# Appendix K-2
## Transportation Technical Memorandum

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# MEMORANDUM

| | |
|---|---|
| **To:** | Mr. Philip Wray, P.E. P.L.S., City of Arcadia |
| **From:** | Lisa Valdez, Senior Transportation Planner |
| | Amanda Meroux, EIT, Assistant Transportation Engineer |
| **Subject:** | Transportation Analysis for the Alexan Mixed-Use Development Project, City of Arcadia |
| **Date:** | October 28, 2021 |
| **cc:** | Kristin Starbird, Project Manager; Brandon Whalen-Castellanos, Associate Planner |
| **Attachment(s):** | Attachment A – Raw Traffic Counts |
| | Attachment B – LOS Worksheets |
| | Attachment C – SimTraffic Queueing Worksheets |
| | Attachment D – SJVCOG VMT Screening Tool Report |

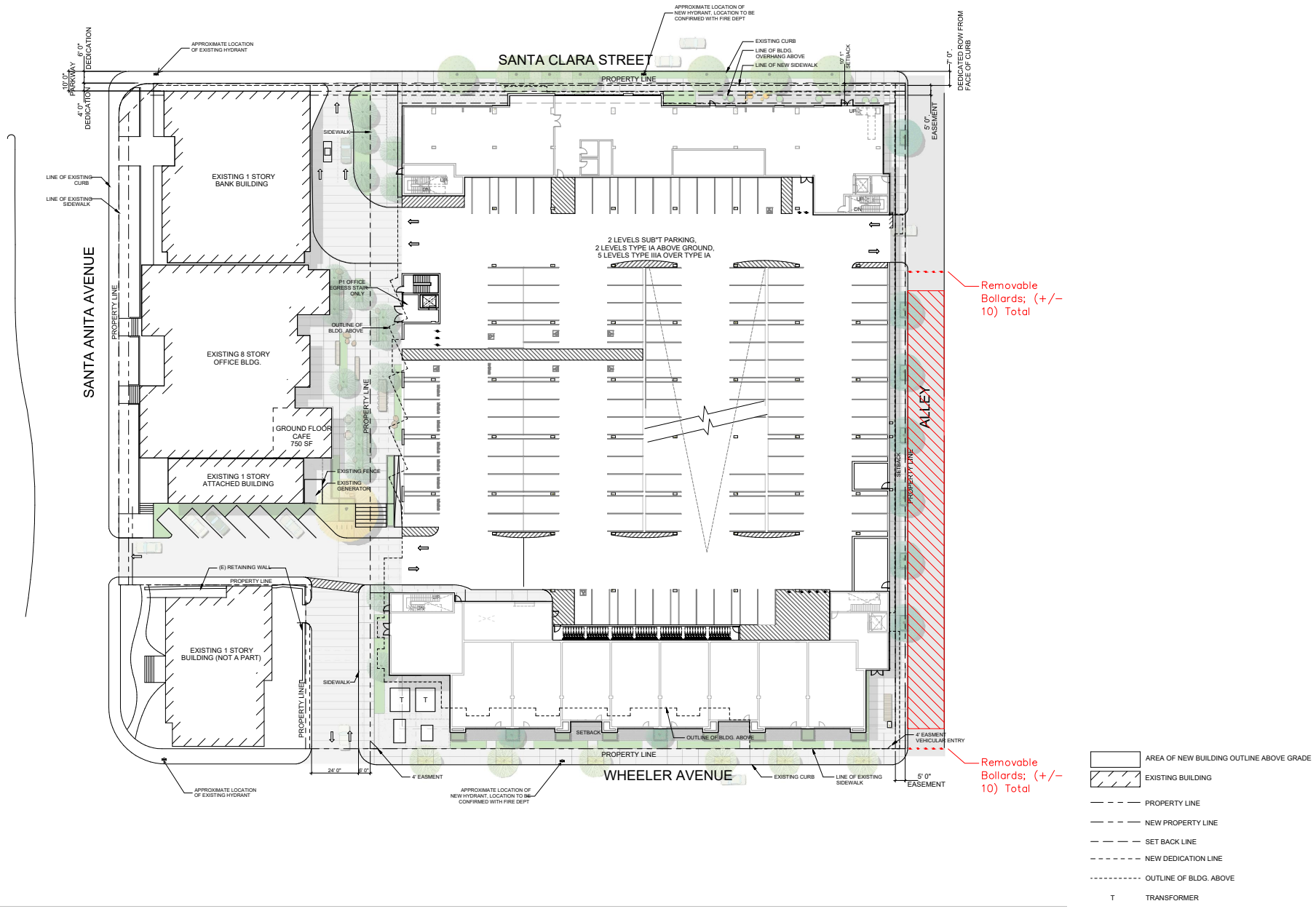
The purpose of this Transportation Technical Memorandum is to conduct a level of service (LOS), site access, parking analysis, and vehicle miles traveled (VMT) analysis to assess potential transportation impacts associated with the proposed Alexan Mixed-Use Development Project (proposed project or project), in the City of Arcadia (City). This Technical Memorandum has been prepared per the City of Arcadia Transportation Study Guidelines for Vehicle Miles Traveled and Level of Service Assessment[1] and its scope of analysis has been approved by the City's Traffic Engineering Department.

# 1 Project Description

The project site is located on the southwest corner of Santa Clara Street and Santa Anita Avenue in Downtown Arcadia. The Project would include a new 7-story residential building including 319 units within four fully developed parcels. The site plan for the proposed Project is shown in Figure 1. The residential units consist of 48 studios, 166 one-bedroom units, 96 two-bedroom units, and 8 live/work units. The proposed Project would dedicate 26 units for affordable housing. Existing land uses, including a 2-story office building and two single-story commercial buildings, along with all surface parking, would be demolished with the construction of the Project. An existing 8-story office tower and bank building, located on the west corner of the site, would remain as-is, except for the development of a 750 square foot café within the existing building at the southern-facing portion of the office tower. Three levels of parking would be constructed, including one subterranean level, with the two above-ground levels of parking within Level 1 and Level 2. A total of 551 parking spaces would be provided. Residential amenities would front onto Santa Clara Street within the first two levels of the building and would include a fitness gym, mail room, coffee bar, leasing offices, reception, and lobbies. An outdoor plaza would be constructed between the office tower and the proposed building. Residential units would be located at Level 3, which would also include an outdoor pool area, fire pit, barbeque dining area, game lounge, and lawn area, as well as an outdoor passive court located in the middle of

[1] City of Arcadia. 2020. City of Arcadia Transportation Study Guidelines for Vehicle Miles Traveled and Level of Service Assessment. August

the building. Levels 4, 5 and 6 would include residential units. Level 7 would also include residential units and an outdoor fire pit courtyard, barbeque dining area, and roof deck.




Sep 17, 2021 - 9:40am ameroux P:\300.Environmental\11663_Arcadia On-Call\03_Alexan Arcadia EIR\4_Technical\11-Transportation\Graphics\AlexanArcadia.dwg Layout: Fig2_SitePlan

SOURCE: studioneleven 2021

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**Figure** 1

Proposed Site Plan

Alexan Arcadia

# 2 Study Area

This section provides a summary of the existing street network, including the major roadways serving the site, the existing transit service, and bicycle and pedestrian facilities in the study area.

## 2.1 Existing Street Network

Figure 2 provides a regional location map and the transportation study area. Regional access to the Project site is provided by Interstate [I-] 210 (Foothill Freeway) approximately 0.35 miles north of the site. The local street system serving the site includes Huntington Drive, Santa Anita Avenue, Santa Clara Street, 1st Avenue, and Wheeler Drive. Characteristics of the existing local roads within the study area are described below.

**Huntington Drive** is an east-west oriented roadway south of the project site. In the Arcadia General Plan Circulation and Infrastructure Element[2], Huntington Drive is classified as a major arterial west of Santa Clara Street and a primary arterial east of Santa Clara Street. Huntington Drive is also a designated truck route, as well as a principal travel corridor and a planned primary transit corridor within the City. The number of through travel lanes in each direction on Huntington Drive varies from four through lanes west of Holly Avenue, to three through lanes between Holly Avenue and Santa Clara Street, to two through lanes east of Santa Clara Street. Exclusive left-turn lanes are provided on Huntington Drive at major intersections. On-street parking is generally not provided in the immediate project vicinity. The speed limit on Huntington Drive varies from 30 MPH east of Santa Clara Street to 45 MPH west of Santa Clara Street.

**Santa Anita Avenue** is a north-south oriented roadway and borders the project site on the west. Direct access to the site will be provided from an existing driveway on Santa Anita Avenue. Santa Anita Avenue is classified as a primary arterial from the southern City boundary to Foothill Boulevard and as an enhanced corridor north of Foothill Boulevard. South of Foothill Boulevard, Santa Anita Avenue is also a designated truck route and a principal travel corridor. North of Foothill Boulevard, Santa Anita Avenue is designated as a secondary travel corridor. Santa Anita Avenue is also planned to serve as a primary transit corridor south of the I-210 Freeway and a secondary transit corridor north of the I-210 Freeway. Two through travel lanes are provided in each direction on Santa Anita Avenue south of Foothill Boulevard while one through travel lane is provided in each direction on Santa Anita Avenue north of Foothill Boulevard. Exclusive left-turn lanes are provided at major intersections. The speed limit on Santa Anita Avenue varies from 35 MPH north of Foothill Boulevard to 40 MPH south of Foothill Boulevard.

**Santa Clara Street** is an east-west oriented roadway and borders the project site on the north. Direct access to the site will be provided from an existing driveway on Santa Clara Street. Santa Clara Street is classified as a secondary arterial between Huntington Drive and Santa Anita Avenue and an enhanced collector between Santa Anita Avenue and the City limits. One to two through travel lanes are provided in each direction on Santa Clara Street, with a two-way left-turn lane (TWLTL) provided between Huntington Drive and 1st Avenue, and left-turn pockets provided at most major intersections and driveways. Parking is restricted along both sides of the street, between Huntington Drive and 1st Avenue and unrestricted between 1st Avenue and the City limits. An existing Class II bike lane (on-

[2] City of Arcadia. 2010. General Plan Circulation and Infrastructure Element. Microsoft Word - Circ Infrastructure Element FINAL NOV-2010.doc (arcadiaca.gov)

street striped lane) is provided on Santa Clara Street along the project frontage. Santa Clara Street has a posted speed limit of 30 MPH within the vicinity of the Project site.

**1st Avenue** is a north-south roadway east of the Project site. 1st Avenue is classified as a collector, as well as a primary transit corridor between Huntington Drive and Santa Clara Street. One through travel lane is provided in each direction on 1st Avenue, with a TWLTL provided between Wheeler Avenue and Huntington Drive, and left-turn pockets provided at most major intersections and driveways. Parking is provided along both sides of the street, where designated. 1st Avenue has a posted speed limit of 25 MPH within the vicinity of the Project site.

**Wheeler Avenue** is an east-west roadway and borders the project site on the south. Direct access to the site will be provided from an existing driveway on Wheeler Avenue. Wheeler Avenue is designated as a local road and extends from Santa Anita Avenue to the west and Indiana Street to the east. Off-street parking is not provided between Santa Anita Avenue and 1st Avenue. Wheeler Avenue does not have a posted speed limit.

## 2.2 Transit System

Public transit in the project vicinity is provided by the Metropolitan Transportation Authority (Metro), Foothill Transit, and Arcadia Transit. Figure 3, Existing Transit Facilities, shows the various bus routes and Metro L (previously Gold) Line that provide service in the study area. The Arcadia Metro L Line Station is approximately 400 feet north of the project site at the northwest corner of 1st Avenue and Santa Clara Street. Bus stops are also located along 1st Avenue, Huntington Drive, and Santa Anita Avenue surrounding the project site. A description of each service provider is presented below.

### Metropolitan Transportation Authority Services (Metro)

Metro currently operates five local Metro bus transit routes in the vicinity of the project site, providing service between downtown Los Angeles and Arcadia[3]. The routes have peak frequencies of between 10 minutes (within Downtown Los Angeles) and 40 minutes in Arcadia. Route 79 operates in conjunction with Route 78 within the downtown Los Angeles area, upon which the route splits into two separate lines in the City of Alhambra, with Route 79 traveling along Huntington Drive. The nearest bus stops to the Project site are located at the intersection of Huntington Drive and Santa Anita Avenue, and along Santa Clara Street in front of the Metro Station Parking garage. Route 79 serves Arcadia, Alhambra, El Sereno, and downtown Los Angeles. Additionally, Route 287 operates along Santa Anita Avenue with the nearest bust stop provided at the same locations noted above, serving the cities of El Monte, Arcadia, South El Monte, Rosemead, and Montebello. Route 287 provides an average peak weekday service frequency of 40 minutes.

[3] Metro. 2021. Line 78/79 – Eastbound to Arcadia, Westbound to Downtown LA via Mission Rd, Las Tunas Dr, Huntington Dr (Effective 09-21-21). Line 287 – Northbound to Arcadia Station, Southbound to The Shops at Montebello via Santa Anita Av & Paramount Bl (Effective 06-27-21).

### Foothill Transit Services

Within the study area, Foothill Transit Line 187 serves Pasadena, Arcadia, Duarte, and Azusa. This bus line provides an average peak weekday service frequency of 20 minutes. The nearest bus stop to the Project site is located at Huntington Drive and Santa Anita Avenue [4].

### Arcadia Transit Services

Arcadia Transit provides fixed-route public transit service with three lines (e.g., Green, Blue and Red Lines). The Green and Red Lines operate in the vicinity of the project site. The Green Line connects the Arcadia Metro L Line Station with Santa Anita Park, City Hall, Methodist Hospital, Westfield Santa Anita Mall, and the Los Angeles County Arboretum[5]. The Red Line runs north-south along 1st Avenue and 6th Avenue connecting communities in the east of Arcadia to many local activity centers and the Arcadia Metro L Line Station. These lines provide headways of generally one to two buses during the weekday morning peak hour and two to three buses during the weekday afternoon peak hour.

Arcadia Dial-A-Ride is a demand-response service providing curb-to-curb transportation to seniors and persons with disabilities to and from any destination within the Arcadia city boundaries. The service is provided based on space availability and is open Monday through Friday from 7:00 AM to 9:00 PM and Saturday/Sunday from 7:00 AM to 7:00 PM. Trip requests can be made the same day or up to seven days in advance.

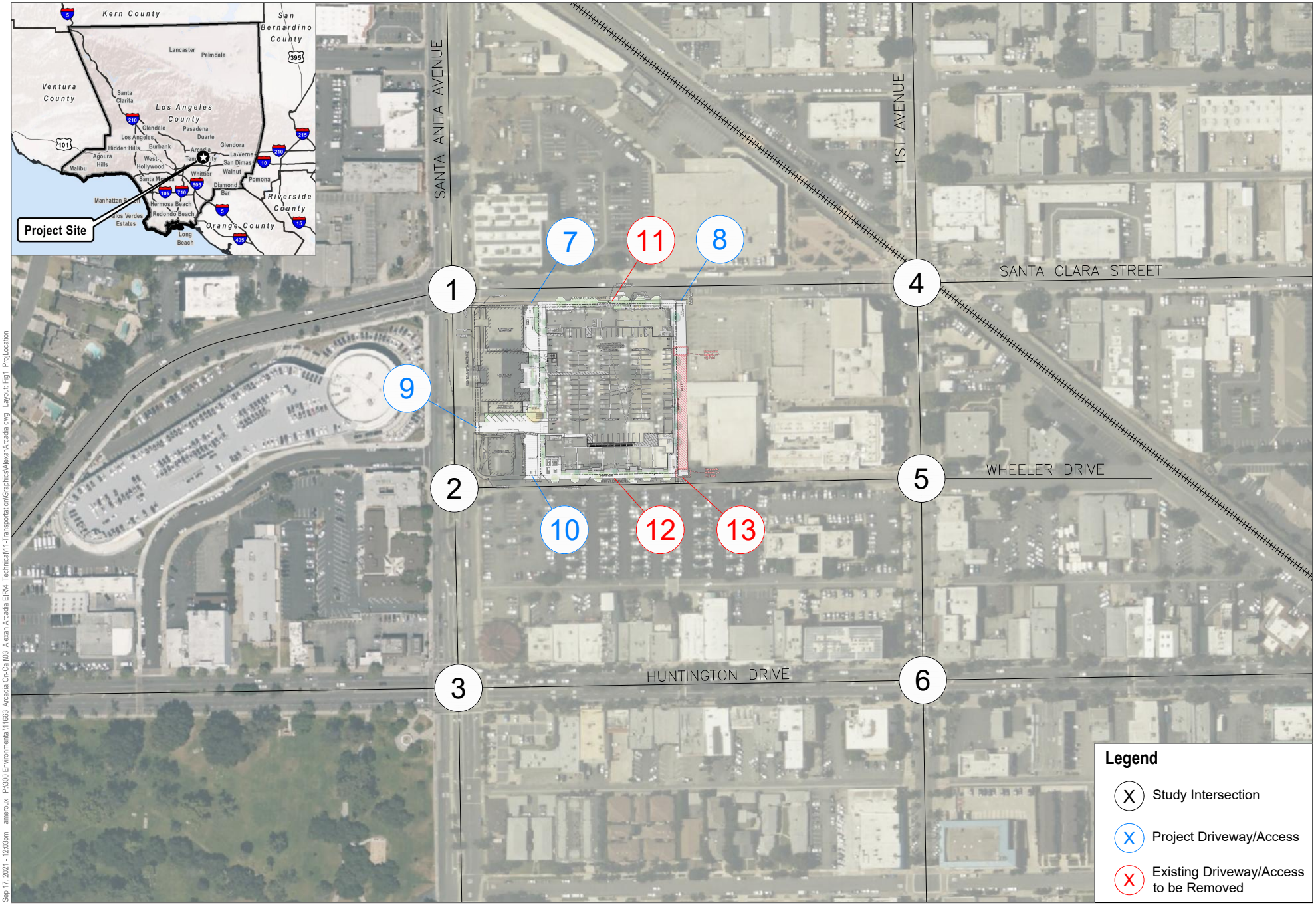
## 2.3 Pedestrian and Bicycle Facilities

Sidewalks are generally present throughout the study area, and marked crosswalks are provided at all major arterial intersections. Pedestrian access to the Project is provided along all the roadways surrounding the Project site. Bicycle facilities in the City are limited, however the City, on an ongoing basis, looks for funding opportunities to improve the City's transportation system[6]. There is an existing Class II bike lane (on-street striped lane) on Santa Clara Street along the project frontage. The City also recently added 3.6 miles of Class II bike lanes on Huntington Drive, and approximately 2 miles of Class II bike lanes on 1st Avenue/Highland Oak Drive, between Duarte Road and Orange Grove Avenue (StreetsBlog LA 2020)[7]. Bike lockers and parking are also provided at the Arcadia Metro L Line Station.

Arcadia has not previously prepared or adopted a bikeway master plan. However, the City's General Plan Circulation and Infrastructure Element includes a Bikeway Plan (see Figure 4) that identifies bicycle routes to accommodate a future bicycle plan which will link to regional routes such as the Rio Hondo bike path system, south of the Project site[8]. The proposed Bicycle Plan includes routes planned around the Project site, including a planned Class I bike path along Santa Anita Avenue. However, it must be noted that the City has constructed routes that may differ from

[4] Foothill Transit. 2021. Service Area Map, Line 187 – Azusa-Arcadia-Pasadena (Effective 05-02-21)
[5] City of Arcadia. 2021. Fixed Route Service. City of Arcadia, CA (arcadiaca.gov)
[6] City of Arcadia. 2021. Bicycle & Pedestrian Improvement Plan. City of Arcadia, CA (arcadiaca.gov)
[7] StreetsBlog LA. 2020. Eyes on the Street: New Bike Lanes Go Up in Sierra Madre, Arcadia – Streetsblog Los Angeles
[8] City of Arcadia. 2021. Bicycle & Pedestrian Improvement Plan. City of Arcadia, CA (arcadiaca.gov)

those shown in Figure 4. As shown in the figure, a Class II bike lane has been constructed along 1st Avenue/Highland Oak Drive, between Duarte Road and Orange Grove Avenue, in place of the Class III bike lane.




SOURCE: Bing Maps

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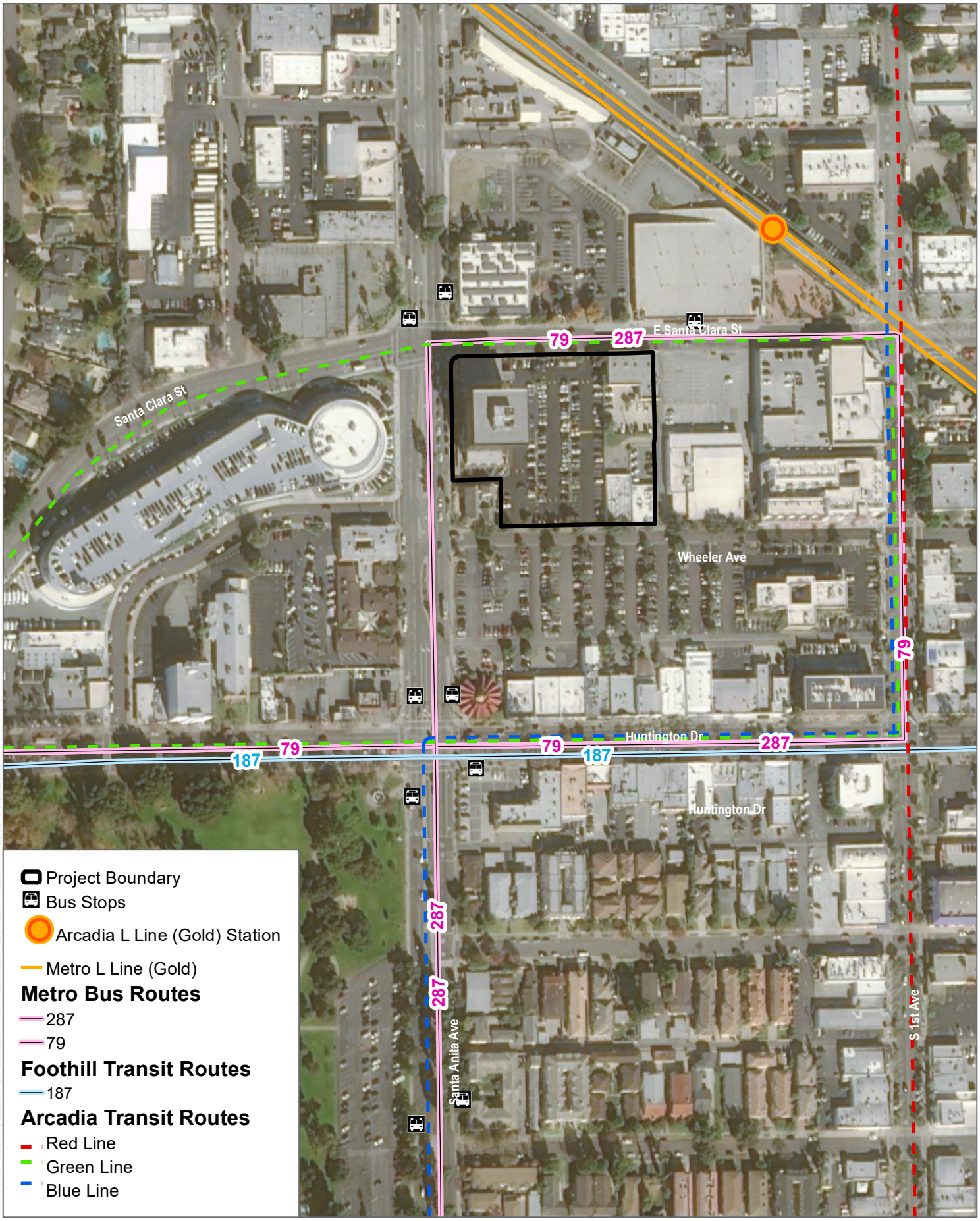
**Figure** 2

Project Location and Study Area

Alexan Arcadia




SOURCE: ESRI 2014

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**Figure 3**

Existing Transit Facilities

Alexan Arcadia

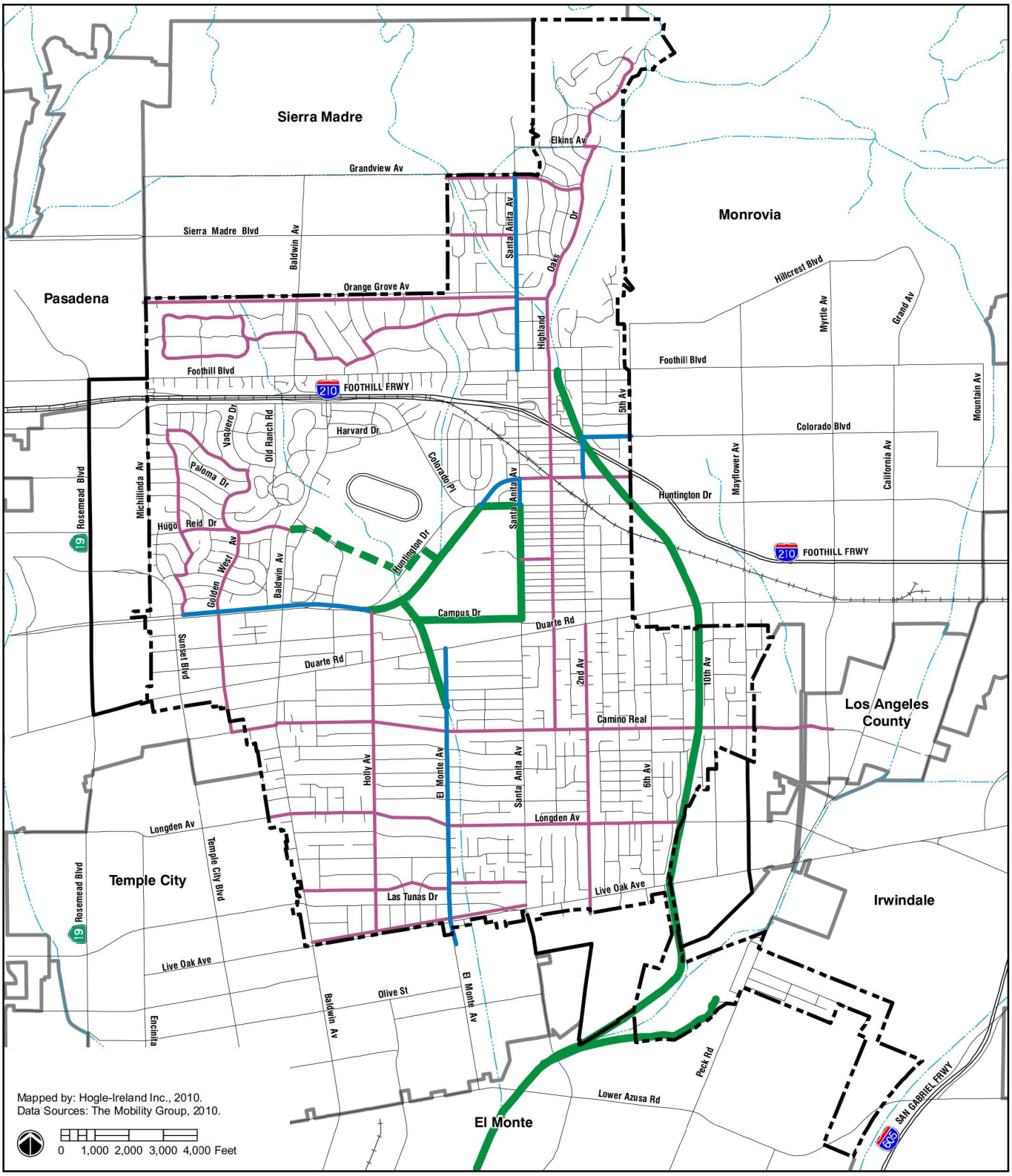


**FIGURE CI-7: BIKEWAY PLAN**

SOURCE: City of Arcadia 2010

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**Figure 4**
Bikeway Plan
Alexan Arcadia

# 3 Project Trip Generation and Distribution

## 3.1 Trip Generation

Trip generation estimates for the proposed project are based on daily and AM and PM peak hour trip generation rates obtained from the Institute of Transportation Engineers (ITE) *Trip Generation Handbook, 10th Edition* (2017). Additionally, the project proposes eight live/work dwelling units, which do not have related ITE trip generation rates. As such, the live/work units are treated as a combination of office and residential space, and a live/work rate was developed using the square footage within each unit that is allocated to office space.

The existing uses on the project site, including a 2-story office building and two commercial buildings, will be demolished with construction of the proposed project. As such, trip generation estimates for the existing land uses were developed to determine a net project trip generation. As shown in Table 1 below, the proposed project would generate 1,424 net daily trips, 132 net AM peak hour trips (38 inbound and 94 outbound), and 166 net PM peak hour trips (100 inbound and 66 outbound).

