBT    | SBLn1 |      |       |
| Capacity (veh/h)         | 1583   | -      | -      | 1066  |      |       |
| HCM Lane V/C Ratio       | 0.029  | -      | -      | 0.006 |      |       |
| HCM Control Delay (s)    | 7.3    | 0      | -      | 8.4   |      |       |
| HCM Lane LOS             | A      | A      | -      | A     |      |       |
| HCM 95th %tile Q(veh)    | 0.1    | -      | -      | 0     |      |       |

Deer Valley 30  
16: Access D

2024 Total PM Scenario B  
HCM 6th TWSC

| Intersection             |        |        |        |       |      |       |
|--------------------------|--------|--------|--------|-------|------|-------|
| Int Delay, s/veh         | 8.1    |        |        |       |      |       |
| Movement                 | EBL    | EBT    | WBT    | WBR   | SBL  | SBR   |
| Lane Configurations      |        | ↕      | ↑      |       |      | ↕     |
| Traffic Vol, veh/h       | 5      | 0      | 0      | 0     | 0    | 31    |
| Future Vol, veh/h        | 5      | 0      | 0      | 0     | 0    | 31    |
| Conflicting Peds, #/hr   | 0      | 0      | 0      | 0     | 0    | 0     |
| Sign Control             | Free   | Free   | Free   | Free  | Stop | Stop  |
| RT Channelized           | -      | None   | -      | None  | -    | None  |
| Storage Length           | -      | -      | -      | -     | -    | 0     |
| Veh in Median Storage, # | -      | 0      | 0      | -     | 0    | -     |
| Grade, %                 | -      | 0      | 0      | -     | 0    | -     |
| Peak Hour Factor         | 92     | 92     | 92     | 92    | 92   | 92    |
| Heavy Vehicles, %        | 8      | 8      | 8      | 8     | 8    | 8     |
| Mvmt Flow                | 5      | 0      | 0      | 0     | 0    | 34    |
| Major/Minor              | Major1 | Major2 | Minor2 |       |      |       |
| Conflicting Flow All     | 1      | 0      | -      | 0     | -    | 1     |
| Stage 1                  | -      | -      | -      | -     | -    | -     |
| Stage 2                  | -      | -      | -      | -     | -    | -     |
| Critical Hdwy            | 4.18   | -      | -      | -     | -    | 6.28  |
| Critical Hdwy Stg 1      | -      | -      | -      | -     | -    | -     |
| Critical Hdwy Stg 2      | -      | -      | -      | -     | -    | -     |
| Follow-up Hdwy           | 2.272  | -      | -      | -     | -    | 3.372 |
| Pot Cap-1 Maneuver       | 1583   | -      | -      | 0     | 0    | 1066  |
| Stage 1                  | -      | -      | -      | 0     | 0    | -     |
| Stage 2                  | -      | -      | -      | 0     | 0    | -     |
| Platoon blocked, %       | -      | -      | -      | -     | -    | -     |
| Mov Cap-1 Maneuver       | 1583   | -      | -      | -     | -    | 1066  |
| Mov Cap-2 Maneuver       | -      | -      | -      | -     | -    | -     |
| Stage 1                  | -      | -      | -      | -     | -    | -     |
| Stage 2                  | -      | -      | -      | -     | -    | -     |
| Approach                 | EB     | WB     | SB     |       |      |       |
| HCM Control Delay, s     | 7.3    | 0      | 8.5    |       |      |       |
| HCM LOS                  |        |        | A      |       |      |       |
| Minor Lane/Major Mvmt    | EBL    | EBT    | WBT    | SBLn1 |      |       |
| Capacity (veh/h)         | 1583   | -      | -      | 1066  |      |       |
| HCM Lane V/C Ratio       | 0.003  | -      | -      | 0.032 |      |       |
| HCM Control Delay (s)    | 7.3    | 0      | -      | 8.5   |      |       |
| HCM Lane LOS             | A      | A      | -      | A     |      |       |
| HCM 95th %tile Q(veh)    | 0      | -      | -      | 0.1   |      |       |

## **APPENDIX I**

### **TRAFFIC SIGNAL WARRANT ANALYSIS**

**Deer Valley 30 - Scenario A**  
**Warrants 1, 2 & 3**  
 7th Ave & Alameda

**Signal Warrant Analysis**

ADOT Traffic Engineering Guidelines and Policies section 611 includes methodology to consider signal warrants for future intersections using projected ADT. The methodology includes multiplying factors to the projected ADT to provide high hour, 4th high hour and 8th high hour volumes to compare with threshold volumes of the peak hour warrant, the 4-hour warrant and the 8-hour warrants. The factors are as follows:

| High Hour | Hourly Adjustment Factor |
|-----------|--------------------------|
| 1         | 0.0771                   |
| 4         | 0.0656                   |
| 8         | 0.0572                   |

| Right-turn factor applied | NB | SB | EB | WB |
|---------------------------|----|----|----|----|
| Background AM             | 0% | 0% | 0% | 0% |
| Background PM             | 0% | 0% | 0% | 0% |
| Total AM                  | 0% | 0% | 0% | 0% |
| Total PM                  | 0% | 0% | 0% | 0% |

| Determine approach PM peak hour volumes | NB  | SB  | EB  | WB |
|---|-----|-----|-----|----|
| Background AM                           | 264 | 223 | 57  | 0  |
| Background PM                           | 216 | 96  | 275 | 0  |
| Total AM                                | 313 | 223 | 65  | 0  |
| Total PM                                | 221 | 96  | 308 | 0  |

Approximate approach ADT volumes by dividing by the high hour adjustment factor (0.0771)

|               | NB    | SB    | EB    | WB | NB+SB | EB+WB |
|---------------|-------|-------|-------|----|-------|-------|
| Background AM | 3,424 | 2,892 | 739   | -  | 6,316 | 739   |
| Background PM | 2,802 | 1,245 | 3,567 | -  | 4,047 | 3,567 |
| Total AM      | 4,060 | 2,892 | 843   | -  | 6,952 | 843   |
| Total PM      | 2,866 | 1,245 | 3,995 | -  | 4,112 | 3,995 |

Apply adjustment factors

|               | 8th high hour          |                        | 4th high hour          |                        | High hour              |                        |
|---------------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|
|               | Major, both approaches | Minor, larger approach | Major, both approaches | Minor, larger approach | Major, both approaches | Minor, larger approach |
| Background AM | 361                    | 42                     | 414                    | 48                     | 487                    | 57                     |
| Background PM | 231                    | 204                    | 265                    | 234                    | 312                    | 275                    |
| Total AM      | 398                    | 48                     | 456                    | 55                     | 536                    | 65                     |
| Total PM      | 235                    | 229                    | 270                    | 262                    | 317                    | 308                    |



**Deer Valley 30 - Scenario A**  
**Warrants 1, 2 & 3**  
 7th Ave & Alameda

**Signal Warrant Analysis**

Thresholds are dependent on the number of lanes on each street approaching the intersection (prior to auxiliary lanes) and the speed limit on the major roadway.

Number of lanes moving traffic on major street? **1**  
 Number of lanes moving traffic on major approach of minor street? **1**  
 Posted or 85 percentile speed over 40 mph? **no**

Now compare to applicable signal warrant criteria of MUTCD

**Warrant 1 (Eight-Hour Vehicular Volume)**

| Thresholds to pass | 500 Minor | 750 Minor | 1200 Minor |
|--------------------|-----------|-----------|------------|
| Condition A        | Major     | Major     | Major      |
| Condition B        | Major     | Major     | Major      |
| Combo (A)          | Major     | Major     | Major      |
| Combo (B)          | Major     | Major     | Major      |

Volumes to compare

|               | Major, both approaches | Minor, larger approach |
|---------------|------------------------|------------------------|
| Background AM | 361                    | 42                     |
| Background PM | 231                    | 204                    |
| Total AM      | 398                    | 48                     |
| Total PM      | 235                    | 229                    |

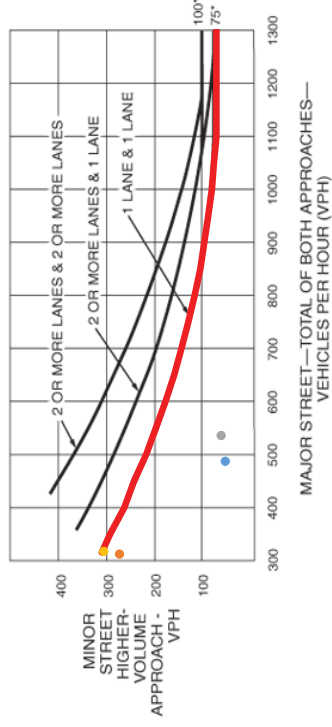
Compare criteria for each scenario

|               | Condition A | Condition B | Combination | Signal Warrant met |
|---------------|-------------|-------------|-------------|--------------------|
| Background AM | No          | No          | No          | No                 |
| Background PM | No          | No          | No          | No                 |
| Total AM      | No          | No          | No          | No                 |
| Total PM      | No          | No          | No          | No                 |



Signal Warrant 3 (Peak Hour)

Figure 4C-4. Warrant 3, Peak Hour (70% Factor)  
 (COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 40 MPH ON MAJOR STREET)



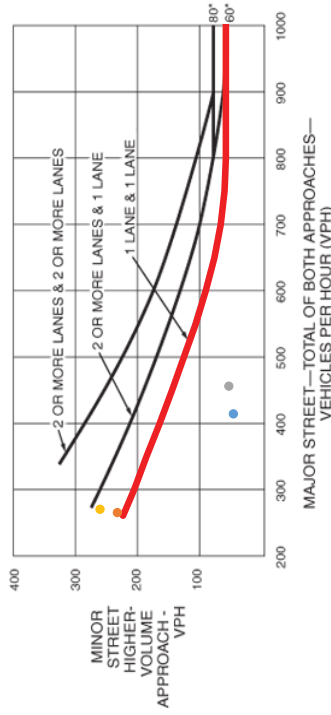
\*Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor-street approach with one lane.

| Legend        | Major, both approaches | Minor, larger approach | Approximate Threshold for Minor |
|---------------|------------------------|------------------------|---------------------------------|
| Background AM | 487                    | 57                     | 423                             |
| Background PM | 312                    | 275                    | 400                             |
| Total AM      | 536                    | 65                     |                                 |
| Total PM      | 317                    | 308                    |                                 |

Signal Warrant 3 is met?  
 Background AM **No**  
 Background PM **No**  
 Total AM **No**  
 Total PM **No**

Signal Warrant 2 (Four-Hour Vehicular Volume)

Figure 4C-2. Warrant 2, Four-Hour Vehicular Volume (70% Factor)  
 (COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 40 MPH ON MAJOR STREET)



\*Note: 80 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 60 vph applies as the lower threshold volume for a minor-street approach with one lane.

| Legend        | Major, both approaches | Minor, larger approach | Approximate Threshold for Minor |
|---------------|------------------------|------------------------|---------------------------------|
| Background AM | 414                    | 48                     | 303                             |
| Background PM | 265                    | 234                    | 282                             |
| Total AM      | 456                    | 55                     |                                 |
| Total PM      | 270                    | 262                    |                                 |

Signal Warrant 2 is met?  
 Background AM **No**  
 Background PM **No**  
 Total AM **No**  
 Total PM **No**

**Deer Valley 30**

**Warrants 1, 2 & 3**

19th Ave & Alameda

**Signal Warrant Analysis**

ADOT Traffic Engineering Guidelines and Policies section 611 includes methodology to consider signal warrants for future intersections using projected ADT. The methodology includes multiplying factors to the projected ADT to provide high hour, 4th high hour and 8th high hour volumes to compare with threshold volumes of the peak hour warrant, the 4-hour warrant and the 8-hour warrants. The factors are as follows:

| High Hour | Hourly Adjustment Factor |
|-----------|--------------------------|
| 1         | 0.0771                   |
| 4         | 0.0656                   |
| 8         | 0.0572                   |

| Right-turn factor applied | NB | SB | EB | WB |
|---------------------------|----|----|----|----|
| Background AM             | 0% | 0% | 0% | 0% |
| Background PM             | 0% | 0% | 0% | 0% |
| Total AM                  | 0% | 0% | 0% | 0% |
| Total PM                  | 0% | 0% | 0% | 0% |

| Determine approach PM peak hour volumes | NB   | SB   | EB | WB  |
|---|------|------|----|-----|
| Background AM                           | 766  | 1088 | 65 | 56  |
| Background PM                           | 1226 | 711  | 76 | 269 |
| Total AM                                | 835  | 1152 | 65 | 77  |
| Total PM                                | 1234 | 718  | 76 | 359 |

Approximate approach ADT volumes by dividing by the high hour adjustment factor (0.0771)

|               | NB     | SB     | EB  | WB    | NB+SB  | EB+WB |
|---------------|--------|--------|-----|-------|--------|-------|
| Background AM | 9,935  | 14,112 | 843 | 726   | 24,047 | 1,569 |
| Background PM | 15,901 | 9,222  | 986 | 3,489 | 25,123 | 4,475 |
| Total AM      | 10,830 | 14,942 | 843 | 999   | 25,772 | 1,842 |
| Total PM      | 16,005 | 9,313  | 986 | 4,656 | 25,318 | 5,642 |

Apply adjustment factors

|               | 8th high hour          |                        | 4th high hour          |                        | High hour              |                        |
|---------------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|
|               | Major, both approaches | Minor, larger approach | Major, both approaches | Minor, larger approach | Major, both approaches | Minor, larger approach |
| Background AM | 1,375                  | 48                     | 1,577                  | 55                     | 1,854                  | 65                     |
| Background PM | 1,437                  | 200                    | 1,648                  | 229                    | 1,937                  | 269                    |
| Total AM      | 1,474                  | 57                     | 1,691                  | 66                     | 1,987                  | 77                     |
| Total PM      | 1,448                  | 266                    | 1,661                  | 305                    | 1,952                  | 359                    |



**Deer Valley 30**

**Warrants 1, 2 & 3**

19th Ave & Alameda

**Signal Warrant Analysis**

Thresholds are dependent on the number of lanes on each street approaching the intersection (prior to auxiliary lanes) and the speed limit on the major roadway.

Number of lanes moving traffic on major street? **2**  
 Number of lanes moving traffic on major approach of minor street? **1**  
 Posted or 85 percentile speed over 40 mph? **yes**

Now compare to applicable signal warrant criteria of MUTCD

**Warrant 1 (Eight-Hour Vehicular Volume)**

| Thresholds to pass | Major | Minor | Combo |
|--------------------|-------|-------|-------|
| Condition A        | 420   | 630   | 105   |
| Condition B        | 630   | 336   | 53    |
| Combo (A)          | 336   | 504   | 84    |
| Combo (B)          | 504   | 336   | 42    |

| Volumes to compare | Major, both approaches | Minor, larger approach |
|--------------------|------------------------|------------------------|
| Background AM      | 1,375                  | 48                     |
| Background PM      | 1,437                  | 200                    |
| Total AM           | 1,474                  | 57                     |
| Total PM           | 1,448                  | 266                    |

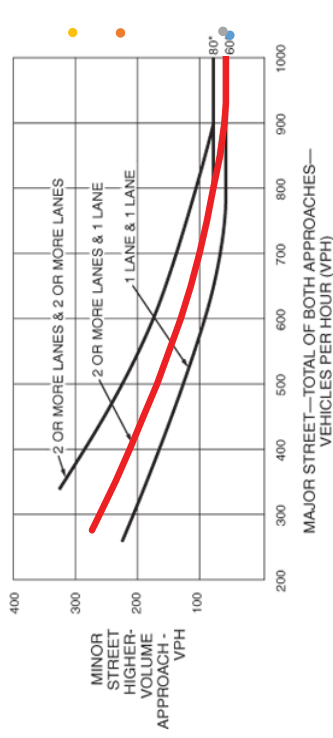
Compare criteria for each scenario

|               | Condition A | Condition B | Combination | Signal Warrant met? |
|---------------|-------------|-------------|-------------|---------------------|
| Background AM | No          | No          | No          | No                  |
| Background PM | Yes         | Yes         | Yes         | Yes                 |
| Total AM      | No          | Yes         | No          | Yes                 |
| Total PM      | Yes         | Yes         | Yes         | Yes                 |



Signal Warrant 2 (Four-Hour Vehicular Volume)

Figure 4C-2. Warrant 2, Four-Hour Vehicular Volume (70% Factor)  
(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 40 MPH ON MAJOR STREET)



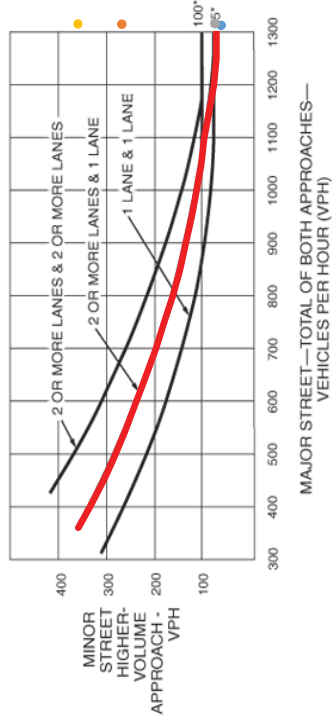
\*Note: 80 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 60 vph applies as the lower threshold volume for a minor-street approach with one lane.

| Legend        | Major, both approaches | Minor, larger approach | Approximate Threshold for Minor |
|---------------|------------------------|------------------------|---------------------------------|
| Background AM | 1,577                  | 55                     | 60                              |
| Background PM | 1,648                  | 229                    | 60                              |
| Total AM      | 1,691                  | 66                     | 60                              |
| Total PM      | 1,661                  | 305                    | 60                              |

Signal Warrant 2 is met?  
Background AM No  
Background PM Yes  
Total AM Yes  
Total PM Yes

Signal Warrant 3 (Peak Hour)

Figure 4C-4. Warrant 3, Peak Hour (70% Factor)  
(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 40 MPH ON MAJOR STREET)



\*Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor-street approach with one lane.

| Legend        | Major, both approaches | Minor, larger approach | Approximate Threshold for Minor |
|---------------|------------------------|------------------------|---------------------------------|
| Background AM | 1,854                  | 65                     | 75                              |
| Background PM | 1,937                  | 289                    | 75                              |
| Total AM      | 1,987                  | 77                     | 75                              |
| Total PM      | 1,952                  | 359                    | 75                              |

Signal Warrant 3 is met?  
Background AM No  
Background PM Yes  
Total AM Yes  
Total PM Yes

**Deer Valley 30**  
**Warrants 1, 2 & 3**  
 7th Ave & Happy Valley

**Deer Valley 30**  
**Warrants 1, 2 & 3**  
 7th Ave & Happy Valley

ADOT Traffic Engineering Guidelines and Policies section 611 includes methodology to consider signal warrants for future intersections using projected ADT. The methodology includes multiplying factors to the projected ADT to provide high hour, 4th high hour and 8th high hour volumes to compare with threshold volumes of the peak hour warrant, the 4-hour warrant and the 8-hour warrants. The factors are as follows:

| High Hour | Hourly Adjustment Factor |
|-----------|--------------------------|
| 1         | 0.0771                   |
| 4         | 0.0656                   |
| 8         | 0.0572                   |

| Right-turn factor applied | NB | SB | EB | WB |
|---------------------------|----|----|----|----|
| Background AM             | 0% | 0% | 0% | 0% |
| Background PM             | 0% | 0% | 0% | 0% |
| Total AM                  | 0% | 0% | 0% | 0% |
| Total PM                  | 0% | 0% | 0% | 0% |

| Determine approach PM peak hour volumes | NB  | SB | EB  | WB  |
|---|-----|----|-----|-----|
| Background AM                           | 64  | 0  | 722 | 291 |
| Background PM                           | 234 | 0  | 556 | 873 |
| Total AM                                | 64  | 0  | 722 | 291 |
| Total PM                                | 234 | 0  | 556 | 873 |

Approximate approach ADT volumes by dividing by the high hour adjustment factor (0.0771)

|               | NB    | SB | EB    | WB     | NB+SB | EB+WB  |
|---------------|-------|----|-------|--------|-------|--------|
| Background AM | 830   | -  | 9,364 | 3,774  | 830   | 13,139 |
| Background PM | 3,035 | -  | 7,211 | 11,323 | 3,035 | 18,534 |
| Total AM      | 830   | -  | 9,364 | 3,774  | 830   | 13,139 |
| Total PM      | 3,035 | -  | 7,211 | 11,323 | 3,035 | 18,534 |

| Apply adjustment factors | 8th high hour | 4th high hour | High hour |
|--------------------------|---------------|---------------|-----------|
| Background AM            | 752           | 47            | 64        |
| Background PM            | 1,060         | 174           | 234       |
| Total AM                 | 752           | 47            | 64        |
| Total PM                 | 1,060         | 174           | 234       |



Thresholds are dependent on the number of lanes on each street approaching the intersection (prior to auxiliary lanes) and the speed limit on the major roadway.

Number of lanes moving traffic on major street? **1**  
 Number of lanes moving traffic on major approach of minor street? **1**  
 Posted or 85 percentile speed over 40 mph? **yes**

Now compare to applicable signal warrant criteria of MUTCD

**Warrant 1 (Eight-Hour Vehicular Volume)**

| Thresholds to pass | Major | Minor |
|--------------------|-------|-------|
| Condition A        | 350   | 105   |
| Condition B        | 525   | 53    |
| Combo (A)          | 280   | 84    |
| Combo (B)          | 420   | 42    |

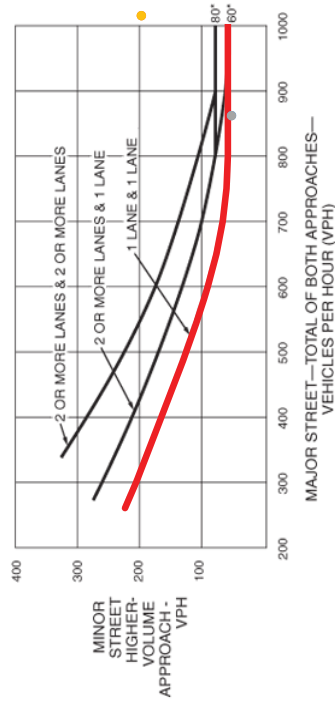
| Volumes to compare | Major, both approaches | Minor, larger approach |
|--------------------|------------------------|------------------------|
| Background AM      | 752                    | 47                     |
| Background PM      | 1,060                  | 174                    |
| Total AM           | 752                    | 47                     |
| Total PM           | 1,060                  | 174                    |

| Compare criteria for each scenario | Condition A | Condition B | Combination | Signal Warrant met? |
|------------------------------------|-------------|-------------|-------------|---------------------|
| Background AM                      | No          | No          | No          | No                  |
| Background PM                      | Yes         | Yes         | Yes         | Yes                 |
| Total AM                           | No          | No          | No          | No                  |
| Total PM                           | Yes         | Yes         | Yes         | Yes                 |



Signal Warrant 2 (Four-Hour Vehicular Volume)

Figure 4C-2. Warrant 2, Four-Hour Vehicular Volume (70% Factor)  
(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 40 MPH ON MAJOR STREET)



\*Note: 80 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 60 vph applies as the lower threshold volume for a minor-street approach with one lane.

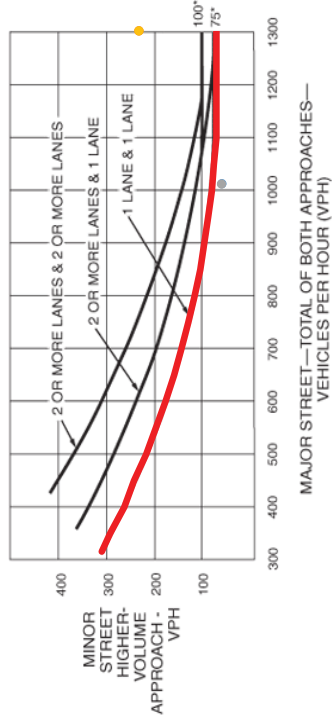
| Legend          | Major, both approaches | Minor, larger approach | Approximate Threshold for Minor |
|-----------------|------------------------|------------------------|---------------------------------|
| ● Background AM | 862                    | 54                     | 60                              |
| ● Background PM | 1,216                  | 199                    | 60                              |
| ● Total AM      | 862                    | 54                     | 60                              |
| ● Total PM      | 1,216                  | 199                    | 60                              |

Signal Warrant 2 is met?

Background AM No  
Background PM Yes  
Total AM No  
Total PM Yes

Signal Warrant 3 (Peak Hour)

Figure 4C-4. Warrant 3, Peak Hour (70% Factor)  
(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 40 MPH ON MAJOR STREET)



\*Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor-street approach with one lane.

| Legend          | Major, both approaches | Minor, larger approach | Approximate Threshold for Minor |
|-----------------|------------------------|------------------------|---------------------------------|
| ● Background AM | 1,013                  | 64                     | 83                              |
| ● Background PM | 1,429                  | 234                    | 75                              |
| ● Total AM      | 1,013                  | 64                     | 83                              |
| ● Total PM      | 1,429                  | 234                    | 75                              |

Signal Warrant 3 is met?

Background AM No  
Background PM Yes  
Total AM No  
Total PM Yes



**Deer Valley 30**  
**Warrants 1, 2 & 3**  
7th Ave & Pinnacle Peak

**Deer Valley 30**  
**Warrants 1, 2 & 3**  
7th Ave & Pinnacle Peak

ADOT Traffic Engineering Guidelines and Policies section 611 includes methodology to consider signal warrants for future intersections using projected ADT. The methodology includes multiplying factors to the projected ADT to provide high hour, 4th high hour and 8th high hour volumes to compare with threshold volumes of the peak hour warrant, the 4-hour warrant and the 8-hour warrants. The factors are as follows:

| High Hour | Hourly Adjustment Factor |
|-----------|--------------------------|
| 1         | 0.0771                   |
| 4         | 0.0656                   |
| 8         | 0.0572                   |

| Right-turn factor applied | NB | SB | EB | WB |
|---------------------------|----|----|----|----|
| Background AM             | 0% | 0% | 0% | 0% |
| Background PM             | 0% | 0% | 0% | 0% |
| Total AM                  | 0% | 0% | 0% | 0% |
| Total PM                  | 0% | 0% | 0% | 0% |

| Determine approach PM peak hour volumes | NB  | SB  | EB  | WB  |
|---|-----|-----|-----|-----|
| Background AM                           | 190 | 132 | 912 | 602 |
| Background PM                           | 285 | 438 | 502 | 532 |
| Total AM                                | 201 | 140 | 912 | 640 |
| Total PM                                | 286 | 471 | 502 | 536 |

Approximate approach ADT volumes by dividing by the high hour adjustment factor (0.0771)

|               | NB    | SB    | EB     | WB    | NB+SB | EB+WB  |
|---------------|-------|-------|--------|-------|-------|--------|
| Background AM | 2,464 | 1,712 | 11,829 | 7,808 | 4,176 | 19,637 |
| Background PM | 3,696 | 5,681 | 6,511  | 6,900 | 9,377 | 13,411 |
| Total AM      | 2,607 | 1,816 | 11,829 | 8,301 | 4,423 | 20,130 |
| Total PM      | 3,709 | 6,109 | 6,511  | 6,952 | 9,818 | 13,463 |

Apply adjustment factors

|               | 8th high hour          |                        | 4th high hour          |                        | High hour              |                        |
|---------------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|
|               | Major, both approaches | Minor, larger approach | Major, both approaches | Minor, larger approach | Major, both approaches | Minor, larger approach |
| Background AM | 1,123                  | 141                    | 1,288                  | 162                    | 1,514                  | 190                    |
| Background PM | 767                    | 325                    | 880                    | 373                    | 1,034                  | 438                    |
| Total AM      | 1,151                  | 149                    | 1,321                  | 171                    | 1,552                  | 201                    |
| Total PM      | 770                    | 349                    | 883                    | 401                    | 1,038                  | 471                    |



Thresholds are dependent on the number of lanes on each street approaching the intersection (prior to auxiliary lanes) and the speed limit on the major roadway.

|   |     |
|---|-----|
| Number of lanes moving traffic on major street?                   | 1   |
| Number of lanes moving traffic on major approach of minor street? | 1   |
| Posted or 85 percentile speed over 40 mph?                        | yes |

Now compare to applicable signal warrant criteria of MUTCD

**Warrant 1 (Eight-Hour Vehicular Volume)**

| Thresholds to pass | Major | Minor | Combo |
|--------------------|-------|-------|-------|
| Condition A        | 350   | 105   |       |
| Condition B        | 525   | 53    |       |
| Combo (A)          | 280   | 84    |       |
| Combo (B)          | 420   | 42    |       |

| Volumes to compare | Major, both approaches | Minor, larger approach |
|--------------------|------------------------|------------------------|
| Background AM      | 1,123                  | 141                    |
| Background PM      | 767                    | 325                    |
| Total AM           | 1,151                  | 149                    |
| Total PM           | 770                    | 349                    |

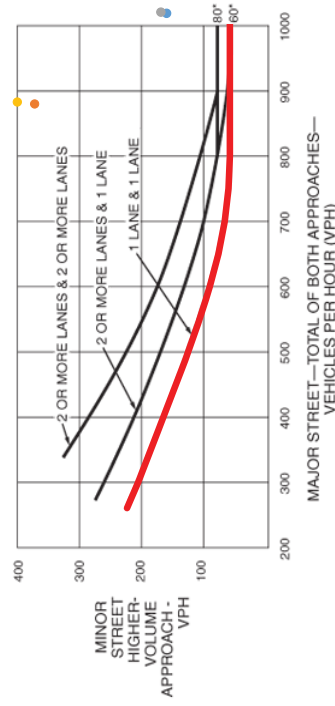
Compare criteria for each scenario

|               | Condition A | Condition B | Combination | Signal Warrant met? |
|---------------|-------------|-------------|-------------|---------------------|
| Background AM | Yes         | Yes         | Yes         | Yes                 |
| Background PM | Yes         | Yes         | Yes         | Yes                 |
| Total AM      | Yes         | Yes         | Yes         | Yes                 |
| Total PM      | Yes         | Yes         | Yes         | Yes                 |



Signal Warrant 2 (Four-Hour Vehicular Volume)

Figure 4C-2. Warrant 2, Four-Hour Vehicular Volume (70% Factor)  
(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 40 MPH ON MAJOR STREET)



\*Note: 80 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 60 vph applies as the lower threshold volume for a minor-street approach with one lane.

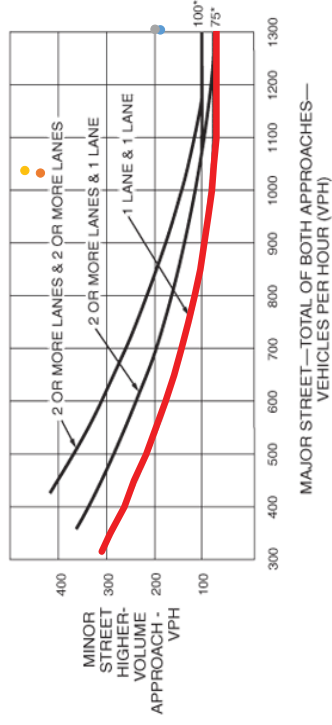
| Legend        | Major, both approaches | Minor, larger approach | Approximate Threshold for Minor |
|---------------|------------------------|------------------------|---------------------------------|
| Background AM | 1,288                  | 162                    | 60                              |
| Background PM | 880                    | 373                    | 60                              |
| Total AM      | 1,321                  | 171                    | 60                              |
| Total PM      | 883                    | 401                    | 60                              |

Signal Warrant 2 is met?

Background AM Yes  
Background PM Yes  
Total AM Yes  
Total PM Yes

Signal Warrant 3 (Peak Hour)

Figure 4C-4. Warrant 3, Peak Hour (70% Factor)  
(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 40 MPH ON MAJOR STREET)



\*Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor-street approach with one lane.

| Legend        | Major, both approaches | Minor, larger approach | Approximate Threshold for Minor |
|---------------|------------------------|------------------------|---------------------------------|
| Background AM | 1,514                  | 190                    | 75                              |
| Background PM | 1,034                  | 438                    | 81                              |
| Total AM      | 1,552                  | 201                    | 75                              |
| Total PM      | 1,038                  | 471                    | 81                              |

Signal Warrant 3 is met?

Background AM Yes  
Background PM Yes  
Total AM Yes  
Total PM Yes

**Deer Valley 30 - Scenario B**  
**Warrants 1, 2 & 3**  
 19th Ave & Alameda

**Signal Warrant Analysis**

ADOT Traffic Engineering Guidelines and Policies section 611 includes methodology to consider signal warrants for future intersections using projected ADT. The methodology includes multiplying factors to the projected ADT to provide high hour, 4th high hour and 8th high hour volumes to compare with threshold volumes of the peak hour warrant, the 4-hour warrant and the 8-hour warrants. The factors are as follows:

| High Hour | Hourly Adjustment Factor |
|-----------|--------------------------|
| 1         | 0.0771                   |
| 4         | 0.0656                   |
| 8         | 0.0572                   |

| Right-turn factor applied | NB | SB | EB | WB |
|---------------------------|----|----|----|----|
| 2024 Total AM             | 0% | 0% | 0% | 0% |
| 2024 Total PM             | 0% | 0% | 0% | 0% |

| Determine approach PM peak hour volumes | NB  | SB  | EB | WB |
|---|-----|-----|----|----|
| 2024 Total AM                           | 653 | 833 | 9  | 13 |
| 2024 Total PM                           | 979 | 643 | 14 | 59 |

Approximate approach ADT volumes by dividing by the high hour adjustment factor (0.0771)

|               | NB     | SB     | EB  | WB  | NB+SB  | EB+WB |
|---------------|--------|--------|-----|-----|--------|-------|
| 2024 Total AM | 8,470  | 10,804 | 117 | 169 | 19,274 | 285   |
| 2024 Total PM | 12,698 | 8,340  | 182 | 765 | 21,038 | 947   |

| Apply adjustment factors | 8th high hour          |                        | 4th high hour          |                        | High hour              |                        |
|--------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|
|                          | Major, both approaches | Minor, larger approach | Major, both approaches | Minor, larger approach | Major, both approaches | Minor, larger approach |
| 2024 Total AM            | 1,102                  | 44                     | 1,264                  | 11                     | 1,486                  | 13                     |
| 2024 Total PM            | 1,203                  | 44                     | 1,380                  | 50                     | 1,622                  | 59                     |

**Deer Valley 30 - Scenario B**  
**Warrants 1, 2 & 3**  
 19th Ave & Alameda

**Signal Warrant Analysis**

Thresholds are dependent on the number of lanes on each street approaching the intersection (prior to auxiliary lanes) and the speed limit on the major roadway.

Number of lanes moving traffic on major street? **2**  
 Number of lanes moving traffic on major approach of minor street? **1**  
 Posted or 85 percentile speed over 40 mph? **yes**

Now compare to applicable signal warrant criteria of MUTCD

**Warrant 1 (Eight-Hour Vehicular Volume)**

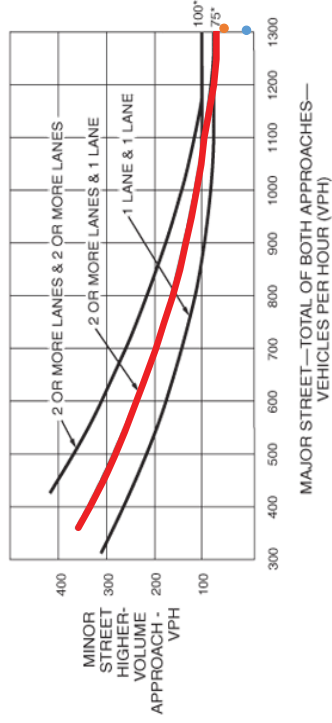
| Thresholds to pass | Major | Minor |
|--------------------|-------|-------|
| Condition A        | 420   | 105   |
| Condition B        | 630   | 53    |
| Combo (A)          | 336   | 84    |
| Combo (B)          | 504   | 42    |

| Volumes to compare | Major, both approaches | Minor, larger approach |
|--------------------|------------------------|------------------------|
| 2024 Total AM      | 1,102                  | 10                     |
| 2024 Total PM      | 1,203                  | 44                     |

| Compare criteria for each scenario | Condition A | Condition B | Combination | Signal Warrant met? |
|------------------------------------|-------------|-------------|-------------|---------------------|
| 2024 Total AM                      | No          | No          | No          | No                  |
| 2024 Total PM                      | No          | No          | No          | No                  |

Signal Warrant 3 (Peak Hour)

Figure 4C-4. Warrant 3, Peak Hour (70% Factor)  
 (COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 40 MPH ON MAJOR STREET)



\*Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor-street approach with one lane.

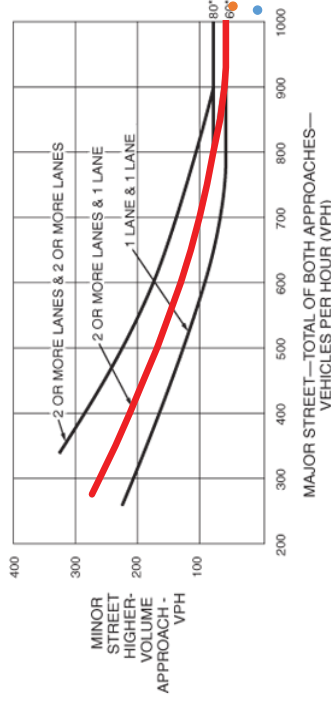
| Legend          | Major, both approaches | Minor, larger approach | Approximate Threshold for Minor |
|-----------------|------------------------|------------------------|---------------------------------|
| ● 2024 Total AM | 1,486                  | 13                     | 75                              |
| ● 2024 Total PM | 1,622                  | 59                     | 75                              |
| ● not used      |                        |                        |                                 |
| ● not used      |                        |                        |                                 |

Signal Warrant 3 is met?  
 2024 Total AM No  
 2024 Total PM No



Signal Warrant 2 (Four-Hour Vehicular Volume)

Figure 4C-2. Warrant 2, Four-Hour Vehicular Volume (70% Factor)  
 (COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 40 MPH ON MAJOR STREET)



\*Note: 80 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 60 vph applies as the lower threshold volume for a minor-street approach with one lane.

| Legend          | Major, both approaches | Minor, larger approach | Approximate Threshold for Minor |
|-----------------|------------------------|------------------------|---------------------------------|
| ● 2024 Total AM | 1,264                  | 11                     | 60                              |
| ● 2024 Total PM | 1,380                  | 50                     | 60                              |
| ● not used      |                        |                        |                                 |
| ● not used      |                        |                        |                                 |

Signal Warrant 2 is met?  
 2024 Total AM No  
 2024 Total PM No



**Deer Valley 30 - Scenario B** **Signal Warrant Analysis**

**Warrants 1, 2 & 3**  
7th Ave & Happy Valley

Thresholds are dependent on the number of lanes on each street approaching the intersection (prior to auxiliary lanes) and the speed limit on the major roadway.

Number of lanes moving traffic on major street? **1**  
 Number of lanes moving traffic on major approach of minor street? **1**  
 Posted or 85 percentile speed over 40 mph? **yes**

Now compare to applicable signal warrant criteria of MUTCD

**Warrant 1 (Eight-Hour Vehicular Volume)**

| Thresholds to pass | Major | Minor |
|--------------------|-------|-------|
| Condition A        | 350   | 105   |
| Condition B        | 525   | 53    |
| Combo (A)          | 280   | 84    |
| Combo (B)          | 420   | 42    |

| Volumes to compare | Major, both approaches | Minor, larger approach |
|--------------------|------------------------|------------------------|
| 2024 Total AM      | <b>611</b>             | <b>20</b>              |
| 2024 Total PM      | <b>1,030</b>           | <b>39</b>              |

| Compare criteria for each scenario | Condition A | Condition B | Combination | Signal Warrant met? |
|------------------------------------|-------------|-------------|-------------|---------------------|
| 2024 Total AM                      | No          | No          | No          | <b>No</b>           |
| 2024 Total PM                      | No          | No          | No          | <b>No</b>           |



**Deer Valley 30 - Scenario B** **Signal Warrant Analysis**

**Warrants 1, 2 & 3**  
7th Ave & Happy Valley

ADOT Traffic Engineering Guidelines and Policies section 611 includes methodology to consider signal warrants for future intersections using projected ADT. The methodology includes multiplying factors to the projected ADT to provide high hour, 4th high hour and 8th high hour volumes to compare with threshold volumes of the peak hour warrant, the 4-hour warrant and the 8-hour warrants. The factors are as follows:

| High Hour | Hourly Adjustment Factor |
|-----------|--------------------------|
| 1         | 0.0771                   |
| 4         | 0.0656                   |
| 8         | 0.0572                   |

| Right-turn factor applied | NB | SB | EB | WB |
|---------------------------|----|----|----|----|
| 2024 Total AM             | 0% | 0% | 0% | 0% |
| 2024 Total PM             | 0% | 0% | 0% | 0% |

| Determine approach PM peak hour volumes | NB | SB | EB  | WB  |
|---|----|----|-----|-----|
| 2024 Total AM                           | 27 | 0  | 532 | 291 |
| 2024 Total PM                           | 52 | 0  | 516 | 873 |

Approximate approach ADT volumes by dividing by the high hour adjustment factor (0.0771)

|               | NB  | SB | EB    | WB     | NB+SB      | EB+WB         |
|---------------|-----|----|-------|--------|------------|---------------|
| 2024 Total AM | 350 | -  | 6,900 | 3,774  | <b>350</b> | <b>10,674</b> |
| 2024 Total PM | 674 | -  | 6,693 | 11,323 | <b>674</b> | <b>18,016</b> |

| Apply adjustment factors | 8th high hour          |                        | 4th high hour          |                        | High hour              |                        |
|--------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|
|                          | Major, both approaches | Minor, larger approach | Major, both approaches | Minor, larger approach | Major, both approaches | Minor, larger approach |
| 2024 Total AM            | <b>611</b>             | <b>20</b>              | <b>700</b>             | <b>23</b>              | <b>823</b>             | <b>27</b>              |
| 2024 Total PM            | <b>1,030</b>           | <b>39</b>              | <b>1,182</b>           | <b>44</b>              | <b>1,389</b>           | <b>52</b>              |

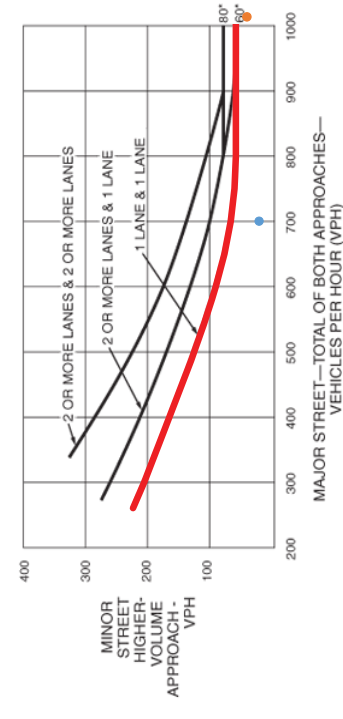
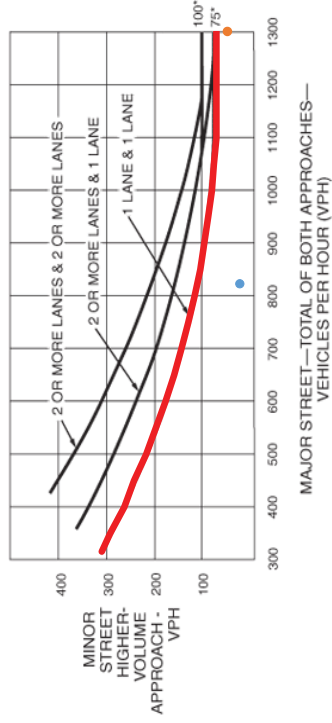


Signal Warrant 3 (Peak Hour)

Signal Warrant 2 (Four-Hour Vehicular Volume)

Figure 4C-4. Warrant 3, Peak Hour (70% Factor)  
 (COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 40 MPH ON MAJOR STREET)

Figure 4C-2. Warrant 2, Four-Hour Vehicular Volume (70% Factor)  
 (COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 40 MPH ON MAJOR STREET)



\*Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor-street approach with one lane.

\*Note: 80 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 60 vph applies as the lower threshold volume for a minor-street approach with one lane.

| Legend          | Major, both approaches | Minor, larger approach | Approximate Threshold for Minor |
|-----------------|------------------------|------------------------|---------------------------------|
| ● 2024 Total AM | 823                    | 27                     | 114                             |
| ● 2024 Total PM | 1,389                  | 52                     | 75                              |
| ● not used      |                        |                        |                                 |
| ● not used      |                        |                        |                                 |

| Legend          | Major, both approaches | Minor, larger approach | Approximate Threshold for Minor |
|-----------------|------------------------|------------------------|---------------------------------|
| ● 2024 Total AM | 700                    | 23                     | 68                              |
| ● 2024 Total PM | 1,182                  | 44                     | 60                              |
| ● not used      |                        |                        |                                 |
| ● not used      |                        |                        |                                 |

Signal Warrant 3 is met?  
 2024 Total AM No  
 2024 Total PM No

Signal Warrant 2 is met?  
 2024 Total AM No  
 2024 Total PM No




## **APPENDIX J**

### **QUEUE STORAGE ANALYSIS**

Deer Valley 30  
1: 19th Ave & Happy Valley Rd

2024 Total AM Scenario A Mitigated  
Queues




| Lane Group              | EBL  | EBT  | WBL  | WBT  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
|-------------------------|------|------|------|------|------|------|------|------|------|------|
| Lane Group Flow (vph)   | 95   | 1126 | 163  | 479  | 241  | 291  | 111  | 320  | 509  | 104  |
| v/c Ratio               | 0.37 | 0.65 | 0.63 | 0.27 | 0.76 | 0.33 | 0.23 | 0.99 | 0.40 | 0.21 |
| Control Delay           | 49.6 | 23.1 | 58.2 | 19.5 | 62.1 | 32.3 | 5.5  | 95.2 | 32.7 | 4.7  |
| Queue Delay             | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| Total Delay             | 49.6 | 23.1 | 58.2 | 19.5 | 62.1 | 32.3 | 5.5  | 95.2 | 32.7 | 4.7  |
| Queue Length 50th (ft)  | 31   | 175  | 55   | 66   | 82   | 82   | 0    | 112  | 102  | 0    |
| Queue Length 95th (ft)  | 57   | 224  | 90   | 97   | #137 | 121  | 34   | #203 | 136  | 29   |
| Internal Link Dist (ft) |      | 1252 |      | 283  |      | 663  |      |      | 841  |      |
| Turn Bay Length (ft)    | 345  |      | 255  |      | 265  |      | 265  |      | 260  | 260  |
| Base Capacity (vph)     | 311  | 1744 | 265  | 1785 | 324  | 888  | 489  | 324  | 1284 | 491  |
| Starvation Cap Reductn  | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Spillback Cap Reductn   | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Storage Cap Reductn     | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Reduced v/c Ratio       | 0.31 | 0.65 | 0.62 | 0.27 | 0.74 | 0.33 | 0.23 | 0.99 | 0.40 | 0.21 |

Intersection Summary

# 95th percentile volume exceeds capacity, queue may be longer.  
Queue shown is maximum after two cycles.

Deer Valley 30  
1: 19th Ave & Happy Valley Rd

2024 Total PM Scenario A Mitigated  
Queues



| Lane Group              | EBL  | EBT  | WBL  | WBT  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
|-------------------------|------|------|------|------|------|------|------|------|------|------|
| Lane Group Flow (vph)   | 182  | 785  | 179  | 1390 | 686  | 583  | 136  | 199  | 260  | 133  |
| v/c Ratio               | 0.91 | 0.61 | 0.56 | 0.97 | 0.80 | 0.48 | 0.21 | 0.76 | 0.30 | 0.30 |
| Control Delay           | 93.8 | 29.2 | 51.8 | 53.0 | 43.5 | 27.6 | 2.5  | 66.5 | 40.0 | 1.8  |
| Queue Delay             | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| Total Delay             | 93.8 | 29.2 | 51.8 | 53.0 | 43.5 | 27.6 | 2.5  | 66.5 | 40.0 | 1.8  |
| Queue Length 50th (ft)  | 63   | 134  | 59   | 317  | 222  | 157  | 0    | 68   | 56   | 0    |
| Queue Length 95th (ft)  | #130 | 181  | 94   | #424 | 265  | 210  | 23   | #123 | 89   | 1    |
| Internal Link Dist (ft) |      | 1252 |      | 283  |      | 663  |      |      | 841  |      |
| Turn Bay Length (ft)    | 345  |      | 255  |      | 265  |      | 265  |      | 260  | 260  |
| Base Capacity (vph)     | 200  | 1286 | 358  | 1426 | 1065 | 1206 | 648  | 262  | 854  | 445  |
| Starvation Cap Reductn  | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Spillback Cap Reductn   | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Storage Cap Reductn     | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Reduced v/c Ratio       | 0.91 | 0.61 | 0.50 | 0.97 | 0.64 | 0.48 | 0.21 | 0.76 | 0.30 | 0.30 |

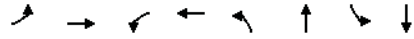
Intersection Summary

# 95th percentile volume exceeds capacity, queue may be longer.  
Queue shown is maximum after two cycles.



Deer Valley 30  
4: Alameda Rd & 19th Ave

2024 Total AM Scenario A Mitigated  
Queues



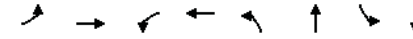
| Lane Group              | EBL  | EBT  | WBL  | WBT  | NBL  | NBT  | SBL  | SBT  |
|-------------------------|------|------|------|------|------|------|------|------|
| Lane Group Flow (vph)   | 10   | 61   | 46   | 38   | 20   | 888  | 203  | 1049 |
| v/c Ratio               | 0.07 | 0.11 | 0.31 | 0.06 | 0.06 | 0.26 | 0.51 | 0.42 |
| Control Delay           | 28.8 | 0.4  | 31.8 | 0.2  | 7.8  | 5.0  | 17.0 | 7.5  |
| Queue Delay             | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| Total Delay             | 28.8 | 0.4  | 31.8 | 0.2  | 7.8  | 5.0  | 17.0 | 7.5  |
| Queue Length 50th (ft)  | 4    | 0    | 18   | 0    | 3    | 48   | 48   | 117  |
| Queue Length 95th (ft)  | 17   | 0    | 44   | 0    | 14   | 82   | #172 | 197  |
| Internal Link Dist (ft) | 1252 |      | 620  |      | 1220 |      | 620  |      |
| Turn Bay Length (ft)    | 150  |      |      | 150  |      |      |      |      |
| Base Capacity (vph)     | 445  | 721  | 336  | 795  | 310  | 3444 | 396  | 2469 |
| Starvation Cap Reductn  | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Spillback Cap Reductn   | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Storage Cap Reductn     | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Reduced v/c Ratio       | 0.02 | 0.08 | 0.14 | 0.05 | 0.06 | 0.26 | 0.51 | 0.42 |

Intersection Summary

# 95th percentile volume exceeds capacity, queue may be longer.  
Queue shown is maximum after two cycles.

Deer Valley 30  
4: Alameda Rd & 19th Ave

2024 Total PM Scenario A Mitigated  
Queues



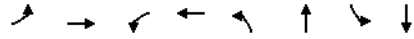
| Lane Group              | EBL  | EBT  | WBL  | WBT  | NBL  | NBT  | SBL  | SBT  |
|-------------------------|------|------|------|------|------|------|------|------|
| Lane Group Flow (vph)   | 15   | 67   | 214  | 176  | 92   | 1249 | 38   | 742  |
| v/c Ratio               | 0.08 | 0.13 | 0.85 | 0.45 | 0.21 | 0.37 | 0.16 | 0.31 |
| Control Delay           | 32.1 | 0.5  | 66.5 | 18.1 | 7.0  | 6.3  | 7.4  | 6.2  |
| Queue Delay             | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| Total Delay             | 32.1 | 0.5  | 66.5 | 18.1 | 7.0  | 6.3  | 7.4  | 6.2  |
| Queue Length 50th (ft)  | 8    | 0    | 128  | 36   | 19   | 108  | 8    | 88   |
| Queue Length 95th (ft)  | 25   | 0    | #241 | 98   | 41   | 132  | 21   | 115  |
| Internal Link Dist (ft) | 1252 |      | 620  |      | 1220 |      | 620  |      |
| Turn Bay Length (ft)    | 150  |      |      | 150  |      |      |      |      |
| Base Capacity (vph)     | 203  | 550  | 282  | 419  | 437  | 3382 | 242  | 2360 |
| Starvation Cap Reductn  | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Spillback Cap Reductn   | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Storage Cap Reductn     | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Reduced v/c Ratio       | 0.07 | 0.12 | 0.76 | 0.42 | 0.21 | 0.37 | 0.16 | 0.31 |

Intersection Summary

# 95th percentile volume exceeds capacity, queue may be longer.  
Queue shown is maximum after two cycles.

Deer Valley 30  
6: Pinnacle Peak Rd & 19th Ave

2024 Total AM Scenario A Mitigated  
Queues



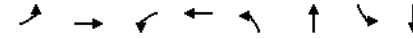
| Lane Group              | EBL   | EBT  | WBL  | WBT  | NBL  | NBT  | SBL  | SBT  |
|-------------------------|-------|------|------|------|------|------|------|------|
| Lane Group Flow (vph)   | 454   | 1266 | 75   | 475  | 184  | 722  | 155  | 851  |
| v/c Ratio               | 1.20  | 0.81 | 0.88 | 0.30 | 0.69 | 0.37 | 0.91 | 0.97 |
| Control Delay           | 140.8 | 25.2 | 99.4 | 9.4  | 32.5 | 17.9 | 86.8 | 58.1 |
| Queue Delay             | 0.0   | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| Total Delay             | 140.8 | 25.2 | 99.4 | 9.4  | 32.5 | 17.9 | 86.8 | 58.1 |
| Queue Length 50th (ft)  | -332  | 311  | 39   | 50   | 68   | 95   | 91   | 261  |
| Queue Length 95th (ft)  | #519  | 405  | #130 | 82   | #138 | 127  | #214 | #394 |
| Internal Link Dist (ft) |       | 315  |      | 5253 |      | 273  |      | 1292 |
| Turn Bay Length (ft)    | 265   |      | 160  |      | 215  |      | 185  |      |
| Base Capacity (vph)     | 377   | 1554 | 85   | 1580 | 275  | 1926 | 170  | 880  |
| Starvation Cap Reductn  | 0     | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Spillback Cap Reductn   | 0     | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Storage Cap Reductn     | 0     | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Reduced v/c Ratio       | 1.20  | 0.81 | 0.88 | 0.30 | 0.67 | 0.37 | 0.91 | 0.97 |

Intersection Summary

- Volume exceeds capacity, queue is theoretically infinite.  
Queue shown is maximum after two cycles.
- # 95th percentile volume exceeds capacity, queue may be longer.  
Queue shown is maximum after two cycles.

Deer Valley 30  
6: Pinnacle Peak Rd & 19th Ave

2024 Total PM Scenario A Mitigated  
Queues



| Lane Group              | EBL   | EBT  | WBL  | WBT  | NBL   | NBT  | SBL   | SBT  |
|-------------------------|-------|------|------|------|-------|------|-------|------|
| Lane Group Flow (vph)   | 161   | 516  | 129  | 967  | 443   | 934  | 182   | 1116 |
| v/c Ratio               | 1.77  | 0.40 | 0.51 | 0.80 | 1.28  | 0.38 | 1.10  | 1.06 |
| Control Delay           | 411.5 | 11.2 | 31.9 | 32.1 | 170.0 | 14.2 | 131.8 | 77.2 |
| Queue Delay             | 0.0   | 0.0  | 0.0  | 0.0  | 0.0   | 0.0  | 0.0   | 0.0  |
| Total Delay             | 411.5 | 11.2 | 31.9 | 32.1 | 170.0 | 14.2 | 131.8 | 77.2 |
| Queue Length 50th (ft)  | -144  | 53   | 59   | 262  | -287  | 116  | -124  | -377 |
| Queue Length 95th (ft)  | #221  | 94   | 121  | 343  | #476  | 146  | #255  | #507 |
| Internal Link Dist (ft) |       | 315  |      | 5253 |       | 273  |       | 1292 |
| Turn Bay Length (ft)    | 265   |      | 160  |      | 215   |      | 185   |      |
| Base Capacity (vph)     | 91    | 1297 | 253  | 1211 | 347   | 2451 | 166   | 1049 |
| Starvation Cap Reductn  | 0     | 0    | 0    | 0    | 0     | 0    | 0     | 0    |
| Spillback Cap Reductn   | 0     | 0    | 0    | 0    | 0     | 0    | 0     | 0    |
| Storage Cap Reductn     | 0     | 0    | 0    | 0    | 0     | 0    | 0     | 0    |
| Reduced v/c Ratio       | 1.77  | 0.40 | 0.51 | 0.80 | 1.28  | 0.38 | 1.10  | 1.06 |

Intersection Summary

- Volume exceeds capacity, queue is theoretically infinite.  
Queue shown is maximum after two cycles.
- # 95th percentile volume exceeds capacity, queue may be longer.  
Queue shown is maximum after two cycles.