### Table 1. Project Trip Generation

| Land Use | ITE Code | Size/Units | Daily | AM Peak Hour | | | PM Peak Hour | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | In | Out | Total | In | Out | Total |
| **TRIP RATES[1]** | | | | | | | | | |
| Multifamily Housing (Mid-Rise) | 221 | per DU | 5.44 | 0.09 | 0.27 | 0.36 | 0.27 | 0.17 | 0.44 |
| General Office Building | 710 | per TSF | 9.74 | 1.00 | 0.16 | 1.16 | 0.18 | 0.97 | 1.15 |
| Live/Work Trip Rate | | | | | | | | | |
| *Office Trip Generation (total office space in live/work units)[2]* | *N/A* | *9.281 TSF* | *90* | *9* | *2* | *11* | *2* | *9* | *11* |
| *Workspace Trip Rate per Unit[3]* | *N/A* | *8 per DU* | *11.30* | *1.16* | *0.19* | *1.35* | *0.21* | *1.12* | *1.33* |
| *Residential Trip Rate per Unit (derived, 39% live/work designated as residential)[4]* | *N/A* | *per DU* | *2.12* | *0.04* | *0.10* | *0.14* | *0.10* | *0.07* | *0.17* |
| Live/Work Trip Rate per Unit[5] | N/A | per DU | 13.42 | 1.19 | 0.29 | 1.49 | 0.32 | 1.19 | 1.51 |
| Shopping Center | 820 | per TSF | 42.70 | 0.60 | 0.36 | 0.96 | 1.78 | 1.93 | 3.71 |
| Coffee/Donut Shop without Drive-Through Window | 936 | per TSF | 101.14 | 18.16 | 18.16 | 36.31 | 40.75 | 39.16 | 79.91 |
| **TRIP GENERATION** | | | | | | | | | |
| ***Existing Land Uses (to be removed)*** | | | | | | | | | |
| Parcel 2 - Office Building (portion to be removed) | 710 | 0.750 TSF | 7 | 1 | 0 | 1 | 0 | 1 | 1 |
| Parcel A - 2-story office | 710 | 9.000 TSF | 88 | 9 | 1 | 10 | 2 | 9 | 11 |

## Table 1. Project Trip Generation

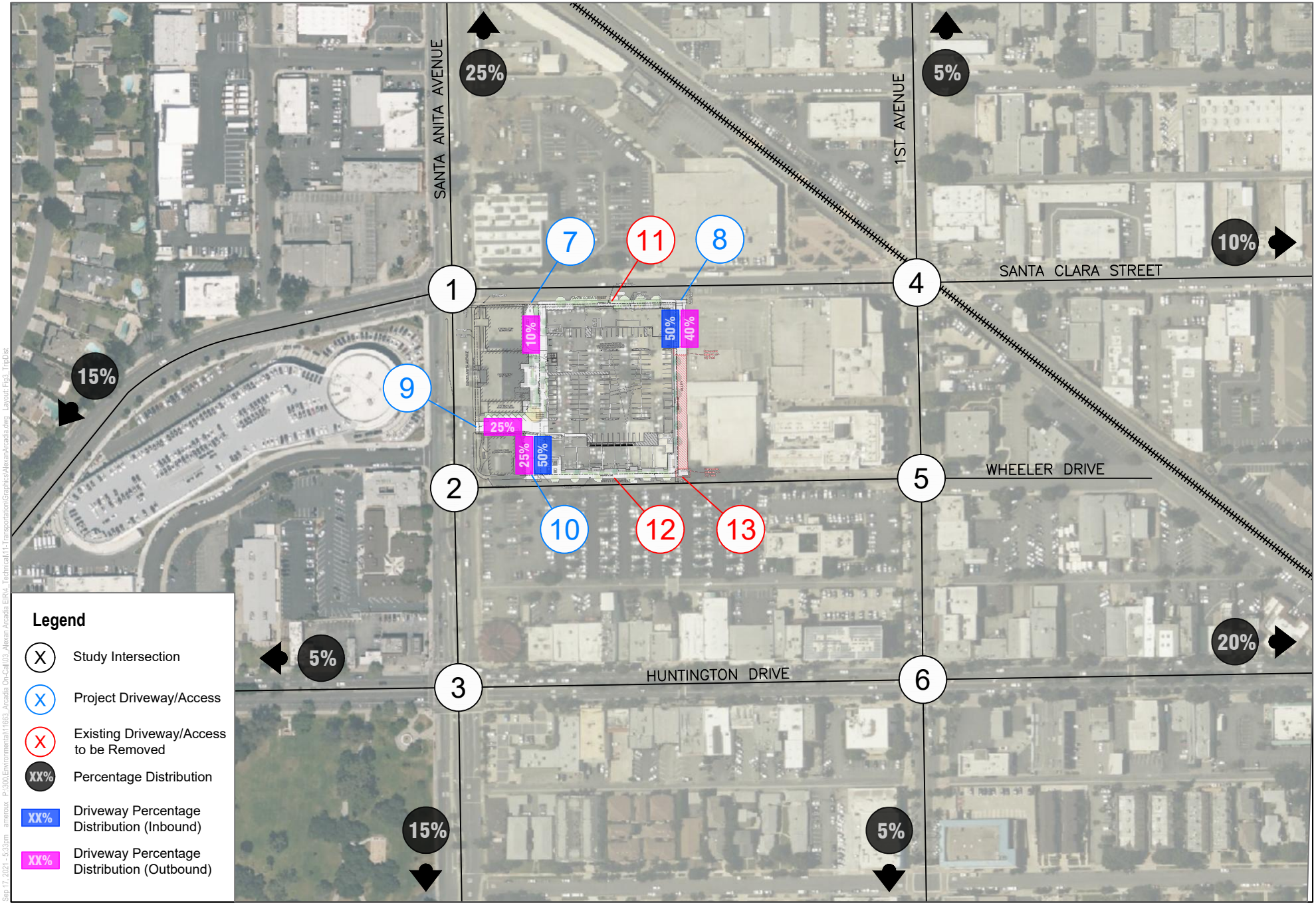
| Land Use | ITE Code | Size/Units | Daily | AM Peak Hour | | | PM Peak Hour | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | In | Out | Total | In | Out | Total |
| Parcel C - single story commercial | 820 | 4.591 TSF | 197 | 3 | 2 | 5 | 8 | 9 | 17 |
| Parcel D - single story commercial | 820 | 3.733 TSF | 159 | 2 | 2 | 4 | 7 | 7 | 14 |
| ***Subtotal Existing Land Uses*** | | | ***451*** | ***15*** | ***5*** | ***20*** | ***17*** | ***26*** | ***43*** |
| ***Proposed Land Use*** | | | | | | | | | |
| Residential | 221 | 311 DU | 1,692 | 29 | 83 | 112 | 84 | 53 | 137 |
| Live-Work[6] | N/A | 8 DU | 107 | 10 | 2 | 12 | 3 | 10 | 13 |
| Café | 936 | 0.750 TSF | 76 | 14 | 14 | 28 | 30 | 29 | 59 |
| ***Subtotal Proposed Land Uses*** | | | ***1,875*** | ***53*** | ***99*** | ***152*** | ***117*** | ***92*** | ***209*** |
| **Total (Proposed - Existing)** | | | **1,424** | **38** | **94** | **132** | **100** | **66** | **166** |

**Notes:** DU = dwelling unit; TSF = thousand square feet
[1] Trip rates from Trip Generation, 10th Edition, Institute of Transportation Engineers, 2017.
[2] Office trip generation calculated from total office space within the live/work units allocated to office use.
[3] Workspace trip rate per unit derived from the total workspace trip generation per square footage divided by the number of live/work units.
[4] Residential trip generation of live/work units calculated by multiplying the ratio of residential space available within each live/work unit by the ITE 221 trip rate (39% residential/61% office).
[5] Live/work unit trip generation rate derived from the sum of the Workspace Trip Rate per Unit and the Residential Trip Rate per Unit.
[6] Live/work unit trip generation estimates determined from derived Live/Work Trip Rate per Unit.

## 3.2 Trip Distribution and Assignment

Project trip distribution percentages are based on logical travel paths to and from the project site, review of traffic studies conducted for nearby projects, and consideration of the traffic distribution patterns in the area. The project trip distribution percentages are shown in Figure 5.

As shown in Table 1, the trips associated with the existing land uses on the site that will be removed, were subtracted from the trips associated with the total proposed land uses. Figure 6 illustrates the trips to be removed at existing driveways, Figure 7 illustrates the total proposed trips to be added at Project driveways, and Figure 8a shows the net proposed trips (proposed minus existing) at Project driveways. Figure 8b shows the net proposed trips at all study intersections.




SOURCE: Bing Maps

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**Figure** 5

Project Trip Distribution

Alexan Arcadia

7 Project Dwy (Northwest)
Santa Clara Street

(8) 1 → ←(1) 4

8 Alley Project Dwy (Northeast)
Santa Clara Street

(0) 1 → ←(1) 0
(2) 0
(0) 2

9 Santa Anita Avenue
Project Dwy (West)

(1)
6
↓
↑ (1) 2
(3)
4

10 Project Dwy (Southwest)
Wheeler Avenue

(3) 8 → ←(3) 9

11 Ex. Dwy (North) - to be removed
Santa Clara Street

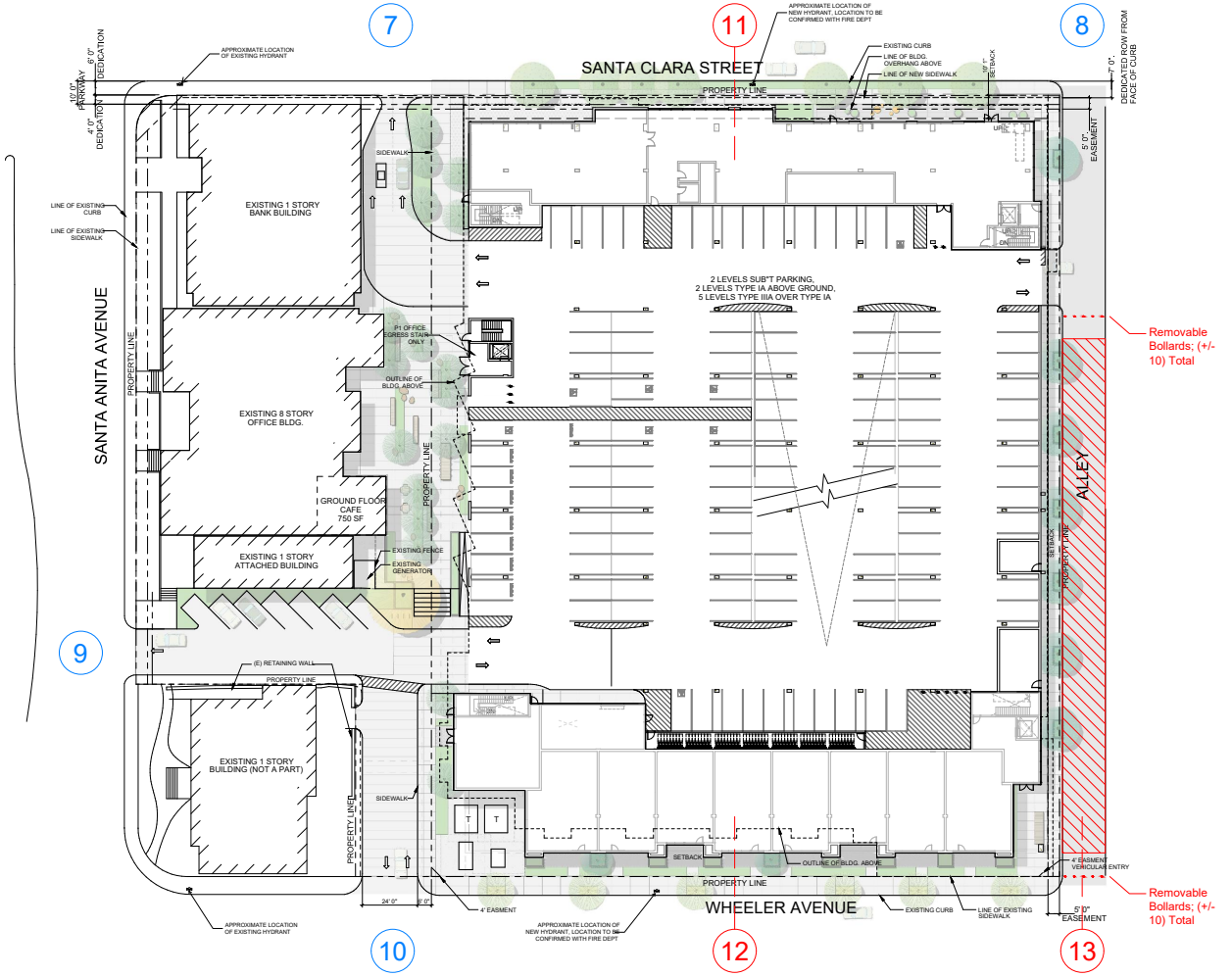
(8) 1 → ←(1) 0
(1) 4 (0) 1

12 Ex. Dwy (South) - to be removed
Wheeler Avenue

(3) 7 (0) 1
(2) 6 (0) 1
(1) 2 →

13 Alley Project Dwy (Southeast) - to be closed
Wheeler Avenue

(1) 2 (1) 6
(1) 2 (1) 7
(0) 1 ← ←(0) 1




## Legend

X Project Driveway/Access

X Existing Driveway/Access to be Removed

(X) Weekday AM Peak Hour Traffic Volumes

X Weekday PM Peak Hour Traffic Volumes

SOURCE: studioneleven 2021

NOT TO SCALE

**Figure** 6

Existing Land Uses (to be removed) Trip Assignment

Alexan Arcadia

7 Project Dwy (Northwest)
Santa Clara Street

(16) 30 → ← (29) 23
(5) 6

8 Alley Project Dwy (Northeast)
Santa Clara Street

(9) 9 → ← (1) 3
(13) 28 (13) 28
(28) 21 (14) 10

9 Santa Anita Avenue
Project Dwy (West)

(17)
26
(12) 16
(8)
11

10 Project Driveway (Southwest)
Wheeler Avenue

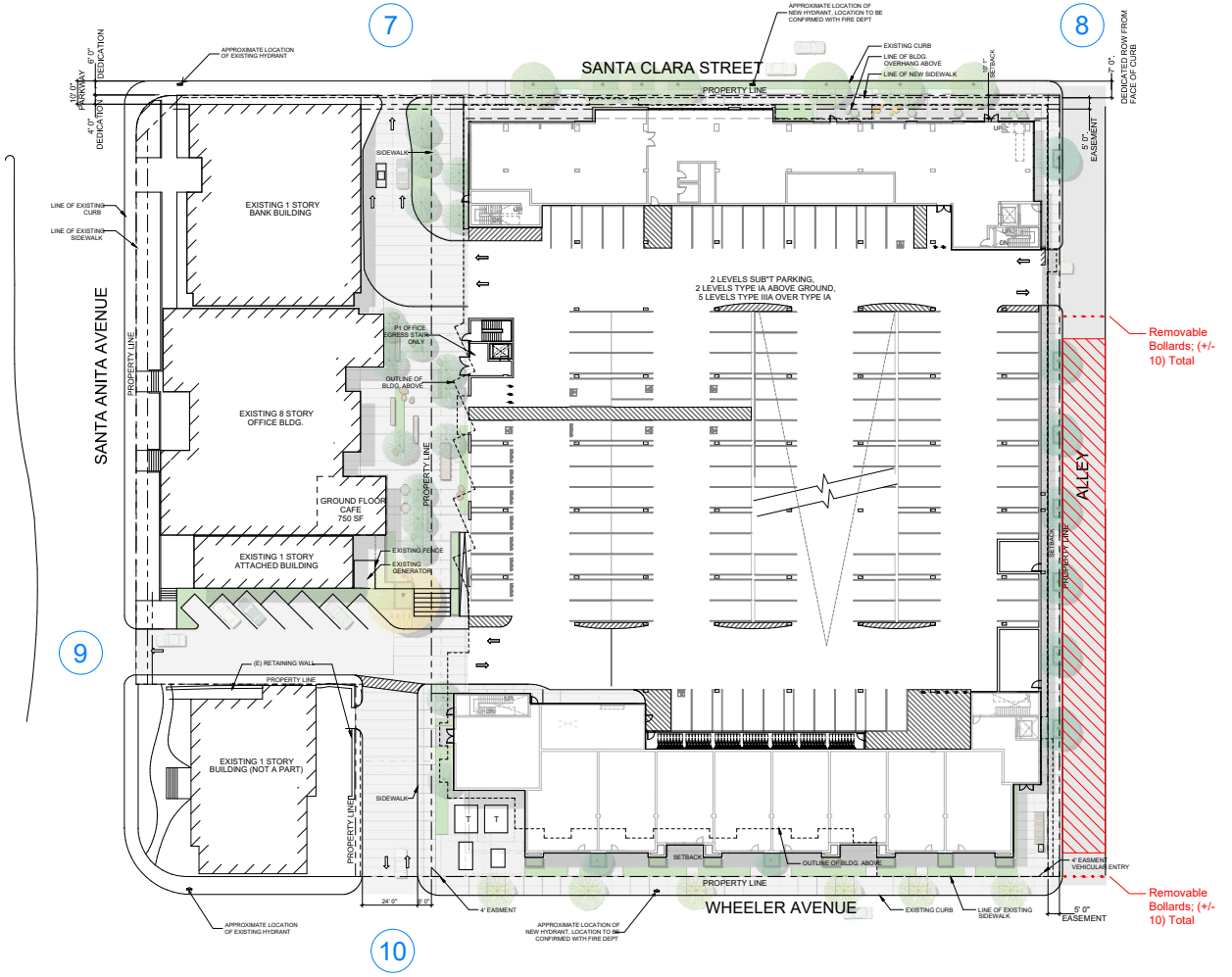
(23) 22 (18) 17
(19) 42 (8) 17

## Legend

X Project Driveway/Access

(X) Weekday AM Peak Hour Traffic Volumes

X Weekday PM Peak Hour Traffic Volumes




SOURCE: studioneleven 2021

**Figure 7**

Proposed Project (Residential + Cafe) Trip Assignment

Alexan Arcadia

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7 Project Dwy (Northwest)
Santa Clara Street

(8) 29 → ← (28) 19
(5) 6

8 Alley Project Dwy (Northeast)
Santa Clara Street

(9) 8 → ← (0) 3
(13) 28 (11) 28
(28) 21 (14) 8

9 Santa Anita Avenue
Project Dwy (West)

(16)
20
(12) 16
(-1) -2
(5)
7

10 Project Dwy (Southwest)
Wheeler Avenue

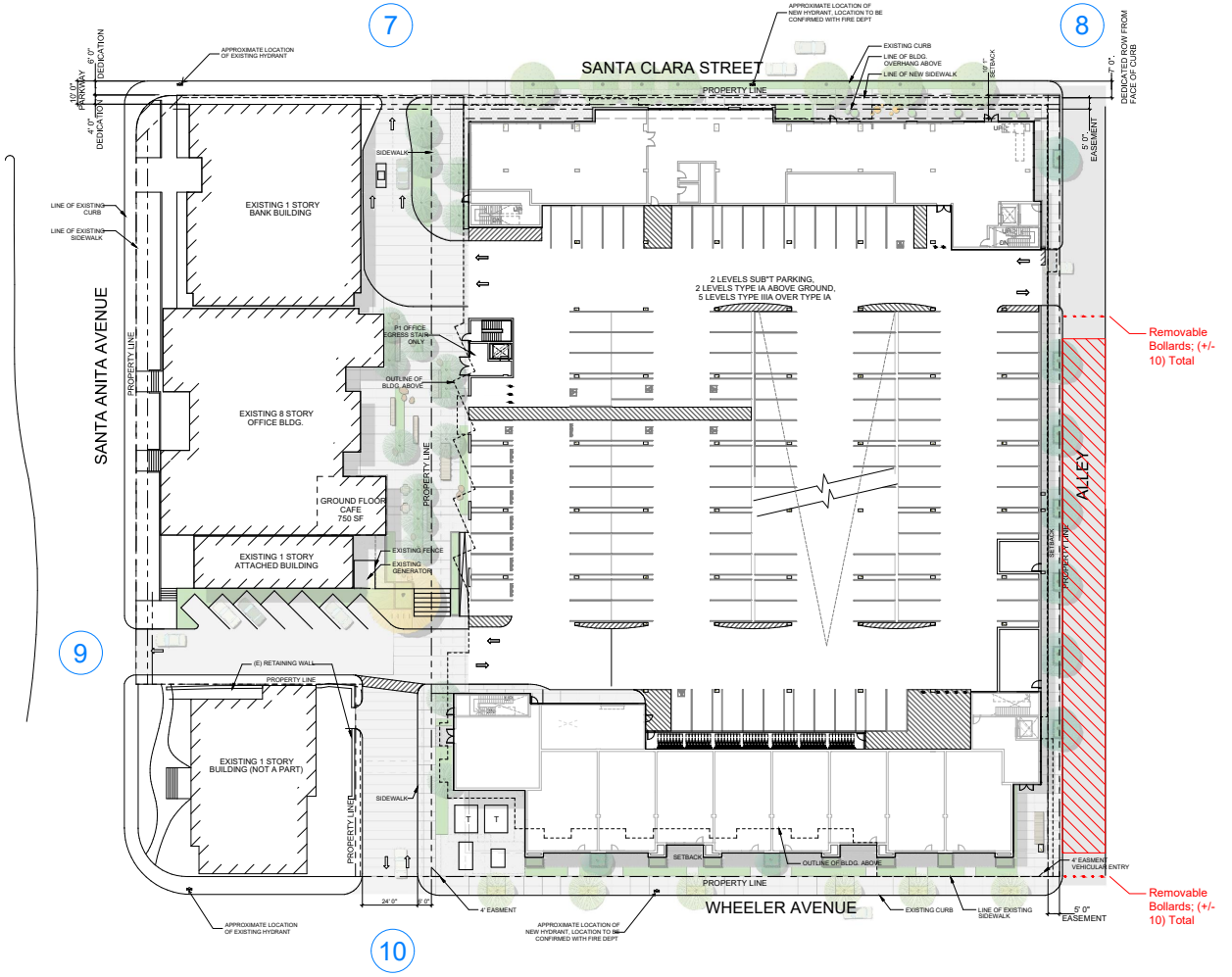
(23) 22 (18) 17
(19) 42 (8) 17
(-3) -8 (-3) -9

## Legend

X Project Driveway/Access

(X) Weekday AM Peak Hour Traffic Volumes

X Weekday PM Peak Hour Traffic Volumes




SOURCE: studioneleven 2021

**Figure 8a**

Net Proposed Project Trip Assignment (Driveways)

Alexan Arcadia

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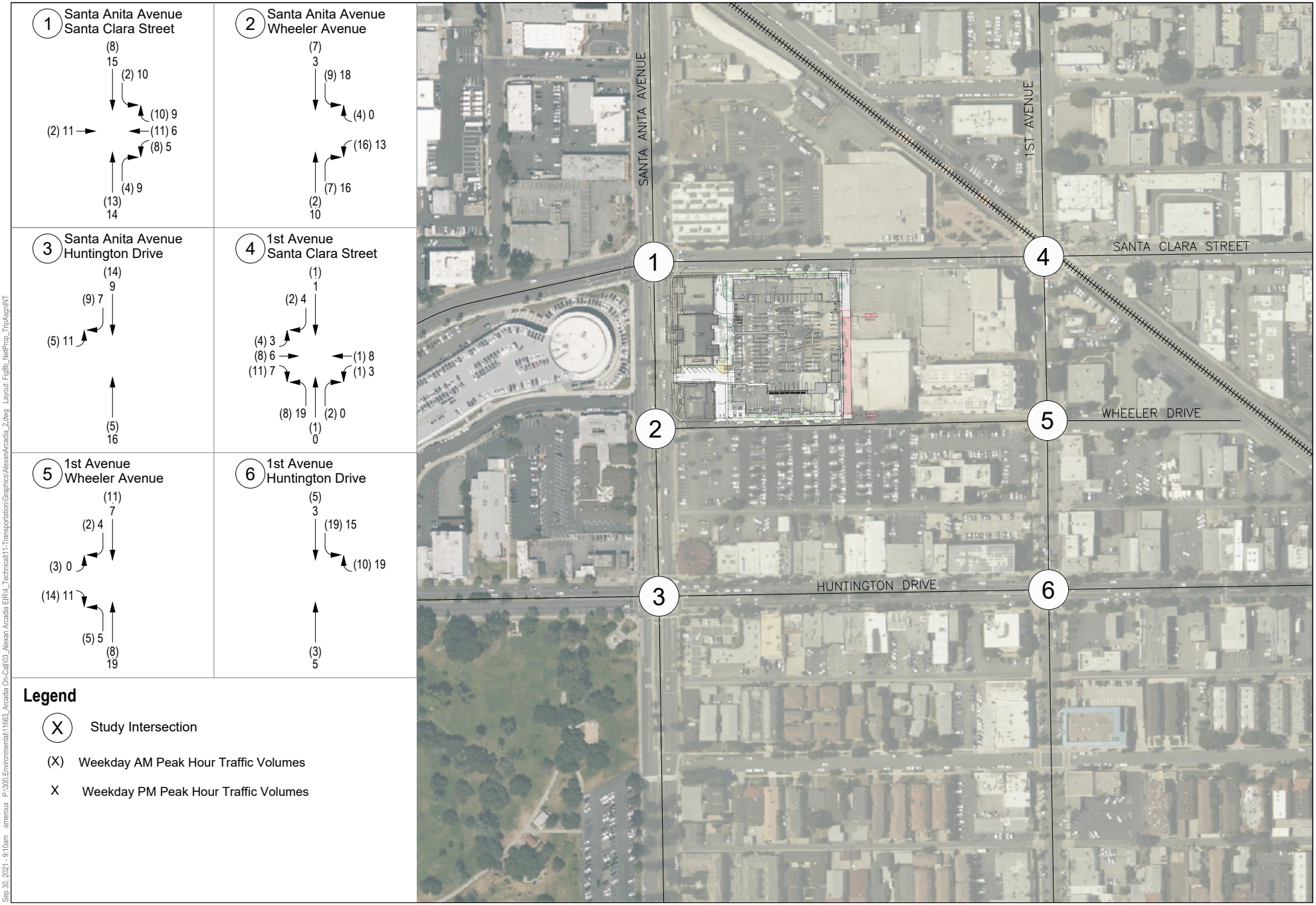


SOURCE: studioneleven 2021

**Figure 8b**

Net Proposed Project Trip Assignment (Study Area Intersections)

Alexan Arcadia

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# 4 Level of Service (LOS) Analysis

The City has vehicle LOS standards in its General Plan Circulation and Infrastructure Element that the City will strive to maintain through various projects designed to improve local infrastructure. The LOS standards apply to discretionary approvals of new land use and transportation projects. This LOS analysis has been prepared to evaluate the project's consistency with the City of Arcadia General Plan Circulation and Infrastructure Element.

## 4.1 Study Intersections

Per the City of Arcadia Transportation Study Guidelines for Vehicle Miles Traveled and Level of Service Assessment[9], the study area intersections included in this analysis consist of, at least, the intersections of roadways where the project would generate 51 or more peak hour trips through those intersections. The following intersections meet these requirements and comprise the study area:

1. Santa Anita Avenue/Santa Clara Street
2. Santa Anita Avenue/Wheeler Avenue
3. Santa Anita Avenue/Huntington Drive
4. 1st Avenue/Huntington Drive
5. 1st Avenue/Wheeler Avenue
6. 1st Avenue/Santa Clara Street

## 4.2 Analysis Scenarios

Consistent with the City's Guidelines, intersection LOS analyses were prepared for the weekday AM and PM peak hours at the study area intersections listed above for the following analysis scenarios:

- Existing (2021) Conditions
- Opening Year (2024) No Project (future short-term year with cumulative projects and ambient growth)
- Opening Year (2024) Plus Project

Additionally, the City's Guidelines note that if it is determined that the project contributes traffic to an intersection operating at an unacceptable LOS, the project requires a General Plan Amendment or otherwise proposes development that exceeds the land use intensity assumed for the General Plan, and/or at the City Traffic Engineer request, an analysis of the Horizon Year (with and without project) should be conducted. Based on the findings in the following analysis, the project would not meet the above criteria and an analysis of horizon year scenarios was not conducted.

## 4.3 Analysis Methodology

LOS is commonly used as a qualitative description of intersection operations and roadway segments and is based on the design capacity of the intersection configuration and roadway facility, compared to the volume of traffic using the facility. The City's intersection evaluation methodology to assess transportation impacts and traffic operating conditions for signalized intersections is based on the Intersection Capacity Utilization (ICU) methodology. The ICU

[9] City of Arcadia. 2020. City of Arcadia Transportation Study Guidelines for Vehicle Miles Traveled and Level of Service Assessment. August.

method determines the volume-to-capacity (V/C) ratio on a critical movement basis and the LOS associated with each V/C ratio at an intersection. These methods are used to assess operational characteristics for signalized intersections which is determined by calculating the intersection's LOS. The intersection as a whole and its individual turning movements can be described alphabetically with a range of LOS (A through F), with LOS A indicating free-flow traffic and LOS F indicating extreme congestion and long vehicle delays.

Additionally, the City uses the latest version of the Highway Capacity Manual (HCM) methodology to evaluate the AM and PM peak hour LOS at unsignalized intersections. The HCM analysis methodology describes the operation of an intersection using a range of LOS from LOS A (free-flow conditions) to LOS F (severely congested conditions), based on the corresponding control delay experienced per vehicle based on the worst turning movement for unsignalized intersections.

The PTV Vistro software was used to determine intersection LOS (for all scenarios), consistent with both ICU and HCM 6 methodologies. Detailed LOS calculation worksheets (for all scenarios) are included in Attachment B. Table 2 shows the LOS values by delay ranges for unsignalized and signalized intersections under the HCM methodology for unsignalized intersections and ICU methodology for signalized intersections.

**Table 2. Level of Service for Criteria**

| Level of Service | Unsignalized Intersections Control Delay (in seconds per vehicle) | Signalized Intersections (vehicle/capacity – v/c) |
|---|---|---|
| A | < 10.0 | < 0.600 |
| B | > 10.0 and < 15.0 | > 0.600 and < 0.700 |
| C | > 15.0 and < 25.0 | > 0.700 and < 0.800 |
| D | > 25.0 and < 35.0 | > 0.800 and < 0.900 |
| E | > 35.0 and < 50.0 | > 0.900 and < 1.000 |
| F | > 50.0 | > 1.000 |

## 4.4 General Plan Consistency Requirements

The LOS thresholds and impact criteria identified in the City of Arcadia General Plan Circulation and Infrastructure Element and the Transportation Study Guidelines for Vehicle Miles Traveled and Level of Service Assessment were used to evaluate the project's potential impacts on intersection LOS, as described below.

### City of Arcadia General Plan Circulation and Infrastructure Element

The acceptable LOS for intersections in the City is D or better as established in the City's General Plan. LOS E is considered acceptable at intersections adjacent to freeway ramps; adjacent to Santa Anita Park during the racing season; and in areas designated as Downtown, Baldwin Avenue, and Live Oak Avenue commercial and mixed-used districts. Any intersection operating at an LOS grade worse than the acceptable condition is considered deficient. LOS E would serve as the acceptable threshold for all intersections included in this analysis as the study area falls within the Downtown mixed-use district.

Signalized intersections will require improvements if one of the following conditions is met:

- LOS C- Project V/C increase 0.04 or more
- LOS D - Project V/C increase 0.02 or more
- LOS E/F- Project V/C increase 0.01 or more

Unsignalized intersections will require improvements if both of the following conditions are met:

- The addition of project traffic to an intersection results in the degradation of overall intersection operations from acceptable operations to unacceptable operations, and
- The intersection meets peak hour signal warrants either caused by project volumes, or project volumes are added at an intersection that meets peak hour signal warrants in the baseline scenario(s). Peak hour signal warrants should be determined based on the latest California Manual on Uniform Traffic Control Devices (CA MUTCD).

The fair share cost for the proposed improvements in the cumulative condition should also be calculated. Fees paid through the City of Arcadia Transportation Impact Fee Program (TIFP) will be considered sufficient if the intersection improvement is identified as a planned project in the General Plan.

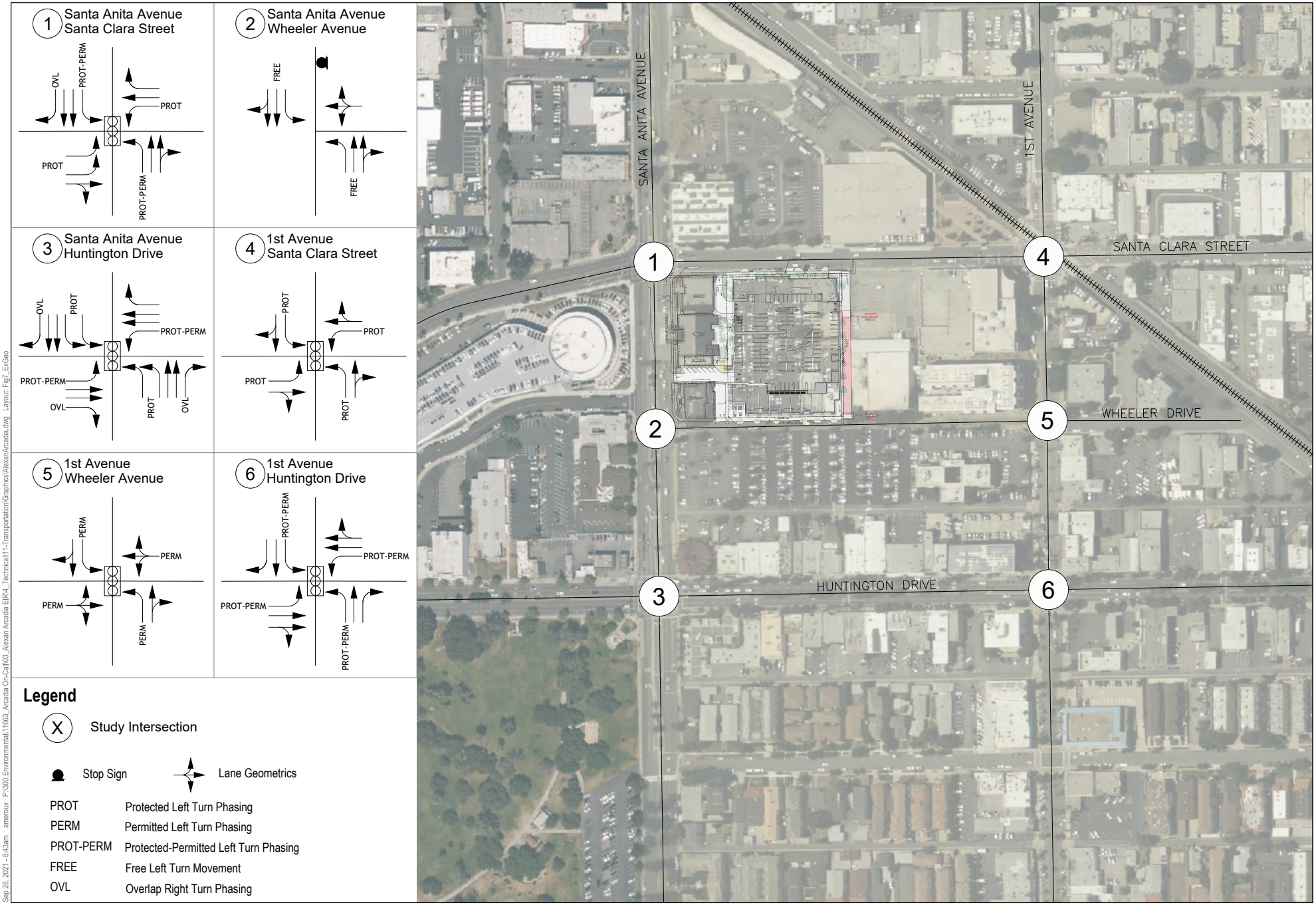
## 4.5 Existing (2021) Conditions

### Traffic Volumes

Although COVID-19 shelter-in-place restrictions were lifted on June 15, 2021, traffic patterns have not returned to pre-pandemic conditions immediately. As such, new AM and PM peak hour intersection counts were not collected as they may not reflect typical traffic conditions in the study area. Instead, AM and PM peak hour traffic counts were obtained from the Huntington Plaza Project Traffic Impact Study[10] for all study intersections. The counts were collected in July 2018, before the COVID-19 shelter-in-place restrictions were put in place and are considered a reasonable baseline for existing conditions in the study area. For the purposes of this study, the counts were grown to 2021 using an ambient annual growth rate of 1.0%, consistent with recent traffic studies in the area. This is also consistent with the 2010 Congestion Management Program, which indicates that existing traffic volumes are expected to increase at a rate of approximately 0.82% per year, from 2015 to 2020. Therefore, use of a 1.0% ambient annual growth rate serves as an appropriate and conservative growth factor for traffic volumes in this area. Raw traffic counts are provided in Attachment A. Existing traffic controls and geometrics at all study intersections are shown in Figure 9 and existing peak hour traffic volumes are shown in Figure 10.

Although a specific LOS analysis is not conducted for an Existing plus Project scenario per the City's guidelines, Existing plus Project traffic volumes are provided at all study intersections for informational purposes only. The net proposed project trip assignments shown in Figure 8b were added to the existing peak hour traffic volumes shown in Figure 10 to derive the Existing plus Project peak hour traffic volumes shown in Figure 11.

[10] PSOMAS. 2019. Final Traffic Impact Study for Huntington Plaza. 2019. Appendix H - Traffic Study.pdf (arcadiaca.gov)




Sep 28, 2021 - 8:43am ameroux P:\300.Environmental\111663_Arcadia On-Call\03_Alexan Arcadia EIR\4_Technical\11-Transportation\Graphics\AlexanArcadia.dwg Layout: Fig7_ExGeo

SOURCE: studioneleven 2021

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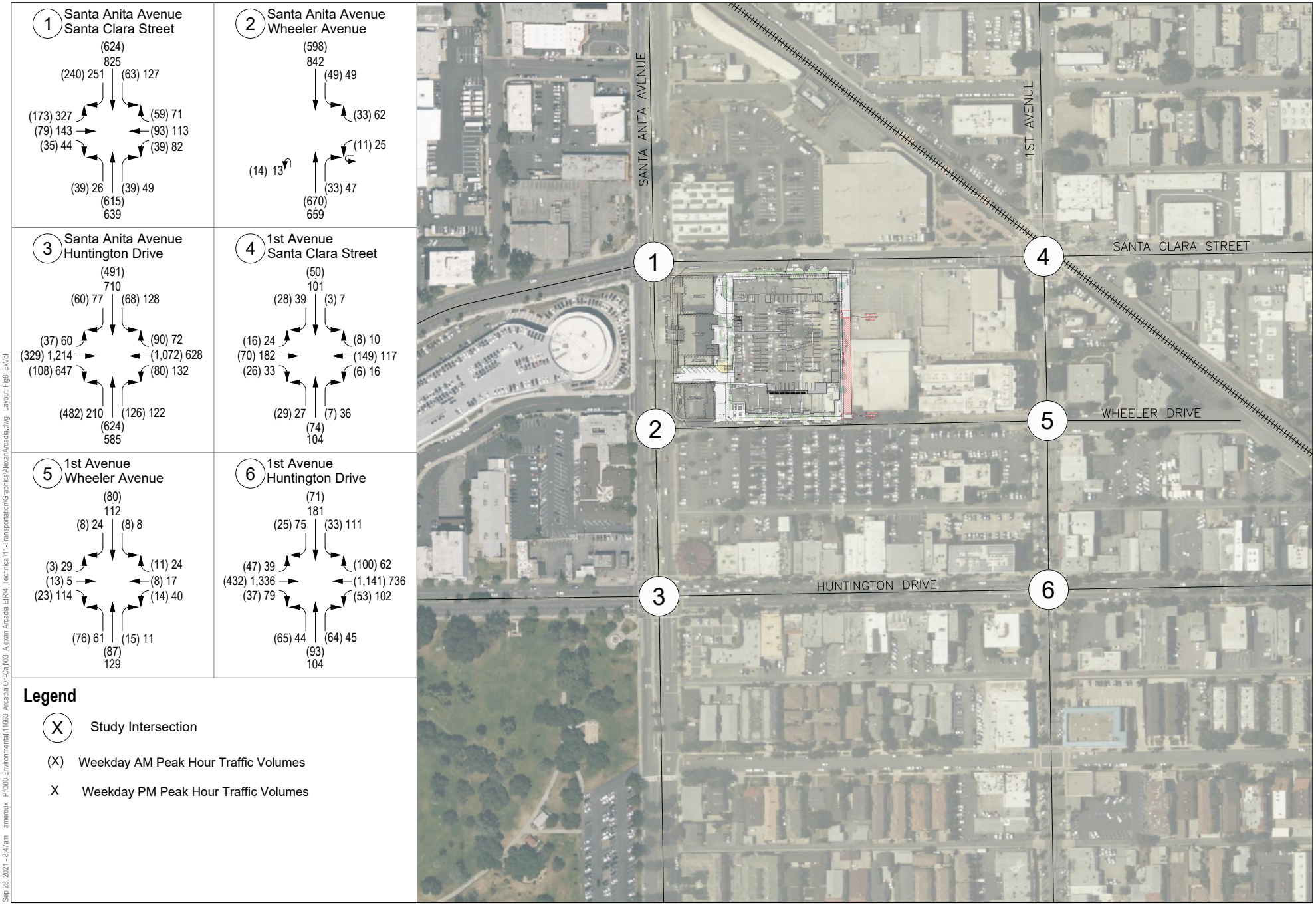
**Figure** 9

Existing Traffic Controls and Geometrics

Alexan Arcadia




Sep 28, 2021 - 8:47am ameroux P:\300.Environmental\111663_Arcadia On-Call\03_Alexan Arcadia EIR\4_Technical\11-Transportation\Graphics\AlexanArcadia.dwg Layout: Fig8_ExVol

SOURCE: studioneleven 2021

**Figure** 10

Existing Peak Hour Traffic Volumes

Alexan Arcadia

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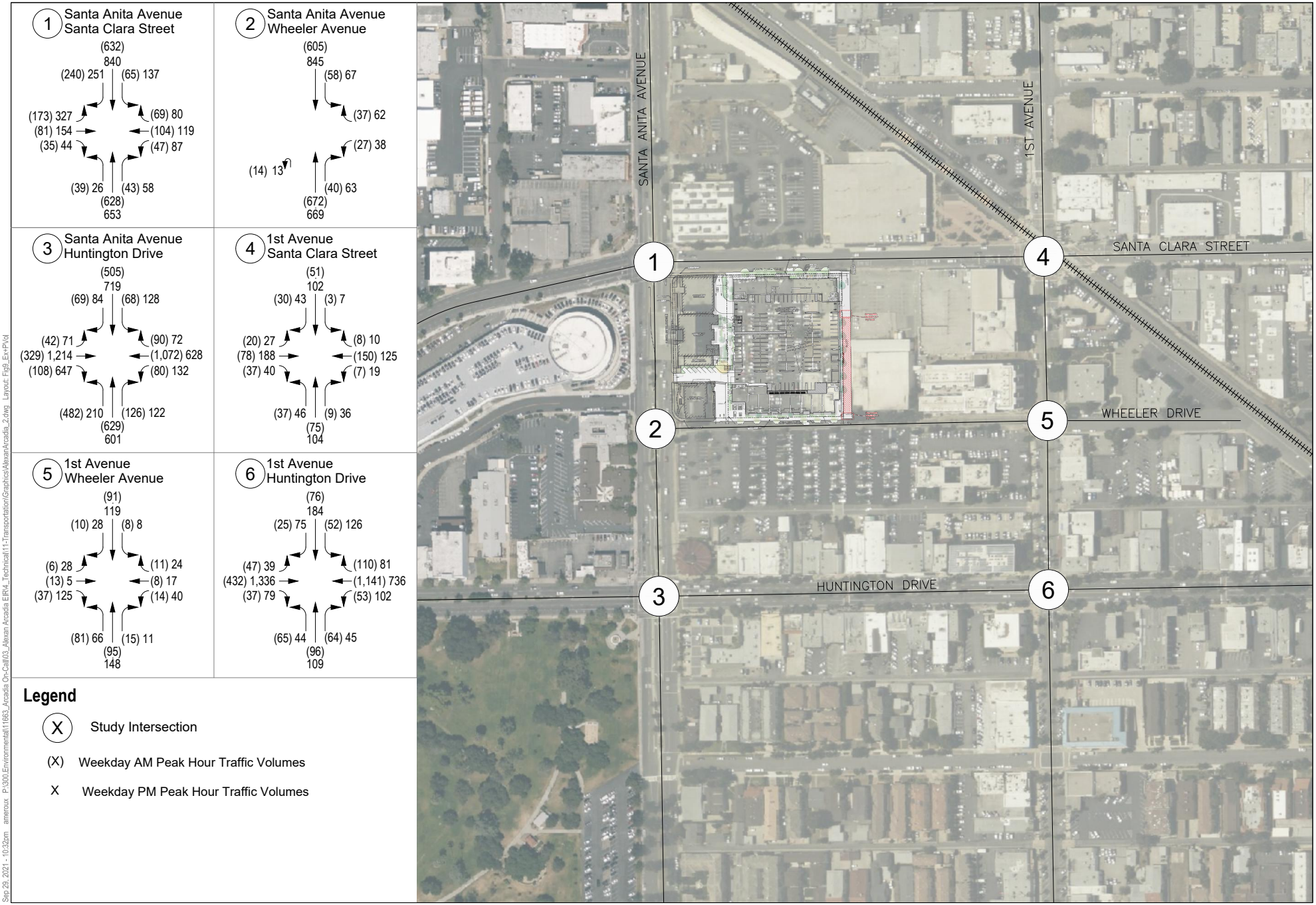


SOURCE: studioneleven 2021

**Figure** 11

Existing Plus Net Proposed Project Peak Hour Traffic Volumes

Alexan Arcadia

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### LOS Analysis

Table 3 summarizes the results of the intersection analysis for the AM and PM peak hours for existing conditions. As shown in the table, all the study intersections are currently operating at satisfactory levels of service (LOS E or better) under existing conditions.

**Table 3. Existing Weekday Peak Hour Intersection LOS**

| No. | Intersection | Traffic Control | LOS Method | Existing | | | |
|---|---|---|---|---|---|---|---|
| | | | | AM Peak | | PM Peak | |
| | | | | V/C or Delay[1] | LOS[2] | V/C or Delay[1] | LOS[2] |
| 1 | Santa Anita Avenue/Santa Clara Street | Signal | ICU | 0.473 | A | 0.590 | A |
| 2 | Santa Anita Avenue/Wheeler Avenue | TWSC | HCM | 24.0 | C | 29.8 | D |
| 3 | Santa Anita Avenue/Huntington Drive | Signal | ICU | 0.822 | D | 0.868 | D |
| 4 | 1st Avenue/Santa Clara Street | Signal | ICU | 0.318 | A | 0.415 | A |
| 5 | 1st Avenue/Wheeler Avenue | Signal | ICU | 0.289 | A | 0.407 | A |
| 6 | 1st Avenue/Huntington Drive | Signal | ICU | 0.613 | B | 0.758 | C |

**Source:** Attachment B
**Notes:** HCM = Highway Capacity Manual; TWSC = two-way stop-controlled
[1] V/C = Volume to Capacity; Delay measured in seconds per vehicle for unsignalized intersection (LOS is reported based on the worst delayed movement of the unsignalized intersection).
[2] LOS = Level of Service

## 4.6 Opening Year (2024) No Project

This section presents the results of a cumulative condition analysis that was conducted for a short-term horizon year assuming the proposed project is constructed and fully occupied. This section describes conditions within the study area in the short-term year 2024.

### Cumulative Projects

Cumulative projects are projects that are proposed and in the development review process, but not yet fully approved; or projects that have been approved, but not fully constructed or occupied. The following projects listed in Table 4 were provided per communication with City staff and are included in the Opening Year analysis.

**Table 4. Cumulative Projects**

| Address | Name/Use | Units | Square Footage (SF) | Status |
|---|---|---|---|---|
| 405 S 1st Ave | Mixed Use Building | 4 Residential | 585 SF Commercial | Permits Issued |
| 420 S 1st Ave | Mixed Use Building | 11 Residential | 1,020 SF Commercial | Planning Review |
| 25 N Santa Anita Ave | Huntington Parkview Mixed Use | 157 Residential | 14,690 SF Commercial | Planning Review |

## Table 4. Cumulative Projects

| Address | Name/Use | Units | Square Footage (SF) | Status |
|---|---|---|---|---|
| 205 N Santa Anita Ave | Santa Anita Mixed Use | 22 Residential | 1,240 SF Commercial | May be withdrawn but almost complete for public hearing |
| 117 E Huntington Dr | Huntington Plaza/Mixed Use | 139 Residential | 10,200 SF Commercial | Plan Check |
| 288 N Santa Anita Ave | Medical Office/Retail Building | | 31,160 SF Office/Retail | Under Construction |
| 130 W Huntington Dr | Le Meridien Hotel/Condos/Retail | 233 Hotel rooms/96 Condo | 6,640 SF of Retail Commercial and 3,960 SF spa | Hotel Complete/Condos Under Construction |
| 125 W Huntington Dr | Hotel Indigo | 175 Hotel rooms | 4,300 SF Restaurant and spa | Plan Check Complete |
| 230 California St | Condos | 5 | | Under Construction |
| 116 Bonita St | Condos | 3 | | Under Construction |
| 157 Genoa St | Condos | 4 | | Plan Check Complete |
| 135 El Dorado St | Condos | 3 | | Under Construction |
| 314 California St | Condos | 5 | | Under Construction |
| 147 Alice St | Condos | 3 | | Plan Check |
| 125 California St | Condos | 3 | | Under Construction |
| 416 Genoa St | Condos | 8 | | Under Construction |
| 414 S 2nd Ave | Condos | 6 | | Plan Check |
| 43 Genoa St | Condos | 4 | | Planning Review |
| 920 N Santa Anita Ave | Condos | 6 | | Planning Review |
| 141 Fano St | Condos | 3 | | Planning Review |
| 200 S 2nd Ave | Condos | 4 | | Planning Review |

**Source:** Email correspondence with the City of Arcadia, 2021

Project trip generation for the cumulative projects were estimated using trip generation rates provided by the ITE *Trip Generation Handbook*, 10th Edition, or derived from traffic impact analyses, where available. As shown in Table 5, the cumulative projects are forecast to generate approximately 9,130 daily trips, 559 AM peak hour trips, and 701 PM peak hour trips. Figure 12 shows the locations of all cumulative projects, and Figure 13 shows the traffic volumes distributed throughout the network.

## Table 5. Cumulative Projects Trip Generation

| Land Use | ITE Code | Size/Units | | AM Peak Hour | | | PM Peak Hour | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | Daily | In | Out | Total | In | Out | Total |
| TRIP RATES[1] | | | | | | | | | |
| Multifamily Housing (Low-Rise) | 220 | per DU | 7.32 | 0.11 | 0.35 | 0.46 | 0.35 | 0.21 | 0.56 |
| Multifamily Housing (Mid-Rise) | 221 | per DU | 5.44 | 0.31 | 0.05 | 0.36 | 0.07 | 0.37 | 0.44 |
| Hotel | 310 | per Room | 8.36 | 0.28 | 0.19 | 0.47 | 0.31 | 0.29 | 0.60 |

## Table 5. Cumulative Projects Trip Generation

| Land Use | | | ITE Code | Size/Units | | | AM Peak Hour | | | PM Peak Hour | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | Daily | In | Out | Total | In | Out | Total |
| General Office Building | | | 710 | per TSF | | 9.74 | 1.00 | 0.16 | 1.16 | 0.18 | 0.97 | 1.15 |
| Medical-Dental Office Building | | | 720 | per TSF | | 34.80 | 2.17 | 0.61 | 2.78 | 0.97 | 2.49 | 3.46 |
| Shopping Center | | | 820 | per TSF | | 42.70 | 0.60 | 0.36 | 0.96 | 1.78 | 1.93 | 3.71 |
| High-Turnover (Sit-Down) Restaurant | | | 932 | per TSF | | 112.18 | 5.47 | 4.47 | 9.94 | 6.06 | 3.71 | 9.77 |
| **No.** | **TRIP GENERATION** | | | | | | | | | | | |
| ***City of Arcadia[2]*** | | | | | | | | | | | | |
| A1 | Mixed Use Building | 405 S 1st Ave | 221 | 4 | DU | 22 | 1 | 0 | 1 | 0 | 1 | 2 |
| | | | 820 | 0.585 | TSF | 25 | 0 | 0 | 1 | 1 | 1 | 2 |
| *Total A1* | | | | | | *47* | *2* | *0* | *2* | *1* | *3* | *4* |
| A2 | Mixed Use Building | 420 S 1st Ave | 221 | 11 | DU | 60 | 3 | 1 | 4 | 1 | 4 | 5 |
| | | | 820 | 1.020 | TSF | 44 | 1 | 0 | 1 | 2 | 2 | 4 |
| *Total A2* | | | | | | *103* | *4* | *1* | *5* | *3* | *6* | *9* |
| A3 | Huntington Parkview Mixed Use | 25 N Santa Anita Ave | 221 | 157 | DU | 854 | 49 | 8 | 57 | 11 | 58 | 69 |
| | | | 820 | 14.690 | TSF | 627 | 9 | 5 | 14 | 26 | 28 | 54 |
| *Total A3* | | | | | | *1481* | *57* | *13* | *71* | *37* | *86* | *124* |
| A4 | Santa Anita Mixed Use | 205 N Santa Anita Ave | 221 | 22 | DU | 120 | 7 | 1 | 8 | 2 | 8 | 10 |
| | | | 820 | 1.240 | TSF | 53 | 1 | 0 | 1 | 2 | 2 | 5 |
| *Total A4* | | | | | | *173* | *8* | *2* | *9* | *4* | *11* | *14* |
| A5 | Huntington Plaza/Mixed Use | 117 E Huntington Dr | *various[3]* | | | 856 | 2 | 33 | 35 | 42 | 23 | 65 |
| A6 | Medical Office/Retail Building | 288 N Santa Anita Ave | 820 | 7.160 | TSF | 306 | 4 | 3 | 7 | 13 | 14 | 27 |
| | | | 720 | 24.000 | TSF | 835 | 52 | 15 | 67 | 23 | 60 | 83 |
| *Total A6* | | | | | | *1141* | *56* | *17* | *74* | *36* | *74* | *110* |
| A7 | Le Meridien Hotel/Condos/Retail | 130 W Huntington Dr | 310 | 233.000 | TSF | 1948 | 65 | 45 | 110 | 71 | 69 | 140 |
| | | | 221 | 96.000 | TSF | 522 | 30 | 5 | 35 | 7 | 35 | 42 |
| | | | 820 | 10.600 | TSF | 453 | 6 | 4 | 10 | 19 | 20 | 39 |
| *Total A7* | | | | | | *2470* | *94* | *50* | *144* | *78* | *104* | *182* |
| A8 | Hotel Indigo | 125 W Huntington Dr | *various[4]* | | | 2442 | 73 | 105 | 178 | 104 | 43 | 147 |
| A9 | Condos | 230 California St | 220 | 5 | DU | 37 | 1 | 2 | 3 | 2 | 2 | 4 |
| A10 | Condos | 116 Bonita St | 220 | 3 | DU | 22 | 1 | 2 | 3 | 2 | 1 | 3 |
| A11 | Condos | 157 Genoa St | 220 | 4 | DU | 29 | 1 | 2 | 3 | 2 | 1 | 3 |

## Table 5. Cumulative Projects Trip Generation

| Land Use | | | ITE Code | Size/Units | | | AM Peak Hour | | | PM Peak Hour | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | Daily | In | Out | Total | In | Out | Total |
| A12 | Condos | 135 El Dorado St | 220 | 3 | DU | 22 | 1 | 2 | 3 | 2 | 1 | 3 |
| A13 | Condos | 314 California St | 220 | 5 | DU | 37 | 1 | 2 | 3 | 2 | 2 | 4 |
| A14 | Condos | 147 Alice St | 220 | 3 | DU | 22 | 1 | 2 | 3 | 2 | 1 | 3 |
| A15 | Condos | 125 California St | 220 | 3 | DU | 22 | 1 | 2 | 3 | 2 | 1 | 3 |
| A16 | Condos | 416 Genoa St | 220 | 8 | DU | 59 | 1 | 3 | 4 | 3 | 2 | 5 |
| A17 | Condos | 414 S 2nd Ave | 220 | 6 | DU | 44 | 1 | 3 | 4 | 3 | 2 | 5 |
| A18 | Condos | 43 Genoa St | 220 | 4 | DU | 29 | 1 | 2 | 3 | 2 | 1 | 3 |
| A19 | Condos | 920 N Santa Anita Ave | 220 | 6 | DU | 44 | 1 | 3 | 4 | 3 | 2 | 5 |
| A20 | Condos | 141 Fano St | 220 | 3 | DU | 22 | 1 | 2 | 3 | 2 | 1 | 3 |
| A21 | Condos | 200 S 2nd Ave | 220 | 4 | DU | 29 | 1 | 2 | 3 | 2 | 1 | 3 |
| **Total Cumulative Project Trip Generation** | | | | | | 9,130 | 309 | 250 | 559 | 334 | 367 | 701 |

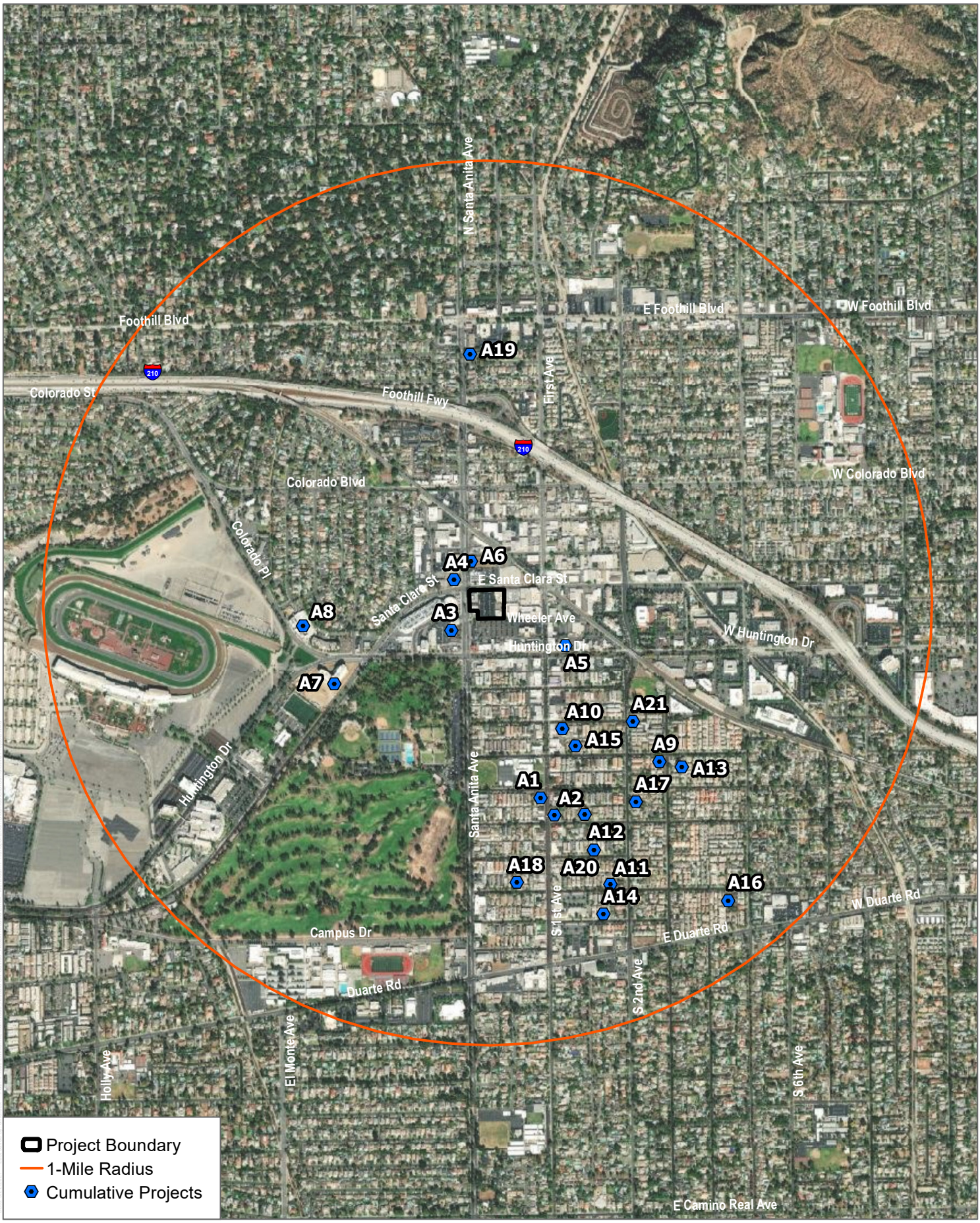
**Notes:** DU = dwelling unit; TSF = thousand square feet

[1]Trip rates from *Trip Generation Handbook*, 10th Edition, Institute of Transportation Engineers (ITE), 2017.

[2] Cumulative projects provided by email correspondence with the City of Arcadia, 2021.