Deer Valley 30  
8: 7th Ave & Happy Valley Rd

2024 Total AM Scenario A Mitigated  
Queues

|                         | →    | ↙    | ←    | ↘    | ↗    |
|-------------------------|------|------|------|------|------|
| Lane Group              | EBT  | WBL  | WBT  | NBL  | NBR  |
| Lane Group Flow (vph)   | 785  | 10   | 307  | 59   | 11   |
| v/c Ratio               | 0.76 | 0.05 | 0.29 | 0.12 | 0.02 |
| Control Delay           | 17.8 | 5.8  | 9.4  | 23.1 | 10.5 |
| Queue Delay             | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| Total Delay             | 17.8 | 5.8  | 9.4  | 23.1 | 10.5 |
| Queue Length 50th (ft)  | 291  | 2    | 80   | 24   | 1    |
| Queue Length 95th (ft)  | 351  | 7    | 98   | m40  | m4   |
| Internal Link Dist (ft) | 2603 |      | 561  | 2558 |      |
| Turn Bay Length (ft)    |      | 150  |      | 150  |      |
| Base Capacity (vph)     | 1189 | 254  | 1222 | 513  | 467  |
| Starvation Cap Reductn  | 0    | 0    | 0    | 0    | 0    |
| Spillback Cap Reductn   | 0    | 0    | 0    | 0    | 0    |
| Storage Cap Reductn     | 0    | 0    | 0    | 0    | 0    |
| Reduced v/c Ratio       | 0.66 | 0.04 | 0.25 | 0.12 | 0.02 |

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

Deer Valley 30  
8: 7th Ave & Happy Valley Rd

2024 Total PM Scenario A Mitigated  
Queues

|                         | →    | ↙    | ←    | ↘    | ↗    |
|-------------------------|------|------|------|------|------|
| Lane Group              | EBT  | WBL  | WBT  | NBL  | NBR  |
| Lane Group Flow (vph)   | 605  | 21   | 928  | 242  | 12   |
| v/c Ratio               | 0.52 | 0.05 | 0.79 | 0.60 | 0.03 |
| Control Delay           | 9.5  | 4.9  | 17.0 | 38.5 | 14.0 |
| Queue Delay             | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| Total Delay             | 9.5  | 4.9  | 17.0 | 38.5 | 14.0 |
| Queue Length 50th (ft)  | 146  | 4    | 321  | 145  | 2    |
| Queue Length 95th (ft)  | 216  | 11   | 487  | #251 | m12  |
| Internal Link Dist (ft) | 2603 |      | 561  | 2558 |      |
| Turn Bay Length (ft)    |      | 150  |      | 150  |      |
| Base Capacity (vph)     | 1222 | 441  | 1240 | 403  | 370  |
| Starvation Cap Reductn  | 0    | 0    | 0    | 0    | 0    |
| Spillback Cap Reductn   | 0    | 0    | 0    | 0    | 0    |
| Storage Cap Reductn     | 0    | 0    | 0    | 0    | 0    |
| Reduced v/c Ratio       | 0.50 | 0.05 | 0.75 | 0.60 | 0.03 |

Intersection Summary

# 95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Deer Valley 30  
9: 7th Ave & Pinnacle Peak Rd

2024 Total AM Scenario A Mitigated  
Queues

| Lane Group              | EBL   | EBT  | EBR  | WBL  | WBT  | NBL  | NBT  | SBL  | SBT  |
|-------------------------|-------|------|------|------|------|------|------|------|------|
| Lane Group Flow (vph)   | 190   | 495  | 307  | 50   | 646  | 86   | 132  | 71   | 81   |
| v/c Ratio               | 1.28  | 0.61 | 0.36 | 0.20 | 0.82 | 0.22 | 0.32 | 0.35 | 0.26 |
| Control Delay           | 193.7 | 24.3 | 3.2  | 18.7 | 32.5 | 32.7 | 31.0 | 56.6 | 37.5 |
| Queue Delay             | 0.0   | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| Total Delay             | 193.7 | 24.3 | 3.2  | 18.7 | 32.5 | 32.7 | 31.0 | 56.6 | 37.5 |
| Queue Length 50th (ft)  | -154  | 230  | 0    | 18   | 327  | 44   | 63   | 47   | 33   |
| Queue Length 95th (ft)  | #291  | 339  | 46   | 45   | #538 | 87   | 116  | m78  | m66  |
| Internal Link Dist (ft) |       | 5253 |      |      | 950  |      | 780  |      | 2592 |
| Turn Bay Length (ft)    | 150   |      | 170  | 150  |      | 150  |      | 150  |      |
| Base Capacity (vph)     | 149   | 809  | 853  | 254  | 784  | 392  | 410  | 201  | 309  |
| Starvation Cap Reductn  | 0     | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Spillback Cap Reductn   | 0     | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Storage Cap Reductn     | 0     | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Reduced v/c Ratio       | 1.28  | 0.61 | 0.36 | 0.20 | 0.82 | 0.22 | 0.32 | 0.35 | 0.26 |

Intersection Summary

- Volume exceeds capacity, queue is theoretically infinite.  
Queue shown is maximum after two cycles.
- # 95th percentile volume exceeds capacity, queue may be longer.  
Queue shown is maximum after two cycles.
- m Volume for 95th percentile queue is metered by upstream signal.

Deer Valley 30  
9: 7th Ave & Pinnacle Peak Rd

2024 Total PM Scenario A Mitigated  
Queues

| Lane Group              | EBL  | EBT  | EBR  | WBL  | WBT  | NBL  | NBT  | SBL  | SBT  |
|-------------------------|------|------|------|------|------|------|------|------|------|
| Lane Group Flow (vph)   | 42   | 423  | 80   | 33   | 550  | 225  | 85   | 229  | 283  |
| v/c Ratio               | 0.33 | 0.63 | 0.13 | 0.15 | 0.82 | 0.51 | 0.18 | 0.86 | 0.69 |
| Control Delay           | 26.8 | 28.5 | 4.1  | 19.1 | 37.6 | 38.8 | 19.5 | 72.2 | 38.2 |
| Queue Delay             | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| Total Delay             | 26.8 | 28.5 | 4.1  | 19.1 | 37.6 | 38.8 | 19.5 | 72.2 | 38.2 |
| Queue Length 50th (ft)  | 18   | 213  | 0    | 13   | 302  | 123  | 20   | 146  | 122  |
| Queue Length 95th (ft)  | 43   | 268  | 24   | 31   | 377  | #253 | 66   | #281 | 215  |
| Internal Link Dist (ft) |      | 5253 |      |      | 950  |      | 780  |      | 2592 |
| Turn Bay Length (ft)    | 150  |      | 170  | 150  |      | 150  |      | 150  |      |
| Base Capacity (vph)     | 158  | 835  | 752  | 268  | 824  | 445  | 464  | 265  | 409  |
| Starvation Cap Reductn  | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Spillback Cap Reductn   | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Storage Cap Reductn     | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Reduced v/c Ratio       | 0.27 | 0.51 | 0.11 | 0.12 | 0.67 | 0.51 | 0.18 | 0.86 | 0.69 |

Intersection Summary

- # 95th percentile volume exceeds capacity, queue may be longer.  
Queue shown is maximum after two cycles.

Deer Valley 30  
1: 19th Ave & Happy Valley Rd

2024 Total AM Scenario B  
Queues

| Lane Group              | EBL  | EBT  | WBL  | WBT  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
|-------------------------|------|------|------|------|------|------|------|------|------|------|
| Lane Group Flow (vph)   | 95   | 626  | 197  | 441  | 176  | 280  | 116  | 290  | 451  | 104  |
| v/c Ratio               | 0.24 | 0.38 | 0.64 | 0.25 | 0.45 | 0.24 | 0.19 | 0.63 | 0.26 | 0.17 |
| Control Delay           | 18.9 | 19.3 | 31.2 | 19.0 | 23.0 | 24.7 | 4.5  | 28.4 | 24.5 | 3.4  |
| Queue Delay             | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| Total Delay             | 18.9 | 19.3 | 31.2 | 19.0 | 23.0 | 24.7 | 4.5  | 28.4 | 24.5 | 3.4  |
| Queue Length 50th (ft)  | 36   | 81   | 80   | 59   | 69   | 69   | 0    | 123  | 78   | 0    |
| Queue Length 95th (ft)  | 68   | 115  | 131  | 86   | 115  | 102  | 33   | 190  | 105  | 25   |
| Internal Link Dist (ft) |      | 1252 |      | 283  |      | 663  |      |      | 841  |      |
| Turn Bay Length (ft)    | 345  |      | 255  |      | 265  |      | 265  | 260  |      | 260  |
| Base Capacity (vph)     | 389  | 1658 | 309  | 1731 | 389  | 1178 | 607  | 462  | 1715 | 614  |
| Starvation Cap Reductn  | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Spillback Cap Reductn   | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Storage Cap Reductn     | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Reduced v/c Ratio       | 0.24 | 0.38 | 0.64 | 0.25 | 0.45 | 0.24 | 0.19 | 0.63 | 0.26 | 0.17 |

Intersection Summary

Deer Valley 30  
1: 19th Ave & Happy Valley Rd

2024 Total PM Scenario B  
Queues

| Lane Group              | EBL  | EBT  | WBL  | WBT  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
|-------------------------|------|------|------|------|------|------|------|------|------|------|
| Lane Group Flow (vph)   | 182  | 675  | 183  | 1190 | 372  | 528  | 158  | 192  | 249  | 133  |
| v/c Ratio               | 1.02 | 0.41 | 0.61 | 0.74 | 0.74 | 0.45 | 0.25 | 0.59 | 0.18 | 0.24 |
| Control Delay           | 98.1 | 20.4 | 29.9 | 30.9 | 31.4 | 27.6 | 4.9  | 29.9 | 28.2 | 3.0  |
| Queue Delay             | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| Total Delay             | 98.1 | 20.4 | 29.9 | 30.9 | 31.4 | 27.6 | 4.9  | 29.9 | 28.2 | 3.0  |
| Queue Length 50th (ft)  | -74  | 93   | 73   | 232  | 169  | 142  | 0    | 77   | 45   | 0    |
| Queue Length 95th (ft)  | #218 | 128  | 121  | 287  | #253 | 191  | 43   | 125  | 67   | 24   |
| Internal Link Dist (ft) |      | 1252 |      | 283  |      | 663  |      |      | 841  |      |
| Turn Bay Length (ft)    | 345  |      | 255  |      | 265  |      | 265  | 260  |      | 260  |
| Base Capacity (vph)     | 178  | 1658 | 298  | 1608 | 501  | 1181 | 630  | 327  | 1404 | 558  |
| Starvation Cap Reductn  | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Spillback Cap Reductn   | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Storage Cap Reductn     | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Reduced v/c Ratio       | 1.02 | 0.41 | 0.61 | 0.74 | 0.74 | 0.45 | 0.25 | 0.59 | 0.18 | 0.24 |

Intersection Summary

- Volume exceeds capacity, queue is theoretically infinite.  
Queue shown is maximum after two cycles.
- # 95th percentile volume exceeds capacity, queue may be longer.  
Queue shown is maximum after two cycles.

Deer Valley 30  
6: Pinnacle Peak Rd & 19th Ave

2024 Total AM Scenario B  
Queues

| Lane Group              | EBL  | EBT  | WBL  | WBT  | NBL  | NBT  | SBL  | SBT  |
|-------------------------|------|------|------|------|------|------|------|------|
| Lane Group Flow (vph)   | 153  | 757  | 62   | 278  | 184  | 594  | 111  | 779  |
| v/c Ratio               | 0.32 | 0.48 | 0.26 | 0.18 | 0.69 | 0.30 | 0.55 | 0.85 |
| Control Delay           | 18.5 | 11.4 | 19.3 | 10.4 | 31.4 | 16.6 | 41.6 | 42.5 |
| Queue Delay             | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| Total Delay             | 18.5 | 11.4 | 19.3 | 10.4 | 31.4 | 16.6 | 41.6 | 42.5 |
| Queue Length 50th (ft)  | 56   | 93   | 22   | 33   | 66   | 74   | 57   | 230  |
| Queue Length 95th (ft)  | 103  | 142  | 53   | 57   | #135 | 101  | 117  | #334 |
| Internal Link Dist (ft) |      | 315  |      | 5253 |      | 273  |      | 1292 |
| Turn Bay Length (ft)    | 265  |      | 160  |      | 215  |      | 185  |      |
| Base Capacity (vph)     | 471  | 1593 | 236  | 1517 | 278  | 1986 | 202  | 916  |
| Starvation Cap Reductn  | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Spillback Cap Reductn   | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Storage Cap Reductn     | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Reduced v/c Ratio       | 0.32 | 0.48 | 0.26 | 0.18 | 0.66 | 0.30 | 0.55 | 0.85 |

Intersection Summary

# 95th percentile volume exceeds capacity, queue may be longer.  
Queue shown is maximum after two cycles.

Deer Valley 30  
6: Pinnacle Peak Rd & 19th Ave

2024 Total PM Scenario B  
Queues

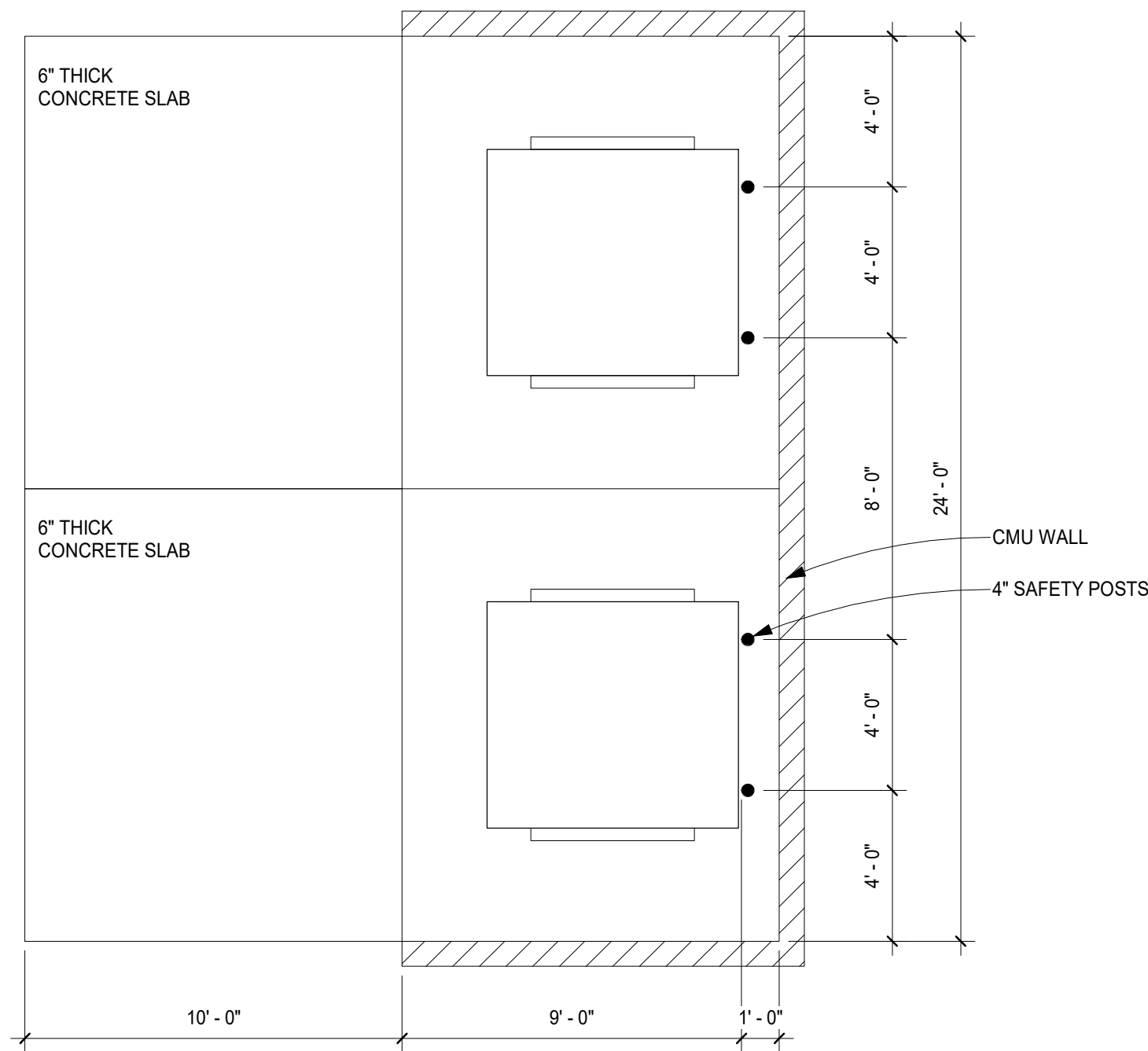
| Lane Group              | EBL  | EBT  | WBL  | WBT  | NBL   | NBT  | SBL  | SBT  |
|-------------------------|------|------|------|------|-------|------|------|------|
| Lane Group Flow (vph)   | 93   | 425  | 62   | 443  | 443   | 908  | 71   | 765  |
| v/c Ratio               | 0.29 | 0.31 | 0.19 | 0.34 | 1.10  | 0.39 | 0.52 | 0.89 |
| Control Delay           | 22.5 | 7.6  | 20.4 | 18.7 | 100.9 | 16.1 | 45.8 | 46.9 |
| Queue Delay             | 0.0  | 0.0  | 0.0  | 0.0  | 0.0   | 0.0  | 0.0  | 0.0  |
| Total Delay             | 22.5 | 7.6  | 20.4 | 18.7 | 100.9 | 16.1 | 45.8 | 46.9 |
| Queue Length 50th (ft)  | 37   | 31   | 24   | 85   | -249  | 120  | 36   | 224  |
| Queue Length 95th (ft)  | 77   | 62   | 53   | 123  | #439  | 153  | #91  | #332 |
| Internal Link Dist (ft) |      | 315  |      | 5253 |       | 273  |      | 1292 |
| Turn Bay Length (ft)    | 265  |      | 160  |      | 215   |      | 185  |      |
| Base Capacity (vph)     | 320  | 1365 | 329  | 1313 | 402   | 2302 | 136  | 857  |
| Starvation Cap Reductn  | 0    | 0    | 0    | 0    | 0     | 0    | 0    | 0    |
| Spillback Cap Reductn   | 0    | 0    | 0    | 0    | 0     | 0    | 0    | 0    |
| Storage Cap Reductn     | 0    | 0    | 0    | 0    | 0     | 0    | 0    | 0    |
| Reduced v/c Ratio       | 0.29 | 0.31 | 0.19 | 0.34 | 1.10  | 0.39 | 0.52 | 0.89 |

Intersection Summary

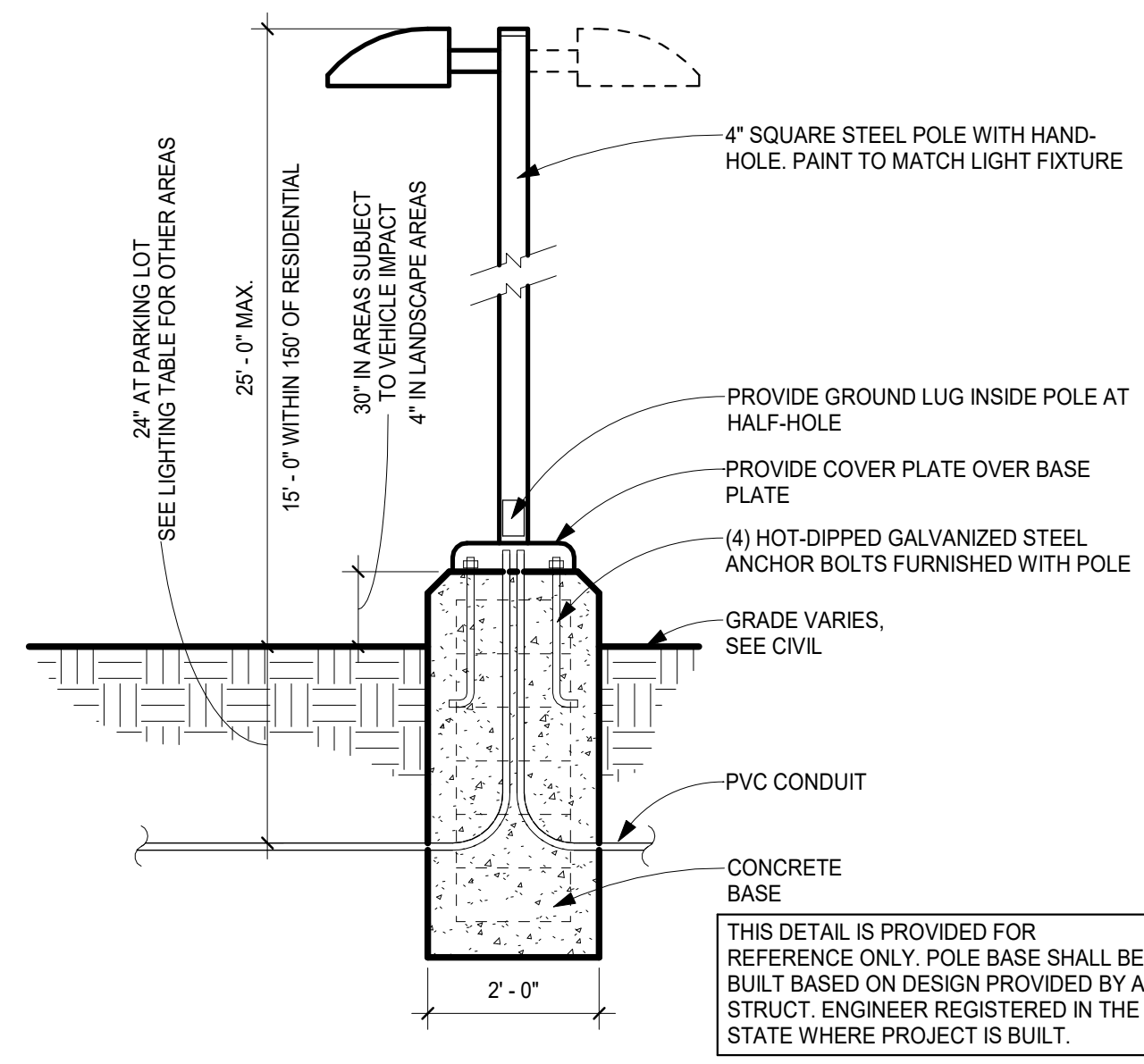
- Volume exceeds capacity, queue is theoretically infinite.  
Queue shown is maximum after two cycles.

# 95th percentile volume exceeds capacity, queue may be longer.  
Queue shown is maximum after two cycles.

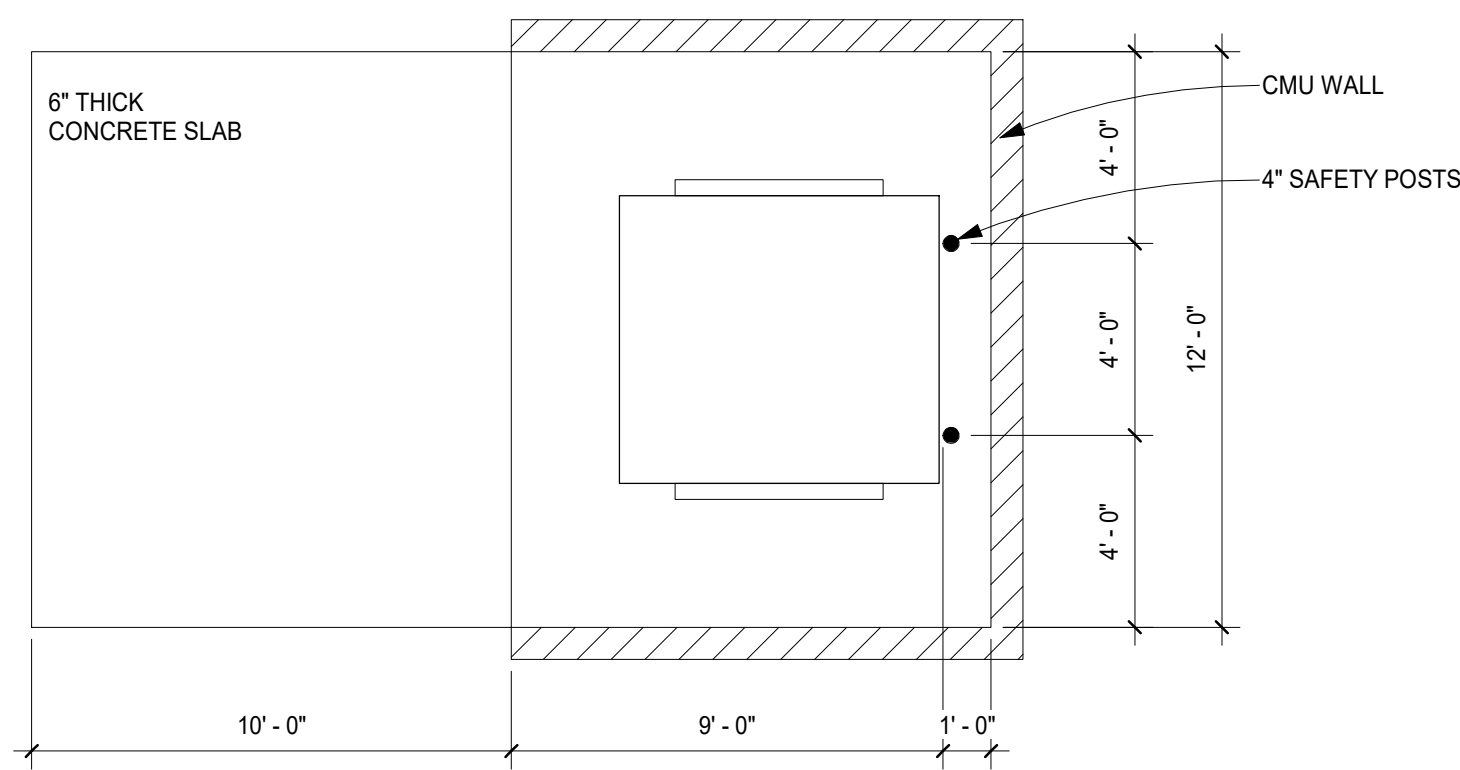
# Exhibit D



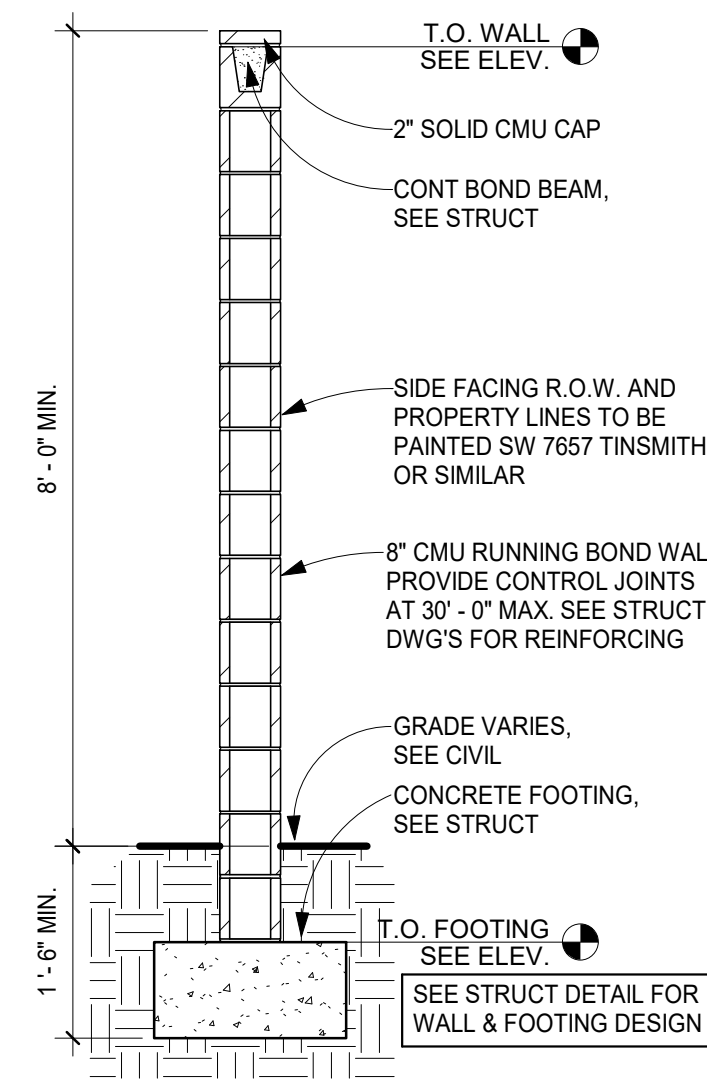
1 TRASH AND RECYCLING BIN - BLDG A  
1/4" = 1'-0"