[3] Trip generation is shown as "net increase" (proposed uses - existing uses); provided from Traffic Impact Study for Huntington Plaza (Psomas, September 2019)

[4] Trip generation is shown as "net increase" (proposed uses - existing uses); provided from Appendix F, Transportation Impact Analysis (LLG, December 2019)




SOURCE: ESRI 2014

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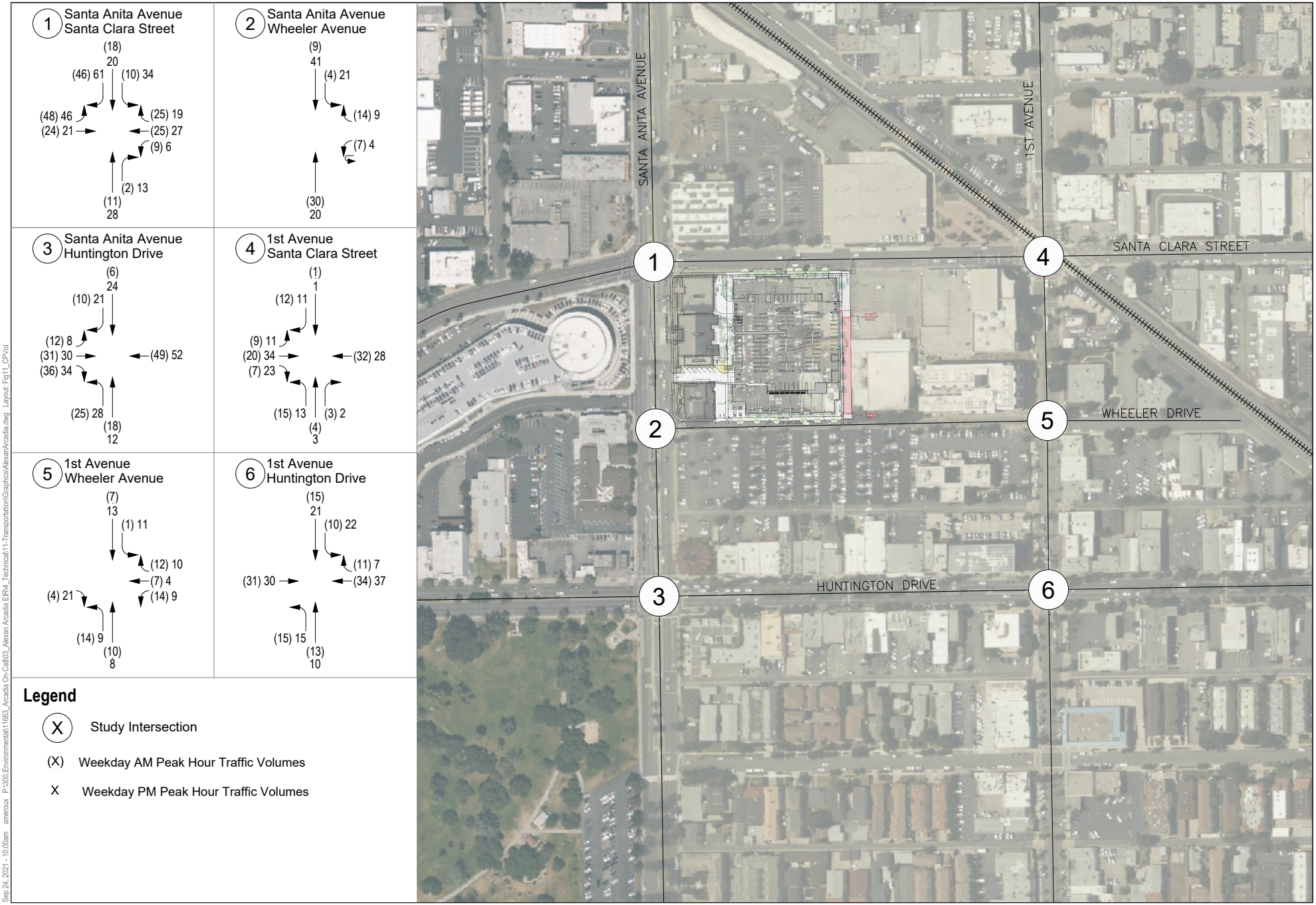
0 750 1,500 Feet

**Figure 12**

Cumulative Project Locations

Alexan Arcadia




SOURCE: studioneleven 2021

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**Figure 13**

Cumulative Projects Peak Hour Traffic Volumes

Alexan Arcadia

### LOS Analysis

The existing intersection configurations (shown in Figure 9) have been assumed to be preserved under the Opening Year (2024) conditions. Figure 14 illustrates the Opening Year (2024) (no project) traffic volumes for the peak hour conditions. Table 6 summarizes the results of the Opening Year (2024) intersection analysis for the AM and PM peak hours. As shown in the table, all the study area intersections are currently operating at satisfactory levels of service (LOS E or better) under Opening Year (2024) conditions.

**Table 6. Opening Year (2024) Weekday Peak Hour Intersection LOS**

| No. | Intersection | Traffic Control | LOS Method | Opening Year (2024) | | | |
|---|---|---|---|---|---|---|---|
| | | | | AM Peak | | PM Peak | |
| | | | | V/C or Delay[1] | LOS[2] | V/C or Delay[1] | LOS[2] |
| 1 | Santa Anita Avenue/Santa Clara Street | Signal | ICU | 0.526 | A | 0.670 | B |
| 2 | Santa Anita Avenue/Wheeler Avenue | TWSC | HCM | 27.5 | D | 37.3 | E |
| 3 | Santa Anita Avenue/Huntington Drive | Signal | ICU | 0.872 | D | 0.914 | E |
| 4 | 1st Avenue/Santa Clara Street | Signal | ICU | 0.367 | A | 0.474 | A |
| 5 | 1st Avenue/Wheeler Avenue | Signal | ICU | 0.319 | A | 0.447 | A |
| 6 | 1st Avenue/Huntington Drive | Signal | ICU | 0.660 | B | 0.807 | D |

**Source:** Attachment B
**Notes:** HCM = Highway Capacity Manual; TWSC = two-way stop-controlled
[1] V/C = Volume to Capacity; Delay measured in seconds per vehicle for unsignalized intersection (LOS is reported based on the worst delayed movement of the unsignalized intersection).
[2] LOS = Level of Service

## 4.7 Opening Year (2024) Plus Project

This section details the Opening Year (2024) traffic volumes and the intersection operations within the study area with the addition of Project trips.

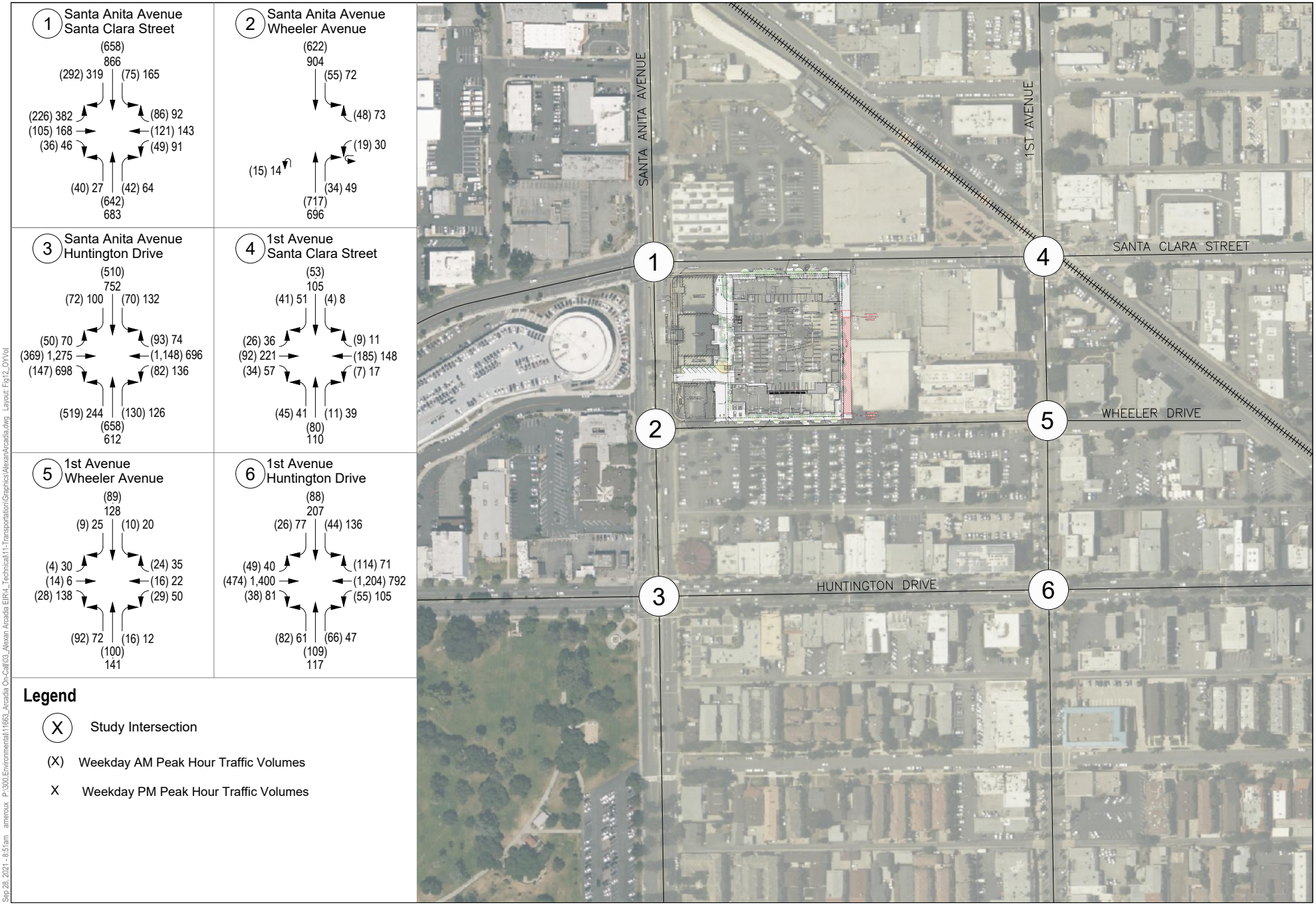
### LOS Analysis

The net proposed Project trip assignments shown in Figure 8b were added to the Opening Year (2024) peak hour traffic volumes shown in Figures 14 to derive the Opening Year (2024) plus Project peak hour traffic volumes shown in Figure 15. Table 7 summarizes the results of the Opening Year (2024) plus Project intersection analysis for the AM and PM peak hours. As shown in Table 7, all the study area intersections are currently operating at satisfactory levels of service (LOS E or better) under Opening Year (2024) plus Project conditions.

## Table 7. Opening Year (2024) Plus Project Weekday Peak Hour Intersection LOS

| No. | Intersection | Traffic Control | LOS Method | Opening Year (2024) | | | | Opening Year (2024) Plus Project | | | | Change in Delay | | LOS Threshold Exceeded? | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | AM Peak | | PM Peak | | AM Peak | | PM Peak | | | | | |
| | | | | V/C or Delay[1] | LOS | V/C or Delay[1] | LOS | V/C or Delay[1] | LOS | V/C or Delay[1] | LOS | AM | PM | AM | PM |
| 1 | Santa Anita Avenue/Santa Clara Street | Signal | ICU | 0.526 | A | 0.670 | B | 0.539 | A | 0.687 | B | 0.013 | 0.017 | No | No |
| 2 | Santa Anita Avenue/Wheeler Avenue | TWSC | HCM | 27.5 | D | 37.3 | E | 31.3 | D | 47.2 | E | 3.8 | 9.9 | No | No |
| 3 | Santa Anita Avenue/Huntington Drive | Signal | ICU | 0.872 | D | 0.914 | E | 0.880 | D | 0.917 | E | 0.008 | 0.003 | No | No |
| 4 | 1st Avenue/Santa Clara Street | Signal | ICU | 0.367 | A | 0.474 | A | 0.377 | A | 0.499 | A | 0.010 | 0.025 | No | No |
| 5 | 1st Avenue/Wheeler Avenue | Signal | ICU | 0.319 | A | 0.447 | A | 0.341 | A | 0.464 | A | 0.022 | 0.017 | No | No |
| 6 | 1st Avenue/Huntington Drive | Signal | ICU | 0.660 | B | 0.807 | D | 0.666 | B | 0.810 | D | 0.006 | 0.003 | No | No |

**Source:** Attachment B
**Notes:** HCM = Highway Capacity Manual; TWSC = two-way stop-controlled
[1] V/C = Volume to Capacity; Delay measured in seconds per vehicle for unsignalized intersection (LOS is reported based on the worst delayed movement of the unsignalized intersection).
[2] LOS = Level of Service




SOURCE: studioneleven 2021

**Figure 1**4

Opening Year (2024) Peak Hour Traffic Volumes

Alexan Arcadia

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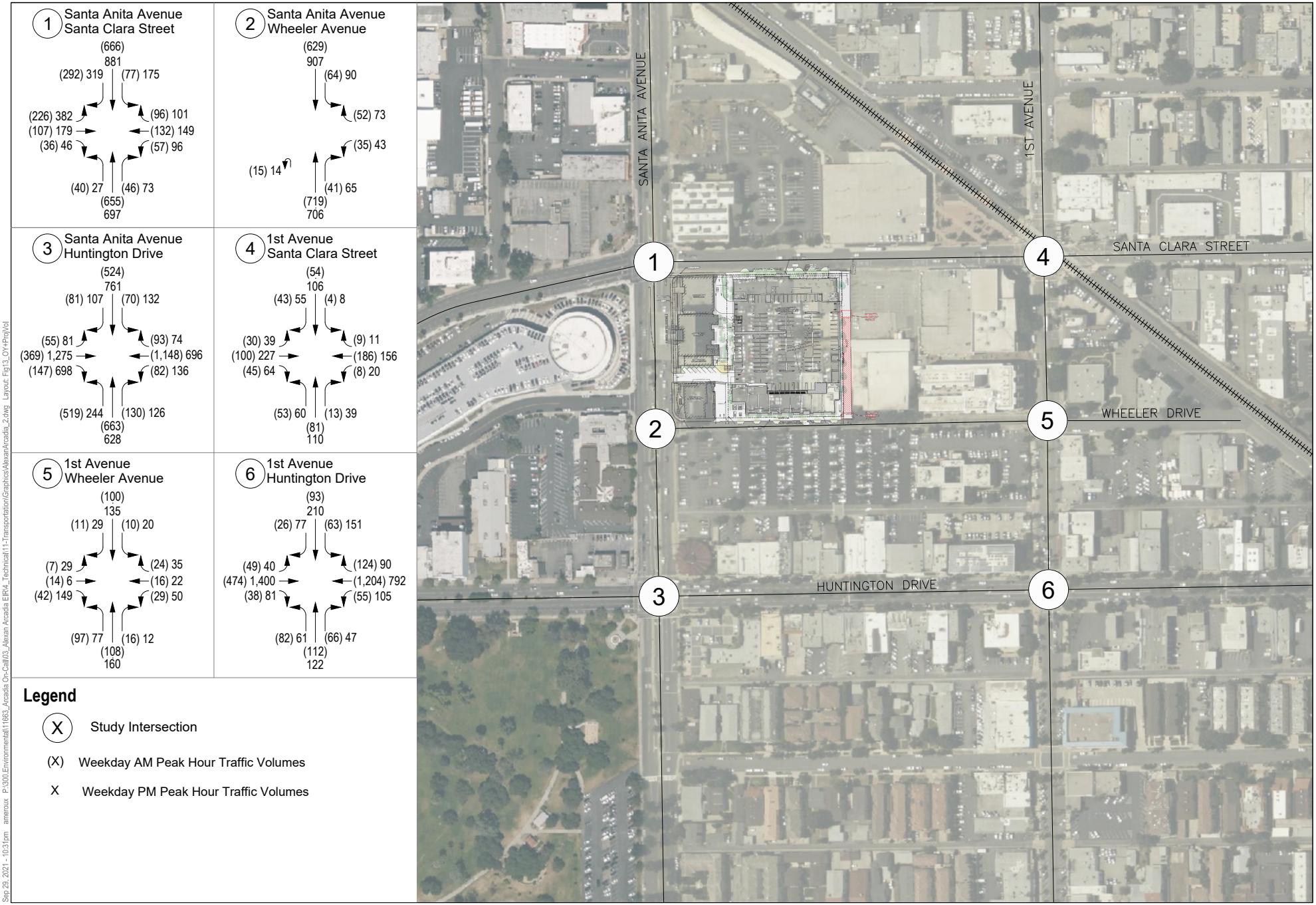



SOURCE: studioneleven 2021

**Figure 1**5

Opening Year (2024) plus Net Proposed Project Peak Hour Traffic Volumes

Alexan Arcadia

DUDEK

NOT TO SCALE

# 5 Project Site Access

The existing Project site is currently configured with seven access points, as shown on the project site plan (Figure 1). Proposed vehicular circulation to the Project site and parking structure would remove or reconfigure four access points to provide full access drive aisles as well as exit-only locations to and from the proposed parking garage, as follows:

- Project Driveway (Northwest)/Santa Clara Street: *ATM driveway; exit only*
- Alley Project Driveway (Northeast)/Santa Clara Street: *Full access*
- Santa Anita Avenue/Project Driveway (West): *Right-out; exit only (currently right-in; inbound only)*
- Project Driveway (Southwest)/Wheeler Avenue: *Full access*
- Existing Driveway (North)/Santa Clara Street: *To be removed*
- Existing Driveway (South)/Wheeler Avenue: *To be removed*
- Alley Project Driveway (Southeast)/Wheeler Avenue: *To be closed to non-emergency vehicular traffic*

As noted above, vehicular access to the Project site would be available from the alley on the eastern edge of the Project site from Santa Clara Street. An entrance and exit point to the parking structure is proposed along the alleyway on the east side of the Project site from Santa Clara Street. Two sets of approximately 10 removable bollards are proposed within the eastern alley's right-of-way, closing off the alleyway south of the parking garage entrance to Wheeler Drive. The other parking garage access point is located at the southwest corner of the garage, and can be accessed from Wheeler Avenue, which provides full access to the site. Additionally, an exit-only drive aisle also provides direct egress to Santa Anita Avenue, south of the existing office building. The drive aisle currently exists and is proposed to remain; however, it is currently designated as an ingress only drive aisle and would be converted to an egress only drive aisle with the proposed project. Finally, an egress point is provided through the existing ATM exit-only drive-thru at the northwest corner of the site. The following recommendations are made to facilitate access to the drive-thru and maintain flow through the parking garage:

- Provide wayfinding signage at all parking garage ingress points for customers prior to entering the garage
- Provide wayfinding signage within the parking garage such that customers are directed to the ATM drive-thru, and other users of the site are channeled to parking spaces and garage exits.
- Restrict northbound left-turning movements onto Santa Clara Street.

Additional specific ATM operations should be re-evaluated as the project design continues to be refined.

## 5.1 Project Site Access and Internal Circulation

A queuing analysis was prepared for all project driveways to assess the adequacy of any off-site storage lanes into the project site, as well as the adequacy of driveway throat lengths and space on-site for vehicles to queue without effecting the internal circulation on the project site. Queuing was analyzed utilizing the SimTraffic software, which calculates the 95$^{th}$ percentile (design) queue. All queuing analysis data and SimTraffic queuing worksheets are provided in Attachment C.

As shown in Tables 8 and 9, none of the calculated 95th percentile (design) queues exceed storage capacities within the existing left-turn pockets on Santa Clara Street, Santa Anita Avenue, or the TWLTL along Santa Clara Street. None of the queues would conflict with turning movements into or out of the project site, within the internal access drive aisles, or along eastbound Wheeler Avenue with Project-added traffic during the Existing and Opening Year (2024) conditions. The longest 95th percentile queue is shown for the westbound, stop-controlled turning movement at the Santa Anita Avenue/Wheeler Avenue intersection, reaching 94 feet in the PM peak hour under Existing plus Project conditions and 96 feet in the PM peak hour under the Opening Year (2024) plus Project conditions. Twenty-five (25) feet is equivalent to approximately one (1) car waiting to exit from the Project driveway onto the adjacent street during the peak hour. Based on this assumption, approximately four (4) vehicles would queue up to the intersection and would not overlap into the Project driveway. Additionally, the 95th percentile queue for the westbound left-turn lane extends approximately 10 to 15 feet past the striped left-turn pocket but does not extend past the available stacking distance (as measured from the intersection stop bar to the ATM driveway exit). This is an acceptable queue and would not impede operations at the ATM driveway; however, it is recommended that northbound left-turning movements onto Santa Clara Street be restricted given the proximity of the intersection as noted above.[11]

## Table 8. Peak-Hour Queuing Summary for Existing Plus Project Conditions

| Intersection or Driveway Access | Movement | Available Stacking Distance (Feet) | Existing plus Project | | | |
|---|---|---|---|---|---|---|
| | | | 95th Percentile Queue (Feet) | | Acceptable?[1] | |
| | | | AM Peak Hour | PM Peak Hour | AM | PM |
| Santa Anita Avenue/Santa Clara Street | WBL[2] | 80 | 63 | 60 | Yes | Yes |
| Santa Anita Avenue/Wheeler Avenue | WBLR | 100 | 65 | 94 | Yes | Yes |
| | SBL | 160 | 46 | 47 | Yes | Yes |
| Project Driveway (Northwest)/Santa Clara Street | NBR[3] | 50 | 32 | 46 | Yes | Yes |
| Access Alley Driveway (Northeast)/Santa Clara Street | WBL[4] | 225 | 26 | 33 | Yes | Yes |
| | NBLTR[5] | 75 | 49 | 45 | Yes | Yes |
| Santa Anita Avenue/Project Driveway (West) | WBR[6] | 95 | 35 | 38 | Yes | Yes |
| Project Driveway (Southwest)/Wheeler Avenue | SBLTR[7] | 95 | 50 | 59 | Yes | Yes |
| | EBLTR | 90 | 13 | 33 | Yes | Yes |

**Source:** Attachment C
**Notes:** WBL = westbound left; WBLR = westbound left-right; WBR = westbound right; EBLTR = eastbound left-through-right; SBL = southbound left; SBLTR = southbound left-through-right; NBR = northbound right; NBLTR = northbound left-through-right

[1] Stacking Distance is acceptable if the required stacking distance is less than or equal to the stacking distance provided.
[2] Pocket length striped to 50 feet; approximately 80 feet available in two-way left-turn lane (TWLTL) to project driveway.
[3] Throat length measured from Santa Clara Street to driveway curve at parking garage exit.
[4] Queueing available in TWLTL; measured to begin of eastbound left-turn pocket at 1st Avenue/Santa Clara Street.
[5] Throat length measured from Santa Clara Street to parking garage entrance.
[6] Throat length measured from Santa Anita Avenue to internal driveway from Wheeler Avenue.
[7] Throat length measured from Wheeler Avenue to internal driveway from Santa Anita Avenue

[11] Project trips were not routed northbound left out of the intersection for the purposes of this analysis.

## Table 9. Peak-Hour Queuing Summary for Opening Year (2024) Plus Project Conditions

| Intersection or Driveway Access | Movement | Available Stacking Distance (Feet) | Opening Year (2024) plus Project | | | |
|---|---|---|---|---|---|---|
| | | | 95th Percentile Queue (Feet) | | Acceptable?[1] | |
| | | | AM Peak Hour | PM Peak Hour | AM | PM |
| Santa Anita Avenue/Santa Clara Street | WBL[2] | 80 | 64 | 58 | Yes | Yes |
| Santa Anita Avenue/Wheeler Avenue | WBLR | 100 | 70 | 95 | Yes | Yes |
| | SBL | 160 | 50 | 49 | Yes | Yes |
| Project Driveway (Northwest)/Santa Clara Street | NBR[3] | 50 | 31 | 49 | Yes | Yes |
| Access Alley Driveway (Northeast)/Santa Clara Street | WBL[4] | 225 | 23 | 36 | Yes | Yes |
| | NBLTR[5] | 75 | 54 | 46 | Yes | Yes |
| Santa Anita Avenue/Project Driveway (West) | WBR[6] | 95 | 30 | 35 | Yes | Yes |
| Project Driveway (Southwest)/Wheeler Avenue | SBLTR[7] | 95 | 47 | 54 | Yes | Yes |
| | EBLTR | 90 | 28 | 33 | Yes | Yes |

**Source:** Attachment C
**Notes:** WBL = westbound left; WBLR = westbound left-right; WBR = westbound right; EBLTR = eastbound left-through-right; SBL = southbound left; SBLTR = southbound left-through-right; NBR = northbound right; NBLTR = northbound left-through-right

[1] Stacking Distance is acceptable if the required stacking distance is less than or equal to the stacking distance provided.
[2] Pocket length striped to 50 feet, approximately 80 feet available in two-way left-turn lane (TWLTL) to project driveway.
[3] Throat length measured from Santa Clara Street to driveway curve at parking garage exit.
[4] Queueing available in TWLTL; measured to begin of eastbound left-turn pocket at 1st Avenue/Santa Clara Street.
[5] Throat length measured from Santa Clara Street to parking garage entrance.
[6] Throat length measured from Santa Anita Avenue to internal driveway from Wheeler Avenue.
[7] Throat length measured from Wheeler Avenue to internal driveway from Santa Anita Avenue

## 5.2 Pedestrian and Bicycle Access

As previously noted, sidewalks are generally present throughout the study area, and marked crosswalks are provided at all major arterial intersections. Pedestrian access to the Project is provided along all the roadways surrounding the Project site, including along Santa Clara Street, Wheeler Avenue, and Santa Anita Avenue. A Class II bicycle lane is also provided on Santa Clara Street. Additionally, the alleyway adjacent to the eastern boundary of the Project site, connecting Santa Clara Street to Wheeler Avenue, would be converted into a pedestrian and bicycle paseo and would facilitate connectivity between the Arcadia Metro L Line Station and the City's downtown amenities. Stairs and a ramp would be installed on the Project site's southwest side between the residential building and existing office tower, which would create an entrance to the paseo to the north from Wheeler Avenue. Pedestrian access is also proposed between the paseo and the parking garage. The northern lobby would be accessible via the alley and Santa Clara Street, and the southern lobby would be accessible via the alley and Wheeler Avenue.

An outdoor plaza would also be constructed between the 8-story office tower and the residential building. Access to the plaza would be available from stairway #2, serving access to Level P2 through Level 7, and stairway #5, providing access to Level P1 only for office parking only. Bicycle parking as well as wayfinding signage would both be provided adjacent and to the west of the proposed stairs.

# 6 Parking Analysis

The proposed Project would redevelop an existing site containing surface parking. As a result, 183 parking spaces would be replaced with the proposed development and six surface level spaces would remain to support parking for the existing office building. A total of 551 parking spaces are proposed to meet the parking needs for the existing uses to remain and the proposed new residential units and café. The following section presents a parking code analysis based on the City of Arcadia Municipal Code, with and without the State's Density Bonus incentive, presents a shared parking analysis for the site based on parking methodologies from ITE and the Urban Land Institute (ULI), and evaluates whether the proposed parking supply can adequately support the potential parking demand for the site.

## 6.1 Municipal Code Parking Requirements

Table 10 presents the City's parking requirements for the existing and proposed land uses on-site per the City of Arcadia Municipal Code Section 9103.07 *Off-Street Parking and Loading*.

**Table 10: City of Arcadia Municipal Parking Code**

| Land Use | | Parking Spaces Required |
|---|---|---|
| **Residential** | Mixed-Use | 1.5 covered spaces per unit plus 1 guest parking space per each 2 units |
| | Live/Work Units | 1 space per unit and 1 space per 1,000 SF of nonresidential floor area |
| **Office** | Financial institutions | 1 space per 250 SF |
| | Professional | 1 space per 250 SF |
| **Restaurant** | Small | 1 space per 200 SF |

**Source:** Section 9103.07 - Off-Street Parking and Loading | Code of Ordinances | Arcadia, CA | Municode Library.
**Note:** SF = Square Feet

## 6.2 State Density Bonus Program and Assembly Bill 2345

The State Density Bonus Program (Government Code 65915) requires a city or county to provide a developer that proposes a housing development in the city or county with a density bonus and other incentives or concessions for the production of lower income housing units, or for the donation of land within the development, if the developer agrees to, among other things, construct a specified percentage of units for very low income, low-income, or moderate-income households or qualifying residents. Assembly Bill (AB) 2345, effective January 1, 2021, makes several changes to the Density Bonus Law. AB 2345 further relaxes parking standards applicable to density bonus projects. If a project provides at least 20 percent low income or 11 percent very low-income housing and is within half a mile of a major transit stop, a city may not impose a vehicle parking ratio, inclusive of parking for persons with a disability and guests, that exceeds 0.5 parking spaces per unit [12]. In addition to the project's proximity to the

[12] Bill Text - SB-290 Density Bonus Law: qualifications for incentives or concessions: student housing for lower income students: moderate-income persons and families: local government constraints.

Arcadia Metro L Line Station, the project is dedicating 26 units for affordable housing and therefore qualifies for the parking incentives under the State Density Bonus program.

## 6.3 Parking Spaces Required per Code

The existing and proposed land uses, square footages, and number of units were reviewed to determine the number of spaces required per the City's Municipal Code, with and without the State Density Bonus parking reductions. The required number of parking spaces is summarized in Table 11. As shown in Table 11, the proposed project is required to provide 921 parking spaces per Code and 494 spaces with application of the State Density Bonus parking reductions. The project is proposing 551 spaces, which meets the required parking with the State Density Bonus reductions.

### Table 11: Project Parking Spaces Required by Use

| Land Use | | Size (Units or SF) | Per City Municipal Code[a] | | With Density Bonus[b] | |
|---|---|---|---|---|---|---|
| | | | Parking Code Requirement | Spaces Required | Parking Code Requirement | Spaces Required |
| **EXISTING- NO CHANGE** | | | | | | |
| Office | Bank | 6,534 SF | 1 per 250 SF | 26 | per City code | 26 |
| | Office- 1 story | 1,586 SF | 1 per 250 SF | 6 | per City code | 6 |
| *Subtotal* | | *8,120* | | *32* | | *32* |
| **EXISTING- REMODEL** | | | | | | |
| Office | Office- 8 stories | 75,133 SF | 1 per 250 SF | 301 | per City code | 301 |
| | | -750 SF[c] | 1 per 250 SF | -3 | per City code | -3 |
| *Subtotal* | | *74,383 SF* | | *298* | | *298* |
| **PROPOSED** | | | | | | |
| Residential | Mixed-Use | 311 units | 1.5 per unit | 467 | 0.5 per unit | 156 |
| | | | 1 guest space per 3 units | 104 | N/A | - |
| | Live/Work | 8 units | 1 per unit | 8 | 0.5 per unit | 4 |
| | | 9,281 SF | 1 per 1,000 SF of non-residential | 9 | N/A | - |
| Retail | Café | 750 SF | 1 per 200 SF | 4 | per code | 4 |
| *Subtotal* | | - | | *592* | | *164* |
| **TOTAL SPACES REQUIRED** | | | | **921** | | **494** |
| **TOTAL SPACES PROVIDED** | | | | **551** | | **551** |

**Source:** Dudek 2021.
**Note:** SF = Square Feet
a. Parking requirements per City municipal parking code.
b. Parking requirements with State Density Bonus incentive. If requested by developer, parking requirement cannot exceed 0.5 spaces per unit if affordable housing criteria is met. No parking reductions are applied to the existing office uses.
c. Office interior to be renovated and replaced with new 750 SF café.

## 6.4 ITE Parking Demand Rates

To evaluate whether the proposed parking supply can adequately support the potential parking demand for the site, the ITE Parking Generation Manual 5th Edition[13] was reviewed. The ITE Parking Generation Manual contains parking requirements and rates for various land uses based on empirical data and observations of existing sites. The ITE Parking Generation Manual distinguishes parking demand among various land uses based on factors such as density, height, location (e.g., urban, suburban, City core), proximity to transit, seasonal variations, and other factors. It also provides rates based on weekday, Saturday, and Sunday conditions and provides time of day distributions. It is a widely used published source for calculating parking demand, particularly when local data is not available, or unique site conditions are present. Consistent with the ITE land uses selected to estimate the project trip generation, ITE Parking Generation demand rates for the project were obtained for Multifamily Housing (Mid-Rise) (Land Use Code 221), General Office Building (Land Use Code 710), and Coffee/Donut Shop without Drive-Through Window (Land Use Code 936). The ITE parking demand rates and projected parking demand are shown in Table 12 for weekday conditions and Table 13 for Saturday conditions.

### Shared Parking Demand

To further refine the parking demand analysis, weekday and Saturday hourly utilization percentages of parking demand were also obtained from the ITE Parking Generation Manual to estimate the shared parking demand for the proposed land uses. Most city zoning codes are based upon peak parking demand ratios for individual land uses. While this appropriately recognizes that separate land uses generate different parking demands on an individual basis, it does not reflect the fact that the combined peak parking demand, when a mix of land uses shares the same parking supply, can be substantially less than the sum of the individual demands. For example, residential uses generally have peak parking demands during the nighttime/early morning hours when residents are at home, while retail/office peak parking demand may occur during the middle of the day, on weekdays, when residents are gone (presumably at their places of employment). Shared parking can also reduce the amount of land needed for parking, creating opportunities for more compact development, more space for pedestrian circulation, or more open space and landscaping.

The weekday and Saturday parking rates and hourly utilization percentages for the project are based on ITE's rates for suburban/urban uses, within a ½ mile of transit. As shown in Tables 12 and 13, the peak parking demand for the office uses would occur at 10:00 a.m. on weekdays and Saturday, the peak parking demand for the residential uses would occur between 12:00 a.m. and 4:00 a.m. on weekdays and Saturday, and the peak parking demand for the café would occur at 8:00 a.m. on weekdays and 7:00 a.m. on Saturday. The combined weekday peak shared parking demand for all the uses would occur at 10:00 a.m. with a demand of 404 spaces, resulting in a residual of 147 spaces. The Saturday peak shared parking demand for all the uses would occur between 12:00 a.m. and 4:00 a.m. with a demand of 376 spaces, resulting in a residual of 175 spaces. Therefore, under a shared parking use, the proposed project would be adequately parked on site. Therefore, with shared parking designated for all uses (residential, office, and cafe) on site, the proposed parking supply of 551 spaces could accommodate the peak weekday and weekend parking demands. However, it is recommended that a minimum of 376 spaces be reserved for residential parking to accommodate the parking demand for the residential uses on-site, at all times.

[13] ITE. 2019. Parking Generation Manual 5th Edition. February.

## Table 12 – Proposed Project Weekday Shared Parking Demand (for all uses)

| Weekday Parking Demand (Suburban/ Urban) | | | | | | | Weekday Shared Parking Demand | Residual Spaces |
|---|---|---|---|---|---|---|---|---|
| Land Use/Code | Office/Bank (720) | | Residential (221) | | Café (936) | | | |
| ITE Parking Rate | 2.39 | | 1.12 | | 10.49 | | | |
| Size | 82,503 SF | | 319 DU | | 750 SF | | | |
| Max Demand | 197 | | 357 + 9[a] | | 8 | | | |
| Hour Begin | % Utilization | Demand (Spaces) | % Utilization | Demand (Spaces) | % Utilization | Demand (Spaces) | | |
| 12:00 AM | 0% | 0 | 100% | 366 | 0% | 0 | 366 | 185 |
| 1:00 AM | 0% | 0 | 100% | 366 | 0% | 0 | 366 | 185 |
| 2:00 AM | 0% | 0 | 100% | 366 | 0% | 0 | 366 | 185 |
| 3:00 AM | 0% | 0 | 100% | 366 | 0% | 0 | 366 | 185 |
| 4:00 AM | 0% | 0 | 100% | 366 | 0% | 0 | 366 | 185 |
| 5:00 AM | 0% | 0 | 94% | 345 | 0% | 0 | 345 | 206 |
| 6:00 AM | 0% | 0 | 83% | 306 | 0% | 0 | 306 | 245 |
| 7:00 AM | 13% | 26 | 71% | 263 | 73% | 6 | 294 | 257 |
| 8:00 AM | 48% | 95 | 61% | 227 | 100% | 8 | 329 | 222 |
| 9:00 AM | 88% | 174 | 55% | 206 | 63% | 5 | 384 | 167 |
| 10:00 AM | 100% | 197 | 54% | 202 | 57% | 4 | 404 | 147 |
| 11:00 AM | 100% | 197 | 53% | 198 | 42% | 3 | 399 | 152 |
| 12:00 PM | 85% | 168 | 50% | 188 | 39% | 3 | 358 | 193 |
| 1:00 PM | 84% | 166 | 49% | 184 | 27% | 2 | 352 | 199 |
| 2:00 PM | 93% | 183 | 49% | 184 | 0% | 0 | 367 | 184 |
| 3:00 PM | 94% | 185 | 50% | 188 | 0% | 0 | 373 | 178 |
| 4:00 PM | 85% | 168 | 58% | 216 | 0% | 0 | 384 | 167 |
| 5:00 PM | 56% | 110 | 64% | 238 | 0% | 0 | 348 | 203 |
| 6:00 PM | 20% | 39 | 67% | 248 | 0% | 0 | 288 | 263 |
| 7:00 PM | 11% | 22 | 70% | 259 | 0% | 0 | 281 | 270 |
| 8:00 PM | 0% | 0 | 76% | 281 | 0% | 0 | 281 | 270 |
| 9:00 PM | 0% | 0 | 83% | 306 | 0% | 0 | 306 | 245 |
| 10:00 PM | 0% | 0 | 90% | 331 | 0% | 0 | 331 | 220 |
| 11:00 PM | 0% | 0 | 93% | 341 | 0% | 0 | 341 | 210 |

**Source:** ITE Parking Generation Manual, 5th Edition.
**Notes:** SF = Square Feet; DU = dwelling units; Rounding errors may occur; Peak demand shaded.
a. An additional 9 spaces are added to the residential parking demand to reflect the "work" square footage of the live/work units. The nine spaces are based on City code.

## Table 13 – Proposed Project Saturday Shared Parking Demand (for all uses)

| Saturday Parking Demand (Suburban/ Urban) | | | | | | | Saturday Shared Parking Demand | Residual Spaces |
|---|---|---|---|---|---|---|---|---|
| Land Use/Code | Office/Bank (720) | | Residential (221) | | Café (936) | | | |
| ITE Parking Rate | 0.28 | | 1.15 | | 14.44 | | | |
| Size | 82,503 SF | | 319 DU | | 750 SF | | | |
| Max Demand | 23 | | 367 + 9[a] | | 11 | | | |
| Hour Begin | % Utilization | Demand (Spaces) | % Utilization | Demand (Spaces) | % Utilization | Demand (Spaces) | | |
| 12:00 AM | 0% | 0 | 100% | 376 | 0% | 0 | 376 | 175 |
| 1:00 AM | 0% | 0 | 100% | 376 | 0% | 0 | 376 | 175 |
| 2:00 AM | 0% | 0 | 100% | 376 | 0% | 0 | 376 | 175 |
| 3:00 AM | 0% | 0 | 100% | 376 | 0% | 0 | 376 | 175 |
| 4:00 AM | 0% | 0 | 100% | 376 | 0% | 0 | 376 | 175 |
| 5:00 AM | 0% | 0 | 99% | 372 | 0% | 0 | 372 | 179 |
| 6:00 AM | 0% | 0 | 97% | 365 | 0% | 0 | 365 | 186 |
| 7:00 AM | 13% | 3 | 95% | 358 | 100% | 11 | 371 | 180 |
| 8:00 AM | 48% | 11 | 88% | 332 | 90% | 10 | 353 | 198 |
| 9:00 AM | 88% | 20 | 83% | 313 | 80% | 9 | 342 | 209 |
| 10:00 AM | 100% | 23 | 75% | 284 | 65% | 7 | 314 | 237 |
| 11:00 AM | 100% | 23 | 71% | 269 | 62% | 7 | 299 | 252 |
| 12:00 PM | 85% | 20 | 68% | 258 | 40% | 4 | 282 | 269 |
| 1:00 PM | 84% | 19 | 66% | 251 | 32% | 3 | 274 | 277 |
| 2:00 PM | 93% | 21 | 70% | 266 | 0% | 0 | 287 | 264 |
| 3:00 PM | 94% | 22 | 69% | 262 | 0% | 0 | 284 | 267 |
| 4:00 PM | 85% | 20 | 72% | 273 | 0% | 0 | 293 | 258 |
| 5:00 PM | 56% | 13 | 74% | 280 | 0% | 0 | 293 | 258 |
| 6:00 PM | 20% | 5 | 74% | 280 | 0% | 0 | 285 | 266 |
| 7:00 PM | 11% | 3 | 73% | 277 | 0% | 0 | 279 | 272 |
| 8:00 PM | 0% | 0 | 75% | 284 | 0% | 0 | 284 | 267 |
| 9:00 PM | 0% | 0 | 78% | 295 | 0% | 0 | 295 | 256 |
| 10:00 PM | 0% | 0 | 82% | 310 | 0% | 0 | 310 | 241 |
| 11:00 PM | 0% | 0 | 88% | 332 | 0% | 0 | 332 | 219 |

**Source:** ITE Parking Generation Manual, 5th Edition.
**Notes:** SF = Square Feet; DU = dwelling units; Rounding errors may occur; Peak demand shaded.
a. An additional 9 spaces are added to the residential parking demand to reflect the "work" square footage of the live/work units. The nine spaces are based on City code.

# 7 Vehicle Miles Traveled Analysis

The following VMT analysis is based on the City of Arcadia Transportation Study Guidelines for Vehicle Miles Traveled and Level of Service Assessment and OPR's Technical Advisory on Evaluating Transportation Impacts in CEQA. As shown in the analysis below, the Project would be screened from a project-levelanalysis, and the project's impact to VMT would be less than significant.

## 7.1 Screening Criteria

The City's Guidelines provide three types of VMT screening that can be applied to the proposed Project to screen from a project-level VMT assessment. The screening criteria are consistent with the recommendations provided in OPR's Technical Advisory.

**Transit Priority Area (TPA) Screening**

Projects located within a TPA[14] may be presumed to have a less than significant impact absent substantial evidence to the contrary. This presumption may not be appropriate if the project:

1. Has a Floor Area Ratio (FAR) of less than 0.75;
2. Includes more parking for use by residents, customers, or employees of the project than required by the jurisdiction (if the jurisdiction requires the project to supply parking);
3. Is inconsistent with the applicable Sustainable Communities Strategy (as determined by the lead agency, with input from the Metropolitan Planning Organization)
4. Replaces affordable residential units with a smaller number of moderate- or high-income residential units

As shown in Attachment D, the proposed Project is located within a TPA. The Arcadia Metro L Line Station (East Los Angeles to Azusa) is located approximately 400 feet north of the Project site, with a weekday peak service frequency of five minutes. Additionally, the nearest bus service is provided by LA Metro Routes 79 and 287, along with Foothill Transit Route 187, with stops along 1st Avenue, Huntington Drive, and Santa Anita Avenue surrounding the Project site. Peak frequencies range between 10 minutes (78/79 within the downtown Los Angeles area) and 40 minutes (LA Metro Routes 79 and 287 within Arcadia). As previously noted, Route 79 operates in conjunction with Route 78 within the downtown Los Angeles area, upon which the route splits into two separate lines in the City of Alhambra, with Route 79 traveling along Huntington Drive. Foothill Transit Route 187 operates with peak service frequencies of 20 minutes. Although the nearby bus transit services do not operate with peak service frequencies of 15 minutes or less, the Project site is located within one-half mile of a TPA as the Arcadia Metro L Line Station serves a Major

[14] A TPA is defined as a half mile area around an existing major transit stop or an existing stop along a high-quality transit corridor per the definitions below:
Pub. Resources Code, § 21064.3 ("'Major transit stop' means a site containing an existing rail transit station, a ferry terminal served by either a bus or rail transit service, or the intersection of two or more major bus routes with a frequency of service interval of 15 minutes or less during the morning and afternoon peak commute periods.")
Pub. Resources Code, § 21155 ("For purposes of this section, a high-quality transit corridor means a corridor with fixed route bus service with service intervals no longer than 15 minutes during peak commute hours.").

Transit Stop, operating with a weekday peak service frequency of 5 minutes. Therefore, the Project can be screened out using this criterium.

### Low VMT Area Screening

Residential and office projects located within a low VMT- generating area may be presumed to have a less than significant impact absent substantial evidence to the contrary. In addition, other employment-related and mixed-use land use projects may qualify for the use of screening if the project can reasonably be expected to generate VMT per resident, per worker, or per service population that is similar to the existing land uses in the low VMT area.

For this screening, the SCAG travel forecasting model was used to measure VMT performance for individual traffic analysis zones (TAZs). TAZs are geographic polygons similar to Census block groups used to represent areas of homogenous travel behavior. Total daily VMT per service population (population plus employment) was estimated for each TAZ. This presumption may not be appropriate if the Project land uses would alter the existing built environment in such a way as to increase the rate or length of vehicle trips.

The SGVCOG screening tool (available at https://www.sgvcog.org/vmt-analysis-tool) was used to determine whether or not the proposed Project would be located in a low VMT-generating area. Per the City's guidelines, a low VMT-generating area is determined as 15% below the subarea baseline home-based VMT per capita and VMT per employee.

As shown in Table 14, the VMT per Capita for the project TAZ is 11.78, and the subarea jurisdiction's average is 15.61. Further, the VMT per Worker for the project TAZ is 15.45, and the subarea jurisdiction's average is 19.17. Therefore, the TAZ would be 27.97% and 21.49% below the subarea threshold for VMT per Capita and per Worker, respectively, which would meet the required baseline screening criteria established in the City's guidelines. As such, the proposed Project can be screened out using this criterium.

## Table 14 – Summary of Project TAZ VMT

| Base Year (2021) | Home-based VMT per Capita | Home-based VMT per Worker |
|---|---|---|
| Project TAZ | 11.78 | 15.45 |
| Jurisdiction | 15.61 | 19.17 |
| **% Difference (Project TAZ – Jurisdiction)** | **-27.97%** | **-21.49%** |
| Threshold | 13.27 | 16.30 |

**Source:** SGVCOG VMT Screening Tool (Attachment D)

### Project Type Screening

The City's guidelines list local serving land uses, which have been identified as having the presumption of a less than significant impact. This includes land uses such as local serving schools, parks, day care centers, and local serving retail of less than 50,000 square feet. The uses are those which should be able to demonstrate that its users (employees, customers, visitors) would be existing within the community. The screening criterion also identifies projects that would generate less than 110 daily vehicle trips and having a presumption of less than

significant.[15] The proposed residential component of the Project would not fall under a local serving land use and would also generate greater than 110 daily vehicle trips; therefore, this component of the Project cannot be screened out from further VMT analysis using this criterium. However, the 750 square-foot proposed café would serve as a local serving land use and can be screened out using this criterium.

Based on SB 743 and the revised CEQA guidelines, the City's Transportation Study Guidelines for Vehicle Miles Traveled and Level of Service Assessment, and the San Gabriel Valley Council of Governments (SGVCOG) VMT Assessment tool, the Project would be screened from a project-level VMT analysis. The Project is in a Low VMT generating area within a TPA. Therefore, a project-level VMT analysis is not required and impacts to VMT can be presumed to be less than significant.

[15] This threshold ties directly to the OPR technical advisory and notes that CEQA provides a categorical exemption for existing facilities, including additions to existing structures of up to 10,000 square feet, so long as the project is in an area where public infrastructure is available to allow for maximum planned development and the project is not in an environmentally sensitive area. (CEQA Guidelines, § 15301, subd. (e)(2).) Typical project types for which trip generation increases relatively linearly with building footprint (i.e., general office building, single tenant office building, office park, and business park) generate or attract an additional 110-124 trips per 10,000 square feet. Therefore, absent substantial evidence otherwise, it is reasonable to conclude that the addition of 110 or fewer trips could be considered not to lead to a significant impact.

# 8 Conclusions

Based on the results of the LOS, site access, and parking analyses presented in this Memo, the following summarizes the key findings of the analysis:

- The proposed Project would generate 1,424 net daily trips, 132 net AM peak hour trips (38 inbound and 94 outbound), and 166 net PM peak hour trips (100 inbound and 66 outbound) (Table 1).
- The six study area intersections currently and are forecast to operate at LOS E or better under all analysis scenarios, which meets the City's traffic impact thresholds for the Downtown mixed-use district (Table 3 and Table 6).
- The proposed Project would not result in unacceptable queueing conditions into or out of the Project site (Table 8 and Table 9); however, the following recommendations are made:
  - Restrict northbound left-turning movements from the ATM driveway exit onto Santa Clara Street given the proximity of the Santa Anita Avenue/Santa Clara Street intersection.
  - Provide wayfinding signage at all parking garage ingress points for customers prior to entering the garage.
  - Provide wayfinding signage within the parking garage such that customers are directed to the ATM drive-thru, and other users of the site are channeled to parking spaces and garage exits.
- The proposed project is required to provide 921 parking spaces per the City's Municipal Code and 494 spaces with application of the State Density Bonus parking reductions. The project is proposing 551 spaces, which meets the required parking with the State Density Bonus reductions (Table 11).
- Based on the ITE parking demand and hourly utilization rates, the combined weekday peak shared parking demand for all the uses would be 404 spaces, resulting in a residual of 147 spaces (Table 12). The Saturday peak shared parking demand for all the uses would be 376 spaces, resulting in a residual of 175 spaces (Table 13). Therefore, under a shared parking use, the proposed project would be adequately parked on site. However, the following recommendation is made:
  - To accommodate the parking demand for the residential uses on-site, at all times, it is recommended that a minimum of 376 spaces be reserved for residential parking.
- The Project is in a Low VMT generating area within a TPA, and would be screened from a project-level VMT analysis. Therefore, the project's impacts to VMT can be presumed to be less than significant.

# Attachment A

## Raw Traffic Counts

National Data & Surveying Services

# Intersection Turning Movement Count

**Location:** Santa Anita Ave & Santa Clara St
**City:** Arcadia
**Control:** Signalized

**Project ID:** 18-05486-002
**Date:** 7/19/2018

**Total**

| NS/EW Streets: | Santa Anita Ave | | | | Santa Anita Ave | | | | Santa Clara St | | | | Santa Clara St | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **AM** | NORTHBOUND | | | | SOUTHBOUND | | | | EASTBOUND | | | | WESTBOUND | | | | |
| | 1 | 2 | 0 | 0 | 1 | 2 | 1 | 0 | 2 | 0.5 | 0.5 | 0 | 1 | 1 | 0 | 0 | |
| | NL | NT | NR | NU | SL | ST | SR | SU | EL | ET | ER | EU | WL | WT | WR | WU | TOTAL |
| 7:00 AM | 2 | 133 | 10 | 0 | 14 | 74 | 47 | 0 | 19 | 12 | 5 | 0 | 6 | 20 | 9 | 0 | 351 |
| 7:15 AM | 6 | 159 | 17 | 0 | 10 | 81 | 44 | 0 | 29 | 15 | 3 | 0 | 5 | 23 | 10 | 0 | 402 |
| 7:30 AM | 7 | 146 | 14 | 0 | 11 | 139 | 58 | 0 | 48 | 24 | 5 | 0 | 9 | 25 | 15 | 0 | 501 |
| 7:45 AM | 4 | 158 | 16 | 1 | 14 | 147 | 66 | 1 | 50 | 15 | 4 | 0 | 6 | 28 | 11 | 0 | 521 |
| 8:00 AM | 8 | 143 | 6 | 1 | 11 | 130 | 61 | 1 | 50 | 17 | 3 | 0 | 10 | 22 | 15 | 0 | 478 |
| 8:15 AM | 8 | 156 | 5 | 0 | 18 | 146 | 70 | 0 | 38 | 21 | 13 | 0 | 11 | 23 | 15 | 0 | 524 |
| 8:30 AM | 8 | 154 | 10 | 0 | 18 | 167 | 44 | 0 | 46 | 14 | 10 | 0 | 8 | 22 | 9 | 0 | 510 |
| 8:45 AM | 12 | 147 | 17 | 1 | 13 | 165 | 59 | 0 | 34 | 25 | 8 | 0 | 9 | 23 | 18 | 0 | 531 |
| | NL | NT | NR | NU | SL | ST | SR | SU | EL | ET | ER | EU | WL | WT | WR | WU | TOTAL |
| TOTAL VOLUMES : | 55 | 1196 | 95 | 3 | 109 | 1049 | 449 | 2 | 314 | 143 | 51 | 0 | 64 | 186 | 102 | 0 | 3818 |
| APPROACH %'s : | 4.08% | 88.66% | 7.04% | 0.22% | 6.77% | 65.20% | 27.91% | 0.12% | 61.81% | 28.15% | 10.04% | 0.00% | 18.18% | 52.84% | 28.98% | 0.00% | |
| PEAK HR : | 08:00 AM - 09:00 AM | | | | | | | | | | | | | | | | TOTAL |
| PEAK HR VOL : | 36 | 600 | 38 | 2 | 60 | 608 | 234 | 1 | 168 | 77 | 34 | 0 | 38 | 90 | 57 | 0 | 2043 |
| PEAK HR FACTOR : | 0.750 | 0.962 | 0.559 | 0.500 | 0.833 | 0.910 | 0.836 | 0.250 | 0.840 | 0.770 | 0.654 | 0.000 | 0.864 | 0.978 | 0.792 | 0.000 | 0.962 |
| | | 0.955 | | | | 0.953 | | | | 0.969 | | | | 0.925 | | | |

| PM | NORTHBOUND | | | | SOUTHBOUND | | | | EASTBOUND | | | | WESTBOUND | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1 | 2 | 0 | 0 | 1 | 2 | 1 | 0 | 2 | 0.5 | 0.5 | 0 | 1 | 1 | 0 | 0 | |
| | NL | NT | NR | NU | SL | ST | SR | SU | EL | ET | ER | EU | WL | WT | WR | WU | TOTAL |
| 4:00 PM | 2 | 124 | 18 | 1 | 30 | 176 | 49 | 1 | 77 | 36 | 14 | 0 | 13 | 21 | 22 | 0 | 584 |
| 4:15 PM | 10 | 150 | 12 | 1 | 30 | 176 | 58 | 1 | 73 | 39 | 7 | 0 | 10 | 25 | 13 | 0 | 605 |
| 4:30 PM | 4 | 142 | 16 | 2 | 22 | 138 | 48 | 0 | 81 | 38 | 10 | 0 | 20 | 27 | 25 | 0 | 573 |
| 4:45 PM | 4 | 142 | 24 | 1 | 29 | 163 | 46 | 0 | 71 | 33 | 7 | 0 | 20 | 39 | 26 | 0 | 605 |
| 5:00 PM | 6 | 173 | 11 | 1 | 24 | 206 | 69 | 2 | 85 | 39 | 13 | 0 | 16 | 41 | 14 | 0 | 700 |
| 5:15 PM | 7 | 173 | 17 | 0 | 37 | 181 | 57 | 0 | 64 | 37 | 8 | 0 | 25 | 25 | 18 | 0 | 649 |
| 5:30 PM | 6 | 128 | 11 | 0 | 34 | 201 | 54 | 0 | 99 | 35 | 12 | 0 | 16 | 24 | 20 | 0 | 640 |
| 5:45 PM | 4 | 149 | 8 | 1 | 22 | 217 | 64 | 4 | 71 | 28 | 9 | 0 | 23 | 20 | 17 | 0 | 637 |
| | NL | NT | NR | NU | SL | ST | SR | SU | EL | ET | ER | EU | WL | WT | WR | WU | TOTAL |
| TOTAL VOLUMES : | 43 | 1181 | 117 | 7 | 228 | 1458 | 445 | 8 | 621 | 285 | 80 | 0 | 143 | 222 | 155 | 0 | 4993 |
| APPROACH %'s : | 3.19% | 87.61% | 8.68% | 0.52% | 10.66% | 68.16% | 20.80% | 0.37% | 62.98% | 28.90% | 8.11% | 0.00% | 27.50% | 42.69% | 29.81% | 0.00% | |
| PEAK HR : | 05:00 PM - 06:00 PM | | | | | | | | | | | | | | | | TOTAL |
| PEAK HR VOL : | 23 | 623 | 47 | 2 | 117 | 805 | 244 | 6 | 319 | 139 | 42 | 0 | 80 | 110 | 69 | 0 | 2626 |
| PEAK HR FACTOR : | 0.821 | 0.900 | 0.691 | 0.500 | 0.791 | 0.927 | 0.884 | 0.375 | 0.806 | 0.891 | 0.808 | 0.000 | 0.800 | 0.671 | 0.863 | 0.000 | 0.938 |
| | | 0.882 | | | | 0.954 | | | | 0.856 | | | | 0.912 | | | |

National Data & Surveying Services

# Intersection Turning Movement Count

**Location:** Santa Anita Ave & Santa Clara
**City:** Arcadia
**Control:** Signalized

**Project ID:** 18-05486-002
**Date:** 7/19/2018

**Bikes**

| NS/EW Streets: | Santa Anita Ave | | | | Santa Anita Ave | | | | Santa Clara St | | | | Santa Clara St | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **AM** | NORTHBOUND | | | | SOUTHBOUND | | | | EASTBOUND | | | | WESTBOUND | | | | |
| | 1 | 2 | 0 | 0 | 1 | 2 | 1 | 0 | 2 | 0.5 | 0.5 | 0 | 1 | 1 | 0 | 0 | |
| | NL | NT | NR | NU | SL | ST | SR | SU | EL | ET | ER | EU | WL | WT | WR | WU | TOTAL |
| 7:00 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 2 |
| 7:15 AM | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 4 |
| 7:30 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7:45 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 |
| 8:00 AM | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 2 |
| 8:15 AM | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| 8:30 AM | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 2 |
| 8:45 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| | NL | NT | NR | NU | SL | ST | SR | SU | EL | ET | ER | EU | WL | WT | WR | WU | TOTAL |
| **TOTAL VOLUMES :** | 1 | 0 | 0 | 0 | 1 | 2 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 6 | 1 | 0 | 13 |
| **APPROACH %'s :** | 100.00% | 0.00% | 0.00% | 0.00% | 25.00% | 50.00% | 25.00% | 0.00% | 100.00% | 0.00% | 0.00% | 0.00% | 0.00% | 85.71% | 14.29% | 0.00% | |
| **PEAK HR :** | 08:00 AM - 09:00 AM | | | | | | | | | | | | | | | | TOTAL |
| **PEAK HR VOL :** | 1 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 6 |
| **PEAK HR FACTOR :** | 0.250 | 0.000 | 0.000 | 0.000 | 0.000 | 0.250 | 0.250 | 0.000 | 0.250 | 0.000 | 0.000 | 0.000 | 0.000 | 0.250 | 0.250 | 0.000 | 0.750 |
| | | 0.250 | | | | 0.500 | | | | 0.250 | | | | 0.500 | | | |

| PM | NORTHBOUND | | | | SOUTHBOUND | | | | EASTBOUND | | | | WESTBOUND | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1 | 2 | 0 | 0 | 1 | 2 | 1 | 0 | 2 | 0.5 | 0.5 | 0 | 1 | 1 | 0 | 0 | |
| | NL | NT | NR | NU | SL | ST | SR | SU | EL | ET | ER | EU | WL | WT | WR | WU | TOTAL |
| 4:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| 4:15 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:30 PM | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 |
| 4:45 PM | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| 5:00 PM | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 3 |
| 5:15 PM | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| 5:30 PM | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 3 |
| 5:45 PM | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 1 | 0 | 0 | 4 |
| | NL | NT | NR | NU | SL | ST | SR | SU | EL | ET | ER | EU | WL | WT | WR | WU | TOTAL |
| **TOTAL VOLUMES :** | 0 | 3 | 0 | 0 | 0 | 3 | 2 | 0 | 2 | 2 | 0 | 0 | 0 | 4 | 0 | 0 | 16 |
| **APPROACH %'s :** | 0.00% | 100.00% | 0.00% | 0.00% | 0.00% | 60.00% | 40.00% | 0.00% | 50.00% | 50.00% | 0.00% | 0.00% | 0.00% | 100.00% | 0.00% | 0.00% | |
| **PEAK HR :** | 05:00 PM - 06:00 PM | | | | | | | | | | | | | | | | TOTAL |
| **PEAK HR VOL :** | 0 | 3 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 2 | 0 | 0 | 0 | 4 | 0 | 0 | 11 |
| **PEAK HR FACTOR :** | 0.00 | 0.750 | 0.000 | 0.000 | 0.000 | 0.250 | 0.000 | 0.000 | 0.250 | 0.250 | 0.000 | 0.000 | 0.000 | 0.500 | 0.000 | 0.000 | 0.688 |
| | | 0.750 | | | | 0.250 | | | | 0.375 | | | | 0.500 | | | |