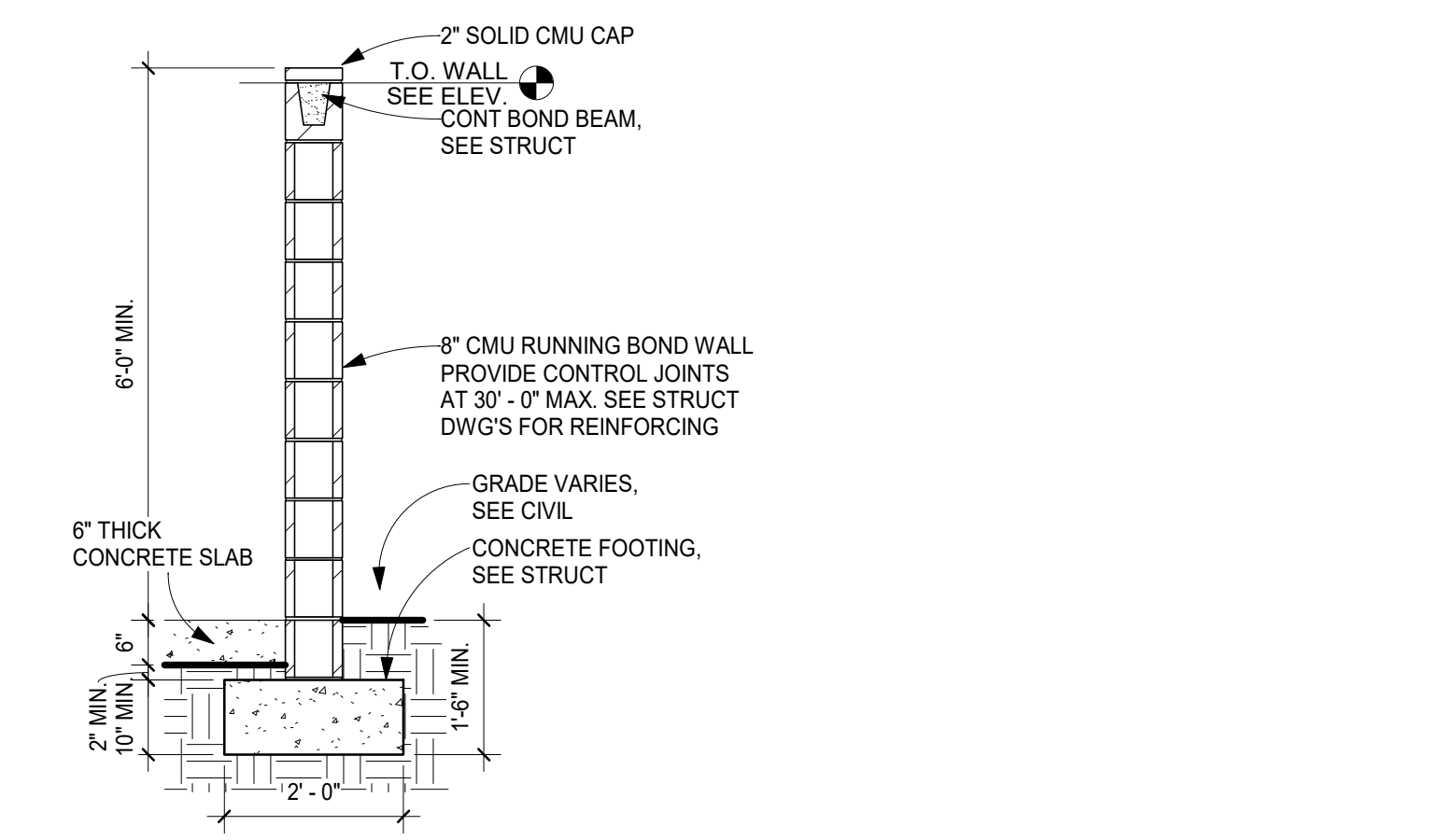
4 LIGHT FIXTURE DETAIL  
NOT TO SCALE



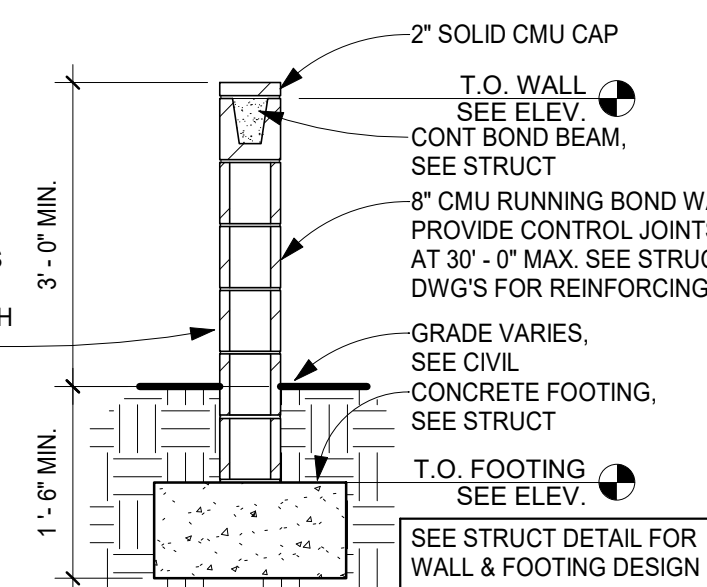
2 TRASH AND RECYCLING BIN - BLDG B  
1/4" = 1'-0"



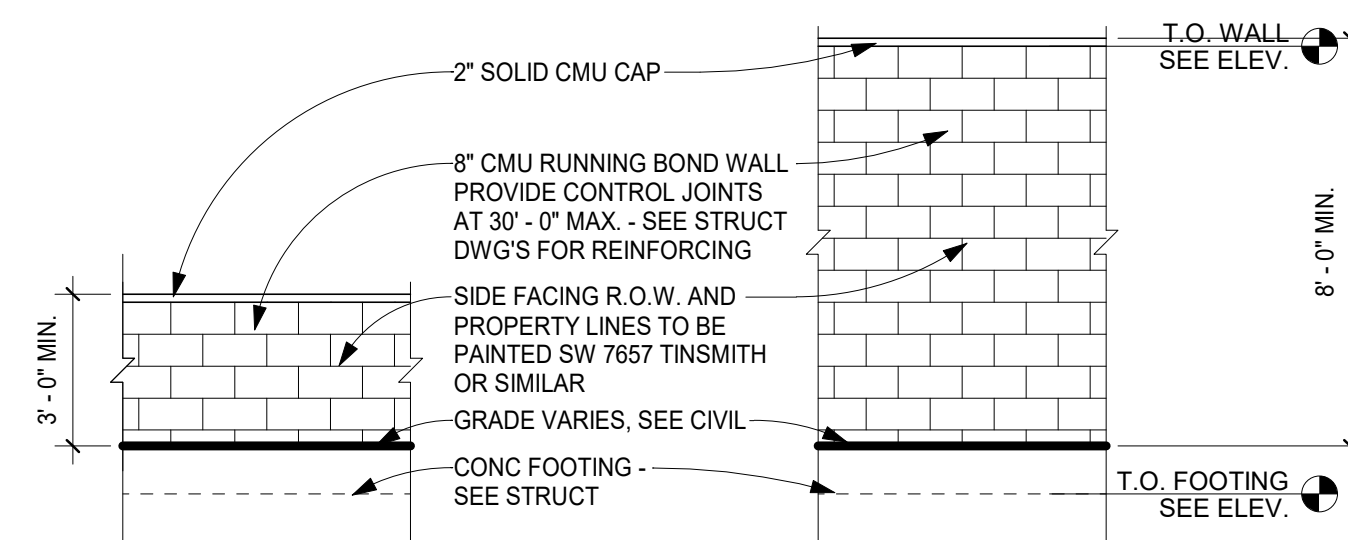
5 8' TALL SITE WALL SECTION  
1/2" = 1'-0"



3 6' TALL TRASH WALL SECTION  
1/2" = 1'-0"



6 3' TALL SITE WALL SECTION  
1/2" = 1'-0"



7 PARTIAL SITE WALL ELEVATIONS

**SITE STIPULATIONS**

**FOR PHO-1-21-Z-129-07-1**

1. The development shall be in general conformance with the site plan and elevations date stamped October 22, 2021, as modified by the following stipulations and approved by the Planning and Development Department.

2. The developer shall construct all streets within and adjacent to the development (except the frontage road) with paving, curb, gutter, sidewalk, curb ramps, streetlights, median islands, landscaping, and other incidentals as per plans approved by the Planning and Development Department. All improvements shall comply with all ADA accessibility standards.

3. The developer shall provide proof of existence of federal patented right-of-way 33-feet in width along the following streets as approved by the Street Transportation and Planning and Development Departments to include:

- a. North side of the east west midsection line Alameda Road alignment.
- b. Both sides of the north south midsection line for 15th Avenue located between Parkview Lane and Alameda Road.
- c. East side of the north south midsection line for 15th Avenue located north of Parkview Lane.
- d. South side of the Parkview Lane alignment.

4. The developer shall comply with requirements of the Finance Department's Real Estate Division for City's adoption of said patented right-of-way as public streets.

5. The developer shall dedicate right of ways for properties as approved by the Street Transportation and Planning and Development Departments to include:

- a. Minimum 40 feet for the north half of Alameda Road.
- b. Minimum 30 feet for the south half of Parkview Lane.
- c. Minimum 60 feet full width for 15th Avenue.

**FOR PHO-1-21-Z-18-10-1**

1. The development shall be in general conformance with the site plan and elevations date stamped October 22, 2021, as modified by the following stipulations and approved by the Planning and Development Department.

2. The developer shall dedicate minimum 40 feet of right-of-way and construct the north side of Alameda Road, as approved by the Planning and Development and Street Transportation Departments.

3. The developer shall dedicate minimum 30 feet of right-of-way and construct the south side of Parkview Lane, as approved by the Planning and Development and Street Transportation Departments.

4. The developer shall construct all streets within and adjacent to the development with paving, curb, gutter, sidewalk, curb ramps, streetlights, landscaping, and other incidentals as per plans approved by the Planning and Development Department. All improvements shall comply with all ADA accessibility standards.

5. The property owner shall record a Notice of Prospective Purchasers of Proximity to Airport in order to disclose the existence, and operational characteristics of Deer Valley Airport to future owners or tenants of the property. The form and content of such documents shall be according to the templates and instructions provided which have been reviewed and approved by the City Attorney.

**LEGAL DESCRIPTION**

**FOR PHO-1-21-Z-129-07-1**

The West Half of the Southwest Quarter of the Southeast Quarter of the Northwest Quarter of Section 7, Township 4 North, Range 3 East of the Gila and Salt River Base and Meridian, Maricopa County, Arizona; Excepting Therefrom All Coal, Oil, Gas and Other Minerals Deposits As Reserved In The Patent.

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The East Half of the Southwest Quarter of the Southwest Quarter of the Northeast Quarter of Section 7, Township 4 North, Range 3 East of the Gila and Salt River Base and Meridian, Maricopa County, Arizona. Except All Coal, Oil, Gas and Other Mineral Deposits, All Uranium, Thorium, or Any Other Material Which is or May be Determined to be Peculiarly Essential to the Production of Fissionable Materials, Whether or not of Commercial Value as Reserved to the United States of America in the Patent to Said Land.

The West Half of the Southwest Quarter of the Southwest Quarter of the Northeast Quarter of Section 7, Township 4 North, Range 3 east of the Gila and Salt River Base and Meridian, Maricopa County, Arizona; Except All Coal, Oil, Gas and Other Mineral Deposits as Reserved in Patent from the United States of America Recorded as Docket 1741, Page 324.

**FOR PHO-1-21-Z-18-10-1**

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**CONSULTANT**

Civil Engineer  
Kinley-Horn and Associates, INC  
7740 N. 16th Street, Suite 300  
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PH: (952) 656-4666  
PH: (952) 656-4663  
Contact: John Wade  
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Developer / Owner  
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Landscaping Architect  
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Email: TJD@studiodpa.com

**PROJECT**

**Deer Valley 30**

PROJECT ADDRESS  
**Phoenix, AZ**

PROJECT NUMBER  
**32013000**

**ISSUE RECORD**

01/04/22 Preliminary Review Submittal  
03/28/22 2nd Preliminary Review Submittal  
09/09/22 Final Site Plan Submittal  
12/01/22 2nd Final Site Plan Submittal  
02/16/23 Plan Revision Acknowledgement  
02/23/23 PHO Submittal

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DATE  
**02/23/23**  
PROJECT MANAGER  
**CL**  
DRAWN BY  
**S. OLSON**  
CHECKED BY  
**J. WADE**

**REGISTRATION**

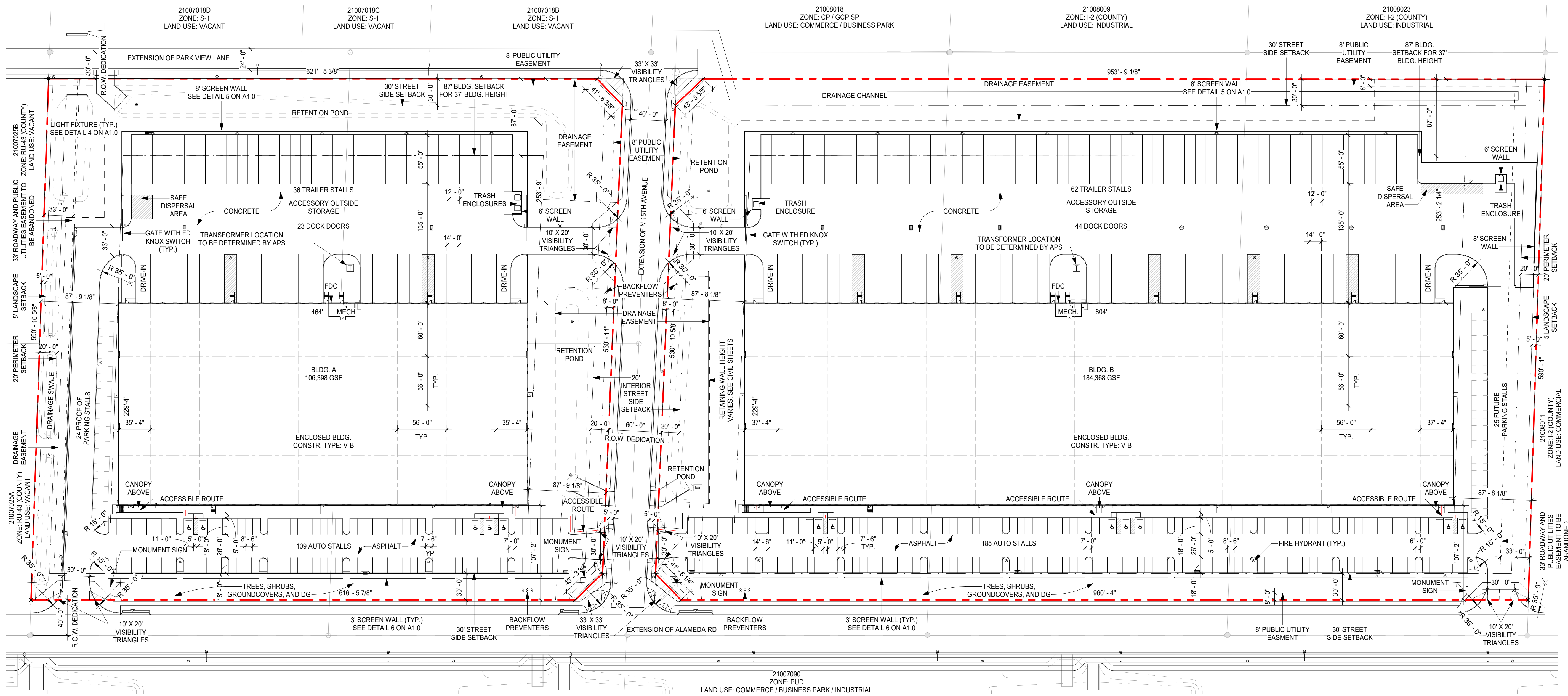
KIVA 21-3801  
SDEV 2100388  
PAPP 2106374  
QS 46-25, 46-26  
PRLM 2200359  
ABND 210068

SHEET TITLE  
**25-Acres Site  
Details**

**SHEET NUMBER**

**A1.0**





CONSULTANT

City Engineer  
Kinley-Horn and Associates, INC.  
7740 N. 16th Street, Suite 300  
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PH: (602) 215-1211  
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Email: T.J.D@studiodpa.com

PROJECT

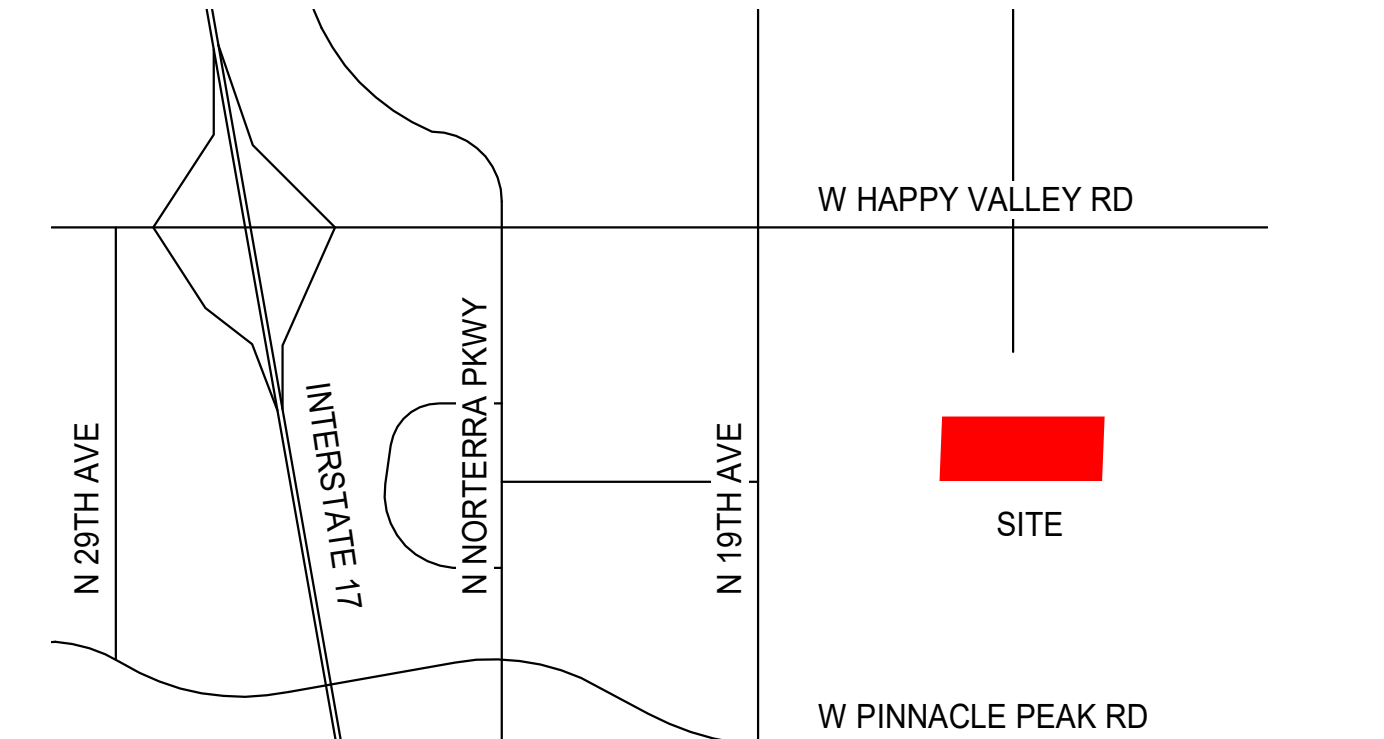
**Deer Valley 30**

PROJECT ADDRESS  
**Phoenix, AZ**

PROJECT NUMBER  
**32013000**

01/04/22 Preliminary Review Submittal  
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09/09/22 Final Site Plan Submittal  
12/01/22 2nd Final Site Plan Submittal  
02/16/23 Plan Revision Acknowledgement  
02/23/23 PHO Submittal

**1 25-Acres Site - Concept Site Plan**  
1" = 60'-0"



**2 Vicinity Map 25-Acres Site**  
NOT TO SCALE

| PARKING  | REQUIRED          | PROPOSED          |
|--|-------------------|-------------------|
| <b>BLDG A</b>  |                   |                   |
| 10% OFFICE USE BLDG. AREA                              | 10,640 SF         | 10,640 SF         |
| 90% UNSPECIFIED INDUSTRIAL USE BLDG. AREA              | 95,758 SF         | 95,758 SF         |
| <b>TOTAL BLDG. AREA</b>                                | <b>106,398 SF</b> | <b>106,398 SF</b> |
| 1 STALL/300 SF OFFICE                                  | 35 STALLS         | 35 STALLS         |
| 1 STALL/1,000 SF FOR 1-150,000 SF INDUSTRIAL USE       | 96 STALLS         | 98 STALLS         |
| <b>TOTAL STALLS REQUIRED</b>                           | <b>131 STALLS</b> | <b>133 STALLS</b> |
| ACCESSIBLE STALLS REQUIRED IF 101-150 STALLS IN LOT    | 5 STALLS          | 5 STALLS          |
| <b>TOTAL ACCESSIBLE STALLS REQUIRED</b>                | <b>5 STALLS</b>   | <b>5 STALLS</b>   |
| <b>BLDG B</b>  |                   |                   |
| 10% OFFICE USE BLDG. AREA                              | 18,437 SF         | 18,437 SF         |
| 90% UNSPECIFIED INDUSTRIAL USE BLDG. AREA              | 165,931 SF        | 165,931 SF        |
| <b>TOTAL BLDG. AREA</b>                                | <b>184,368 SF</b> | <b>184,368 SF</b> |
| 1 STALL/300 SF OFFICE                                  | 61 STALLS         | 61 STALLS         |
| 1 STALL/2,000 SF FOR 150,000-500,000 SF INDUSTRIAL USE | 83 STALLS         | 149 STALLS        |
| <b>TOTAL STALLS REQUIRED</b>                           | <b>144 STALLS</b> | <b>210 STALLS</b> |
| ACCESSIBLE STALLS REQUIRED IF 101-150 STALLS IN LOT    | 5 STALLS          | -                 |
| ACCESSIBLE STALLS REQUIRED IF 200-300 STALLS IN LOT    | 7 STALLS          | 7 STALLS          |
| <b>TOTAL ACCESSIBLE STALLS REQUIRED</b>                | <b>5 STALLS</b>   | <b>7 STALLS</b>   |

**PROJECT DESCRIPTION**

Deer Valley 25 Acres Industrial consists of approximately 22 acres of undeveloped land in the Deer Valley region, located north of Phoenix Deer Valley Airport and east of Interstate 17. The site is north of Alameda Road and divided down the middle by North Fifteenth Avenue. As planned, there are two buildings totaling approximately 290,766 gross square feet. Building A is approximately 106,398 gross square feet and Building B is approximately 184,368 gross square feet. Both buildings are fully enclosed.

This is a speculative industrial project without known tenants at the time of this submittal. The project will attract a wide variety of industrial, manufacturing, warehousing, and/or office uses.

Building A has two primary entrances and Building B has three primary entrances, all facing Alameda Road. The primary architectural features provide visual interest through the application of canopies over entrances, three different and complimentary paint colors, horizontal reveals, a textural formliner, and vertical plane breaks.

Access to each site is from Alameda and North 15th Avenue. Auto parking is located in front of the buildings. Proof of parking provides flexibility for future tenants' needs and is located west of Building A and east of Building B. Each building has a secured 185-foot truck court on the north side of the buildings. The courts are secured by eight-foot screen walls. The truck staging area is to be considered accessory outside storage with storage length likely greater than 48 hours. From the street view, thoughtful groupings of landscaping provides visual relief in companionship with the screen walls.

**PROJECT INFORMATION**

| Building A         |                   |
|--------------------|-------------------|
| Gross Area         | +/- 10.29 Acres   |
| Net Area           | +/- 448,430 SF    |
| Building Area      | +/- 8.78 Acres    |
| Lot Coverage       | +/- 382,295 SF    |
| Auto Parking       | +/- 106,398 GSF   |
| Proof of Parking   | +/- 37' / 1 Story |
| Total Parking      | 27.8 %            |
| Accessible Parking | 109 Stalls        |
| Dock Doors         | 24 Stalls         |
| Drive-In Doors     | 133 Stalls        |
| Trailer Stalls     | 5 Stalls          |
| Construction Type  | 23 Doors          |
|                    | 2 Doors           |
|                    | 36 Stalls         |
|                    | V-B (Enclosed)    |

| Building B         |                   |
|--------------------|-------------------|
| Gross Area         | +/- 15.41 Acres   |
| Net Area           | +/- 671,398 SF    |
| Building Area      | +/- 13.35 Acres   |
| Lot Coverage       | +/- 581,540 SF    |
| Auto Parking       | +/- 184,368 GSF   |
| Proof of Parking   | +/- 37' / 1 Story |
| Total Parking      | 31.7 %            |
| Accessible Parking | 185 Stalls        |
| Dock Doors         | 25 Stalls         |
| Drive-In Doors     | 210 Stalls        |
| Trailer Stalls     | 7 Stalls          |
| Construction Type  | 44 Doors          |
|                    | 2 Doors           |
|                    | 62 Stalls         |
|                    | V-B (Enclosed)    |

**ZONING**

**Zone District:** CP/GCP Commerce Park / General Commerce Park

**Overlay District:** Deer Valley Airport Overlay (DVAO Area 1)

**Zoning Cases:** Z-129-07 and Z-18-10. Stipulations on Sheet A1.0.

**ZONING PARKING REQUIREMENTS**

**Unspecified Industrial Use (Shell Building):**  
for 1-150,000 SF 1 stall per 1,000 SF;  
for 150,001-500,000 SF 1 stall per 2,000 SF;  
for 500,001 SF plus 1 stall per 2,500 SF

**Office:** 1 per 300 SF

**Industrial Plants, Manufacturing, Wholesale (including Warehouses):**  
1 stall per 1.5 warehouse or production workers and 1 space per 300 SF of administrative office. If the facility runs more than one shift a day, employee count will be based on the 2 largest shifts

**Accessible Parking Required:**  
for 1-25 total stalls in parking lot: 1 required accessible space; for 26-50: 2; for 51-75: 3; for 76-100: 4; for 101-150: 5; for 151-200: 6; for 201-300: 7; for 301-400: 8; for 401-500: 9; for 1,001 and over: 20 plus 1 for each 100 spaces, or fraction thereof over 1,000.

**Proposed Parking Mix:** 10% Office, 90% Industrial

**Building A:** 131 Stalls Required, 5 to be accessible (96 Industrial + 35 Office)

**Building B:** 144 Stalls Required, 5 to be accessible (83 Industrial + 61 Office)

**SITE PLAN NOTES**

- Development and use of this site will conform with all applicable codes and ordinances.
- This project is located in the City of Phoenix water service area and has been designated as having an assured water supply.
- All new or relocated utilities will be placed underground.
- All signage requires separate approvals and permits.
- Any lighting will be placed so as to direct light away from the adjacent residential districts and will not exceed one-foot candle at the property line. No noise, odor, or vibration will be emitted so that it exceeds the general level of noise, odor, or vibration emitted by uses outside of the site.
- Owners of property adjacent to public right-of-way will have the responsibility for maintaining all landscaping within the rights-of-way in accordance with approved plans.

**SITE PLAN NOTES ADDITIONAL**

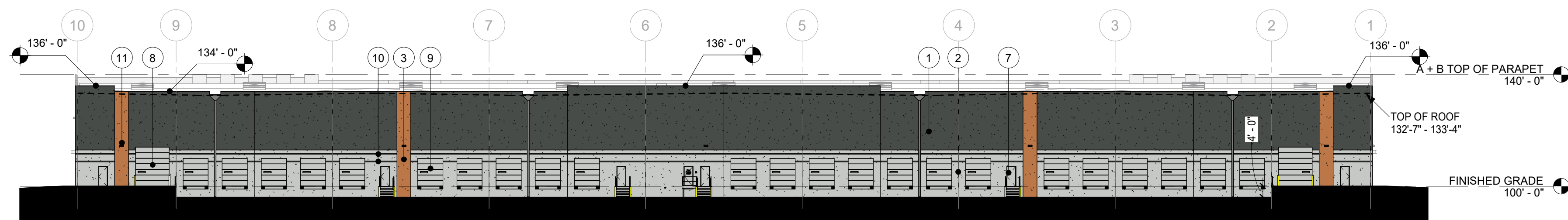
- Smoke, gas and odor emissions shall comply with Regulation III of the Maricopa County Air Pollution Control Rules and Regulations.
- The disposal of all waste materials shall comply with title 9, chapter 8, articles 18 and 4 of the Hazardous Waste Regulations as adopted by the Arizona Health Department.
- The average noise level, measured at the property line, shall not exceed fifty-five dB (l dn) when measured on an "A weighted" sound level meter and according to the procedures of the Environmental Protection Agency.

|      |              |
|------|--------------|
| KIVA | 21-3801      |
| SDEV | 2100388      |
| PAPP | 2106374      |
| QS   | 46-25, 46-26 |
| PRLM | 2200359      |
| ABND | 210068       |

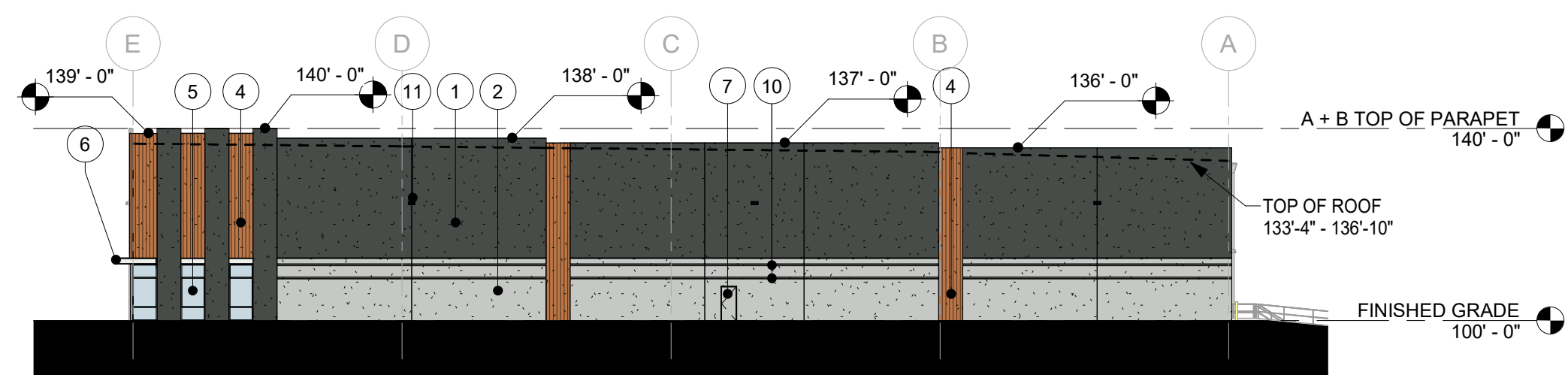
SHEET TITLE  
**25-Acres Site - Concept Site Plan**

SHEET NUMBER

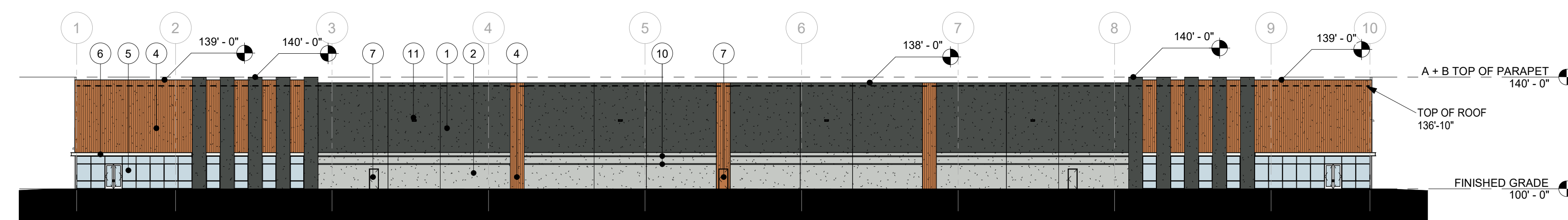
**A1.1**



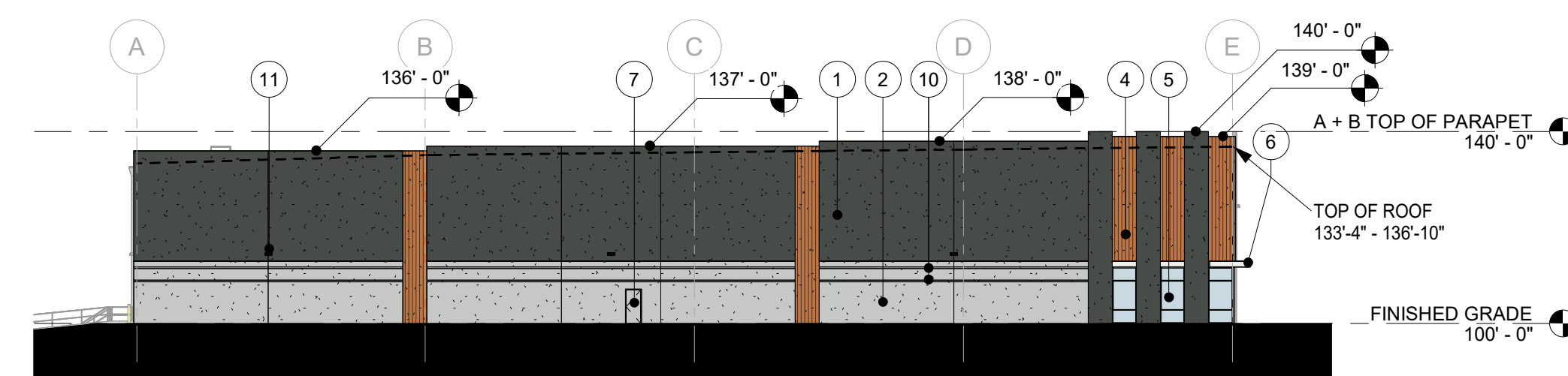
**1 NORTH ELEVATION @ BLD A**  
1" = 30'-0"



**2 EAST ELEVATION @ BLD A**  
1" = 30'-0"



**3 SOUTH ELEVATION @ BLD A**  
1" = 30'-0"



**4 WEST ELEVATION @ BLD A**  
1" = 30'-0"

| KEYNOTE LEGEND |   |
|----------------|---|
| 1              | CONCRETE PAINTED COLOR #1 - SW 7062 ROCK BOTTOM OR SIMILAR                      |
| 2              | CONCRETE PAINTED COLOR #2 - SW 7657 TINSMITH OR SIMILAR                         |
| 3              | CONCRETE PAINTED COLOR #3 - SW 6362 TIGEREYE OR SIMILAR                         |
| 4              | CONCRETE W/ FORMLINER PAINTED COLOR #3 - SW 6362 TIGEREYE OR SIMILAR            |
| 5              | STOREFRONT VISION GLASS W/ ALUMINUM FRAME                                       |
| 6              | METAL CANOPY PAINTED COLOR #4 - SW 7006 EXTRA WHITE OR SIMILAR                  |
| 7              | HOLLOW METAL DOOR - PAINTED TO MATCH COLOR OF SURROUNDING PANEL                 |
| 8              | DRIVE-IN DOOR - COLOR TO MATCH PAINT COLOR #2 SW 7657 TINSMITH OR SIMILAR       |
| 9              | OVERHEAD DOCK DOORS - COLOR TO MATCH PAINT COLOR #2 SW 7657 TINSMITH OR SIMILAR |
| 10             | HORIZONTAL REVEALS  |
| 11             | WALL-MOUNTED LIGHT  |

NOTE: ROOFTOP EQUIPMENT NOT PLANNED TO BE INSTALLED WITH CORE AND SHELL BUILDING.

KIVA 21-3801  
SDEV 2100388  
PAPP 2106374  
QS 46-25, 46-26  
PRLM 2200359

CONSULTANT  
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PH: (480) 577-5818  
Contact: Tim Dougherty  
Email: TJD@studiodpa.com

PROJECT  
**Deer Valley 30**

PROJECT ADDRESS  
Phoenix, AZ

PROJECT NUMBER  
32013000

01/04/22 Preliminary Review Submittal  
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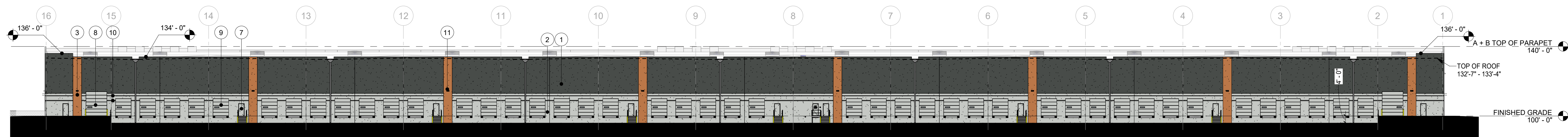
DATE  
03/28/22  
PROJECT MANAGER  
CL  
DRAWN BY  
S. OLSON  
CHECKED BY  
J. WADE

REGISTRATION

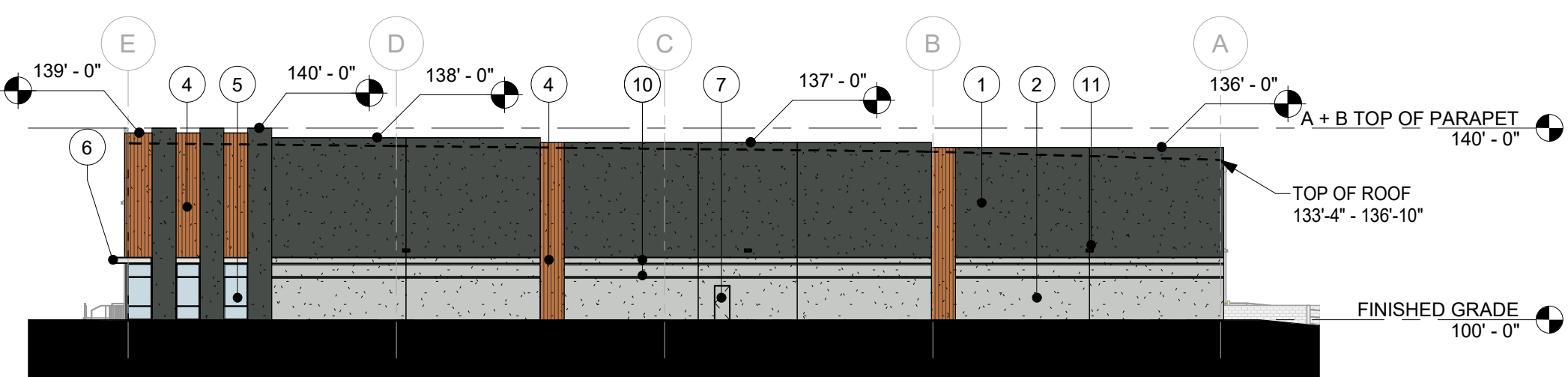
SHEET TITLE  
**BUILDING A  
ELEVATIONS**

SHEET NUMBER

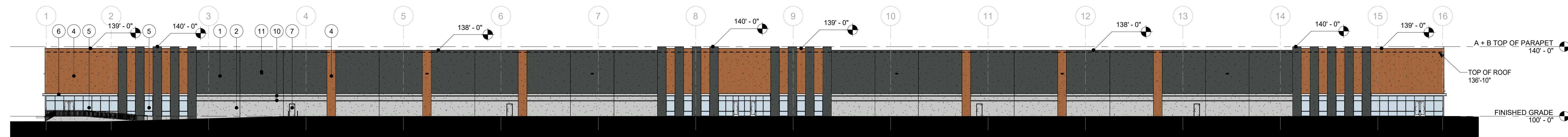
**A5**



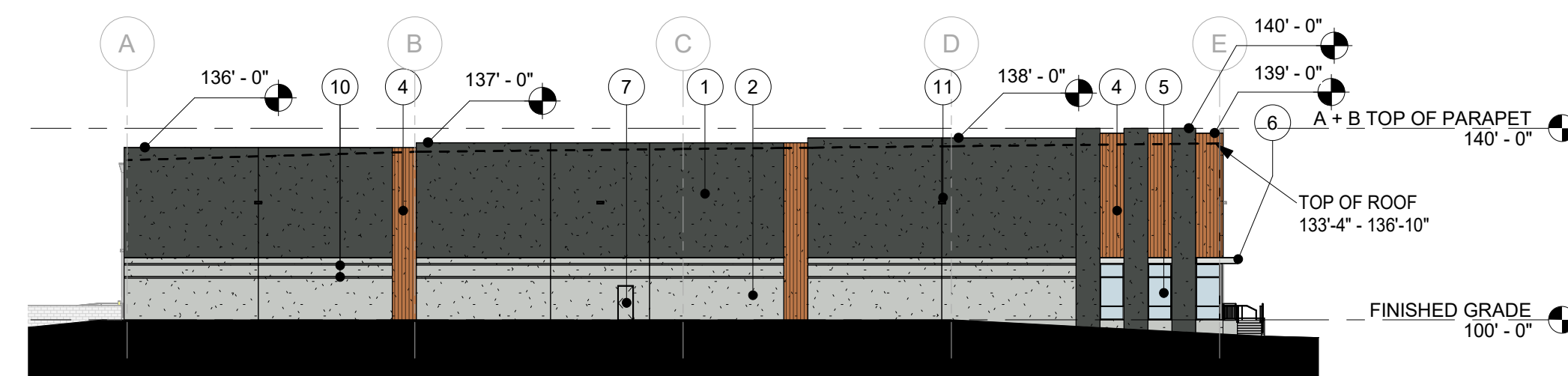
**1 NORTH ELEVATION @ BLD B**  
1" = 30'-0"



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1" = 30'-0"



**3 SOUTH ELEVATION @ BLD B**  
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**4 WEST ELEVATION @ BLD B**  
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**KEYNOTE LEGEND**

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- 10 HORIZONTAL REVEALS
- 11 WALL-MOUNTED LIGHT

NOTE: ROOFTOP EQUIPMENT NOT PLANNED TO BE INSTALLED WITH CORE AND SHELL BUILDING.

|   |   |
|---|---|
| <b>CONSULTANT</b>   |   |
| Civil Engineer<br>Kinley-Horn and Associates, INC.<br>7740 N. 16th Street, Suite 300<br>Phoenix, AZ 85021<br>PH: (602) 215-1221<br>Contact: Chuck Watt, P.E.<br>Email: Chuck.Watt@kinley-horn.com | Architect<br>Opus AE Group, LLC<br>10350 Bren Road West<br>Minnetonka, MN 55343<br>Fax: (952) 656-4666<br>PH: (952) 656-4663<br>Contact: John Wade<br>Email: John.Wade@opus-group.com |
| <b>Developer / Owner</b>  |   |
| Opus Development Company, LLC<br>2505 E Camelback Rd, Suite 100<br>Phoenix, AZ 85016<br>PH: (602) 648-5077<br>Contact: Matthew Vranesky<br>Email: Matthew.Vranesky@opus-group.com                 | Landscape Architect<br>Studio DPA<br>PO Box 3489<br>Gilbert, AZ 85299<br>PH: (480) 577-5818<br>Contact: Tim Dougherty<br>Email: TJD@studiodpa.com                                     |

**PROJECT**  
**Deer Valley 30**

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01/04/22 Preliminary Review Submittal  
03/28/22 2nd Preliminary Review Submittal

**DATE**  
03/28/22  
**PROJECT MANAGER**  
CL  
**DRAWN BY**  
S. OLSON  
**CHECKED BY**  
J. WADE

REGISTRATION

KIVA 21-3801  
SDEV 2100388  
PAPP 2106374  
QS 46-25, 46-26  
PRLM 2200359

**SHEET TITLE**  
**BUILDING B ELEVATIONS**

SHEET NUMBER

**A6**

ORDINANCE G-6948

AN ORDINANCE AMENDING THE STIPULATIONS APPLICABLE  
TO REZONING APPLICATION Z-18-10-1 PREVIOUSLY  
APPROVED BY ORDINANCE G-5574.

BE IT ORDAINED BY THE COUNCIL OF THE CITY OF PHOENIX, as  
follows:

SECTION 1. The zoning stipulations applicable to the property located at  
the southeast corner of 13th Avenue and Parkview Lane alignments in a portion of  
Section 7, Township 4 North, Range 3 East, as described more specifically in  
Attachment "A," are hereby modified to read as set forth below.

STIPULATIONS:

Mod

1. ~~That conceptual site plan(s) and elevations shall be approved by the Planning Hearing Officer through the public hearing process prior to the Planning and Development Services Department preliminary site plan approval. This review is for conceptual purposes only. Specific development standards and requirements will be determined through the site plan approval process with the Planning and Development Services Department.~~

THE DEVELOPMENT SHALL BE IN GENERAL CONFORMANCE WITH THE  
SITE PLAN AND ELEVATIONS DATE STAMPED OCTOBER 22, 2021, AS  
MODIFIED BY THE FOLLOWING STIPULATIONS AND APPROVED BY THE  
PLANNING AND DEVELOPMENT DEPARTMENT.

2. ~~That~~ The developer shall dedicate MINIMUM right-of-way totaling 40 feet OF  
RIGHT-OF-WAY AND CONSTRUCT for the north half SIDE of Alameda  
Road, and that right-of-way totaling 30 feet shall be dedicated for the south

Mod

~~half of Parkview Road as approved by the Street Transportation Department and the Planning and Development Services AND STREET TRANSPORTATION Departments.~~

3. THE DEVELOPER SHALL DEDICATE MINIMUM 30 FEET OF RIGHT-OF-WAY AND CONSTRUCT THE SOUTH SIDE OF PARKVIEW LANE, AS APPROVED BY THE PLANNING AND DEVELOPMENT AND STREET TRANSPORTATION DEPARTMENTS.
4. ~~That~~ The developer shall construct all streets within and adjacent to the development with paving, curb, gutter, sidewalk, curb ramps, streetlights, landscaping, and other incidentals as per plans approved by the Planning and Development ~~Services~~ Department. All improvements shall comply with all ADA accessibility standards.
5. ~~That~~ The property owner shall record a Notice of Prospective Purchasers of Proximity to Airport in order to disclose the existence, and operational characteristics of Deer Valley Airport to future owners or tenants of the property. The form and content of such documents shall be according to the templates and instructions provided which have been reviewed and approved by the City Attorney.

SECTION 2. Due to the site's specific physical conditions and the use district granted pursuant to Ordinance G-5574 this portion of the rezoning is now subject to the stipulations approved pursuant to Ordinance G-5574 and as modified in Section 1 of this Ordinance. Any violation of the stipulation is a violation of the City of Phoenix Zoning Ordinance. Building permits shall not be issued for the subject site until all the stipulations have been met.

SECTION 3. If any section, subsection, sentence, clause, phrase or portion of this ordinance is for any reason held to be invalid or unconstitutional by the decision of any court of competent jurisdiction, such decision shall not affect the validity of the remaining portions hereof.

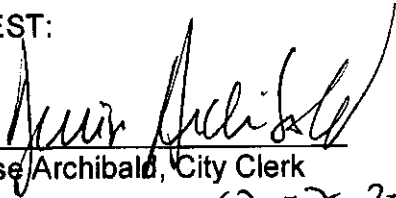
PASSED by the Council of the City of Phoenix this 26th day of January,

2022.



MAYOR

ATTEST:



Denise Archibald, City Clerk

02.07.2022

APPROVED AS TO FORM:  
Cris Meyer, City Attorney

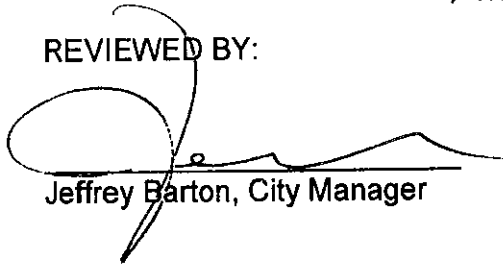
By:



Acting Chief Counsel

Pml

REVIEWED BY:

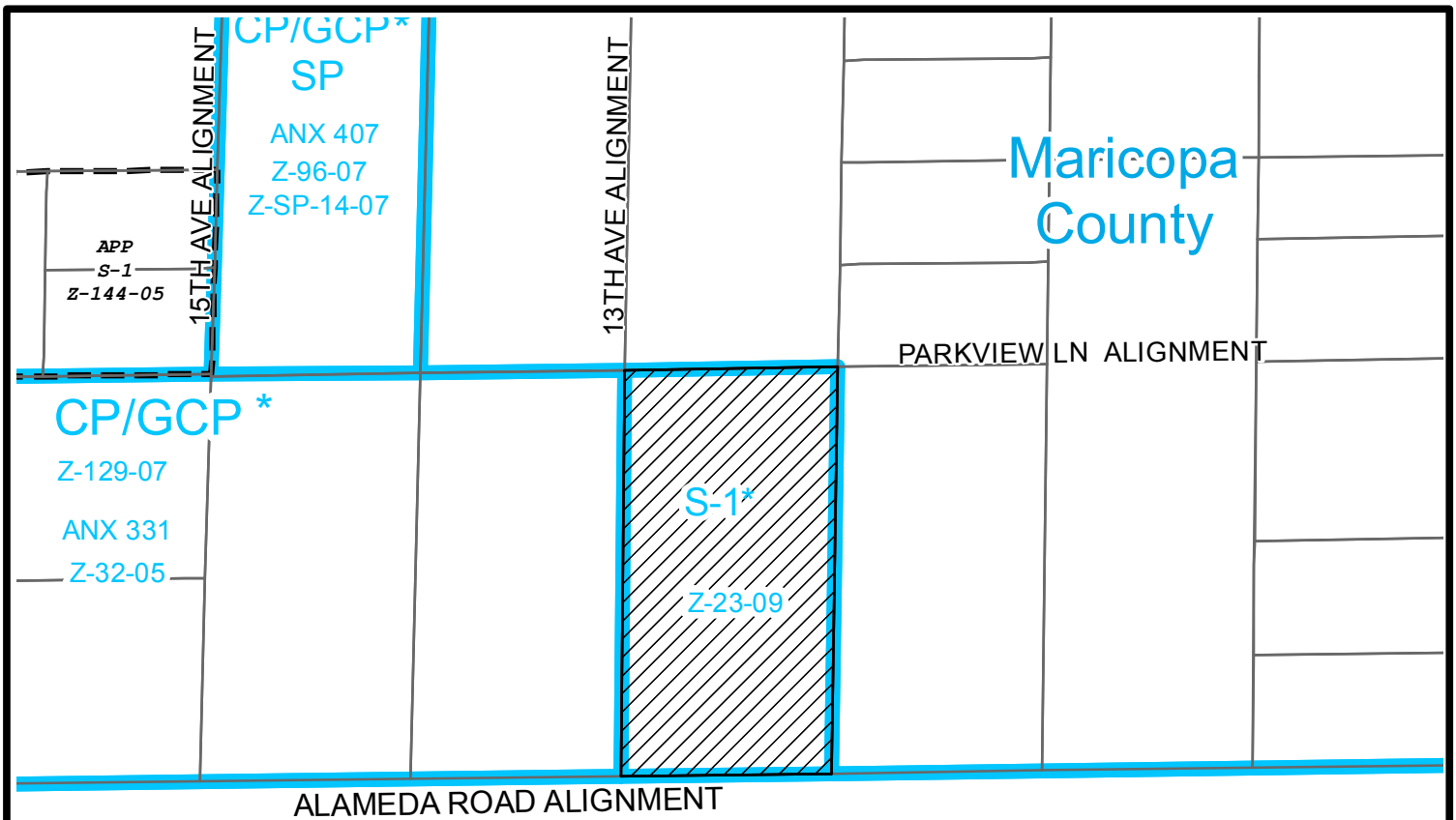


Jeffrey Barton, City Manager

Exhibits:

- A - Legal Description (1 Page)
- B - Ordinance Location Map (1 Page)

PL:tml:LF21-3338:1-26-2022:2296917v1

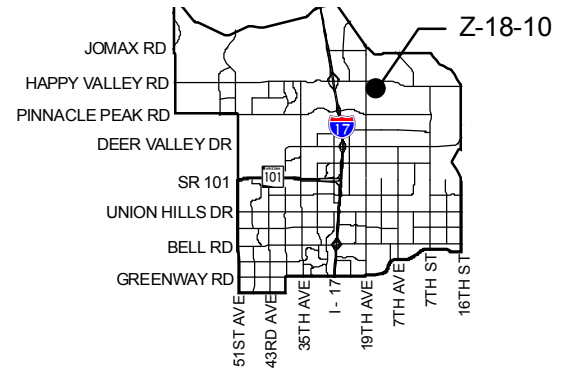


Maricopa County

S-1\*



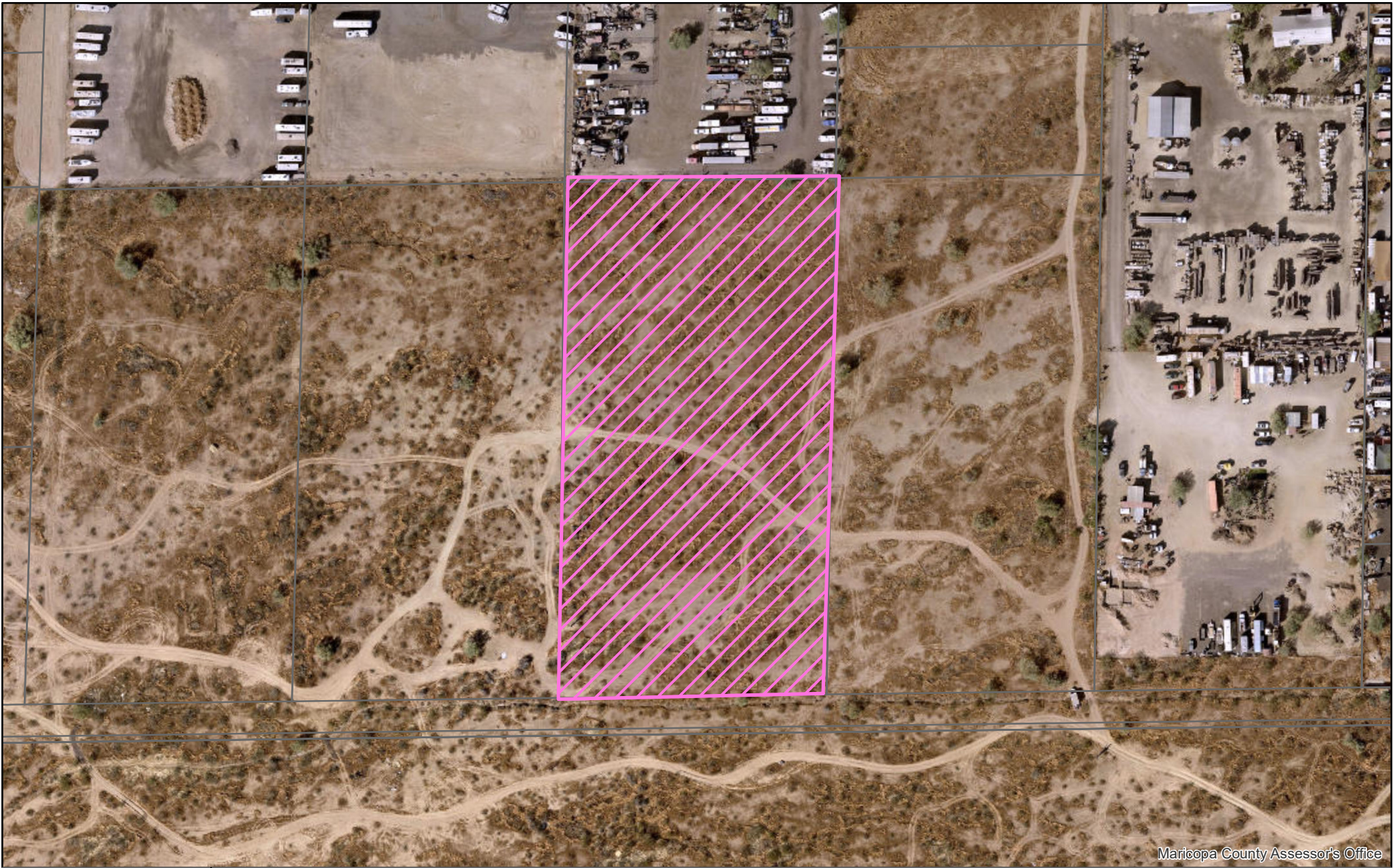
300 150 0 300 Feet



CITY OF PHOENIX PLANNING DEPARTMENT  
**DEER VALLEY VILLAGE**  
 CITY COUNCIL DISTRICT: 1

|  |  |  |  |
|--|--|--|--|
| <b>APPLICANT'S NAME:</b> Francis J. Slavin, P.C.   |  | <b>REQUESTED CHANGE:</b>   |  |
| <b>APPLICATION NO.</b> Z-18-10   |  | <b>FROM:</b> S-1, (5.16 a. c.)   |  |
| <small>GROSS AREA INCLUDING 1/2 STREET AND ALLEY DEDICATION IS APPROX.</small><br>5.16 Acres |  | <b>TO:</b> CP/GCP, (5.16 a. c.)  |  |
| <small>DATE:</small> 7/15/10<br><small>REVISION DATES:</small>                               |  | <small>AERIAL PHOTO &amp; QUARTER SEC. NO.</small> Q46-26<br><small>ZONING MAP</small> O-8 |  |
| <b>MULTIPLES PERMITTED</b>   |  | <b>CONVENTIONAL OPTION</b>   |  |
| S-1  |  | 5  |  |
| CP/GCP   |  | N/A  |  |
|  |  | <b>* UNITS P.R.D. OPTION</b>   |  |
|  |  | 5  |  |
|  |  | N/A  |  |

\* Maximum Units Allowed with P.R.D. Bonus



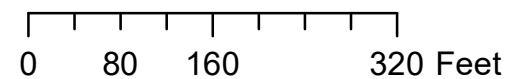
Maricopa County Assessor's Office

PHO-2-23--Z-18-10-1

**Property Location: Southeast corner of 13th Avenue and Parkview Lane alignments**



**Planning & Development Department**





S-1

CP/GCP SP\*

CP/GCP\*

CP/GCP\*

COUNTY

PUD\*

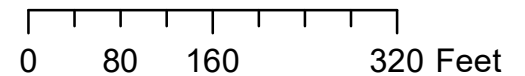
Maricopa County Assessor's Office

PHO-2-23--Z-18-10-1

Property Location: Southeast corner of 13th Avenue and Parkview Lane alignments



Planning & Development Department





Opus AE Group, L.L.C.  
10350 Bren Road West  
Minnetonka, MN 55343-0110  
952-656-4444

Opus Design Build, L.L.C.  
10350 Bren Road West  
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952-656-4444

CONSULTANT  
Civil Engineer  
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Phoenix, AZ 85021  
PH: (602) 215-1221  
Contact: Chuck Wirt, P.E.  
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Minnetonka, MN 55343  
PH: (952) 656-4666  
PH: (952) 656-4663  
Contact: John Wade  
Email: John.Wade@opus-group.com

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Phoenix, AZ 85016  
PH: (602) 648-5077  
Contact: Matthew Vranesky  
Email: Matthew.Vranesky@opus-group.com

Landscaping Architect  
Studio DPA  
PO Box 3489  
Gilbert, AZ 85299  
PH: (480) 577-5818  
Contact: Tim Dougherty  
Email: TJD@studiodpa.com

PROJECT  
**Deer Valley 30**

PROJECT ADDRESS  
Phoenix, AZ

PROJECT NUMBER  
32013000

**ISSUE RECORD**

01/04/22 Preliminary Review Submittal  
03/28/22 2nd Preliminary Review Submittal  
09/09/22 Final Site Plan Submittal  
12/01/22 2nd Final Site Plan Submittal  
02/16/23 Plan Revision Acknowledgement  
02/23/23 PHO Submittal

**LEGAL DESCRIPTION**

**FOR PHO-1-21-Z-129-07-01**  
The West Half of the Southwest Quarter of the Southeast Quarter of the Northwest Quarter of Section 7, Township 4 North, Range 3 East of the Gila and Salt River Base and Meridian, Maricopa County, Arizona; Excepting Therefrom All Coal, Oil, Gas and Other Minerals Deposits As Reserved In The Patent.

The Southeast Quarter of the Southeast Quarter of the Southeast Quarter of the Northwest Quarter of Section 7, Township 4 North, range 3 East of the Gila and Salt River Base and Meridian, Maricopa County, Arizona. Excepting Therefrom All Coal, Oil, Gas and Other Minerals Deposits As Reserved In The Patent.