National Data & Surveying Services

# Intersection Turning Movement Count

**Location:** Santa Anita Ave & Wheeler Ave/Morlan Pl
**City:** Arcadia
**Control:** 2-Way Stop (EB/WB)

**Project ID:** 18-05486-003
**Date:** 7/19/2018

**Total**

| NS/EW Streets: | Santa Anita Ave | | | | Santa Anita Ave | | | | Wheeler Ave_Morlan Pl | | | | Wheeler Ave_Morlan Pl | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **AM** | NORTHBOUND | | | | SOUTHBOUND | | | | EASTBOUND | | | | WESTBOUND | | | | |
| | 1 | 2 | 0 | 0 | 1 | 2 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | |
| | NL | NT | NR | NU | SL | ST | SR | SU | EL | ET | ER | EU | WL | WT | WR | WU | TOTAL |
| 7:00 AM | 3 | 141 | 7 | 1 | 11 | 80 | 8 | 0 | 1 | 0 | 1 | 0 | 2 | 2 | 3 | 0 | 260 |
| 7:15 AM | 8 | 148 | 6 | 1 | 9 | 69 | 6 | 1 | 2 | 0 | 1 | 1 | 0 | 0 | 6 | 0 | 258 |
| 7:30 AM | 3 | 180 | 1 | 1 | 12 | 106 | 6 | 0 | 2 | 1 | 2 | 1 | 1 | 2 | 6 | 0 | 324 |
| 7:45 AM | 4 | 167 | 4 | 2 | 13 | 158 | 9 | 1 | 1 | 1 | 2 | 0 | 0 | 0 | 7 | 0 | 369 |
| 8:00 AM | 3 | 171 | 11 | 4 | 8 | 129 | 5 | 0 | 2 | 1 | 4 | 0 | 2 | 0 | 9 | 0 | 349 |
| 8:15 AM | 6 | 134 | 8 | 2 | 12 | 128 | 10 | 0 | 3 | 1 | 2 | 0 | 3 | 2 | 8 | 0 | 319 |
| 8:30 AM | 3 | 181 | 9 | 5 | 11 | 168 | 10 | 2 | 0 | 1 | 10 | 0 | 5 | 3 | 8 | 0 | 416 |
| 8:45 AM | 4 | 138 | 16 | 3 | 22 | 142 | 7 | 2 | 7 | 1 | 4 | 0 | 8 | 0 | 7 | 0 | 361 |
| | NL | NT | NR | NU | SL | ST | SR | SU | EL | ET | ER | EU | WL | WT | WR | WU | TOTAL |
| **TOTAL VOLUMES :** | 34 | 1260 | 62 | 19 | 98 | 980 | 61 | 6 | 18 | 6 | 26 | 2 | 21 | 9 | 54 | 0 | 2656 |
| **APPROACH %'s :** | 2.47% | 91.64% | 4.51% | 1.38% | 8.56% | 85.59% | 5.33% | 0.52% | 34.62% | 11.54% | 50.00% | 3.85% | 25.00% | 10.71% | 64.29% | 0.00% | |
| **PEAK HR :** | 07:45 AM - 08:45 AM | | | | | | | | | | | | | | | | TOTAL |
| **PEAK HR VOL :** | 16 | 653 | 32 | 13 | 44 | 583 | 34 | 3 | 6 | 4 | 18 | 0 | 10 | 5 | 32 | 0 | 1453 |
| **PEAK HR FACTOR :** | 0.667 | 0.902 | 0.727 | 0.650 | 0.846 | 0.868 | 0.850 | 0.375 | 0.500 | 1.000 | 0.450 | 0.000 | 0.500 | 0.417 | 0.889 | 0.000 | 0.873 |
| | | 0.902 | | | | 0.869 | | | | 0.636 | | | | 0.734 | | | |

| PM | NORTHBOUND | | | | SOUTHBOUND | | | | EASTBOUND | | | | WESTBOUND | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1 | 2 | 0 | 0 | 1 | 2 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | |
| | NL | NT | NR | NU | SL | ST | SR | SU | EL | ET | ER | EU | WL | WT | WR | WU | TOTAL |
| 4:00 PM | 3 | 138 | 10 | 3 | 8 | 196 | 8 | 0 | 2 | 0 | 10 | 0 | 3 | 1 | 19 | 0 | 401 |
| 4:15 PM | 4 | 142 | 11 | 3 | 7 | 173 | 5 | 0 | 5 | 0 | 8 | 0 | 7 | 1 | 10 | 0 | 376 |
| 4:30 PM | 6 | 159 | 7 | 1 | 9 | 168 | 10 | 0 | 7 | 1 | 7 | 0 | 4 | 1 | 15 | 0 | 395 |
| 4:45 PM | 6 | 126 | 13 | 1 | 9 | 157 | 7 | 1 | 3 | 1 | 12 | 0 | 7 | 0 | 13 | 0 | 356 |
| 5:00 PM | 2 | 173 | 10 | 2 | 14 | 201 | 8 | 0 | 1 | 0 | 10 | 0 | 4 | 1 | 21 | 0 | 447 |
| 5:15 PM | 6 | 174 | 16 | 4 | 7 | 210 | 12 | 1 | 2 | 5 | 9 | 0 | 2 | 3 | 15 | 0 | 466 |
| 5:30 PM | 1 | 144 | 9 | 5 | 11 | 207 | 7 | 1 | 4 | 1 | 8 | 0 | 11 | 1 | 15 | 0 | 425 |
| 5:45 PM | 2 | 152 | 10 | 1 | 13 | 203 | 14 | 0 | 2 | 1 | 14 | 0 | 7 | 0 | 9 | 0 | 428 |
| | NL | NT | NR | NU | SL | ST | SR | SU | EL | ET | ER | EU | WL | WT | WR | WU | TOTAL |
| **TOTAL VOLUMES :** | 30 | 1208 | 86 | 20 | 78 | 1515 | 71 | 3 | 26 | 9 | 78 | 0 | 45 | 8 | 117 | 0 | 3294 |
| **APPROACH %'s :** | 2.23% | 89.88% | 6.40% | 1.49% | 4.68% | 90.88% | 4.26% | 0.18% | 23.01% | 7.96% | 69.03% | 0.00% | 26.47% | 4.71% | 68.82% | 0.00% | |
| **PEAK HR :** | 05:00 PM - 06:00 PM | | | | | | | | | | | | | | | | TOTAL |
| **PEAK HR VOL :** | 11 | 643 | 45 | 12 | 45 | 821 | 41 | 2 | 9 | 7 | 41 | 0 | 24 | 5 | 60 | 0 | 1766 |
| **PEAK HR FACTOR :** | 0.458 | 0.924 | 0.703 | 0.600 | 0.804 | 0.977 | 0.732 | 0.500 | 0.563 | 0.350 | 0.732 | 0.000 | 0.545 | 0.417 | 0.714 | 0.000 | 0.947 |
| | | 0.899 | | | | 0.988 | | | | 0.838 | | | | 0.824 | | | |

National Data & Surveying Services

# Intersection Turning Movement Count

**Location:** Santa Anita Ave & Wheeler Ave_Morlan Pl
**City:** Arcadia
**Control:** 2-Way Stop (EB/WB)

**Project ID:** 18-05486-003
**Date:** 7/19/2018

**Bikes**

| NS/EW Streets: | Santa Anita Ave | | | | Santa Anita Ave | | | | Wheeler Ave_Morlan Pl | | | | Wheeler Ave_Morlan Pl | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **AM** | NORTHBOUND | | | | SOUTHBOUND | | | | EASTBOUND | | | | WESTBOUND | | | | |
| | 1 | 2 | 0 | 0 | 1 | 2 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | |
| | NL | NT | NR | NU | SL | ST | SR | SU | EL | ET | ER | EU | WL | WT | WR | WU | TOTAL |
| 7:00 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7:15 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7:30 AM | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| 7:45 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8:00 AM | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| 8:15 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8:30 AM | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| 8:45 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | NL | NT | NR | NU | SL | ST | SR | SU | EL | ET | ER | EU | WL | WT | WR | WU | TOTAL |
| TOTAL VOLUMES : | 0 | 1 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 |
| APPROACH %'s : | 0.00% | 100.00% | 0.00% | 0.00% | 0.00% | 100.00% | 0.00% | 0.00% | | | | | | | | | |
| PEAK HR : | 07:45 AM - 08:45 AM | | | | | | | | | | | | | | | | TOTAL |
| PEAK HR VOL : | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| PEAK HR FACTOR : | 0.000 | 0.250 | 0.000 | 0.000 | 0.000 | 0.250 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.500 |
| | | 0.250 | | | | 0.250 | | | | | | | | | | | |

| PM | NORTHBOUND | | | | SOUTHBOUND | | | | EASTBOUND | | | | WESTBOUND | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1 | 2 | 0 | 0 | 1 | 2 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | |
| | NL | NT | NR | NU | SL | ST | SR | SU | EL | ET | ER | EU | WL | WT | WR | WU | TOTAL |
| 4:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:15 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:30 PM | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| 4:45 PM | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| 5:00 PM | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| 5:15 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5:30 PM | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| 5:45 PM | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| | NL | NT | NR | NU | SL | ST | SR | SU | EL | ET | ER | EU | WL | WT | WR | WU | TOTAL |
| TOTAL VOLUMES : | 0 | 3 | 0 | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 |
| APPROACH %'s : | 0.00% | 100.00% | 0.00% | 0.00% | 0.00% | 100.00% | 0.00% | 0.00% | | | | | | | | | |
| PEAK HR : | 05:00 PM - 06:00 PM | | | | | | | | | | | | | | | | TOTAL |
| PEAK HR VOL : | 0 | 3 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 |
| PEAK HR FACTOR : | 0.00 | 0.375 | 0.000 | 0.000 | 0.000 | 0.250 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.500 |
| | | 0.375 | | | | 0.250 | | | | | | | | | | | |

National Data & Surveying Services

# Intersection Turning Movement Count

**Location:** Santa Anita Ave & Huntington
**City:** Arcadia
**Control:** Signalized

**Project ID:** 18-05486-004
**Date:** 7/19/2018

**Total**

| NS/EW Streets: | Santa Anita Ave | | | | Santa Anita Ave | | | | Huntington Dr | | | | Huntington Dr | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **AM** | NORTHBOUND | | | | SOUTHBOUND | | | | EASTBOUND | | | | WESTBOUND | | | | |
| | 2 | 2 | 1 | 0 | 2 | 2 | 1 | 0 | 1 | 2 | 1 | 0 | 1 | 2 | 0 | 0 | |
| | NL | NT | NR | NU | SL | ST | SR | SU | EL | ET | ER | EU | WL | WT | WR | WU | TOTAL |
| 7:00 AM | 124 | 138 | 15 | 0 | 4 | 57 | 6 | 0 | 2 | 47 | 15 | 0 | 12 | 188 | 15 | 0 | 623 |
| 7:15 AM | 111 | 147 | 12 | 0 | 9 | 54 | 6 | 0 | 5 | 32 | 17 | 0 | 12 | 253 | 12 | 0 | 670 |
| 7:30 AM | 159 | 169 | 20 | 0 | 17 | 91 | 3 | 0 | 2 | 58 | 21 | 0 | 19 | 254 | 23 | 0 | 836 |
| 7:45 AM | 104 | 153 | 41 | 0 | 13 | 137 | 8 | 0 | 8 | 85 | 19 | 0 | 14 | 264 | 16 | 0 | 862 |
| 8:00 AM | 118 | 166 | 32 | 0 | 9 | 121 | 11 | 0 | 3 | 63 | 29 | 0 | 16 | 244 | 29 | 0 | 841 |
| 8:15 AM | 91 | 122 | 33 | 0 | 13 | 92 | 12 | 1 | 12 | 77 | 18 | 0 | 27 | 282 | 17 | 0 | 797 |
| 8:30 AM | 132 | 185 | 24 | 0 | 18 | 156 | 21 | 0 | 14 | 81 | 29 | 0 | 17 | 248 | 14 | 0 | 939 |
| 8:45 AM | 129 | 134 | 33 | 0 | 25 | 110 | 14 | 0 | 7 | 100 | 29 | 0 | 18 | 272 | 27 | 0 | 898 |
| | NL | NT | NR | NU | SL | ST | SR | SU | EL | ET | ER | EU | WL | WT | WR | WU | TOTAL |
| **TOTAL VOLUMES :** | 968 | 1214 | 210 | 0 | 108 | 818 | 81 | 1 | 53 | 543 | 177 | 0 | 135 | 2005 | 153 | 0 | 6466 |
| **APPROACH %'s :** | 40.47% | 50.75% | 8.78% | 0.00% | 10.71% | 81.15% | 8.04% | 0.10% | 6.86% | 70.25% | 22.90% | 0.00% | 5.89% | 87.44% | 6.67% | 0.00% | |
| **PEAK HR :** | 08:00 AM - 09:00 AM | | | | | | | | | | | | | | | | TOTAL |
| **PEAK HR VOL :** | 470 | 607 | 122 | 0 | 65 | 479 | 58 | 1 | 36 | 321 | 105 | 0 | 78 | 1046 | 87 | 0 | 3475 |
| **PEAK HR FACTOR :** | 0.890 | 0.820 | 0.924 | 0.000 | 0.650 | 0.768 | 0.690 | 0.250 | 0.643 | 0.803 | 0.905 | 0.000 | 0.722 | 0.927 | 0.750 | 0.000 | 0.925 |
| | | 0.879 | | | | 0.773 | | | | 0.849 | | | | 0.929 | | | |

| PM | NORTHBOUND | | | | SOUTHBOUND | | | | EASTBOUND | | | | WESTBOUND | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 2 | 2 | 1 | 0 | 2 | 2 | 1 | 0 | 1 | 2 | 1 | 0 | 1 | 2 | 0 | 0 | |
| | NL | NT | NR | NU | SL | ST | SR | SU | EL | ET | ER | EU | WL | WT | WR | WU | TOTAL |
| 4:00 PM | 45 | 121 | 41 | 0 | 32 | 155 | 17 | 1 | 17 | 266 | 119 | 0 | 35 | 98 | 16 | 0 | 963 |
| 4:15 PM | 33 | 119 | 27 | 0 | 31 | 128 | 17 | 1 | 12 | 275 | 158 | 0 | 34 | 108 | 31 | 0 | 974 |
| 4:30 PM | 42 | 139 | 38 | 0 | 34 | 145 | 15 | 0 | 10 | 260 | 128 | 0 | 22 | 116 | 20 | 0 | 969 |
| 4:45 PM | 46 | 118 | 34 | 0 | 24 | 125 | 13 | 0 | 16 | 310 | 148 | 0 | 31 | 134 | 23 | 0 | 1022 |
| 5:00 PM | 54 | 149 | 37 | 0 | 34 | 175 | 15 | 2 | 12 | 285 | 157 | 0 | 25 | 147 | 18 | 0 | 1110 |
| 5:15 PM | 42 | 152 | 28 | 0 | 24 | 169 | 21 | 2 | 18 | 296 | 157 | 0 | 31 | 168 | 25 | 0 | 1133 |
| 5:30 PM | 63 | 131 | 28 | 0 | 38 | 179 | 24 | 0 | 9 | 266 | 135 | 0 | 41 | 132 | 15 | 0 | 1061 |
| 5:45 PM | 45 | 138 | 26 | 0 | 24 | 169 | 15 | 0 | 19 | 337 | 182 | 0 | 31 | 165 | 12 | 0 | 1163 |
| | NL | NT | NR | NU | SL | ST | SR | SU | EL | ET | ER | EU | WL | WT | WR | WU | TOTAL |
| **TOTAL VOLUMES :** | 370 | 1067 | 259 | 0 | 241 | 1245 | 137 | 6 | 113 | 2295 | 1184 | 0 | 250 | 1068 | 160 | 0 | 8395 |
| **APPROACH %'s :** | 21.82% | 62.91% | 15.27% | 0.00% | 14.79% | 76.43% | 8.41% | 0.37% | 3.15% | 63.89% | 32.96% | 0.00% | 16.91% | 72.26% | 10.83% | 0.00% | |
| **PEAK HR :** | 05:00 PM - 06:00 PM | | | | | | | | | | | | | | | | TOTAL |
| **PEAK HR VOL :** | 204 | 570 | 119 | 0 | 120 | 692 | 75 | 4 | 58 | 1184 | 631 | 0 | 128 | 612 | 70 | 0 | 4467 |
| **PEAK HR FACTOR :** | 0.810 | 0.938 | 0.804 | 0.000 | 0.789 | 0.966 | 0.781 | 0.500 | 0.763 | 0.878 | 0.867 | 0.000 | 0.780 | 0.911 | 0.700 | 0.000 | 0.960 |
| | | 0.930 | | | | 0.924 | | | | 0.870 | | | | 0.904 | | | |

National Data & Surveying Services

# Intersection Turning Movement Count

**Location:** Santa Anita Ave & Huntington
**City:** Arcadia
**Control:** Signalized

**Project ID:** 18-05486-004
**Date:** 7/19/2018

## Bikes

| NS/EW Streets: | Santa Anita Ave | | | | Santa Anita Ave | | | | Huntington Dr | | | | Huntington Dr | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **AM** | NORTHBOUND | | | | SOUTHBOUND | | | | EASTBOUND | | | | WESTBOUND | | | | |
| | 2 | 2 | 1 | 0 | 2 | 2 | 1 | 0 | 1 | 2 | 1 | 0 | 1 | 2 | 0 | 0 | |
| | NL | NT | NR | NU | SL | ST | SR | SU | EL | ET | ER | EU | WL | WT | WR | WU | TOTAL |
| 7:00 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 |
| 7:15 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7:30 AM | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 1 | 0 | 0 | 4 |
| 7:45 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 2 |
| 8:00 AM | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 2 |
| 8:15 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 |
| 8:30 AM | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 0 | 0 | 5 |
| 8:45 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| | NL | NT | NR | NU | SL | ST | SR | SU | EL | ET | ER | EU | WL | WT | WR | WU | TOTAL |
| **TOTAL VOLUMES :** | 0 | 2 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 2 | 0 | 0 | 3 | 8 | 0 | 0 | 16 |
| **APPROACH %'s :** | 0.00% | 100.00% | 0.00% | 0.00% | 0.00% | 100.00% | 0.00% | 0.00% | 0.00% | 100.00% | 0.00% | 0.00% | 27.27% | 72.73% | 0.00% | 0.00% | |
| **PEAK HR :** | 08:00 AM - 09:00 AM | | | | | | | | | | | | | | | | TOTAL |
| **PEAK HR VOL :** | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 5 | 0 | 0 | 9 |
| **PEAK HR FACTOR :** | 0.000 | 0.250 | 0.000 | 0.000 | 0.000 | 0.250 | 0.000 | 0.000 | 0.000 | 0.250 | 0.000 | 0.000 | 0.250 | 0.313 | 0.000 | 0.000 | 0.450 |
| | | 0.250 | | | | 0.250 | | | | 0.250 | | | | 0.375 | | | |

| PM | NORTHBOUND | | | | SOUTHBOUND | | | | EASTBOUND | | | | WESTBOUND | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 2 | 2 | 1 | 0 | 2 | 2 | 1 | 0 | 1 | 2 | 1 | 0 | 1 | 2 | 0 | 0 | |
| | NL | NT | NR | NU | SL | ST | SR | SU | EL | ET | ER | EU | WL | WT | WR | WU | TOTAL |
| 4:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 |
| 4:15 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 |
| 4:30 PM | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| 4:45 PM | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 2 |
| 5:00 PM | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 5 |
| 5:15 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 0 | 0 | 3 |
| 5:30 PM | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| 5:45 PM | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| | NL | NT | NR | NU | SL | ST | SR | SU | EL | ET | ER | EU | WL | WT | WR | WU | TOTAL |
| **TOTAL VOLUMES :** | 0 | 2 | 0 | 0 | 0 | 3 | 0 | 0 | 0 | 6 | 0 | 0 | 4 | 2 | 0 | 0 | 17 |
| **APPROACH %'s :** | 0.00% | 100.00% | 0.00% | 0.00% | 0.00% | 100.00% | 0.00% | 0.00% | 0.00% | 100.00% | 0.00% | 0.00% | 66.67% | 33.33% | 0.00% | 0.00% | |
| **PEAK HR :** | 05:00 PM - 06:00 PM | | | | | | | | | | | | | | | | TOTAL |
| **PEAK HR VOL :** | 0 | 2 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 6 | 0 | 0 | 3 | 0 | 0 | 0 | 12 |
| **PEAK HR FACTOR :** | 0.00 | 0.500 | 0.000 | 0.000 | 0.000 | 0.250 | 0.000 | 0.000 | 0.000 | 0.375 | 0.000 | 0.000 | 0.250 | 0.000 | 0.000 | 0.000 | 0.600 |
| | | 0.500 | | | | 0.250 | | | | 0.375 | | | | 0.250 | | | |

National Data & Surveying Services

# Intersection Turning Movement Count

**Location:** 1st Ave & Huntington Dr
**City:** Arcadia
**Control:** Signalized

**Project ID:** 18-05486-005
**Date:** 7/19/2018

**Total**

| NS/EW Streets: | 1st Ave | | | | 1st Ave | | | | Huntington Dr | | | | Huntington Dr | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **AM** | NORTHBOUND | | | | SOUTHBOUND | | | | EASTBOUND | | | | WESTBOUND | | | | |
| | 1 | 1 | 0 | 0 | 1 | 1 | 0 | 0 | 1 | 2 | 0 | 0 | 1 | 2 | 0 | 0 | |
| | NL | NT | NR | NU | SL | ST | SR | SU | EL | ET | ER | EU | WL | WT | WR | WU | TOTAL |
| 7:00 AM | 6 | 12 | 5 | 0 | 4 | 5 | 2 | 0 | 6 | 67 | 2 | 0 | 5 | 217 | 13 | 0 | 344 |
| 7:15 AM | 12 | 17 | 6 | 0 | 5 | 9 | 2 | 0 | 4 | 39 | 4 | 0 | 4 | 272 | 18 | 0 | 392 |
| 7:30 AM | 15 | 21 | 7 | 0 | 7 | 5 | 5 | 0 | 5 | 87 | 5 | 0 | 8 | 295 | 17 | 0 | 477 |
| 7:45 AM | 17 | 33 | 10 | 0 | 10 | 11 | 3 | 0 | 7 | 106 | 12 | 0 | 6 | 256 | 22 | 0 | 493 |
| 8:00 AM | 16 | 21 | 10 | 0 | 5 | 16 | 6 | 0 | 13 | 100 | 9 | 0 | 14 | 294 | 15 | 0 | 519 |
| 8:15 AM | 20 | 28 | 13 | 0 | 10 | 14 | 9 | 0 | 9 | 98 | 12 | 0 | 14 | 263 | 32 | 0 | 522 |
| 8:30 AM | 12 | 22 | 12 | 0 | 8 | 15 | 3 | 0 | 12 | 109 | 9 | 0 | 10 | 286 | 27 | 0 | 525 |
| 8:45 AM | 15 | 19 | 27 | 0 | 9 | 24 | 6 | 0 | 11 | 114 | 6 | 0 | 13 | 270 | 23 | 0 | 537 |
| | NL | NT | NR | NU | SL | ST | SR | SU | EL | ET | ER | EU | WL | WT | WR | WU | TOTAL |
| TOTAL VOLUMES : | 113 | 173 | 90 | 0 | 58 | 99 | 36 | 0 | 67 | 720 | 59 | 0 | 74 | 2153 | 167 | 0 | 3809 |
| APPROACH %'s : | 30.05% | 46.01% | 23.94% | 0.00% | 30.05% | 51.30% | 18.65% | 0.00% | 7.92% | 85.11% | 6.97% | 0.00% | 3.09% | 89.93% | 6.98% | 0.00% | |
| PEAK HR : | 08:00 AM - 09:00 AM | | | | | | | | | | | | | | | | TOTAL |
| PEAK HR VOL : | 63 | 90 | 62 | 0 | 32 | 69 | 24 | 0 | 45 | 421 | 36 | 0 | 51 | 1113 | 97 | 0 | 2103 |
| PEAK HR FACTOR : | 0.788 | 0.804 | 0.574 | 0.000 | 0.800 | 0.719 | 0.667 | 0.000 | 0.865 | 0.923 | 0.750 | 0.000 | 0.911 | 0.946 | 0.758 | 0.000 | 0.979 |
| | | | 0.881 | | | | 0.801 | | | | 0.958 | | | | 0.976 | | |

| PM | NORTHBOUND | | | | SOUTHBOUND | | | | EASTBOUND | | | | WESTBOUND | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1 | 1 | 0 | 0 | 1 | 1 | 0 | 0 | 1 | 2 | 0 | 0 | 1 | 2 | 0 | 0 | |
| | NL | NT | NR | NU | SL | ST | SR | SU | EL | ET | ER | EU | WL | WT | WR | WU | TOTAL |
| 4:00 PM | 14 | 17 | 19 | 0 | 22 | 32 | 15 | 0 | 6 | 317 | 16 | 0 | 26 | 123 | 19 | 0 | 626 |
| 4:15 PM | 14 | 24 | 10 | 0 | 28 | 31 | 13 | 0 | 12 | 294 | 12 | 0 | 15 | 127 | 17 | 0 | 597 |
| 4:30 PM | 11 | 31 | 12 | 0 | 33 | 35 | 14 | 0 | 16 | 318 | 18 | 0 | 15 | 146 | 17 | 0 | 666 |
| 4:45 PM | 13 | 26 | 19 | 0 | 20 | 31 | 12 | 0 | 10 | 306 | 21 | 0 | 16 | 145 | 16 | 0 | 635 |
| 5:00 PM | 7 | 24 | 12 | 0 | 28 | 44 | 25 | 0 | 10 | 346 | 17 | 0 | 26 | 182 | 18 | 0 | 739 |
| 5:15 PM | 16 | 26 | 10 | 0 | 32 | 43 | 14 | 0 | 10 | 297 | 14 | 0 | 24 | 181 | 12 | 0 | 679 |
| 5:30 PM | 6 | 22 | 7 | 0 | 26 | 41 | 17 | 0 | 11 | 331 | 22 | 0 | 29 | 182 | 14 | 0 | 708 |
| 5:45 PM | 13 | 29 | 14 | 0 | 22 | 48 | 17 | 0 | 7 | 329 | 24 | 0 | 20 | 173 | 16 | 0 | 712 |
| | NL | NT | NR | NU | SL | ST | SR | SU | EL | ET | ER | EU | WL | WT | WR | WU | TOTAL |
| TOTAL VOLUMES : | 94 | 199 | 103 | 0 | 211 | 305 | 127 | 0 | 82 | 2538 | 144 | 0 | 171 | 1259 | 129 | 0 | 5362 |
| APPROACH %'s : | 23.74% | 50.25% | 26.01% | 0.00% | 32.81% | 47.43% | 19.75% | 0.00% | 2.97% | 91.82% | 5.21% | 0.00% | 10.97% | 80.76% | 8.27% | 0.00% | |
| PEAK HR : | 05:00 PM - 06:00 PM | | | | | | | | | | | | | | | | TOTAL |
| PEAK HR VOL : | 42 | 101 | 43 | 0 | 108 | 176 | 73 | 0 | 38 | 1303 | 77 | 0 | 99 | 718 | 60 | 0 | 2838 |
| PEAK HR FACTOR : | 0.656 | 0.871 | 0.768 | 0.000 | 0.844 | 0.917 | 0.730 | 0.000 | 0.864 | 0.941 | 0.802 | 0.000 | 0.853 | 0.986 | 0.833 | 0.000 | 0.960 |
| | | | 0.830 | | | | 0.920 | | | | 0.950 | | | | 0.970 | | |

National Data & Surveying Services

# Intersection Turning Movement Count

**Location:** 1st Ave & Huntington Dr
**City:** Arcadia
**Control:** Signalized

**Project ID:** 18-05486-005
**Date:** 7/19/2018

**Bikes**

| NS/EW Streets: | 1st Ave | | | | 1st Ave | | | | Huntington Dr | | | | Huntington Dr | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **AM** | NORTHBOUND | | | | SOUTHBOUND | | | | EASTBOUND | | | | WESTBOUND | | | | |
| | 1 | 1 | 0 | 0 | 1 | 1 | 0 | 0 | 1 | 2 | 0 | 0 | 1 | 2 | 0 | 0 | |
| | NL | NT | NR | NU | SL | ST | SR | SU | EL | ET | ER | EU | WL | WT | WR | WU | TOTAL |
| 7:00 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 |
| 7:15 AM | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| 7:30 AM | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 4 |
| 7:45 AM | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 2 | 0 | 5 |
| 8:00 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 |
| 8:15 AM | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| 8:30 AM | 0 | 2 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 3 | 0 | 0 | 8 |
| 8:45 AM | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 |
| | NL | NT | NR | NU | SL | ST | SR | SU | EL | ET | ER | EU | WL | WT | WR | WU | TOTAL |
| TOTAL VOLUMES : | 0 | 8 | 0 | 0 | 1 | 4 | 1 | 0 | 0 | 1 | 0 | 0 | 1 | 8 | 2 | 0 | 26 |
| APPROACH %'s : | 0.00% | 100.00% | 0.00% | 0.00% | 16.67% | 66.67% | 16.67% | 0.00% | 0.00% | 100.00% | 0.00% | 0.00% | 9.09% | 72.73% | 18.18% | 0.00% | |
| PEAK HR : | 08:00 AM - 09:00 AM | | | | | | | | | | | | | | | | TOTAL |
| PEAK HR VOL : | 0 | 6 | 0 | 0 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 4 | 0 | 0 | 14 |
| PEAK HR FACTOR : | 0.000 | 0.500 | 0.000 | 0.000 | 0.250 | 0.250 | 0.250 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.250 | 0.333 | 0.000 | 0.000 | 0.438 |
| | | 0.500 | | | | 0.375 | | | | | | | | 0.313 | | | |

| PM | NORTHBOUND | | | | SOUTHBOUND | | | | EASTBOUND | | | | WESTBOUND | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1 | 1 | 0 | 0 | 1 | 1 | 0 | 0 | 1 | 2 | 0 | 0 | 1 | 2 | 0 | 0 | |
| | NL | NT | NR | NU | SL | ST | SR | SU | EL | ET | ER | EU | WL | WT | WR | WU | TOTAL |
| 4:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| 4:15 PM | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 2 |
| 4:30 PM | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 2 |
| 4:45 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 |
| 5:00 PM | 0 | 2 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 1 | 9 |
| 5:15 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 0 | 3 |
| 5:30 PM | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| 5:45 PM | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 3 |
| | NL | NT | NR | NU | SL | ST | SR | SU | EL | ET | ER | EU | WL | WT | WR | WU | TOTAL |
| TOTAL VOLUMES : | 0 | 2 | 1 | 0 | 3 | 2 | 1 | 0 | 1 | 5 | 0 | 0 | 0 | 6 | 0 | 1 | 22 |
| APPROACH %'s : | 0.00% | 66.67% | 33.33% | 0.00% | 50.00% | 33.33% | 16.67% | 0.00% | 16.67% | 83.33% | 0.00% | 0.00% | 0.00% | 85.71% | 0.00% | 14.29% | |
| PEAK HR : | 05:00 PM - 06:00 PM | | | | | | | | | | | | | | | | TOTAL |
| PEAK HR VOL : | 0 | 2 | 1 | 0 | 1 | 2 | 0 | 0 | 1 | 5 | 0 | 0 | 0 | 3 | 0 | 1 | 16 |
| PEAK HR FACTOR : | 0.00 | 0.250 | 0.250 | 0.000 | 0.250 | 0.500 | 0.000 | 0.000 | 0.250 | 0.313 | 0.000 | 0.000 | 0.000 | 0.250 | 0.000 | 0.250 | 0.444 |
| | | 0.375 | | | | 0.375 | | | | 0.375 | | | | 0.333 | | | |

National Data & Surveying Services

# Intersection Turning Movement Count

**Location:** 1st Ave & Wheeler Ave
**City:** Arcadia
**Control:** Signalized

**Project ID:** 18-05486-006
**Date:** 7/19/2018

**Total**

| NS/EW Streets: | 1st Ave | | | | 1st Ave | | | | Wheeler Ave | | | | Wheeler Ave | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **AM** | NORTHBOUND | | | | SOUTHBOUND | | | | EASTBOUND | | | | WESTBOUND | | | | |
| | 1 | 1 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | |
| | NL | NT | NR | NU | SL | ST | SR | SU | EL | ET | ER | EU | WL | WT | WR | WU | TOTAL |
| 7:00 AM | 7 | 11 | 1 | 0 | 2 | 7 | 2 | 0 | 1 | 1 | 4 | 0 | 3 | 0 | 2 | 0 | 41 |
| 7:15 AM | 7 | 18 | 0 | 0 | 0 | 13 | 0 | 0 | 1 | 0 | 4 | 0 | 0 | 1 | 2 | 0 | 46 |
| 7:30 AM | 16 | 20 | 3 | 0 | 1 | 13 | 0 | 1 | 2 | 4 | 4 | 0 | 2 | 2 | 2 | 0 | 70 |
| 7:45 AM | 16 | 29 | 0 | 0 | 1 | 16 | 1 | 0 | 0 | 1 | 5 | 0 | 4 | 3 | 1 | 0 | 77 |
| 8:00 AM | 12 | 19 | 1 | 0 | 3 | 18 | 0 | 0 | 0 | 1 | 3 | 0 | 3 | 1 | 3 | 0 | 64 |
| 8:15 AM | 21 | 29 | 7 | 0 | 1 | 22 | 1 | 0 | 2 | 4 | 5 | 0 | 6 | 3 | 3 | 0 | 104 |
| 8:30 AM | 18 | 20 | 3 | 0 | 2 | 20 | 3 | 0 | 0 | 3 | 3 | 0 | 1 | 1 | 3 | 0 | 77 |
| 8:45 AM | 23 | 16 | 3 | 0 | 1 | 18 | 3 | 0 | 0 | 4 | 11 | 0 | 3 | 2 | 1 | 0 | 85 |
| | NL | NT | NR | NU | SL | ST | SR | SU | EL | ET | ER | EU | WL | WT | WR | WU | TOTAL |
| TOTAL VOLUMES : | 120 | 162 | 18 | 0 | 11 | 127 | 10 | 1 | 6 | 18 | 39 | 0 | 22 | 13 | 17 | 0 | 564 |
| APPROACH %'s : | 40.00% | 54.00% | 6.00% | 0.00% | 7.38% | 85.23% | 6.71% | 0.67% | 9.52% | 28.57% | 61.90% | 0.00% | 42.31% | 25.00% | 32.69% | 0.00% | |
| PEAK HR : | 08:00 AM - 09:00 AM | | | | | | | | | | | | | | | | TOTAL |
| PEAK HR VOL : | 74 | 84 | 14 | 0 | 7 | 78 | 7 | 0 | 2 | 12 | 22 | 0 | 13 | 7 | 10 | 0 | 330 |
| PEAK HR FACTOR : | 0.804 | 0.724 | 0.500 | 0.000 | 0.583 | 0.886 | 0.583 | 0.000 | 0.250 | 0.750 | 0.500 | 0.000 | 0.542 | 0.583 | 0.833 | 0.000 | 0.793 |
| | | | 0.754 | | | | 0.920 | | | | 0.600 | | | | 0.625 | | |

| PM | NORTHBOUND | | | | SOUTHBOUND | | | | EASTBOUND | | | | WESTBOUND | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1 | 1 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | |
| | NL | NT | NR | NU | SL | ST | SR | SU | EL | ET | ER | EU | WL | WT | WR | WU | TOTAL |
| 4:00 PM | 9 | 21 | 1 | 0 | 2 | 19 | 6 | 0 | 8 | 1 | 23 | 0 | 6 | 1 | 4 | 0 | 101 |
| 4:15 PM | 14 | 29 | 2 | 0 | 3 | 27 | 10 | 0 | 9 | 1 | 21 | 0 | 9 | 2 | 7 | 0 | 134 |
| 4:30 PM | 16 | 34 | 3 | 1 | 2 | 31 | 5 | 0 | 10 | 1 | 26 | 0 | 10 | 3 | 5 | 0 | 147 |
| 4:45 PM | 15 | 30 | 2 | 0 | 1 | 24 | 5 | 0 | 3 | 0 | 23 | 0 | 3 | 3 | 5 | 0 | 114 |
| 5:00 PM | 13 | 32 | 3 | 0 | 1 | 27 | 3 | 0 | 6 | 2 | 41 | 0 | 17 | 8 | 6 | 0 | 159 |
| 5:15 PM | 14 | 14 | 3 | 0 | 1 | 23 | 4 | 0 | 4 | 2 | 26 | 0 | 5 | 1 | 4 | 0 | 101 |
| 5:30 PM | 18 | 25 | 4 | 0 | 1 | 27 | 6 | 0 | 5 | 0 | 31 | 0 | 9 | 1 | 10 | 0 | 137 |
| 5:45 PM | 10 | 27 | 6 | 0 | 2 | 36 | 4 | 1 | 2 | 1 | 33 | 0 | 7 | 1 | 6 | 0 | 136 |
| | NL | NT | NR | NU | SL | ST | SR | SU | EL | ET | ER | EU | WL | WT | WR | WU | TOTAL |
| TOTAL VOLUMES : | 109 | 212 | 24 | 1 | 13 | 214 | 43 | 1 | 47 | 8 | 224 | 0 | 66 | 20 | 47 | 0 | 1029 |
| APPROACH %'s : | 31.50% | 61.27% | 6.94% | 0.29% | 4.80% | 78.97% | 15.87% | 0.37% | 16.85% | 2.87% | 80.29% | 0.00% | 49.62% | 15.04% | 35.34% | 0.00% | |
| PEAK HR : | 04:15 PM - 05:15 PM | | | | | | | | | | | | | | | | TOTAL |
| PEAK HR VOL : | 58 | 125 | 10 | 1 | 7 | 109 | 23 | 0 | 28 | 4 | 111 | 0 | 39 | 16 | 23 | 0 | 554 |
| PEAK HR FACTOR : | 0.906 | 0.919 | 0.833 | 0.250 | 0.583 | 0.879 | 0.575 | 0.000 | 0.700 | 0.500 | 0.677 | 0.000 | 0.574 | 0.500 | 0.821 | 0.000 | 0.871 |
| | | | 0.898 | | | | 0.869 | | | | 0.730 | | | | 0.629 | | |

National Data & Surveying Services

# Intersection Turning Movement Count

**Location:** 1st Ave & Wheeler Ave
**City:** Arcadia
**Control:** Signalized

**Project ID:** 18-05486-006
**Date:** 7/19/2018

**Bikes**

| NS/EW Streets: | 1st Ave | | | | 1st Ave | | | | Wheeler Ave | | | | Wheeler Ave | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **AM** | NORTHBOUND | | | | SOUTHBOUND | | | | EASTBOUND | | | | WESTBOUND | | | | |
| | 1 | 1 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | |
| | NL | NT | NR | NU | SL | ST | SR | SU | EL | ET | ER | EU | WL | WT | WR | WU | TOTAL |
| 7:00 AM | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| 7:15 AM | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| 7:30 AM | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| 7:45 AM | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| 8:00 AM | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| 8:15 AM | 0 | 3 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 |
| 8:30 AM | 0 | 3 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 |
| 8:45 AM | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| | NL | NT | NR | NU | SL | ST | SR | SU | EL | ET | ER | EU | WL | WT | WR | WU | TOTAL |
| **TOTAL VOLUMES :** | 0 | 11 | 0 | 0 | 0 | 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 19 |
| **APPROACH %'s :** | 0.00% | 100.00% | 0.00% | 0.00% | 0.00% | 100.00% | 0.00% | 0.00% | | | | | | | | | |
| **PEAK HR :** | 08:00 AM - 09:00 AM | | | | | | | | | | | | | | | | TOTAL |
| **PEAK HR VOL :** | 0 | 8 | 0 | 0 | 0 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 13 |
| **PEAK HR FACTOR :** | 0.000 | 0.667 | 0.000 | 0.000 | 0.000 | 0.625 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.650 |
| | | 0.667 | | | | 0.625 | | | | | | | | | | | |

| PM | NORTHBOUND | | | | SOUTHBOUND | | | | EASTBOUND | | | | WESTBOUND | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1 | 1 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | |
| | NL | NT | NR | NU | SL | ST | SR | SU | EL | ET | ER | EU | WL | WT | WR | WU | TOTAL |
| 4:00 PM | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 3 |
| 4:15 PM | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 3 |
| 4:30 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:45 PM | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 2 |
| 5:00 PM | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| 5:15 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5:30 PM | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| 5:45 PM | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| | NL | NT | NR | NU | SL | ST | SR | SU | EL | ET | ER | EU | WL | WT | WR | WU | TOTAL |
| **TOTAL VOLUMES :** | 0 | 4 | 0 | 0 | 0 | 4 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 3 | 0 | 12 |
| **APPROACH %'s :** | 0.00% | 100.00% | 0.00% | 0.00% | 0.00% | 100.00% | 0.00% | 0.00% | 0.00% | 0.00% | 100.00% | 0.00% | 0.00% | 0.00% | 100.00% | 0.00% | |
| **PEAK HR :** | 04:15 PM - 05:15 PM | | | | | | | | | | | | | | | | TOTAL |
| **PEAK HR VOL :** | 0 | 2 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 2 | 0 | 7 |
| **PEAK HR FACTOR :** | 0.00 | 0.250 | 0.000 | 0.000 | 0.000 | 0.500 | 0.000 | 0.000 | 0.000 | 0.000 | 0.250 | 0.000 | 0.000 | 0.000 | 0.250 | 0.000 | 0.583 |
| | | 0.250 | | | | 0.500 | | | | | 0.250 | | | | 0.250 | | |

National Data & Surveying Services

# Intersection Turning Movement Count

**Location:** 1st Ave & Santa Clara St
**City:** Arcadia
**Control:** Signalized

**Project ID:** 18-05486-007
**Date:** 7/19/2018

**Total**

| NS/EW Streets: | 1st Ave | | | | 1st Ave | | | | Santa Clara St | | | | Santa Clara St | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **AM** | NORTHBOUND | | | | SOUTHBOUND | | | | EASTBOUND | | | | WESTBOUND | | | | |
| | 1 | 0.5 | 0.5 | 0 | 1 | 0.5 | 0.5 | 0 | 1 | 0.5 | 0.5 | 0 | 1 | 0.5 | 0.5 | 0 | |
| | NL | NT | NR | NU | SL | ST | SR | SU | EL | ET | ER | EU | WL | WT | WR | WU | TOTAL |
| 7:00 AM | 8 | 4 | 2 | 0 | 0 | 5 | 4 | 0 | 0 | 9 | 4 | 0 | 1 | 26 | 0 | 0 | 63 |
| 7:15 AM | 11 | 8 | 2 | 0 | 0 | 7 | 7 | 0 | 0 | 9 | 2 | 0 | 2 | 26 | 1 | 0 | 75 |
| 7:30 AM | 5 | 18 | 1 | 0 | 0 | 12 | 6 | 0 | 4 | 19 | 3 | 0 | 1 | 45 | 0 | 0 | 114 |
| 7:45 AM | 7 | 18 | 3 | 0 | 1 | 10 | 4 | 0 | 1 | 19 | 7 | 0 | 0 | 36 | 1 | 0 | 107 |
| 8:00 AM | 7 | 17 | 0 | 0 | 0 | 16 | 8 | 0 | 5 | 13 | 8 | 0 | 2 | 29 | 1 | 0 | 106 |
| 8:15 AM | 9 | 19 | 2 | 0 | 1 | 10 | 9 | 0 | 5 | 17 | 7 | 0 | 2 | 35 | 5 | 0 | 121 |
| 8:30 AM | 6 | 11 | 3 | 0 | 0 | 12 | 5 | 0 | 5 | 8 | 9 | 0 | 2 | 16 | 1 | 0 | 78 |
| 8:45 AM | 4 | 14 | 1 | 0 | 0 | 21 | 10 | 0 | 3 | 24 | 4 | 0 | 1 | 25 | 3 | 0 | 110 |
| | NL | NT | NR | NU | SL | ST | SR | SU | EL | ET | ER | EU | WL | WT | WR | WU | TOTAL |
| **TOTAL VOLUMES :** | 57 | 109 | 14 | 0 | 2 | 93 | 53 | 0 | 23 | 118 | 44 | 0 | 11 | 238 | 12 | 0 | 774 |
| **APPROACH %'s :** | 31.67% | 60.56% | 7.78% | 0.00% | 1.35% | 62.84% | 35.81% | 0.00% | 12.43% | 63.78% | 23.78% | 0.00% | 4.21% | 91.19% | 4.60% | 0.00% | |
| **PEAK HR :** | 07:30 AM - 08:30 AM | | | | | | | | | | | | | | | | TOTAL |
| **PEAK HR VOL :** | 28 | 72 | 6 | 0 | 2 | 48 | 27 | 0 | 15 | 68 | 25 | 0 | 5 | 145 | 7 | 0 | 448 |
| **PEAK HR FACTOR :** | 0.778 | 0.947 | 0.500 | 0.000 | 0.500 | 0.750 | 0.750 | 0.000 | 0.750 | 0.895 | 0.781 | 0.000 | 0.625 | 0.806 | 0.350 | 0.000 | 0.926 |
| | | 0.883 | | | | 0.802 | | | | 0.931 | | | | 0.853 | | | |

| PM | NORTHBOUND | | | | SOUTHBOUND | | | | EASTBOUND | | | | WESTBOUND | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1 | 0.5 | 0.5 | 0 | 1 | 0.5 | 0.5 | 0 | 1 | 0.5 | 0.5 | 0 | 1 | 0.5 | 0.5 | 0 | |
| | NL | NT | NR | NU | SL | ST | SR | SU | EL | ET | ER | EU | WL | WT | WR | WU | TOTAL |
| 4:00 PM | 6 | 27 | 6 | 0 | 2 | 31 | 11 | 0 | 7 | 47 | 5 | 0 | 2 | 26 | 2 | 0 | 172 |
| 4:15 PM | 6 | 23 | 6 | 0 | 1 | 27 | 7 | 0 | 10 | 43 | 4 | 0 | 8 | 13 | 2 | 0 | 150 |
| 4:30 PM | 7 | 26 | 13 | 0 | 1 | 22 | 11 | 0 | 3 | 55 | 11 | 0 | 3 | 41 | 3 | 0 | 196 |
| 4:45 PM | 7 | 25 | 10 | 0 | 2 | 18 | 9 | 0 | 3 | 32 | 12 | 0 | 2 | 34 | 2 | 0 | 156 |
| 5:00 PM | 9 | 26 | 6 | 0 | 0 | 24 | 9 | 0 | 6 | 42 | 4 | 0 | 1 | 23 | 3 | 0 | 153 |
| 5:15 PM | 6 | 15 | 4 | 0 | 1 | 17 | 7 | 0 | 0 | 59 | 8 | 0 | 1 | 22 | 2 | 0 | 142 |
| 5:30 PM | 4 | 26 | 6 | 0 | 3 | 19 | 10 | 0 | 5 | 49 | 10 | 0 | 3 | 22 | 1 | 0 | 158 |
| 5:45 PM | 6 | 26 | 7 | 0 | 1 | 29 | 6 | 0 | 6 | 41 | 10 | 0 | 4 | 18 | 2 | 0 | 156 |
| | NL | NT | NR | NU | SL | ST | SR | SU | EL | ET | ER | EU | WL | WT | WR | WU | TOTAL |
| **TOTAL VOLUMES :** | 51 | 194 | 58 | 0 | 11 | 187 | 70 | 0 | 40 | 368 | 64 | 0 | 24 | 199 | 17 | 0 | 1283 |
| **APPROACH %'s :** | 16.83% | 64.03% | 19.14% | 0.00% | 4.10% | 69.78% | 26.12% | 0.00% | 8.47% | 77.97% | 13.56% | 0.00% | 10.00% | 82.92% | 7.08% | 0.00% | |
| **PEAK HR :** | 04:00 PM - 05:00 PM | | | | | | | | | | | | | | | | TOTAL |
| **PEAK HR VOL :** | 26 | 101 | 35 | 0 | 6 | 98 | 38 | 0 | 23 | 177 | 32 | 0 | 15 | 114 | 9 | 0 | 674 |
| **PEAK HR FACTOR :** | 0.929 | 0.935 | 0.673 | 0.000 | 0.750 | 0.790 | 0.864 | 0.000 | 0.575 | 0.805 | 0.667 | 0.000 | 0.469 | 0.695 | 0.750 | 0.000 | 0.860 |
| | | 0.880 | | | | 0.807 | | | | 0.841 | | | | 0.734 | | | |

National Data & Surveying Services

# Intersection Turning Movement Count

**Location:** 1st Ave & Santa Clara St
**City:** Arcadia
**Control:** Signalized

**Project ID:** 18-05486-007
**Date:** 7/19/2018

**Bikes**

| NS/EW Streets: | 1st Ave | | | | 1st Ave | | | | Santa Clara St | | | | Santa Clara St | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **AM** | NORTHBOUND | | | | SOUTHBOUND | | | | EASTBOUND | | | | WESTBOUND | | | | |
| | 1 | 0.5 | 0.5 | 0 | 1 | 0.5 | 0.5 | 0 | 1 | 0.5 | 0.5 | 0 | 1 | 0.5 | 0.5 | 0 | |
| | NL | NT | NR | NU | SL | ST | SR | SU | EL | ET | ER | EU | WL | WT | WR | WU | TOTAL |
| 7:00 AM | 0 | 0 | 0 | 0 | 0 | 1 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 |
| 7:15 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7:30 AM | 0 | 2 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 |
| 7:45 AM | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 2 |
| 8:00 AM | 0 | 1 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 |
| 8:15 AM | 0 | 1 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 |
| 8:30 AM | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 3 |
| 8:45 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | NL | NT | NR | NU | SL | ST | SR | SU | EL | ET | ER | EU | WL | WT | WR | WU | TOTAL |
| **TOTAL VOLUMES :** | 0 | 4 | 2 | 0 | 0 | 6 | 4 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 18 |
| **APPROACH %'s :** | 0.00% | 66.67% | 33.33% | 0.00% | 0.00% | 60.00% | 40.00% | 0.00% | 0.00% | 0.00% | 100.00% | 0.00% | 0.00% | 100.00% | 0.00% | 0.00% | |
| **PEAK HR :** | 07:30 AM - 08:30 AM | | | | | | | | | | | | | | | | TOTAL |
| **PEAK HR VOL :** | 0 | 4 | 0 | 0 | 0 | 5 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 12 |
| **PEAK HR FACTOR :** | 0.000 | 0.500 | 0.000 | 0.000 | 0.000 | 0.625 | 0.500 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.250 | 0.000 | 0.000 | 0.750 |
| | | 0.500 | | | | 0.875 | | | | | | | | 0.250 | | | |

| PM | NORTHBOUND | | | | SOUTHBOUND | | | | EASTBOUND | | | | WESTBOUND | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1 | 0.5 | 0.5 | 0 | 1 | 0.5 | 0.5 | 0 | 1 | 0.5 | 0.5 | 0 | 1 | 0.5 | 0.5 | 0 | |
| | NL | NT | NR | NU | SL | ST | SR | SU | EL | ET | ER | EU | WL | WT | WR | WU | TOTAL |
| 4:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:15 PM | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 3 |
| 4:30 PM | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| 4:45 PM | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 4 |
| 5:00 PM | 0 | 2 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 |
| 5:15 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 |
| 5:30 PM | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 3 |
| 5:45 PM | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| | NL | NT | NR | NU | SL | ST | SR | SU | EL | ET | ER | EU | WL | WT | WR | WU | TOTAL |
| **TOTAL VOLUMES :** | 0 | 4 | 1 | 0 | 1 | 2 | 3 | 0 | 0 | 2 | 0 | 0 | 1 | 2 | 2 | 0 | 18 |
| **APPROACH %'s :** | 0.00% | 80.00% | 20.00% | 0.00% | 16.67% | 33.33% | 50.00% | 0.00% | 0.00% | 100.00% | 0.00% | 0.00% | 20.00% | 40.00% | 40.00% | 0.00% | |
| **PEAK HR :** | 04:00 PM - 05:00 PM | | | | | | | | | | | | | | | | TOTAL |
| **PEAK HR VOL :** | 0 | 1 | 1 | 0 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 0 | 8 |
| **PEAK HR FACTOR :** | 0.00 | 0.250 | 0.250 | 0.000 | 0.250 | 0.250 | 0.250 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.250 | 0.250 | 0.250 | 0.000 | 0.500 |
| | | 0.500 | | | | 0.750 | | | | | | | | 0.375 | | | |

# Attachment B

## LOS Worksheets

Vistro File: P:\...\Base_Alexan Arcadia_2_wCumu.vistro
Report File: P:\...\Existing AM.pdf
Scenario 1 Existing
9/23/2021

**Intersection Analysis Summary**

| ID | Intersection Name | Control Type | Method | Worst Mvmt | V/C | Delay (s/veh) | LOS |
|---|---|---|---|---|---|---|---|
| 1 | Santa Anita Avenue/Santa Clara Street | Signalized | ICU 1 | NB Right | 0.473 | - | A |
| 2 | Santa Anita Avenue/Wheeler Avenue | Two-way stop | HCM 6th Edition | WB Left | 0.055 | 24.0 | C |
| 3 | Santa Anita Avenue/Huntington Drive | Signalized | ICU 1 | WB Thru | 0.822 | - | D |
| 4 | 1st Avenue/Santa Clara Street | Signalized | ICU 1 | WB Thru | 0.318 | - | A |
| 5 | 1st Avenue/Wheeler Avenue | Signalized | ICU 1 | NB Thru | 0.289 | - | A |
| 6 | 1st Avenue/Huntington Drive | Signalized | ICU 1 | WB Thru | 0.613 | - | B |

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. For all other control types, they are taken for the whole intersection.

**Intersection Level Of Service Report**
**Intersection 1: Santa Anita Avenue/Santa Clara Street**

| | | | |
|---|---|---|---|
| Control Type: | Signalized | Delay (sec / veh): | - |
| Analysis Method: | ICU 1 | Level Of Service: | A |
| Analysis Period: | 1 hour | Volume to Capacity (v/c): | 0.473 |

**Intersection Setup**

| Name | Santa Anita Avenue | | | Santa Anita Avenue | | | Santa Clara Street | | | Santa Clara Street | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Approach | Northbound | | | Southbound | | | Eastbound | | | Westbound | | |
| Lane Configuration |  | | |  | | |  | | |  | | |
| Turning Movement | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right |
| Lane Width [ft] | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 |
| No. of Lanes in Entry Pocket | 1 | 0 | 1 | 1 | 0 | 1 | 1 | 0 | 0 | 1 | 0 | 1 |
| Entry Pocket Length [ft] | 100.00 | 100.00 | 100.00 | 90.00 | 100.00 | 70.00 | 115.00 | 100.00 | 100.00 | 50.00 | 100.00 | 100.00 |
| No. of Lanes in Exit Pocket | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Exit Pocket Length [ft] | 0.00 | 0.00 | 100.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Speed [mph] | 30.00 | | | 30.00 | | | 30.00 | | | 30.00 | | |
| Grade [%] | 0.00 | | | 0.00 | | | 0.00 | | | 0.00 | | |
| Crosswalk | Yes | | | Yes | | | Yes | | | Yes | | |

**Volumes**

| Name | Santa Anita Avenue | | | Santa Anita Avenue | | | Santa Clara Street | | | Santa Clara Street | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Base Volume Input [veh/h] | 39 | 615 | 39 | 63 | 624 | 240 | 173 | 79 | 35 | 39 | 93 | 59 |
| Base Volume Adjustment Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Heavy Vehicles Percentage [%] | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 |
| Growth Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| In-Process Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Site-Generated Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Diverted Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Pass-by Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Existing Site Adjustment Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Other Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Hourly Volume [veh/h] | 39 | 615 | 39 | 63 | 624 | 240 | 173 | 79 | 35 | 39 | 93 | 59 |
| Peak Hour Factor | 0.9620 | 0.9620 | 0.9620 | 0.9620 | 0.9620 | 0.9620 | 0.9620 | 0.9620 | 0.9620 | 0.9620 | 0.9620 | 0.9620 |
| Other Adjustment Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Total 15-Minute Volume [veh/h] | 10 | 160 | 10 | 16 | 162 | 62 | 45 | 21 | 9 | 10 | 24 | 15 |
| Total Analysis Volume [veh/h] | 41 | 639 | 41 | 65 | 649 | 249 | 180 | 82 | 36 | 41 | 97 | 61 |
| Pedestrian Volume [ped/h] | 0 | | | 0 | | | 0 | | | 0 | | |
| Bicycle Volume [bicycles/h] | 0 | | | 0 | | | 0 | | | 0 | | |

**Intersection Settings**

| | |
|---|---|
| Cycle Length [s] | 90 |
| Lost time [s] | 10.00 |

**Phasing & Timing**

| Control Type | ProtPer | Permiss | Permiss | ProtPer | Permiss | Overlap | Protecte | Permiss | Permiss | Protecte | Permiss | Permiss |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Signal Group | 1 | 6 | 0 | 5 | 2 | 2 | 3 | 8 | 0 | 7 | 4 | 0 |
| Auxiliary Signal Groups | | | | | | 2,3 | | | | | | |
| Lead / Lag | Lead | - | - | Lead | - | - | Lead | - | - | Lead | - | - |

**Movement, Approach, & Intersection Results**

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| V/C, Movement V/C Ratio | 0.02 | 0.20 | 0.20 | 0.04 | 0.20 | 0.09 | 0.06 | 0.07 | 0.07 | 0.02 | 0.06 | 0.04 |
| Intersection LOS | A | | | | | | | | | | | |
| Intersection V/C | 0.473 | | | | | | | | | | | |

**Intersection Level Of Service Report**
**Intersection 2: Santa Anita Avenue/Wheeler Avenue**

| | | | |
|---|---|---|---|
| Control Type: | Two-way stop | Delay (sec / veh): | 24.0 |
| Analysis Method: | HCM 6th Edition | Level Of Service: | C |
| Analysis Period: | 1 hour | Volume to Capacity (v/c): | 0.055 |

**Intersection Setup**

| Name | Santa Anita Avenue | | | | | |
|---|---|---|---|---|---|---|
| Approach | Northbound | | Southbound | | Westbound | |
| Lane Configuration |  | |  | |  | |
| Turning Movement | Thru | Right | Left | Thru | Left | Right |
| Lane Width [ft] | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 |
| No. of Lanes in Entry Pocket | 0 | 0 | 1 | 0 | 0 | 0 |
| Entry Pocket Length [ft] | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 |
| No. of Lanes in Exit Pocket | 0 | 0 | 0 | 0 | 0 | 0 |
| Exit Pocket Length [ft] | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Speed [mph] | 30.00 | | 30.00 | | 30.00 | |
| Grade [%] | 0.00 | | 0.00 | | 0.00 | |
| Crosswalk | No | | No | | Yes | |

**Volumes**

| Name | Santa Anita Avenue | | | | | |
|---|---|---|---|---|---|---|
| Base Volume Input [veh/h] | 670 | 33 | 49 | 598 | 11 | 33 |
| Base Volume Adjustment Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Heavy Vehicles Percentage [%] | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 |
| Growth Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| In-Process Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 |
| Site-Generated Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 |
| Diverted Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 |
| Pass-by Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 |
| Existing Site Adjustment Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 |
| Other Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Hourly Volume [veh/h] | 670 | 33 | 49 | 598 | 11 | 33 |
| Peak Hour Factor | 0.8730 | 0.8730 | 0.8730 | 0.8730 | 0.8730 | 0.8730 |
| Other Adjustment Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Total 15-Minute Volume [veh/h] | 192 | 9 | 14 | 171 | 3 | 9 |
| Total Analysis Volume [veh/h] | 767 | 38 | 56 | 685 | 13 | 38 |
| Pedestrian Volume [ped/h] | 0 | | 0 | | 0 | |

**Intersection Settings**

| Priority Scheme | Free | Free | Stop |
|---|---|---|---|
| Flared Lane | | | No |
| Storage Area [veh] | 0 | 0 | 0 |
| Two-Stage Gap Acceptance | | | No |
| Number of Storage Spaces in Median | 0 | 0 | 0 |

**Movement, Approach, & Intersection Results**

| V/C, Movement V/C Ratio | 0.01 | 0.00 | 0.06 | 0.01 | 0.05 | 0.05 |
|---|---|---|---|---|---|---|
| d_M, Delay for Movement [s/veh] | 0.00 | 0.00 | 9.28 | 0.00 | 24.03 | 11.62 |
| Movement LOS | A | A | A | A | C | B |
| 95th-Percentile Queue Length [veh/ln] | 0.00 | 0.00 | 0.17 | 0.00 | 0.36 | 0.36 |
| 95th-Percentile Queue Length [ft/ln] | 0.00 | 0.00 | 4.37 | 0.00 | 8.89 | 8.89 |
| d_A, Approach Delay [s/veh] | 0.00 | | 0.70 | | 14.72 | |
| Approach LOS | A | | A | | B | |
| d_I, Intersection Delay [s/veh] | 0.79 | | | | | |
| Intersection LOS | C | | | | | |

**Intersection Level Of Service Report**
**Intersection 3: Santa Anita Avenue/Huntington Drive**

| | | | |
|---|---|---|---|
| Control Type: | Signalized | Delay (sec / veh): | - |
| Analysis Method: | ICU 1 | Level Of Service: | D |
| Analysis Period: | 1 hour | Volume to Capacity (v/c): | 0.822 |