The North Half of the East Half of the Southeast Quarter of the Southeast Quarter of the Northwest Quarter of Section 7, Township 4 North, Range 3 East of the Gila and Salt River base and Meridian, Maricopa County, Arizona. Excepting Therefrom All Coal, Oil, Gas and Other Minerals Deposits As Reserved In The Patent of Said Land.

The East Half of the Southwest Quarter of the Southwest Quarter of the Northeast Quarter of Section 7, Township 4 North, Range 3 East of the Gila and Salt River Base and Meridian, Maricopa County, Arizona. Except All Coal, Oil, Gas and Other Mineral Deposits, All Uranium, Thorium, or Any Other Material Which is or May be Determined to be Peculiarly Essential to the Production of Fissionable Materials, Whether or not of Commercial Value as Reserved to the United States of America in the Patent to Said Land.

The West Half of the Southwest Quarter of the Southwest Quarter of the Northeast Quarter of Section 7, Township 4 North, Range 3 east of the Gila and Salt River Base and Meridian, Maricopa County, Arizona; Except All Coal, Oil, Gas and Other Mineral Deposits as Reserved in Patent from the United States of America Recorded as Docket 1741, Page 324.

**FOR PHO-1-21-Z-18-10-1**  
The West Half of the Southeast Quarter of the Southwest Quarter of the Northeast Quarter of Section 7, Township 4 North, Range 3 East of the Gila and Salt river base and Meridian, Maricopa County, Arizona; Except All Coal, Oil, Gas and Other Mineral Deposits as Reserved in Patent from the United States of America Recorded as Docket 2230, Page 42.

**SITE STIPULATIONS**

**FOR PHO-1-21-Z-129-07-01**  
1. The development shall be in general conformance with the site plan and elevations date stamped October 22, 2021, as modified by the following stipulations and approved by the Planning and Development Department.

2. The developer shall construct all streets within and adjacent to the development (except the frontage road) with paving, curb, gutter, sidewalk, curb ramps, streetlights, median islands, landscaping, and other incidentals as per plans approved by the Planning and Development Department. All improvements shall comply with all ADA accessibility standards.

3. The developer shall provide proof of existence of federal patented right-of-way 33-feet in width along the following streets as approved by the Street Transportation and Planning and Development Departments to include:  
a. North side of the east west midsection line Alameda Road alignment.  
b. Both sides of the north south midsection line for 15th Avenue located between Parkview Lane and Alameda Road.  
c. East side of the north south midsection line for 15th Avenue located north of Parkview Lane.  
d. South side of the Parkview Lane alignment.

4. The developer shall comply with requirements of the Finance Department's Real Estate Division for City's adoption of said patented right-of-way as public streets.

5. The developer shall dedicate right of ways for properties as approved by the Street Transportation and Planning and Development Departments to include:  
a. Minimum 40 feet for the north half of Alameda Road.  
b. Minimum 30 feet for the south half of Parkview Lane.  
c. Minimum 60 feet full width for 15th Avenue.

**FOR PHO-1-21-Z-18-10-1**  
1. The development shall be in general conformance with the site plan and elevations date stamped October 22, 2021, as modified by the following stipulations and approved by the Planning and Development Department.

2. The developer shall dedicate minimum 40 feet of right-of-way and construct the north side of Alameda Road, as approved by the Planning and Development and Street Transportation Departments.

3. The developer shall dedicate minimum 30 feet of right-of-way and construct the south side of Parkview Lane, as approved by the Planning and Development and Street Transportation Departments.

4. The developer shall construct all streets within and adjacent to the development with paving, curb, gutter, sidewalk, curb ramps, streetlights, landscaping, and other incidentals as per plans approved by the Planning and Development Department. All improvements shall comply with all ADA accessibility standards.

5. The property owner shall record a Notice of Prospective Purchasers of Proximity to Airport in order to disclose the existence, and operational characteristics of Deer Valley Airport to future owners or tenants of the property. The form and content of such documents shall be according to the templates and instructions provided which have been reviewed and approved by the City Attorney.

KIVA 21-3801  
SDEV 2100388  
PAPP 2106374  
QS 46-25, 46-26  
PRLM 2200359  
ABND 210068

**CITY OF PHOENIX**

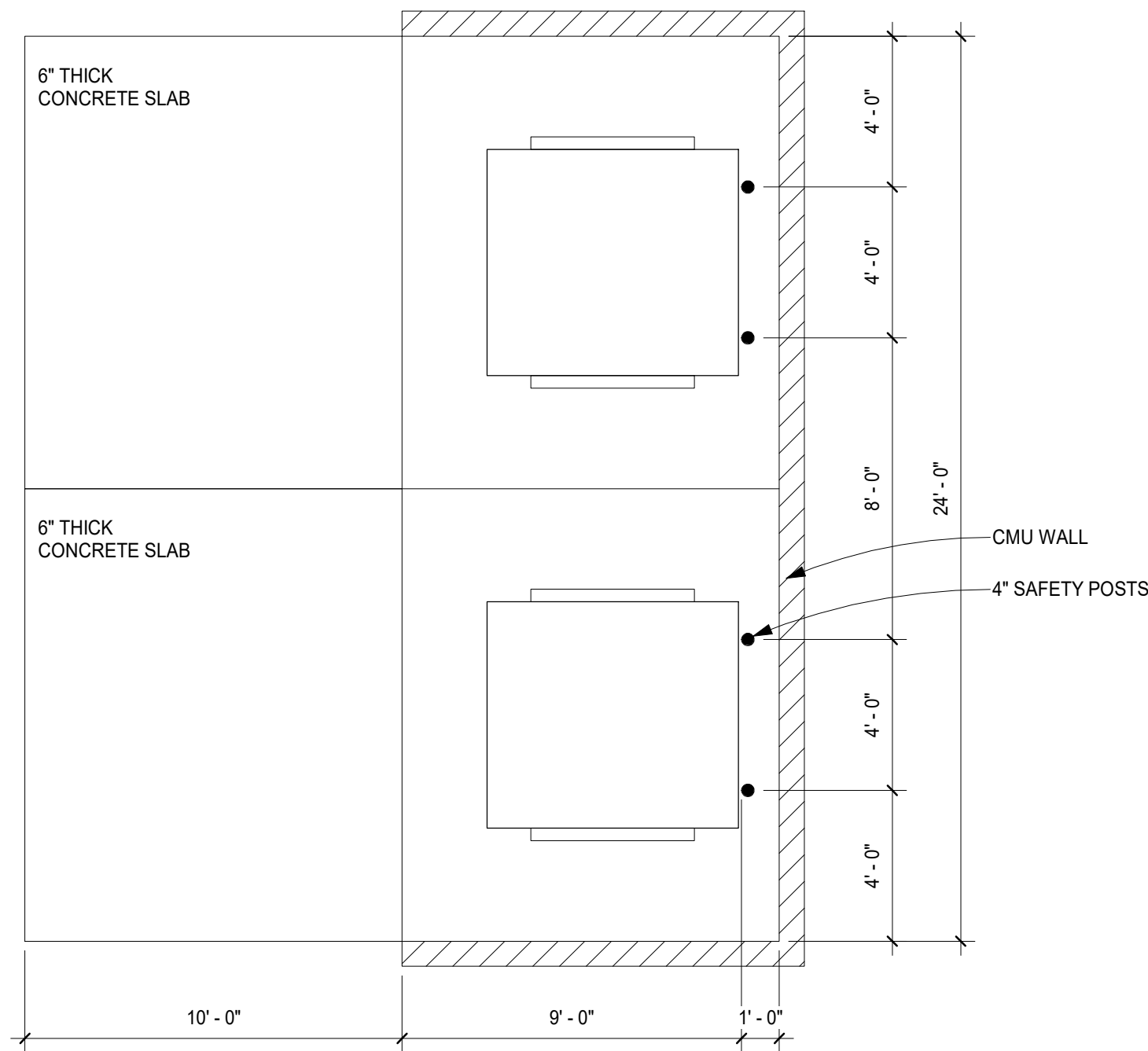
MAR 29 2023

Planning & Development  
Department

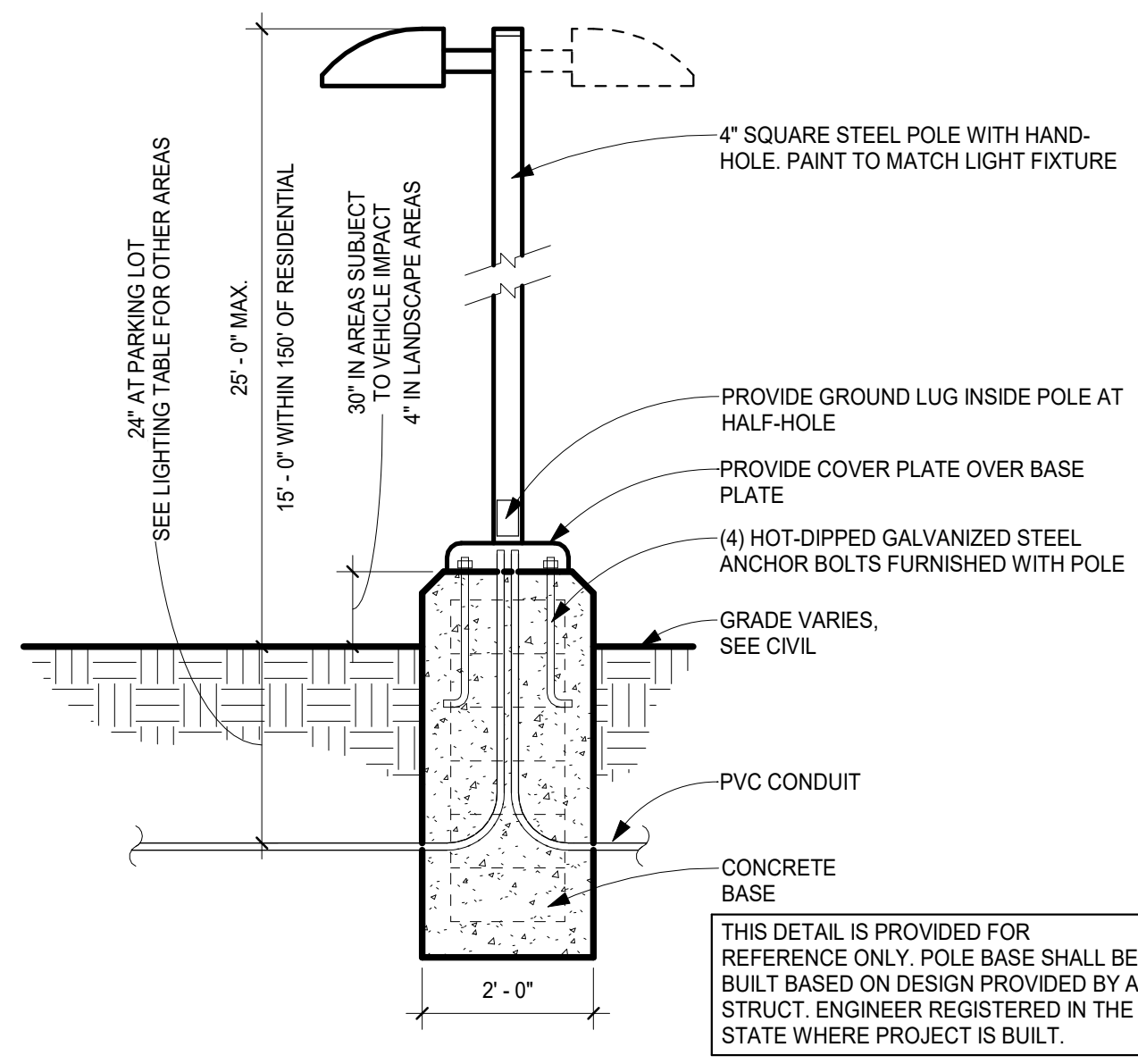
SHEET TITLE  
**25-Acres Site  
Details**

SHEET NUMBER

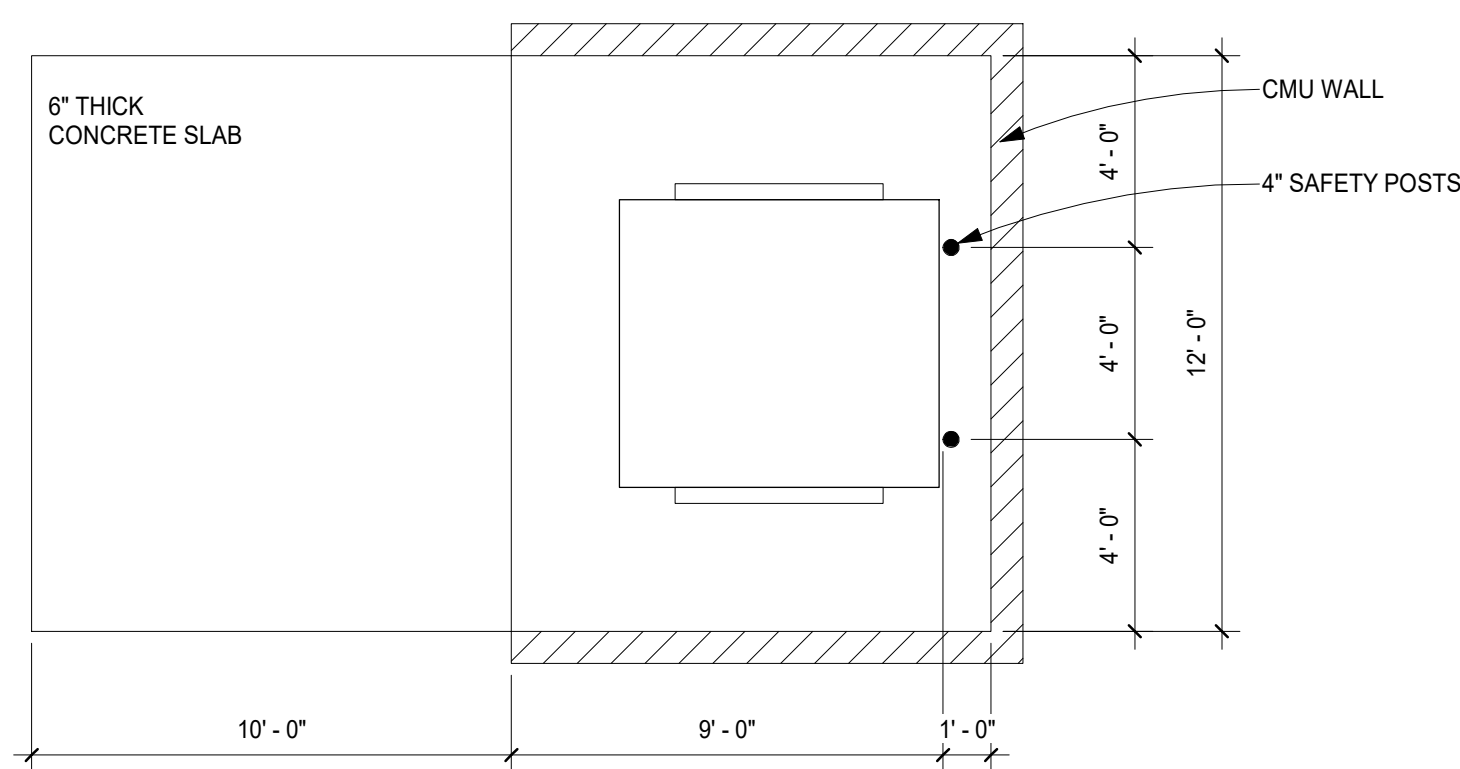
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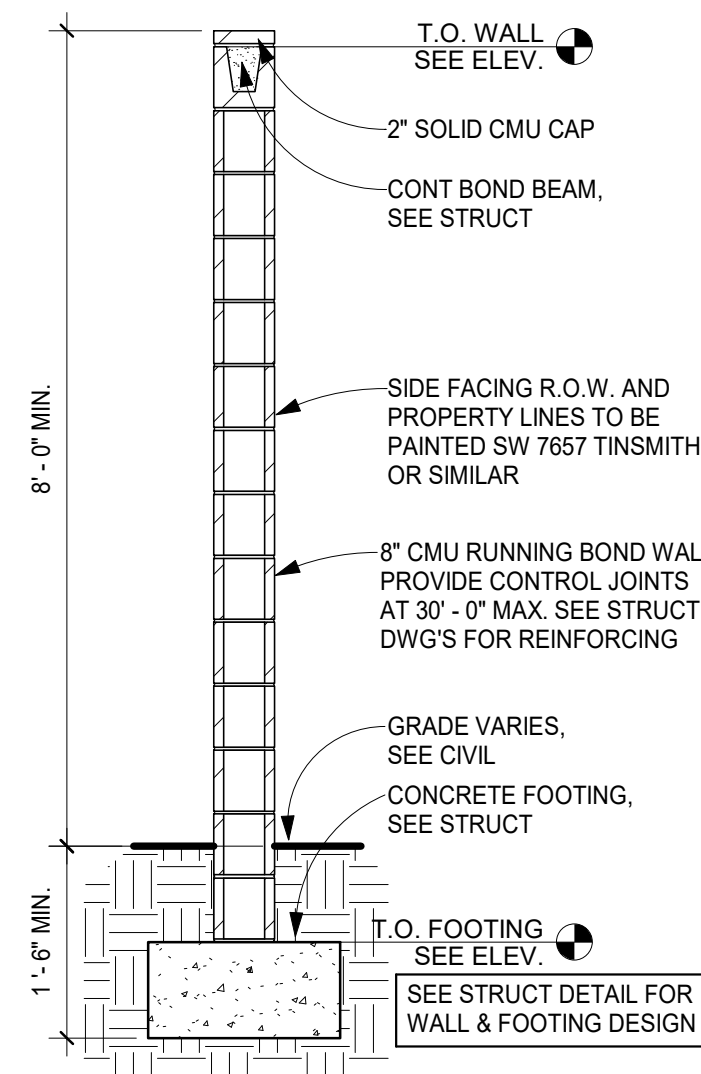
**1 TRASH AND RECYCLING BIN - BLDG A**  
1/4" = 1'-0"



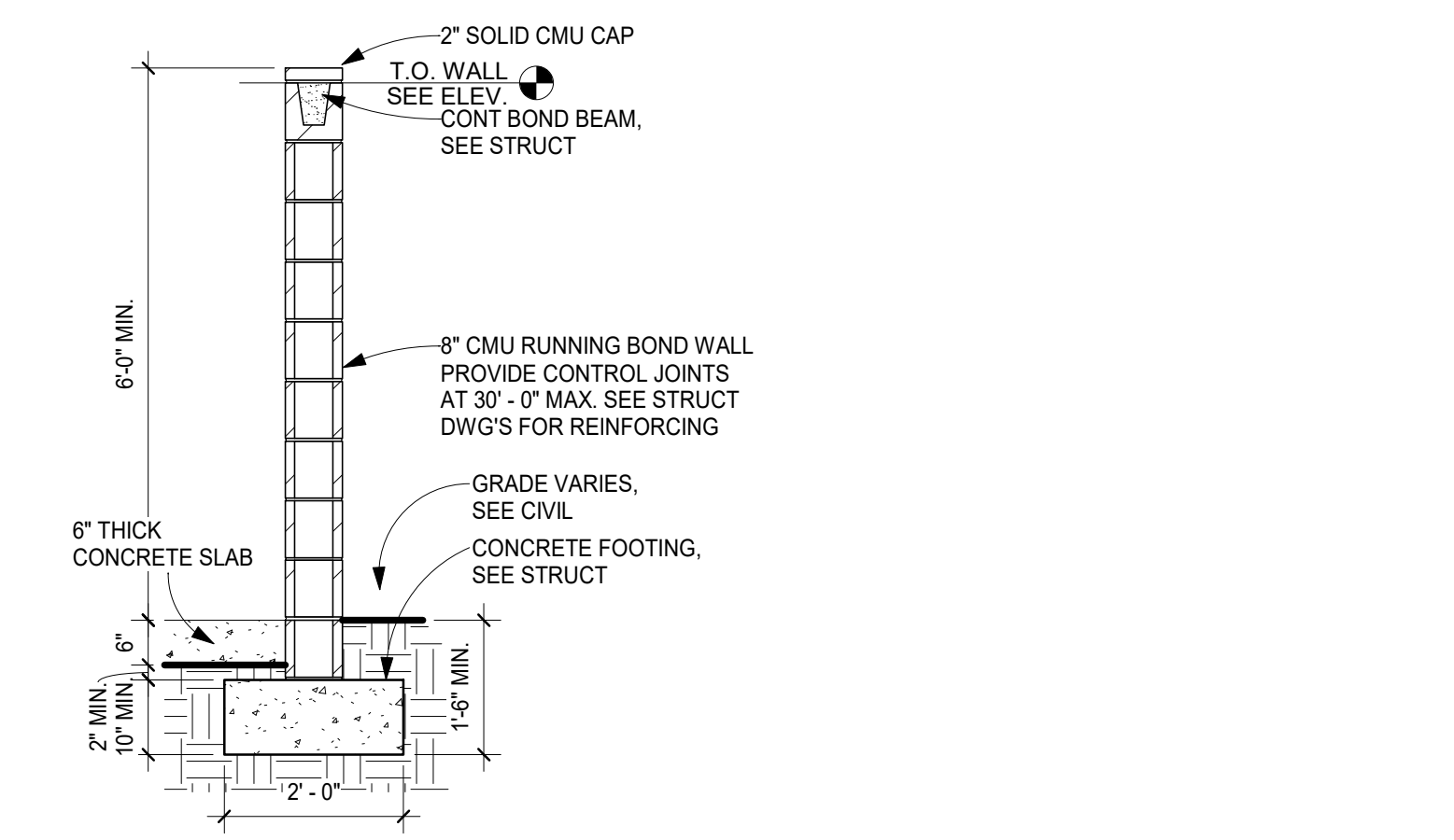
**4 LIGHT FIXTURE DETAIL**  
NOT TO SCALE



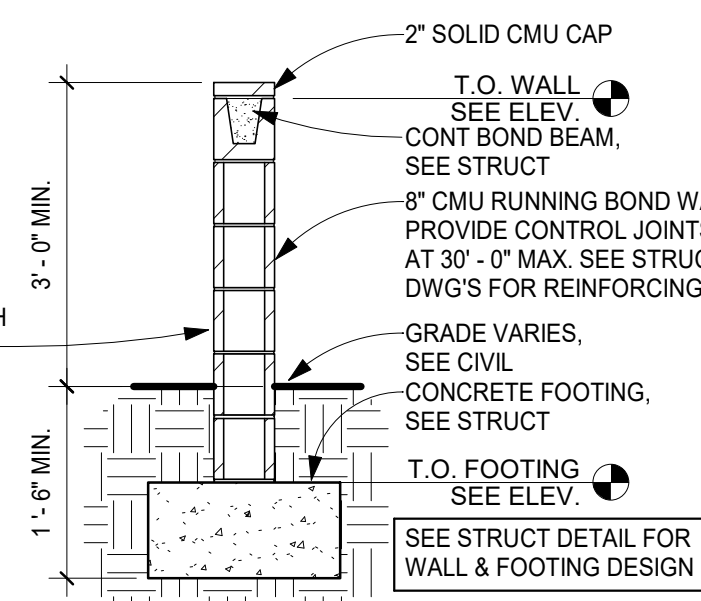
**2 TRASH AND RECYCLING BIN - BLDG B**  
1/4" = 1'-0"



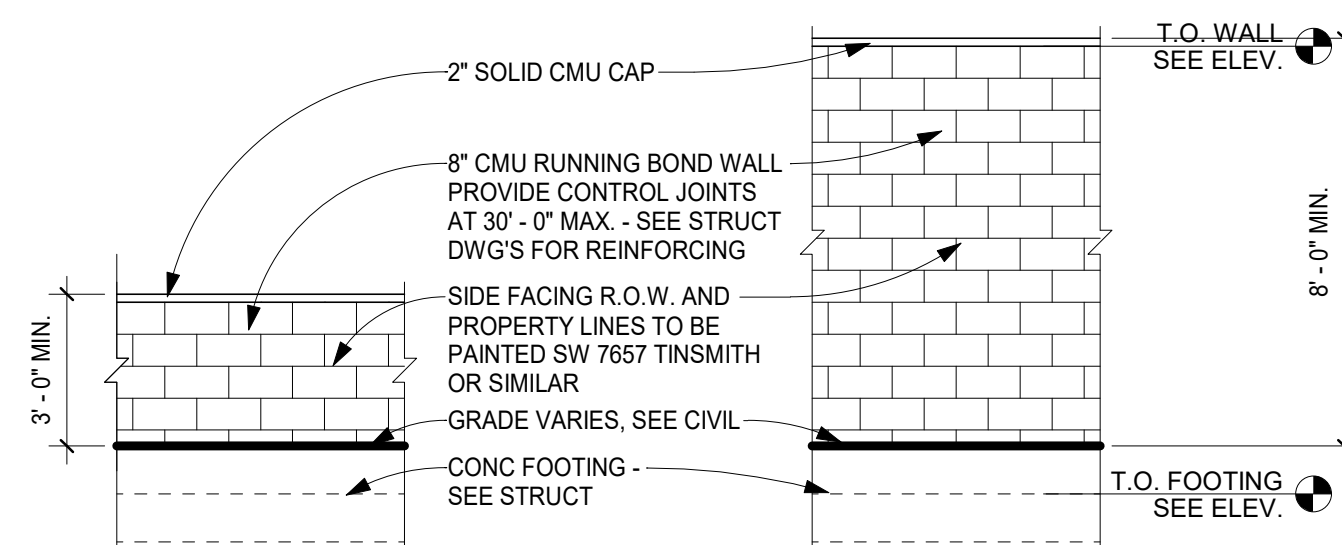
**5 8' TALL SITE WALL SECTION**  
1/2" = 1'-0"



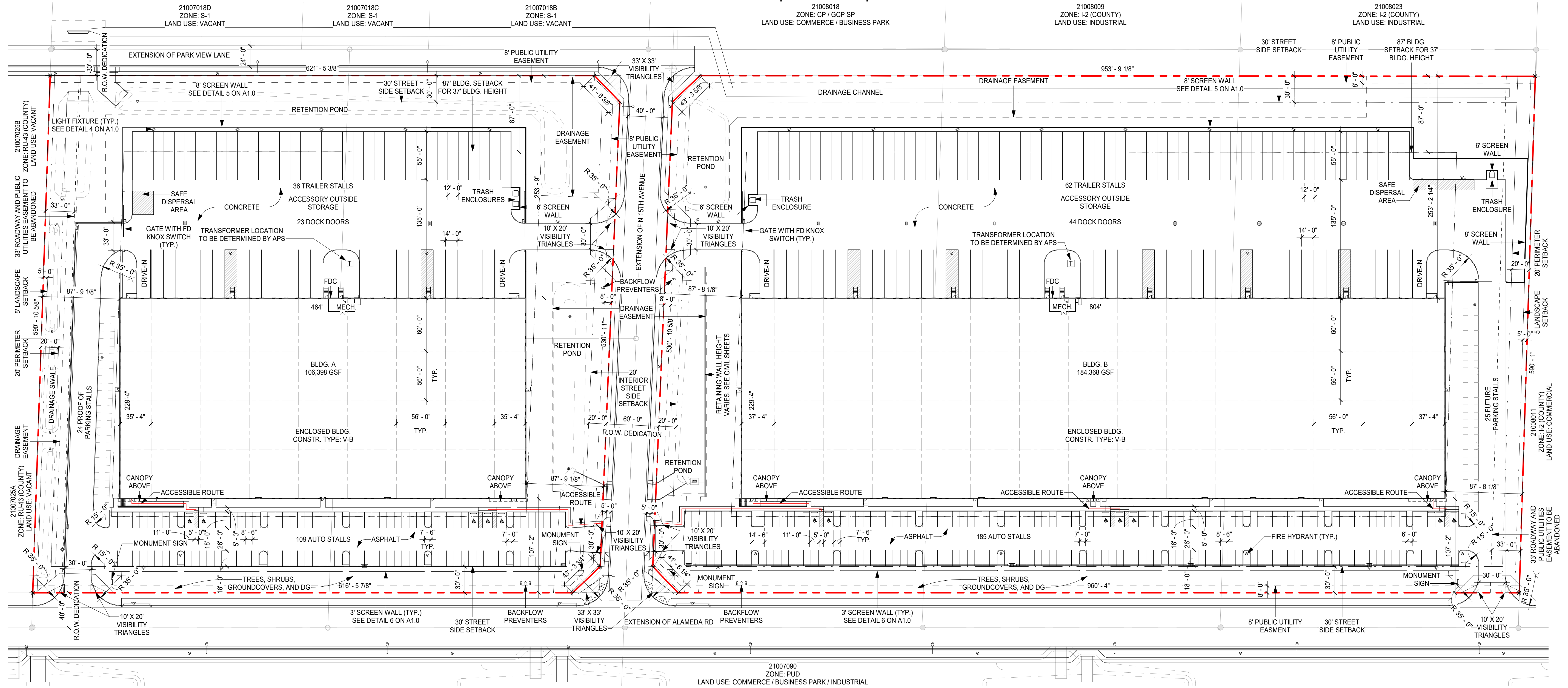
**3 6' TALL TRASH WALL SECTION**  
1/2" = 1'-0"



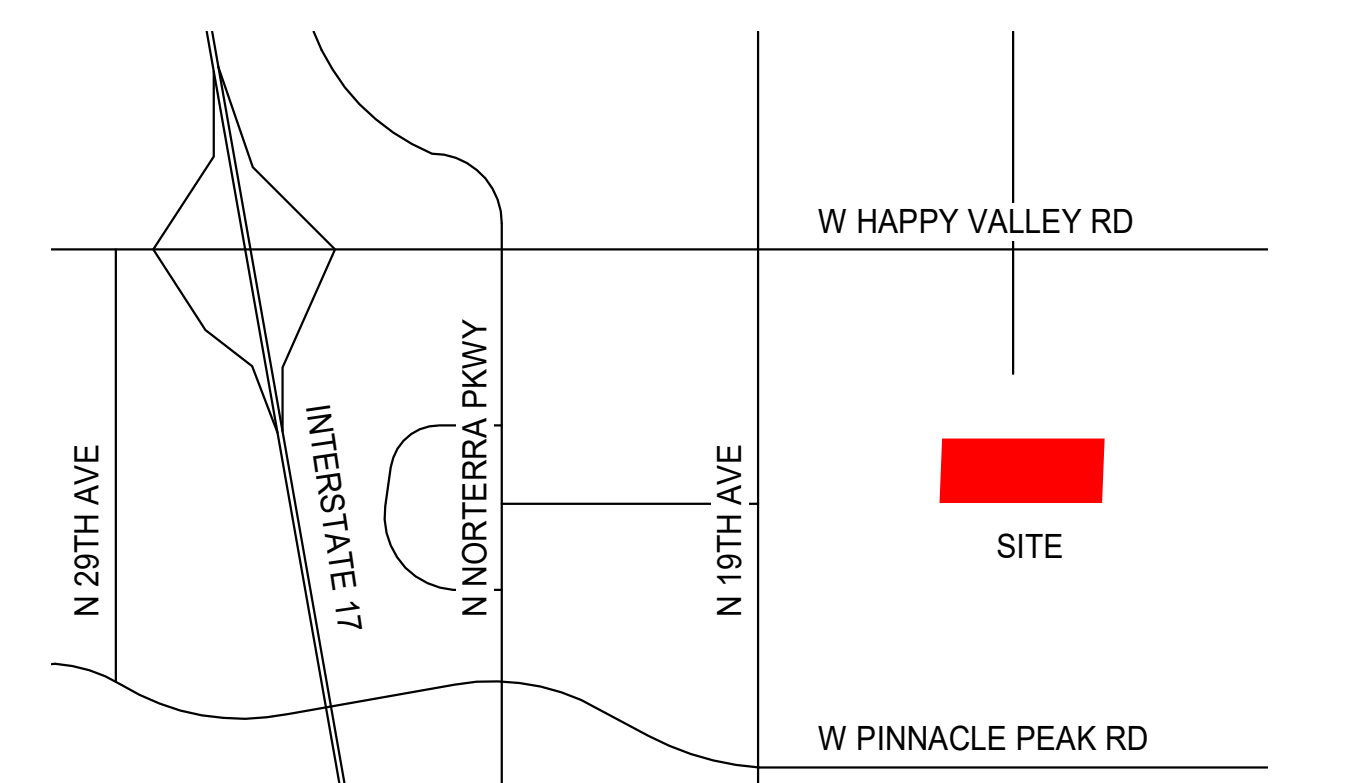
**6 3' TALL SITE WALL SECTION**  
1/2" = 1'-0"



**7 PARTIAL SITE WALL ELEVATIONS**



1 25-Acres Site - Concept Site Plan  
1" = 60'-0"



2 Vicinity Map 25-Acres Site  
NOT TO SCALE

| PARKING  | REQUIRED          | PROPOSED          |
|--|-------------------|-------------------|
| <b>BLDG A</b>  |                   |                   |
| 10% OFFICE USE BLDG. AREA                              | 10,640 SF         | 10,640 SF         |
| 90% UNSPECIFIED INDUSTRIAL USE BLDG. AREA              | 95,758 SF         | 95,758 SF         |
| <b>TOTAL BLDG. AREA</b>                                | <b>106,398 SF</b> | <b>106,398 SF</b> |
| 1 STALL/300 SF OFFICE                                  | 35 STALLS         | 35 STALLS         |
| 1 STALL/1,000 SF FOR 1-150,000 SF INDUSTRIAL USE       | 96 STALLS         | 98 STALLS         |
| <b>TOTAL STALLS REQUIRED</b>                           | <b>131 STALLS</b> | <b>133 STALLS</b> |
| ACCESSIBLE STALLS REQUIRED IF 101-150 STALLS IN LOT    | 5 STALLS          | 5 STALLS          |
| <b>TOTAL ACCESSIBLE STALLS REQUIRED</b>                | <b>5 STALLS</b>   | <b>5 STALLS</b>   |
| <b>BLDG B</b>  |                   |                   |
| 10% OFFICE USE BLDG. AREA                              | 18,437 SF         | 18,437 SF         |
| 90% UNSPECIFIED INDUSTRIAL USE BLDG. AREA              | 165,931 SF        | 165,931 SF        |
| <b>TOTAL BLDG. AREA</b>                                | <b>184,368 SF</b> | <b>184,368 SF</b> |
| 1 STALL/300 SF OFFICE                                  | 61 STALLS         | 61 STALLS         |
| 1 STALL/2,000 SF FOR 150,000-500,000 SF INDUSTRIAL USE | 83 STALLS         | 83 STALLS         |
| <b>TOTAL STALLS REQUIRED</b>                           | <b>144 STALLS</b> | <b>210 STALLS</b> |
| ACCESSIBLE STALLS REQUIRED IF 101-150 STALLS IN LOT    | 5 STALLS          | -                 |
| ACCESSIBLE STALLS REQUIRED IF 200-300 STALLS IN LOT    | 7 STALLS          | 7 STALLS          |
| <b>TOTAL ACCESSIBLE STALLS REQUIRED</b>                | <b>5 STALLS</b>   | <b>7 STALLS</b>   |

**PROJECT DESCRIPTION**

Deer Valley 25 Acres Industrial consists of approximately 22 acres of undeveloped land in the Deer Valley region, located north of Phoenix Deer Valley Airport and east of Interstate 17. The site is north of Alameda Road and divided down the middle by North Fifteenth Avenue. As planned, there are two buildings totaling approximately 290,766 gross square feet. Building A is approximately 106,398 gross square feet and Building B is approximately 184,368 gross square feet. Both buildings are fully enclosed.

This is a speculative industrial project without known tenants at the time of this submittal. The project will attract a wide variety of industrial, manufacturing, warehousing, and/or office uses.

Building A has two primary entrances and Building B has three primary entrances, all facing Alameda Road. The primary architectural features provide visual interest through the application of canopies over entrances, three different and complimentary paint colors, horizontal reveals, a textural formliner, and vertical plane breaks.

Access to each site is from Alameda and North 15th Avenue. Auto parking is located in front of the buildings. Proof of parking provides flexibility for future tenants' needs and is located west of Building A and east of Building B. Each building has a secured 185-foot truck court on the north side of the buildings. The courts are secured by eight-foot screen walls. The truck staging area is to be considered accessory outside storage with storage length likely greater than 48 hours. From the street view, thoughtful groupings of landscaping provides visual relief in companionship with the screen walls.

**PROJECT INFORMATION**

| Building A         |                   |
|--------------------|-------------------|
| Gross Area         | +/- 10.29 Acres   |
| Net Area           | +/- 448,430 SF    |
| Building Area      | +/- 8.78 Acres    |
| Lot Coverage       | +/- 382,295 SF    |
| Auto Parking       | +/- 106,398 GSF   |
| Proof of Parking   | +/- 37' / 1 Story |
| Total Parking      | 27.8 %            |
| Accessible Parking | 109 Stalls        |
| Dock Doors         | 24 Stalls         |
| Drive-In Doors     | 133 Stalls        |
| Trailer Stalls     | 5 Stalls          |
| Construction Type  | 23 Doors          |
|                    | 2 Doors           |
|                    | 36 Stalls         |
|                    | V-B (Enclosed)    |

| Building B         |                   |
|--------------------|-------------------|
| Gross Area         | +/- 15.41 Acres   |
| Net Area           | +/- 671,398 SF    |
| Building Area      | +/- 13.35 Acres   |
| Lot Coverage       | +/- 581,540 SF    |
| Auto Parking       | +/- 184,368 GSF   |
| Proof of Parking   | +/- 37' / 1 Story |
| Total Parking      | 31.7 %            |
| Accessible Parking | 185 Stalls        |
| Dock Doors         | 25 Stalls         |
| Drive-In Doors     | 210 Stalls        |
| Trailer Stalls     | 7 Stalls          |
| Construction Type  | 44 Doors          |
|                    | 2 Doors           |
|                    | 62 Stalls         |
|                    | V-B (Enclosed)    |

**ZONING**

**Zone District:** CP/GCP Commerce Park / General Commerce Park

**Overlay District:** Deer Valley Airport Overlay (DVAO Area 1)

**Zoning Cases:** Z-129-07 and Z-18-10. Stipulations on Sheet A1.0.

**ZONING PARKING REQUIREMENTS**

**Unspecified Industrial Use (Shell Building):**  
for 1-150,000 SF 1 stall per 1,000 SF;  
for 150,001-500,000 SF 1 stall per 2,000 SF;  
for 500,001 SF plus 1 stall per 2,500 SF

**Office:** 1 per 300 SF

**Industrial Plants, Manufacturing, Wholesale (including Warehouses):**  
1 stall per 1.5 warehouse or production workers and 1 space per 300 SF of administrative office. If the facility runs more than one shift a day, employee count will be based on the 2 largest shifts

**Accessible Parking Required:**  
for 1-25 total stalls in parking lot: 1 required accessible space; for 26-50: 2; for 51-75: 3; for 76-100: 4; for 101-150: 5; for 151-200: 6; for 201-300: 7; for 301-400: 8; for 401-500: 9; for 1,001 and over: 20 plus 1 for each 100 spaces, or fraction thereof over 1,000.

**Proposed Parking Mix:** 10% Office, 90% Industrial

**Building A:** 131 Stalls Required, 5 to be accessible (96 Industrial + 35 Office)

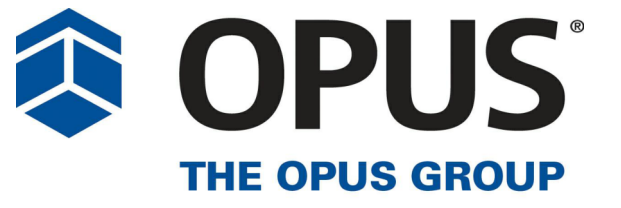
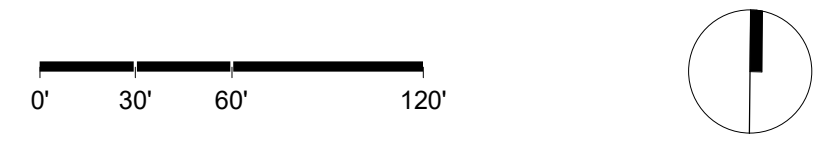
**Building B:** 144 Stalls Required, 5 to be accessible (83 Industrial + 61 Office)

**SITE PLAN NOTES**

- Development and use of this site will conform with all applicable codes and ordinances.
- This project is located in the City of Phoenix water service area and has been designated as having an assured water supply.
- All new or relocated utilities will be placed underground.
- All signage requires separate approvals and permits.
- Any lighting will be placed so as to direct light away from the adjacent residential districts and will not exceed one-foot candle at the property line. No noise, odor, or vibration will be emitted so that it exceeds the general level of noise, odor, or vibration emitted by uses outside of the site.
- Owners of property adjacent to public right-of-way will have the responsibility for maintaining all landscaping within the rights-of-way in accordance with approved plans.

**SITE PLAN NOTES ADDITIONAL**

- Smoke, gas and odor emissions shall comply with Regulation III of the Maricopa County Air Pollution Control Rules and Regulations.
- The disposal of all waste materials shall comply with title 9, chapter 8, articles 18 and 4 of the Hazardous Waste Regulations as adopted by the Arizona Health Department.
- The average noise level, measured at the property line, shall not exceed fifty-five dB (l dn) when measured on an "A weighted" sound level meter and according to the procedures of the Environmental Protection Agency.



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10350 Bren Road West  
Minnetonka, MN 55343-0110  
952-656-4444

Opus Design Build, L.L.C.  
10350 Bren Road West  
Minnetonka, MN 55343-0110  
952-656-4444

**CONSULTANT**

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PH: (602) 215-1211  
Contact: Chuck Wray, P.E.  
Email: Chuck.Wray@kinsley-horn.com

Architect  
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Minnetonka, MN 55343  
PH: (602) 656-4666  
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2505 E Camelback Rd, Suite 100  
Phoenix, AZ 85016  
PH: (602) 648-5077  
Contact: Matthew Vioransky  
Email: Matthew.Vioransky@opus-group.com

Landscaping Architect  
Studio DPA  
PO Box 3489  
Gilbert, AZ 85299  
PH: (480) 577-5818  
Contact: Tim Daugherty  
Email: T.J.D@studiodpa.com

**PROJECT**  
**Deer Valley 30**

**PROJECT ADDRESS**  
Phoenix, AZ

**PROJECT NUMBER**  
32013000

- 01/04/22 Preliminary Review Submittal
- 03/28/22 2nd Preliminary Review Submittal
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- 12/01/22 2nd Final Site Plan Submittal
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**DATE**  
02/23/23

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CL

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**REGISTRATION**

**KIVA** 21-3801  
**SDEV** 2100388  
**PAPP** 2106374  
**QS** 46-25, 46-26  
**PRLM** 2200359  
**ABND** 210068

**CITY OF PHOENIX**  
MAR 29 2023  
Planning & Development  
Department

**SHEET TITLE**  
25-Acres Site -  
Concept Site Plan

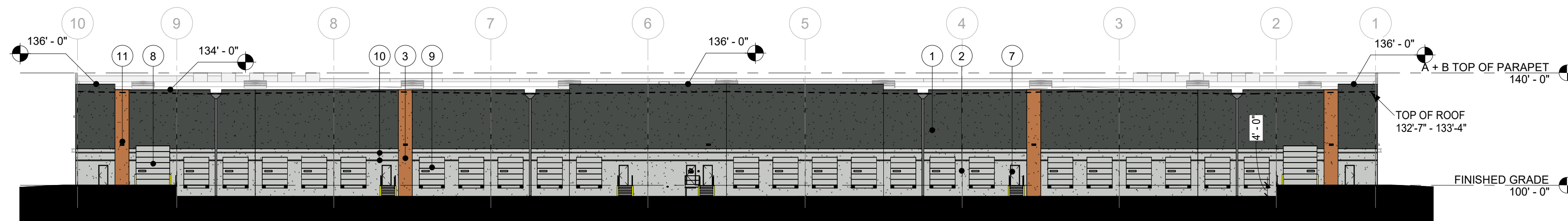
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**A1.1**

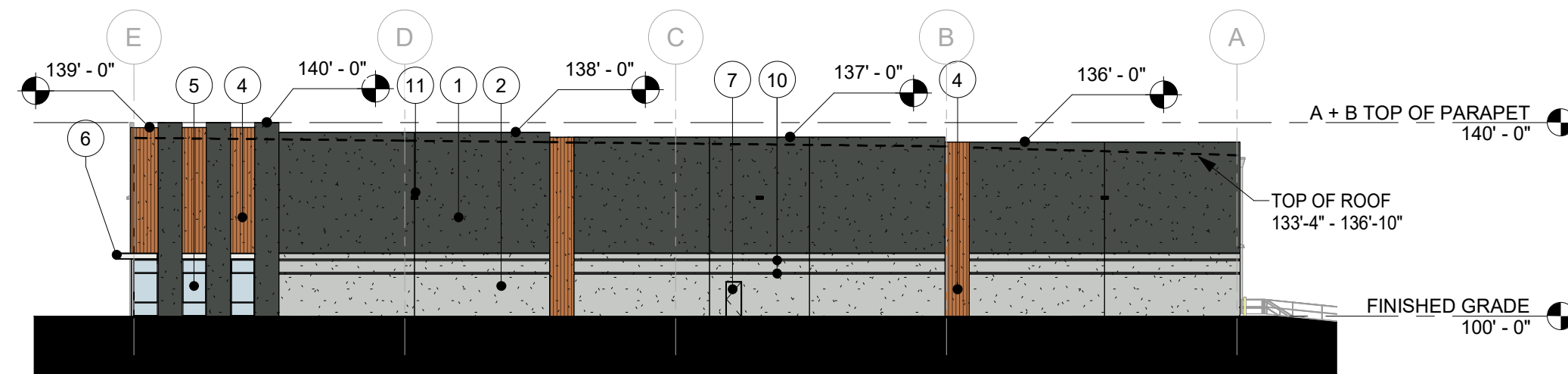


Opus AE Group, L.L.C.  
10350 Bren Road West  
Minnetonka, MN 55343-0110  
952-656-4444

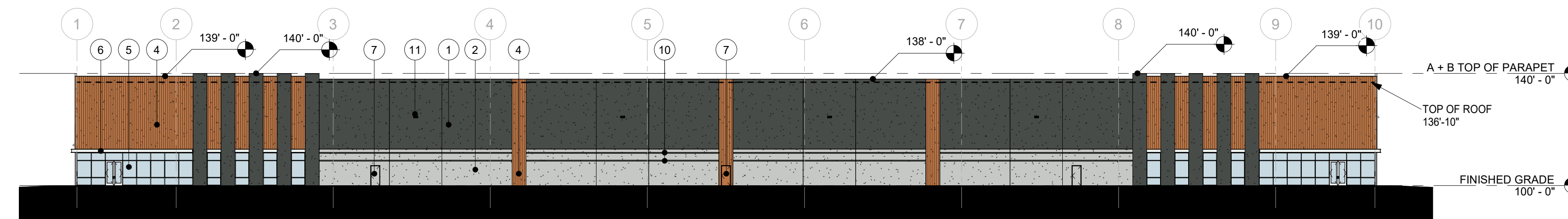
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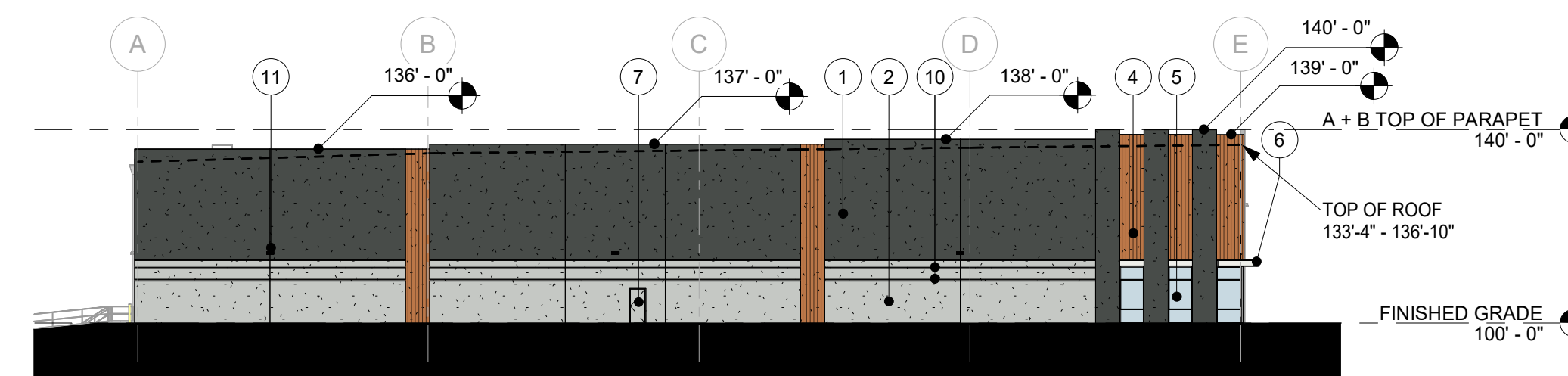
1 NORTH ELEVATION @ BLD A  
1" = 30'-0"



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1" = 30'-0"



3 SOUTH ELEVATION @ BLD A  
1" = 30'-0"



4 WEST ELEVATION @ BLD A  
1" = 30'-0"

**KEYNOTE LEGEND**

- 1 CONCRETE PAINTED COLOR #1 - SW 7062 ROCK BOTTOM OR SIMILAR
- 2 CONCRETE PAINTED COLOR #2 - SW 7657 TINSMITH OR SIMILAR
- 3 CONCRETE PAINTED COLOR #3 - SW 6362 TIGEREYE OR SIMILAR
- 4 CONCRETE W/ FORMLINER PAINTED COLOR #3 - SW 6362 TIGEREYE OR SIMILAR
- 5 STOREFRONT VISION GLASS W/ ALUMINUM FRAME
- 6 METAL CANOPY PAINTED COLOR #4 - SW 7006 EXTRA WHITE OR SIMILAR
- 7 HOLLOW METAL DOOR - PAINTED TO MATCH COLOR OF SURROUNDING PANEL
- 8 DRIVE-IN DOOR - COLOR TO MATCH PAINT COLOR #2 SW 7657 TINSMITH OR SIMILAR
- 9 OVERHEAD DOCK DOORS - COLOR TO MATCH PAINT COLOR #2 SW 7657 TINSMITH OR SIMILAR
- 10 HORIZONTAL REVEALS
- 11 WALL-MOUNTED LIGHT

NOTE: ROOFTOP EQUIPMENT NOT PLANNED TO BE INSTALLED WITH CORE AND SHELL BUILDING.

**CONSULTANT**

**Civil Engineer**  
Kinley-Horn and Associates, INC.  
7740 N. 16th Street, Suite 300  
Phoenix, AZ 85021  
PH: (602) 215-1221  
Contact: Chuck Ward, P.E.  
Email: Chuck.Ward@kinley-horn.com

**Architect**  
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10350 Bren Road West  
Minnetonka, MN 55343  
PH: (952) 656-4666  
Fax: (952) 656-4663  
Contact: John Wade  
Email: John.Wade@opus-group.com

**Developer / Owner**  
Opus Development Company, LLC  
2505 E Camelback Rd, Suite 100  
Phoenix, AZ 85016  
PH: (602) 648-5077  
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Email: Matthew.Vranesky@opus-group.com

**Landscaping Architect**  
Studio DPA  
PO Box 3489  
Gilbert, AZ 85299  
PH: (480) 577-5818  
Contact: Tim Dougherty  
Email: TJD@studiodpa.com

**PROJECT**  
**Deer Valley 30**

**PROJECT ADDRESS**  
Phoenix, AZ

**PROJECT NUMBER**  
32013000

01/04/22 Preliminary Review Submittal  
03/28/22 2nd Preliminary Review Submittal

**DATE**  
03/28/22

**PROJECT MANAGER**  
CL

**DRAWN BY**  
S. OLSON

**CHECKED BY**  
J. WADE

REGISTRATION

KIVA 21-3801  
SDEV 2100388  
PAPP 2106374  
QS 46-25, 46-26  
PRLM 2200359

**CITY OF PHOENIX**

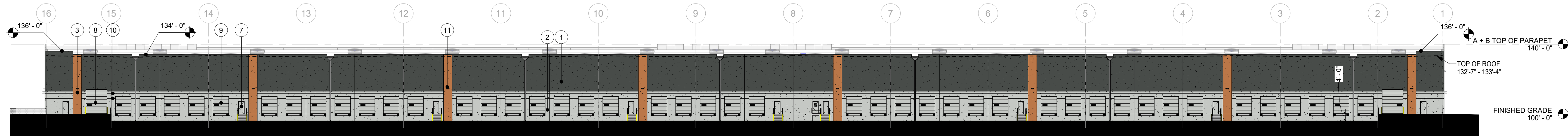
MAR 29 2023

Planning & Development  
Department

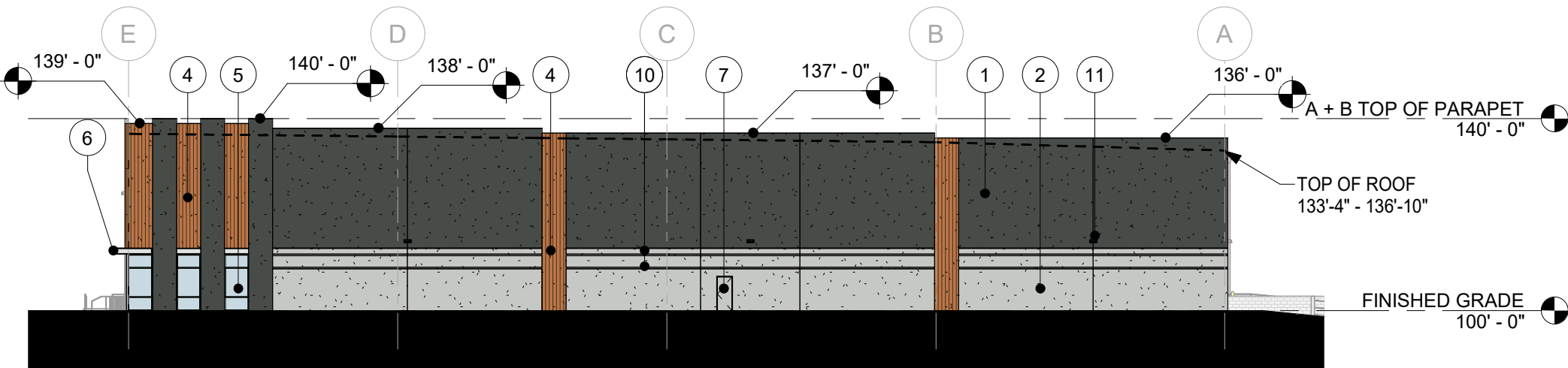
**SHEET TITLE**  
BUILDING A  
ELEVATIONS

SHEET NUMBER

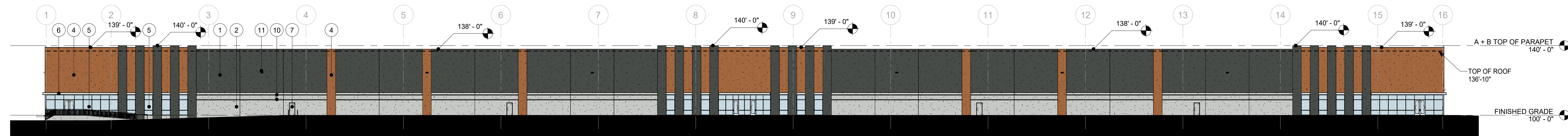
**A5**



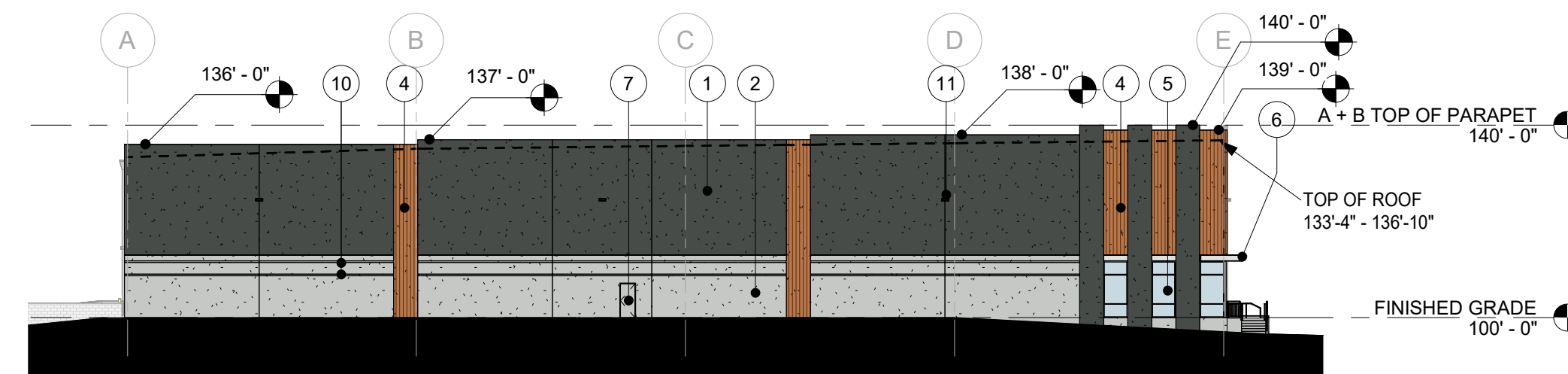
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10350 Bren Road West  
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CONSULTANT

|  |   |
|--|---|
| Civil Engineer<br>Kinley-Horn and Associates, INC<br>7740 N. 16th Street, Suite 300<br>Phoenix, AZ 85021<br>PH: (602) 215-1221<br>Contact: Chuck Wurt, P.E.<br>Email: Chuck.Wurt@kinley-horn.com       | Architect<br>Opus AE Group, LLC<br>10350 Bren Road West<br>Minnetonka, MN 55343<br>Fax: (952) 656-4666<br>PH: (952) 656-4663<br>Contact: John Wade<br>Email: John.Wade@opus-group.com |
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PROJECT  
**Deer Valley 30**

PROJECT ADDRESS  
Phoenix, AZ

PROJECT NUMBER  
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01/04/22 Preliminary Review Submittal  
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DATE  
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PROJECT MANAGER  
CL

DRAWN BY  
S. OLSON

CHECKED BY  
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REGISTRATION

KIVA 21-3801  
SDEV 2100388  
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QS 46-25, 46-26  
PRLM 2200359

**CITY OF PHOENIX**

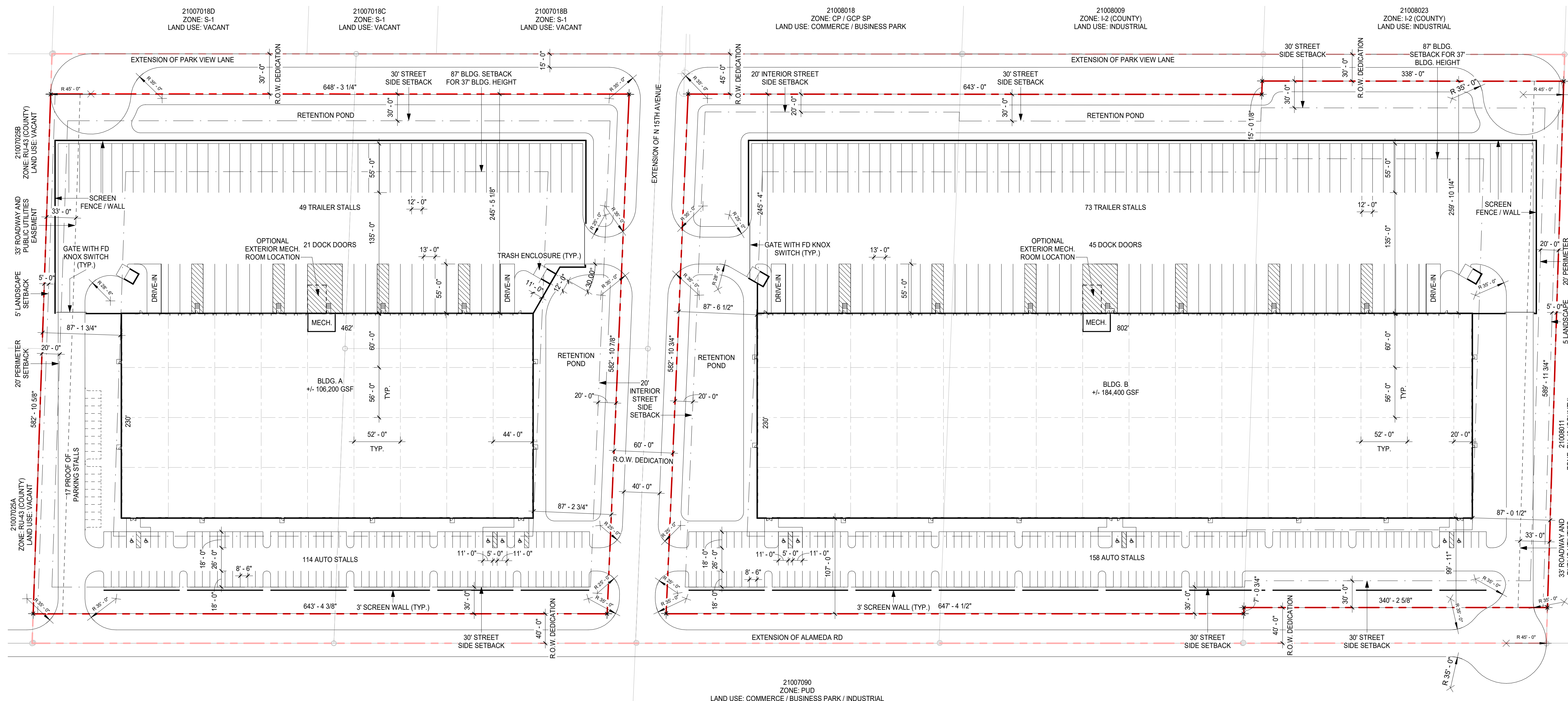
MAR 29 2023

Planning & Development  
Department

SHEET TITLE  
**BUILDING B  
ELEVATIONS**

SHEET NUMBER

**A6**



**1 LEVEL 1 25-Acre Site**  
1" = 60'-0"



**2 Vicinity Map 25-Acres Site**  
1" = 24000'



**PROJECT INFORMATION**

**Total Site Area**  
Gross Area +/- 25.71 Acres  
Net Area +/- 21.85 Acres

**Building A**  
Gross Area +/- 10.29 Acres  
Net Area +/- 8.64 Acres  
Building Area +/- 106,200 GSF  
Building Height +/- 37' 1 Story  
Lot Coverage / F.A.R. 28.2 %  
Auto Parking 114 Stalls  
Proof of Parking 17 Stalls  
Total Parking 131 Stalls  
Dock Doors 21 Doors  
Drive-In Doors 2 Doors  
Trailer Stalls 49 Stalls

**Building B**  
Gross Area +/- 15.41 Acres  
Net Area +/- 13.21 Acres  
Building Area +/- 184,400 GSF  
Building Height +/- 37' / 1 Story  
Lot Coverage / F.A.R. 32.0 %  
Auto Parking 158 Stalls  
Dock Doors 45 Doors  
Drive-In Doors 2 Doors  
Trailer Stalls 73 Stalls

**ZONING**

**Zone District:** CP/GCP Commerce Park / General Commerce Park

**Overlay District:** Deer Valley Airport Overlay (DVAO Area 1)

**Zoning Cases:** Z-129-07 and Z-18-10

**ZONING PARKING REQUIREMENTS**

**Unspecified Industrial Use (Shell Building):**  
for 1-150,000 SF 1 stall per 1,000 SF;  
for 150,001-500,000 SF 1 stall per 2,000 SF;  
for 500,001 SF plus 1 stall per 2,500 SF

**Office:** 1 per 300 SF

**Industrial Plants, Manufacturing, Wholesale (including Warehouses):**  
1 stall per 1.5 warehouse or production workers and 1 space per 300 SF of administrative office. If the facility runs more than one shift a day, employee count will be based on the 2 largest shifts

**Proposed Parking Mix:** 10% Office, 90% Industrial

**Building A:** 131 Stalls Required (96 Industrial + 35 Office)

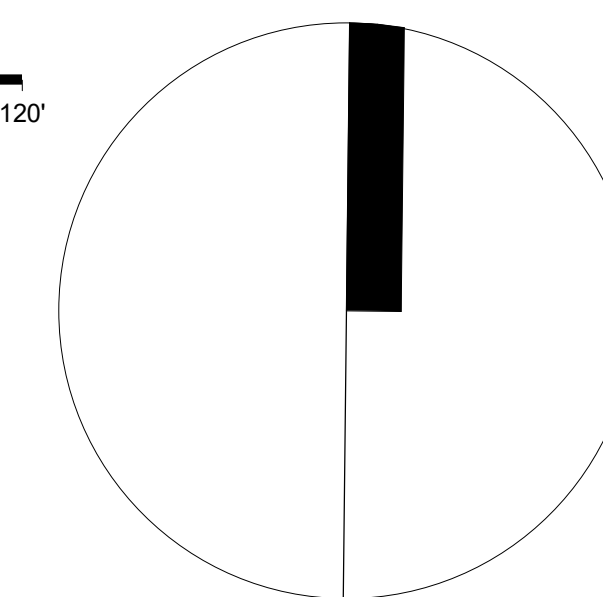
**Building B:** 144 Stalls Required (83 Industrial + 61 Office)

**SITE PLAN NOTES**

- Development and use of this site will conform with all applicable codes and ordinances.
- This project is located in the City of Phoenix water service area and has been designated as having an assured water supply.
- All new or relocated utilities will be placed underground.
- All signage requires separate approvals and permits.
- Any lighting will be placed so as to direct light away from the adjacent residential districts and will not exceed one-foot candle at the property line. No noise, odor, or vibration will be emitted so that it exceeds the general level of noise, odor, or vibration emitted by uses outside of the site.
- Owners of property adjacent to public right-of-way will have the responsibility for maintaining all landscaping within the rights-of-way in accordance with approved plans.

**SITE PLAN NOTES ADDITIONAL**

- Smoke, gas and odor emissions shall comply with Regulation III of the Maricopa County Air Pollution Control Rules and Regulations.
- The disposal of all waste materials shall comply with title 9, chapter 8, articles 18 and 4 of the Hazardous Waste Regulations as adopted by the Arizona Health Department.
- The average noise level, measured at the property line, shall not exceed fifty-five dB (l dn) when measured on an "A weighted" sound level meter and according to the procedures of the Environmental Protection Agency.
- Explosive or hazardous processes: Certification shall be provided by the Phoenix Fire Department Prevention Bureau that all manufacturing, storage and waste processes on the site shall meet safety and environmental standards as administered by the Bureau.
- Outdoor lighting shall be shielded so that:
  - No source of illumination is directly visible from a public street or from residentially zoned property.
  - Light intensity does not exceed 1 footcandle on any adjacent residentially zoned property.



KIVA  
SDEV  
PAPP  
QS

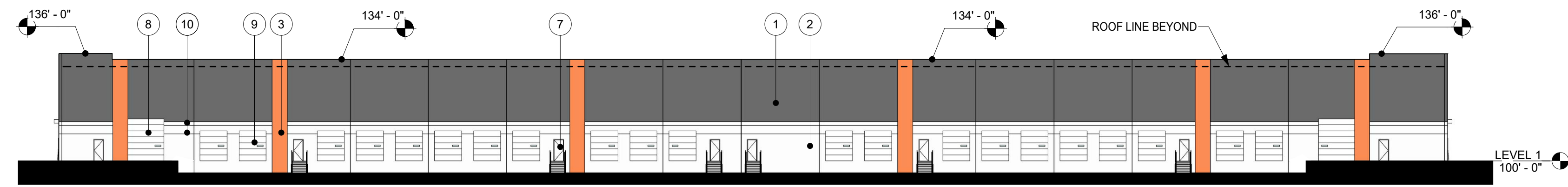
**CITY OF PHOENIX**  
OCT 22 2021  
Planning & Development  
Department



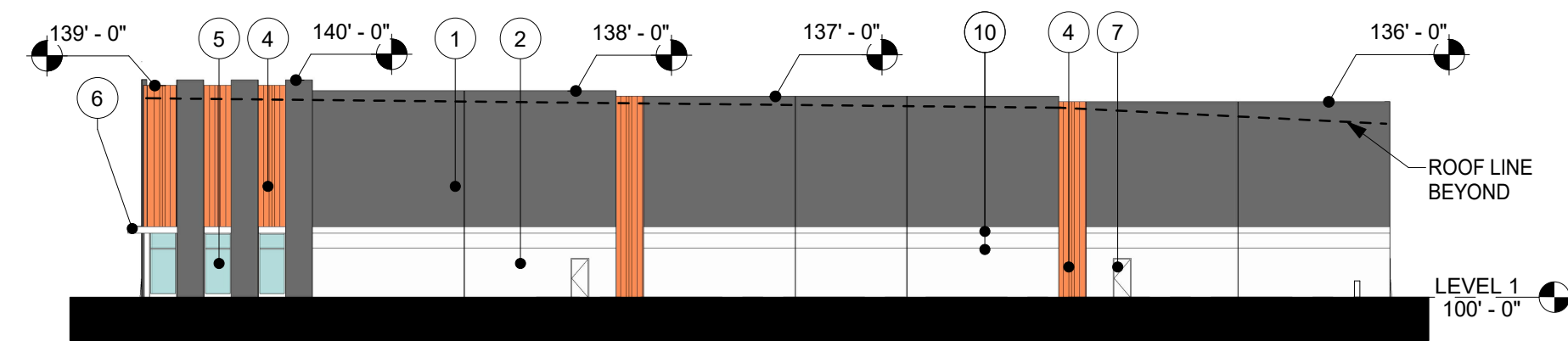
PERSPECTIVE AT BUILDING A



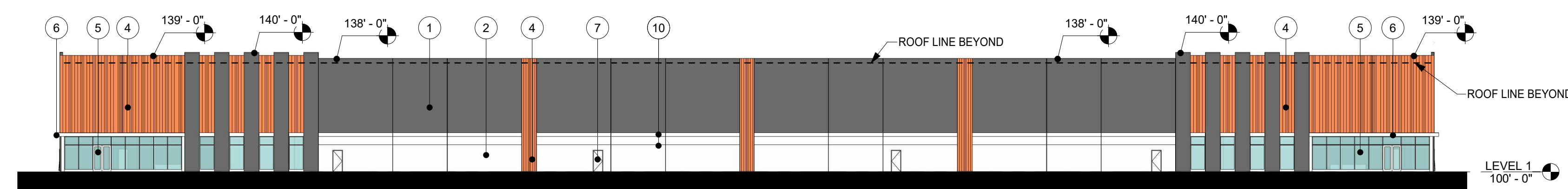
PERSPECTIVE AT BUILDING A - SOUTHEAST ENTRY



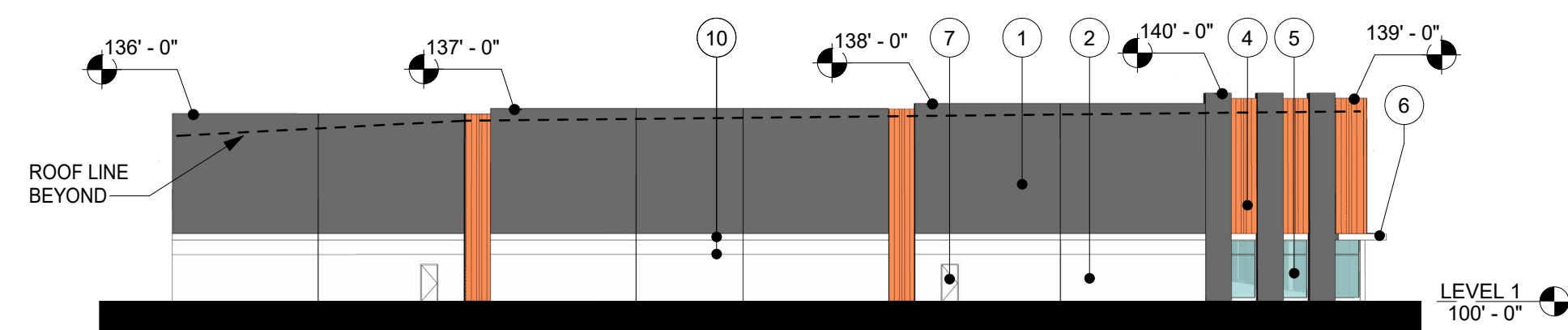
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| KEYNOTE LEGEND |   |
|----------------|---|
| 1              | CONCRETE PAINTED COLOR #1 - DARK GRAY               |
| 2              | CONCRETE PAINTED COLOR #2 - LIGHT GRAY              |
| 3              | CONCRETE PAINTED COLOR #3 - ORANGE                  |
| 4              | CONCRETE W/ FORMLINER PAINTED COLOR #3 - ORANGE     |
| 5              | STOREFRONT VISION GLASS W/ ALUMINUM FRAME           |
| 6              | METAL CANOPY  |
| 7              | HOLLOW METAL DOOR - COLOR TO MATCH PAINT COLOR #2   |
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| 9              | OVERHEAD DOCK DOORS - COLOR TO MATCH PAINT COLOR #2 |
| 10             | HORIZONTAL REVEALS                                  |

**ISSUE RECORD**



PERSPECTIVE AT CENTER ENTRY



PERSPECTIVE AT SOUTHEAST ENTRY

| KEYNOTE LEGEND |   |
|----------------|---|
| 1              | CONCRETE PAINTED COLOR #1 - DARK GRAY               |
| 2              | CONCRETE PAINTED COLOR #2 - LIGHT GRAY              |
| 3              | CONCRETE PAINTED COLOR #3 - ORANGE                  |
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| 10             | HORIZONTAL REVEALS                                  |

CONSULTANT

PROJECT

**Deer Valley 30**

PROJECT ADDRESS  
Phoenix, AZ

PROJECT NUMBER  
32013000

**ISSUE RECORD**

DATE  
10/08/21  
PROJECT MANAGER

DRAWN BY  
M CAMERON  
CHECKED BY  
J WADE

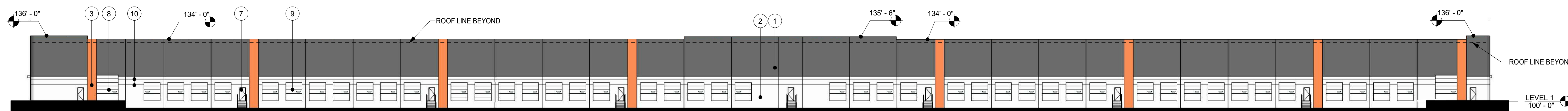
REGISTRATION

SHEET TITLE  
**BUILDING B  
ELEVATIONS**

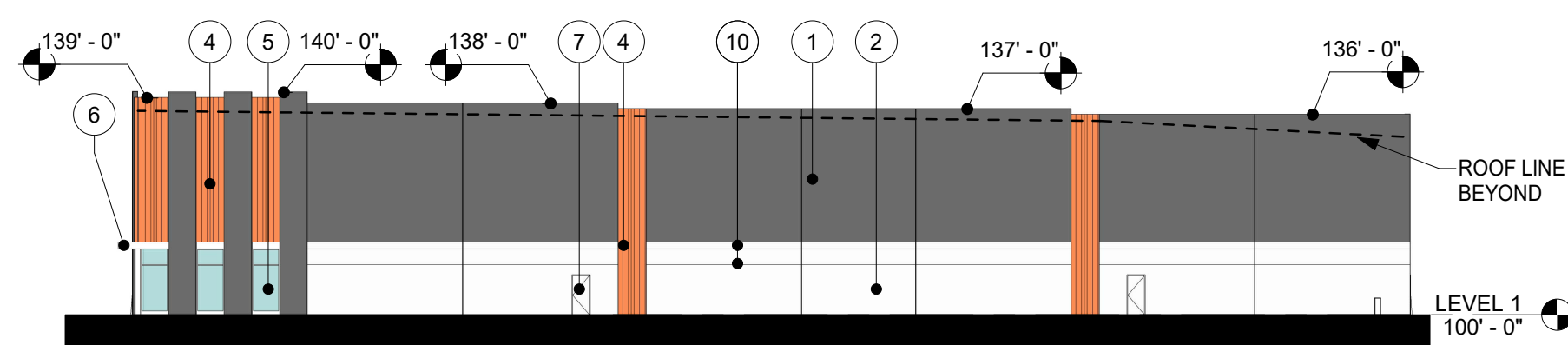
SHEET NUMBER

**A5**

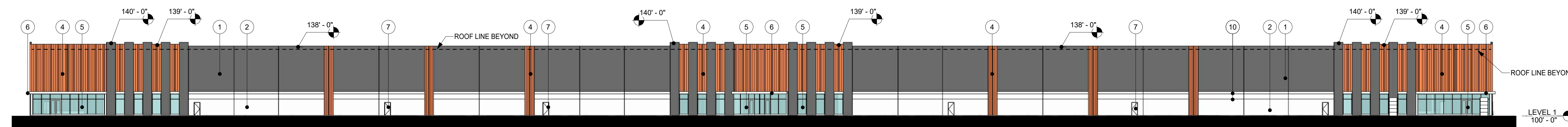
Hearing Date: 5/17/23



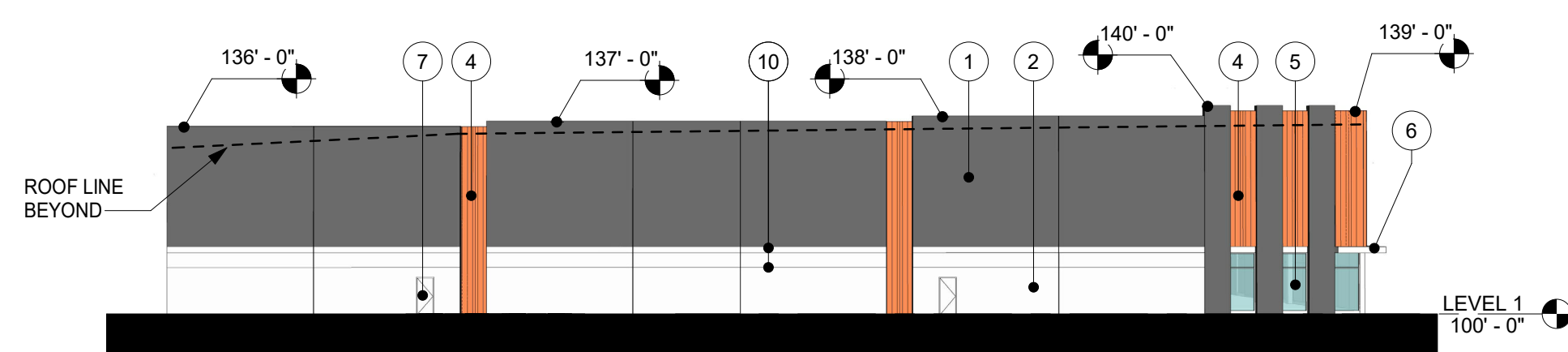
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1" = 30'-0"

PLOT DATE: 10/08/2021 1:45:13 PM

PHO-2-23--Z-18-10-1

Stipulated Elevations - PHO-1-21

**CITY OF PHOENIX**  
OCT 22 2021  
Planning & Development  
Department



REPORT OF PLANNING HEARING OFFICER ACTION  
Adam Stranieri, Planner III, Hearing Officer  
Bradley Wylam, Planner I, Assisting

December 15, 2021

|                 |  |
|-----------------|--|
| ITEM NO: 3      |  |
|                 | DISTRICT 1   |
| SUBJECT:        |  |
|                 |  |
| Application #:  | PHO-1-21--Z-18-10-1  |
| Location:       | Southeast corner of 13th Avenue and Parkview Lane alignments   |
| Zoning:         | CP/GCP DVAO  |
| Acreage:        | 5.16   |
| Request:        | 1) Review of conceptual site plans and elevations per Stipulation 1.<br>2) Modification of Stipulation 2 regarding dedicating 40 feet of right-of-way for the north half of Alameda Road and 30 feet for the south half of Parkview Road.<br>3) Technical correction to Stipulation 3. |
| Applicant:      | Ed Bull, Burch & Cracchiolo PA   |
| Owner:          | North K LLC  |
| Representative: | Ed Bull, Burch & Cracchiolo PA   |

**ACTIONS:**

Planning Hearing Officer Recommendation: The Planning Hearing Officer recommended approval with a modification and an additional stipulation.

Village Planning Committee (VPC) Recommendation: The Deer Valley Village Planning Committee opted not to hear this case.

**DISCUSSION:**

*This item was heard concurrently with Item Nos. 1 (PHO-1-21—Z-128-07-1) and 2 (PHO-1-21—Z-129-07-1).*

Ali Bull, representative with Burch and Cracchiolo, provided an overview of the three concurrent case areas (PHO-1-21—Z-128-07-1, PHO-1-21—Z-129-07-1, and PHO-1-21—Z-18-10-1) and original rezoning cases. She stated that each case required approval of conceptual site plans. She noted that the applicant worked with the Street Transportation Department to finalize the modifications regarding dedication of right-of-way and provided a summary of each proposal. She stated that the street widths and proposed site plans are consistent with recent approvals and existing streets in the area.

Adam Stranieri, Planning Hearing Officer, stated that the Deer Valley Village Planning Committee opted not to hear the request and no public correspondence had been received. He noted that the subject property depicted on the conceptual site plan is proposed to develop in conjunction with the property to the west in companion Rezoning Case No. PHO-1-21—Z-129-07-1. He stated the proposed conceptual site plan depicts two industrial shell buildings of approximately 106,200 and 184,400 square feet with an approximate height of 37 feet. He stated this development would be consistent with the land use pattern in the surrounding area. He stated that the building elevations include architectural features such as multiple colors, materials, metal canopies, and other façade relief. He stated that the modification of Stipulation 2 regarding a dedication of right-of-way for the north side of Alameda Road and south side of Parkview Lane be approved with a modification. He stated that splitting the dedication requirements, which results in an additional stipulation will clarify the requirements and is recommended by the Street Transportation Department. He noted that the recommendation for approval regarding the conceptual site plan does not require the implementation of the cul-de-sac terminations as shown on the plan, but that street construction and design will be approved by the Street Transportation Department.

**FINDINGS:**

- 1) The applicant submitted a conceptual site plan and building elevations in compliance with Stipulation 1. This stipulation is recommended to be deleted and replaced with a requirement for general conformance to the plans submitted. Note that the subject property of this case is proposed to develop in conjunction with the property to the west in Rezoning Case No. PHO-1-21—Z-129-07-1 (companion case also heard on this agenda).

The conceptual site plan depicts two industrial shell buildings of approximately 106,200 and 184,400 square feet with an approximate height of 37 feet. Vehicular access is provided at multiple driveways along 15th Avenue, Alameda Road, and Park View Lane. Conceptual elevations include architectural features and details such as multiple colors, materials, metal canopies, offsets, reveals, and other façade relief. The proposal is consistent in scale and character with the land use pattern in the surrounding area.

Additionally, note that the cul-de-sac terminations shown on the site plan are not intended to be governed by the general conformance stipulation. Parkview Lane to the east and west will connect to adjacent parcels. Street construction and design is to be approved by the Street Transportation Department.

- 2) The request to modify Stipulation 2 is recommended to be approved with a modification and additional stipulation to provide current standard

language regarding right-of-way dedication and split the dedication requirements for Alameda Road and Parkview Lane into separate stipulations for clarity. This recommendation is consistent with the recommendation of the Street Transportation Department.

**STIPULATIONS:**

|                     |   |
|---------------------|---|
| 1.                  | <p><del>That conceptual site plan(s) and elevations shall be approved by the Planning Hearing Officer through the public hearing process prior to the Planning and Development Services Department preliminary site plan approval. This review is for conceptual purposes only. Specific development standards and requirements will be determined through the site plan approval process with the Planning and Development Services Department.</del></p> <p>THE DEVELOPMENT SHALL BE IN GENERAL CONFORMANCE WITH THE SITE PLAN AND ELEVATIONS DATE STAMPED OCTOBER 22, 2021, AS MODIFIED BY THE FOLLOWING STIPULATIONS AND APPROVED BY THE PLANNING AND DEVELOPMENT DEPARTMENT.</p> |
| 2.                  | <p><del>That The developer shall dedicate MINIMUM right-of-way totaling 40 feet OF RIGHT-OF-WAY AND CONSTRUCT for the north half SIDE of Alameda Road, and that right-of-way totaling 30 feet shall be dedicated for the south half of Parkview Road as approved by the Street Transportation Department and the Planning and Development Services AND STREET TRANSPORTATION DepartmentS.</del></p>   |
| 3.                  | <p>THE DEVELOPER SHALL DEDICATE MINIMUM 30 FEET OF RIGHT-OF-WAY AND CONSTRUCT THE SOUTH SIDE OF PARKVIEW LANE, AS APPROVED BY THE PLANNING AND DEVELOPMENT AND STREET TRANSPORTATION DEPARTMENTS.</p>   |
| 4.<br><del>3.</del> | <p><del>That The developer shall construct all streets within and adjacent to the development with paving, curb, gutter, sidewalk, curb ramps, streetlights, landscaping, and other incidentals as per plans approved by the Planning and Development Services Department. All improvements shall comply with all ADA accessibility standards.</del></p>  |
| 5.<br>4.            | <p><del>That The property owner shall record a Notice of Prospective Purchasers of Proximity to Airport in order to disclose the existence, and operational characteristics of Deer Valley Airport to future owners or tenants of the property. The form and content of such documents shall be according to the templates and instructions provided which have been reviewed and approved by the City Attorney.</del></p>  |

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Upon request, this publication will be made available within a reasonable length of time through appropriate auxiliary aids or services to accommodate an individual with a disability. This publication may be made available through the following auxiliary aids or services: large print, Braille, audiotape or computer diskette. Please contact the Planning and Development Department, Angie Holdsworth, at voice number 602-495-5622 or TTY use 7-1-1.

**This item was adopted.**

- 62 Cooling Tower Water Treatment Services Agreement (Ordinance S-48267)

**This item was adopted.**

### **PLANNING AND ZONING MATTERS**

- 63 Final Plat - Hurley Ranch Phase 2 - PLAT 200637 - North of Broadway Road and West of 83rd Avenue

**This item was approved.**

- 64 Final Plat - 10215 S. 27th Avenue - 210082 - Southeast Corner of Lodge Drive and 27th Avenue

**This item was approved.**

- 65 Remove/Replace Zoning District - Cave Creek and Dynamite Boulevard Annexation 508 - 4328 E. Dynamite Blvd. (Ordinance G-6944)

**This item was adopted.**

- 66 Remove/Replace Zoning District - Ismail Annexation 510 - 3335 W. Baseline Road (Ordinance G-6945)

**This item was adopted.**

- 67 Amend City Code - Ordinance Adoption - Rezoning Application PHO-1-21--Z-18-10-1 - Southeast Corner of 13th Avenue and Parkview Lane Alignments (Ordinance G-6948)

**This item was adopted.**

- 68 Amend City Code - Ordinance Adoption - Rezoning Application PHO-1-21--Z-128-07-1 - Approximately 800 Feet East of 19th Avenue and the Alameda Road Alignment (Ordinance G-6946)

**This item was adopted.**

- 69 Amend City Code - Ordinance Adoption - Rezoning Application PHO-1-21--Z-129-07-1 - Approximately 1,825 Feet East of 19th Avenue and the Alameda Road Alignment (Ordinance G-6947)

**This item was adopted.**

- 70 Amend City Code - Ordinance Adoption - Rezoning Application PHO-1-21--Z-52-08-7 - Northwest Corner of 67th Avenue and Baseline Road (Ordinance G-6949)