**Intersection Setup**

| Name | Santa Anita Avenue | | | Santa Anita Avenue | | | Huntington Drive | | | Huntington Drive | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Approach | Northbound | | | Southbound | | | Eastbound | | | Westbound | | |
| Lane Configuration |  | | |  | | |  | | |  | | |
| Turning Movement | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right |
| Lane Width [ft] | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 |
| No. of Lanes in Entry Pocket | 1 | 0 | 1 | 1 | 0 | 1 | 1 | 0 | 1 | 1 | 0 | 1 |
| Entry Pocket Length [ft] | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 |
| No. of Lanes in Exit Pocket | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 |
| Exit Pocket Length [ft] | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 100.00 | 0.00 | 0.00 | 0.00 |
| Speed [mph] | 30.00 | | | 30.00 | | | 30.00 | | | 30.00 | | |
| Grade [%] | 0.00 | | | 0.00 | | | 0.00 | | | 0.00 | | |
| Crosswalk | Yes | | | Yes | | | Yes | | | Yes | | |

**Volumes**

| Name | Santa Anita Avenue | | | Santa Anita Avenue | | | Huntington Drive | | | Huntington Drive | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Base Volume Input [veh/h] | 482 | 624 | 126 | 68 | 491 | 60 | 37 | 329 | 108 | 80 | 1072 | 90 |
| Base Volume Adjustment Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Heavy Vehicles Percentage [%] | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 |
| Growth Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| In-Process Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Site-Generated Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Diverted Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Pass-by Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Existing Site Adjustment Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Other Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Hourly Volume [veh/h] | 482 | 624 | 126 | 68 | 491 | 60 | 37 | 329 | 108 | 80 | 1072 | 90 |
| Peak Hour Factor | 0.9250 | 0.9250 | 0.9250 | 0.9250 | 0.9250 | 0.9250 | 0.9250 | 0.9250 | 0.9250 | 0.9250 | 0.9250 | 0.9250 |
| Other Adjustment Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Total 15-Minute Volume [veh/h] | 130 | 169 | 34 | 18 | 133 | 16 | 10 | 89 | 29 | 22 | 290 | 24 |
| Total Analysis Volume [veh/h] | 521 | 675 | 136 | 74 | 531 | 65 | 40 | 356 | 117 | 86 | 1159 | 97 |
| Pedestrian Volume [ped/h] | 0 | | | 0 | | | 0 | | | 0 | | |
| Bicycle Volume [bicycles/h] | 0 | | | 0 | | | 0 | | | 0 | | |

**Intersection Settings**

| | |
|---|---|
| Cycle Length [s] | 70 |
| Lost time [s] | 10.00 |

**Phasing & Timing**

| Control Type | Protecte | Permiss | Overlap | Protecte | Permiss | Overlap | ProtPer | Permiss | Overlap | ProtPer | Permiss | Permiss |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Signal Group | 1 | 6 | 6 | 5 | 2 | 2 | 3 | 8 | 8 | 7 | 4 | 0 |
| Auxiliary Signal Groups | | | 6,7 | | | 2,3 | | | 1,8 | | | |
| Lead / Lag | Lead | - | - | Lead | - | - | Lead | - | - | Lead | - | - |

**Movement, Approach, & Intersection Results**

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| V/C, Movement V/C Ratio | 0.17 | 0.20 | 0.08 | 0.02 | 0.15 | 0.04 | 0.02 | 0.10 | 0.00 | 0.05 | 0.34 | 0.06 |
| Intersection LOS | D | | | | | | | | | | | |
| Intersection V/C | 0.822 | | | | | | | | | | | |

**Intersection Level Of Service Report**
**Intersection 4: 1st Avenue/Santa Clara Street**

| | | | |
|---|---|---|---|
| Control Type: | Signalized | Delay (sec / veh): | - |
| Analysis Method: | ICU 1 | Level Of Service: | A |
| Analysis Period: | 1 hour | Volume to Capacity (v/c): | 0.318 |

**Intersection Setup**

| Name | 1st Avenue | | | 1st Avenue | | | Santa Clara Street | | | Santa Clara Street | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Approach | Northbound | | | Southbound | | | Eastbound | | | Westbound | | |
| Lane Configuration | | | | | | | | | | | | |
| Turning Movement | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right |
| Lane Width [ft] | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 |
| No. of Lanes in Entry Pocket | 1 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 0 |
| Entry Pocket Length [ft] | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 |
| No. of Lanes in Exit Pocket | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Exit Pocket Length [ft] | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Speed [mph] | 30.00 | | | 30.00 | | | 30.00 | | | 30.00 | | |
| Grade [%] | 0.00 | | | 0.00 | | | 0.00 | | | 0.00 | | |
| Crosswalk | Yes | | | Yes | | | Yes | | | Yes | | |

**Volumes**

| Name | 1st Avenue | | | 1st Avenue | | | Santa Clara Street | | | Santa Clara Street | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Base Volume Input [veh/h] | 29 | 74 | 7 | 3 | 50 | 28 | 16 | 70 | 26 | 6 | 149 | 8 |
| Base Volume Adjustment Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Heavy Vehicles Percentage [%] | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 |
| Growth Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| In-Process Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Site-Generated Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Diverted Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Pass-by Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Existing Site Adjustment Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Other Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Hourly Volume [veh/h] | 29 | 74 | 7 | 3 | 50 | 28 | 16 | 70 | 26 | 6 | 149 | 8 |
| Peak Hour Factor | 0.9260 | 0.9260 | 0.9260 | 0.9260 | 0.9260 | 0.9260 | 0.9260 | 0.9260 | 0.9260 | 0.9260 | 0.9260 | 0.9260 |
| Other Adjustment Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Total 15-Minute Volume [veh/h] | 8 | 20 | 2 | 1 | 13 | 8 | 4 | 19 | 7 | 2 | 40 | 2 |
| Total Analysis Volume [veh/h] | 31 | 80 | 8 | 3 | 54 | 30 | 17 | 76 | 28 | 6 | 161 | 9 |
| Pedestrian Volume [ped/h] | 0 | | | 0 | | | 0 | | | 0 | | |
| Bicycle Volume [bicycles/h] | 0 | | | 0 | | | 0 | | | 0 | | |

**Intersection Settings**

| | |
|---|---|
| Cycle Length [s] | 70 |
| Lost time [s] | 10.00 |

**Phasing & Timing**

| Control Type | Protecte | Permiss | Permiss | Protecte | Permiss | Permiss | Protecte | Permiss | Permiss | Protecte | Permiss | Permiss |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Signal Group | 1 | 6 | 0 | 5 | 2 | 0 | 3 | 8 | 0 | 7 | 4 | 0 |
| Auxiliary Signal Groups | | | | | | | | | | | | |
| Lead / Lag | Lead | - | - | Lead | - | - | Lead | - | - | Lead | - | - |

**Movement, Approach, & Intersection Results**

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| V/C, Movement V/C Ratio | 0.02 | 0.05 | 0.05 | 0.00 | 0.05 | 0.05 | 0.01 | 0.06 | 0.06 | 0.00 | 0.10 | 0.10 |
| Intersection LOS | A | | | | | | | | | | | |
| Intersection V/C | 0.318 | | | | | | | | | | | |

**Intersection Level Of Service Report**
**Intersection 5: 1st Avenue/Wheeler Avenue**

| | | | |
|---|---|---|---|
| Control Type: | Signalized | Delay (sec / veh): | - |
| Analysis Method: | ICU 1 | Level Of Service: | A |
| Analysis Period: | 1 hour | Volume to Capacity (v/c): | 0.289 |

**Intersection Setup**

| Name | 1st Avenue | | | 1st Avenue | | | Wheeler Avenue | | | Wheeler Avenue | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Approach | Northbound | | | Southbound | | | Eastbound | | | Westbound | | |
| Lane Configuration | | | | | | | | | | | | |
| Turning Movement | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right |
| Lane Width [ft] | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 |
| No. of Lanes in Entry Pocket | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Entry Pocket Length [ft] | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 |
| No. of Lanes in Exit Pocket | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Exit Pocket Length [ft] | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Speed [mph] | 30.00 | | | 30.00 | | | 30.00 | | | 30.00 | | |
| Grade [%] | 0.00 | | | 0.00 | | | 0.00 | | | 0.00 | | |
| Crosswalk | Yes | | | Yes | | | Yes | | | Yes | | |

**Volumes**

| Name | 1st Avenue | | | 1st Avenue | | | Wheeler Avenue | | | Wheeler Avenue | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Base Volume Input [veh/h] | 76 | 87 | 15 | 8 | 80 | 8 | 3 | 13 | 23 | 14 | 8 | 11 |
| Base Volume Adjustment Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Heavy Vehicles Percentage [%] | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 |
| Growth Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| In-Process Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Site-Generated Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Diverted Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Pass-by Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Existing Site Adjustment Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Other Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Hourly Volume [veh/h] | 76 | 87 | 15 | 8 | 80 | 8 | 3 | 13 | 23 | 14 | 8 | 11 |
| Peak Hour Factor | 0.7930 | 0.7930 | 0.7930 | 0.7930 | 0.7930 | 0.7930 | 0.7930 | 0.7930 | 0.7930 | 0.7930 | 0.7930 | 0.7930 |
| Other Adjustment Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Total 15-Minute Volume [veh/h] | 24 | 27 | 5 | 3 | 25 | 3 | 1 | 4 | 7 | 4 | 3 | 3 |
| Total Analysis Volume [veh/h] | 96 | 110 | 19 | 10 | 101 | 10 | 4 | 16 | 29 | 18 | 10 | 14 |
| Pedestrian Volume [ped/h] | 0 | | | 0 | | | 0 | | | 0 | | |
| Bicycle Volume [bicycles/h] | 0 | | | 0 | | | 0 | | | 0 | | |

**Intersection Settings**

| | |
|---|---|
| Cycle Length [s] | 65 |
| Lost time [s] | 10.00 |

**Phasing & Timing**

| Control Type | Permiss | Permiss | Permiss | Permiss | Permiss | Permiss | Permiss | Permiss | Permiss | Permiss | Permiss | Permiss |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Signal Group | 0 | 6 | 0 | 0 | 2 | 0 | 0 | 8 | 0 | 0 | 4 | 0 |
| Auxiliary Signal Groups | | | | | | | | | | | | |
| Lead / Lag | - | - | - | - | - | - | - | - | - | - | - | - |

**Movement, Approach, & Intersection Results**

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| V/C, Movement V/C Ratio | 0.05 | 0.06 | 0.06 | 0.01 | 0.06 | 0.06 | 0.00 | 0.02 | 0.02 | 0.01 | 0.02 | 0.02 |
| Intersection LOS | A | | | | | | | | | | | |
| Intersection V/C | 0.289 | | | | | | | | | | | |

**Intersection Level Of Service Report**
**Intersection 6: 1st Avenue/Huntington Drive**

| | | | |
|---|---|---|---|
| Control Type: | Signalized | Delay (sec / veh): | - |
| Analysis Method: | ICU 1 | Level Of Service: | B |
| Analysis Period: | 1 hour | Volume to Capacity (v/c): | 0.613 |

**Intersection Setup**

| Name | 1st Avenue | | | 1st Avenue | | | Huntington Drive | | | Huntington Drive | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Approach | Northbound | | | Southbound | | | Eastbound | | | Westbound | | |
| Lane Configuration |  | | |  | | |  | | |  | | |
| Turning Movement | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right |
| Lane Width [ft] | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 |
| No. of Lanes in Entry Pocket | 1 | 0 | 1 | 1 | 0 | 1 | 1 | 0 | 0 | 1 | 0 | 0 |
| Entry Pocket Length [ft] | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 |
| No. of Lanes in Exit Pocket | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 |
| Exit Pocket Length [ft] | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 100.00 | 0.00 | 0.00 | 100.00 |
| Speed [mph] | 30.00 | | | 30.00 | | | 30.00 | | | 30.00 | | |
| Grade [%] | 0.00 | | | 0.00 | | | 0.00 | | | 0.00 | | |
| Crosswalk | Yes | | | Yes | | | Yes | | | Yes | | |

**Volumes**

| Name | 1st Avenue | | | 1st Avenue | | | Huntington Drive | | | Huntington Drive | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Base Volume Input [veh/h] | 65 | 93 | 64 | 33 | 71 | 25 | 47 | 432 | 37 | 53 | 1141 | 100 |
| Base Volume Adjustment Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Heavy Vehicles Percentage [%] | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 |
| Growth Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| In-Process Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Site-Generated Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Diverted Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Pass-by Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Existing Site Adjustment Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Other Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Hourly Volume [veh/h] | 65 | 93 | 64 | 33 | 71 | 25 | 47 | 432 | 37 | 53 | 1141 | 100 |
| Peak Hour Factor | 0.9790 | 0.9790 | 0.9790 | 0.9790 | 0.9790 | 0.9790 | 0.9790 | 0.9790 | 0.9790 | 0.9790 | 0.9790 | 0.9790 |
| Other Adjustment Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Total 15-Minute Volume [veh/h] | 17 | 24 | 16 | 8 | 18 | 6 | 12 | 110 | 9 | 14 | 291 | 26 |
| Total Analysis Volume [veh/h] | 66 | 95 | 65 | 34 | 73 | 26 | 48 | 441 | 38 | 54 | 1165 | 102 |
| Pedestrian Volume [ped/h] | 0 | | | 0 | | | 0 | | | 0 | | |
| Bicycle Volume [bicycles/h] | 0 | | | 0 | | | 0 | | | 0 | | |

**Intersection Settings**

| | |
|---|---|
| Cycle Length [s] | 90 |
| Lost time [s] | 10.00 |

**Phasing & Timing**

| Control Type | ProtPer | Permiss | Permiss | ProtPer | Permiss | Permiss | ProtPer | Permiss | Permiss | ProtPer | Permiss | Permiss |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Signal Group | 1 | 6 | 0 | 5 | 2 | 0 | 3 | 8 | 0 | 7 | 4 | 0 |
| Auxiliary Signal Groups | | | | | | | | | | | | |
| Lead / Lag | Lead | - | - | Lead | - | - | Lead | - | - | Lead | - | - |

**Movement, Approach, & Intersection Results**

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| V/C, Movement V/C Ratio | 0.04 | 0.06 | 0.04 | 0.02 | 0.04 | 0.02 | 0.03 | 0.15 | 0.15 | 0.03 | 0.39 | 0.39 |
| Intersection LOS | B | | | | | | | | | | | |
| Intersection V/C | 0.613 | | | | | | | | | | | |

Vistro File: P:\...\Base_Alexan Arcadia_2_wCumu_PM.vistro
Report File: P:\...\Existing PM.pdf
Scenario 1 Existing
9/23/2021

**Intersection Analysis Summary**

| ID | Intersection Name | Control Type | Method | Worst Mvmt | V/C | Delay (s/veh) | LOS |
|---|---|---|---|---|---|---|---|
| 1 | Santa Anita Avenue/Santa Clara Street | Signalized | ICU 1 | SB Thru | 0.590 | - | A |
| 2 | Santa Anita Avenue/Wheeler Avenue | Two-way stop | HCM 6th Edition | WB Left | 0.149 | 29.8 | D |
| 3 | Santa Anita Avenue/Huntington Drive | Signalized | ICU 1 | EB Thru | 0.868 | - | D |
| 4 | 1st Avenue/Santa Clara Street | Signalized | ICU 1 | EB Thru | 0.415 | - | A |
| 5 | 1st Avenue/Wheeler Avenue | Signalized | ICU 1 | EB Thru | 0.407 | - | A |
| 6 | 1st Avenue/Huntington Drive | Signalized | ICU 1 | EB Thru | 0.758 | - | C |

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. For all other control types, they are taken for the whole intersection.

**Intersection Level Of Service Report**
**Intersection 1: Santa Anita Avenue/Santa Clara Street**

| | | | |
|---|---|---|---|
| Control Type: | Signalized | Delay (sec / veh): | - |
| Analysis Method: | ICU 1 | Level Of Service: | A |
| Analysis Period: | 1 hour | Volume to Capacity (v/c): | 0.590 |

**Intersection Setup**

| Name | Santa Anita Avenue | | | Santa Anita Avenue | | | Santa Clara Street | | | Santa Clara Street | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Approach | Northbound | | | Southbound | | | Eastbound | | | Westbound | | |
| Lane Configuration |  | | |  | | |  | | |  | | |
| Turning Movement | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right |
| Lane Width [ft] | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 |
| No. of Lanes in Entry Pocket | 1 | 0 | 1 | 1 | 0 | 1 | 1 | 0 | 0 | 1 | 0 | 1 |
| Entry Pocket Length [ft] | 100.00 | 100.00 | 100.00 | 90.00 | 100.00 | 70.00 | 115.00 | 100.00 | 100.00 | 50.00 | 100.00 | 100.00 |
| No. of Lanes in Exit Pocket | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Exit Pocket Length [ft] | 0.00 | 0.00 | 100.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Speed [mph] | 30.00 | | | 30.00 | | | 30.00 | | | 30.00 | | |
| Grade [%] | 0.00 | | | 0.00 | | | 0.00 | | | 0.00 | | |
| Crosswalk | Yes | | | Yes | | | Yes | | | Yes | | |

**Volumes**

| Name | Santa Anita Avenue | | | Santa Anita Avenue | | | Santa Clara Street | | | Santa Clara Street | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Base Volume Input [veh/h] | 26 | 639 | 49 | 127 | 825 | 251 | 327 | 143 | 44 | 82 | 113 | 71 |
| Base Volume Adjustment Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Heavy Vehicles Percentage [%] | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 |
| Growth Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| In-Process Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Site-Generated Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Diverted Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Pass-by Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Existing Site Adjustment Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Other Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Hourly Volume [veh/h] | 26 | 639 | 49 | 127 | 825 | 251 | 327 | 143 | 44 | 82 | 113 | 71 |
| Peak Hour Factor | 0.9380 | 0.9380 | 0.9380 | 0.9380 | 0.9380 | 0.9380 | 0.9380 | 0.9380 | 0.9380 | 0.9380 | 0.9380 | 0.9380 |
| Other Adjustment Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Total 15-Minute Volume [veh/h] | 7 | 170 | 13 | 34 | 220 | 67 | 87 | 38 | 12 | 22 | 30 | 19 |
| Total Analysis Volume [veh/h] | 28 | 681 | 52 | 135 | 880 | 268 | 349 | 152 | 47 | 87 | 120 | 76 |
| Pedestrian Volume [ped/h] | 0 | | | 0 | | | 0 | | | 0 | | |
| Bicycle Volume [bicycles/h] | 0 | | | 0 | | | 0 | | | 0 | | |

**Intersection Settings**

| | |
|---|---|
| Cycle Length [s] | 90 |
| Lost time [s] | 10.00 |

**Phasing & Timing**

| Control Type | ProtPer | Permiss | Permiss | ProtPer | Permiss | Overlap | Protecte | Permiss | Permiss | Protecte | Permiss | Permiss |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Signal Group | 1 | 6 | 0 | 5 | 2 | 2 | 3 | 8 | 0 | 7 | 4 | 0 |
| Auxiliary Signal Groups | | | | | | 2,3 | | | | | | |
| Lead / Lag | Lead | - | - | Lead | - | - | Lead | - | - | Lead | - | - |

**Movement, Approach, & Intersection Results**

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| V/C, Movement V/C Ratio | 0.02 | 0.22 | 0.22 | 0.08 | 0.26 | 0.04 | 0.11 | 0.12 | 0.12 | 0.05 | 0.07 | 0.04 |
| Intersection LOS | A | | | | | | | | | | | |
| Intersection V/C | 0.590 | | | | | | | | | | | |

**Intersection Level Of Service Report**
**Intersection 2: Santa Anita Avenue/Wheeler Avenue**

| | | | |
|---|---|---|---|
| Control Type: | Two-way stop | Delay (sec / veh): | 29.8 |
| Analysis Method: | HCM 6th Edition | Level Of Service: | D |
| Analysis Period: | 1 hour | Volume to Capacity (v/c): | 0.149 |

**Intersection Setup**

| Name | Santa Anita Avenue | | | | | |
|---|---|---|---|---|---|---|
| Approach | Northbound | | Southbound | | Westbound | |
| Lane Configuration |  | |  | |  | |
| Turning Movement | Thru | Right | Left | Thru | Left | Right |
| Lane Width [ft] | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 |
| No. of Lanes in Entry Pocket | 0 | 0 | 1 | 0 | 0 | 0 |
| Entry Pocket Length [ft] | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 |
| No. of Lanes in Exit Pocket | 0 | 0 | 0 | 0 | 0 | 0 |
| Exit Pocket Length [ft] | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Speed [mph] | 30.00 | | 30.00 | | 30.00 | |
| Grade [%] | 0.00 | | 0.00 | | 0.00 | |
| Crosswalk | No | | No | | Yes | |

**Volumes**

| Name | Santa Anita Avenue | | | | | |
|---|---|---|---|---|---|---|
| Base Volume Input [veh/h] | 659 | 47 | 49 | 842 | 25 | 62 |
| Base Volume Adjustment Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Heavy Vehicles Percentage [%] | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 |
| Growth Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| In-Process Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 |
| Site-Generated Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 |
| Diverted Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 |
| Pass-by Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 |
| Existing Site Adjustment Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 |
| Other Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Hourly Volume [veh/h] | 659 | 47 | 49 | 842 | 25 | 62 |
| Peak Hour Factor | 0.9470 | 0.9470 | 0.9470 | 0.9470 | 0.9470 | 0.9470 |
| Other Adjustment Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Total 15-Minute Volume [veh/h] | 174 | 12 | 13 | 222 | 7 | 16 |
| Total Analysis Volume [veh/h] | 696 | 50 | 52 | 889 | 26 | 65 |
| Pedestrian Volume [ped/h] | 0 | | 0 | | 0 | |

**Intersection Settings**

| | | | |
|---|---|---|---|
| Priority Scheme | Free | Free | Stop |
| Flared Lane | | | No |
| Storage Area [veh] | 0 | 0 | 0 |
| Two-Stage Gap Acceptance | | | No |
| Number of Storage Spaces in Median | 0 | 0 | 0 |

**Movement, Approach, & Intersection Results**

| | | | | | | |
|---|---|---|---|---|---|---|
| V/C, Movement V/C Ratio | 0.01 | 0.00 | 0.06 | 0.01 | 0.15 | 0.10 |
| d_M, Delay for Movement [s/veh] | 0.00 | 0.00 | 9.29 | 0.00 | 29.79 | 13.90 |
| Movement LOS | A | A | A | A | D | B |
| 95th-Percentile Queue Length [veh/ln] | 0.00 | 0.00 | 0.18 | 0.00 | 0.97 | 0.97 |
| 95th-Percentile Queue Length [ft/ln] | 0.00 | 0.00 | 4.38 | 0.00 | 24.24 | 24.24 |
| d_A, Approach Delay [s/veh] | 0.00 | | 0.51 | | 18.46 | |
| Approach LOS | A | | A | | C | |
| d_I, Intersection Delay [s/veh] | 1.22 | | | | | |
| Intersection LOS | D | | | | | |

**Intersection Level Of Service Report**
**Intersection 3: Santa Anita Avenue/Huntington Drive**

| | | | |
|---|---|---|---|
| Control Type: | Signalized | Delay (sec / veh): | - |
| Analysis Method: | ICU 1 | Level Of Service: | D |
| Analysis Period: | 1 hour | Volume to Capacity (v/c): | 0.868 |

**Intersection Setup**

| Name | Santa Anita Avenue | | | Santa Anita Avenue | | | Huntington Drive | | | Huntington Drive | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Approach | Northbound | | | Southbound | | | Eastbound | | | Westbound | | |
| Lane Configuration |  | | |  | | |  | | |  | | |
| Turning Movement | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right |
| Lane Width [ft] | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 |
| No. of Lanes in Entry Pocket | 1 | 0 | 1 | 1 | 0 | 1 | 1 | 0 | 1 | 1 | 0 | 1 |
| Entry Pocket Length [ft] | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 |
| No. of Lanes in Exit Pocket | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 |
| Exit Pocket Length [ft] | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 100.00 | 0.00 | 0.00 | 0.00 |
| Speed [mph] | 30.00 | | | 30.00 | | | 30.00 | | | 30.00 | | |
| Grade [%] | 0.00 | | | 0.00 | | | 0.00 | | | 0.00 | | |
| Crosswalk | Yes | | | Yes | | | Yes | | | Yes | | |

**Volumes**

| Name | Santa Anita Avenue | | | Santa Anita Avenue | | | Huntington Drive | | | Huntington Drive | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Base Volume Input [veh/h] | 210 | 585 | 122 | 128 | 710 | 77 | 60 | 1214 | 647 | 132 | 628 | 72 |
| Base Volume Adjustment Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Heavy Vehicles Percentage [%] | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 |
| Growth Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| In-Process Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Site-Generated Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Diverted Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Pass-by Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Existing Site Adjustment Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Other Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Hourly Volume [veh/h] | 210 | 585 | 122 | 128 | 710 | 77 | 60 | 1214 | 647 | 132 | 628 | 72 |
| Peak Hour Factor | 0.9600 | 0.9600 | 0.9600 | 0.9600 | 0.9600 | 0.9600 | 0.9600 | 0.9600 | 0.9600 | 0.9600 | 0.9600 | 0.9600 |
| Other Adjustment Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Total 15-Minute Volume [veh/h] | 55 | 152 | 32 | 33 | 185 | 20 | 16 | 316 | 168 | 34 | 164 | 19 |
| Total Analysis Volume [veh/h] | 219 | 609 | 127 | 133 | 740 | 80 | 63 | 1265 | 674 | 138 | 654 | 75 |
| Pedestrian Volume [ped/h] | 0 | | | 0 | | | 0 | | | 0 | | |
| Bicycle Volume [bicycles/h] | 0 | | | 0 | | | 0 | | | 0 | | |

**Intersection Settings**

| | |
|---|---|
| Cycle Length [s] | 90 |
| Lost time [s] | 10.00 |

**Phasing & Timing**

| Control Type | Protecte | Permiss | Overlap | Protecte | Permiss | Overlap | ProtPer | Permiss | Overlap | ProtPer | Permiss | Permiss |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Signal Group | 1 | 6 | 6 | 5 | 2 | 2 | 3 | 8 | 8 | 7 | 4 | 0 |
| Auxiliary Signal Groups | | | 6,7 | | | 2,3 | | | 1,8 | | | |
| Lead / Lag | Lead | - | - | Lead | - | - | Lead | - | - | Lead | - | - |

**Movement, Approach, & Intersection Results**

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| V/C, Movement V/C Ratio | 0.07 | 0.18 | 0.08 | 0.04 | 0.22 | 0.05 | 0.04 | 0.38 | 0.33 | 0.08 | 0.20 | 0.05 |
| Intersection LOS | D | | | | | | | | | | | |
| Intersection V/C | 0.868 | | | | | | | | | | | |

**Intersection Level Of Service Report**
**Intersection 4: 1st Avenue/Santa Clara Street**

| | | | |
|---|---|---|---|
| Control Type: | Signalized | Delay (sec / veh): | - |
| Analysis Method: | ICU 1 | Level Of Service: | A |
| Analysis Period: | 1 hour | Volume to Capacity (v/c): | 0.415 |

**Intersection Setup**

| Name | 1st Avenue | | | 1st Avenue | | | Santa Clara Street | | | Santa Clara Street | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Approach | Northbound | | | Southbound | | | Eastbound | | | Westbound | | |
| Lane Configuration | | | | | | | | | | | | |
| Turning Movement | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right |
| Lane Width [ft] | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 |
| No. of Lanes in Entry Pocket | 1 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 0 |
| Entry Pocket Length [ft] | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 |
| No. of Lanes in Exit Pocket | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Exit Pocket Length [ft] | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Speed [mph] | 30.00 | | | 30.00 | | | 30.00 | | | 30.00 | | |
| Grade [%] | 0.00 | | | 0.00 | | | 0.00 | | | 0.00 | | |
| Crosswalk | Yes | | | Yes | | | Yes | | | Yes | | |

**Volumes**

| Name | 1st Avenue | | | 1st Avenue | | | Santa Clara Street | | | Santa Clara Street | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Base Volume Input [veh/h] | 27 | 104 | 36 | 7 | 101 | 39 | 24 | 182 | 33 | 16 | 117 | 10 |
| Base Volume Adjustment Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Heavy Vehicles Percentage [%] | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 |
| Growth Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| In-Process Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Site-Generated Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Diverted Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Pass-by Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Existing Site Adjustment Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Other Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Hourly Volume [veh/h] | 27 | 104 | 36 | 7 | 101 | 39 | 24 | 182 | 33 | 16 | 117 | 10 |
| Peak Hour Factor | 0.8600 | 0.8600 | 0.8600 | 0.8600 | 0.8600 | 0.8600 | 0.8600 | 0.8600 | 0.8600 | 0.8600 | 0.8600 | 0.8600 |
| Other Adjustment Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Total 15-Minute Volume [veh/h] | 8 | 30 | 10 | 2 | 29 | 11 | 7 | 53 | 10 | 5 | 34 | 3 |
| Total Analysis Volume [veh/h] | 31 | 121 | 42 | 8 | 117 | 45 | 28 | 212 | 38 | 19 | 136 | 12 |
| Pedestrian Volume [ped/h] | 0 | | | 0 | | | 0 | | | 0 | | |
| Bicycle Volume [bicycles/h] | 0 | | | 0 | | | 0 | | | 0 | | |

**Intersection Settings**

| | |
|---|---|
| Cycle Length [s] | 60 |
| Lost time [s] | 10.00 |

**Phasing & Timing**

| Control Type | Protecte | Permiss | Permiss | Protecte | Permiss | Permiss | Protecte | Permiss | Permiss | Protecte | Permiss | Permiss |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Signal Group | 1 | 6 | 0 | 5 | 2 | 0 | 3 | 8 | 0 | 7 | 4 | 0 |
| Auxiliary Signal Groups | | | | | | | | | | | | |
| Lead / Lag | Lead | - | - | Lead | - | - | Lead | - | - | Lead | - | - |

**Movement, Approach, & Intersection Results**

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| V/C, Movement V/C Ratio | 0.02 | 0.09 | 0.09 | 0.00 | 0.09 | 0.09 | 0.02 | 0.13 | 0.13 | 0.01 | 0.08 | 0.08 |
| Intersection LOS | A | | | | | | | | | | | |
| Intersection V/C | 0.415 | | | | | | | | | | | |

**Intersection Level Of Service Report**
**Intersection 5: 1st Avenue/Wheeler Avenue**

| | | | |
|---|---|---|---|
| Control Type: | Signalized | Delay (sec / veh): | - |
| Analysis Method: | ICU 1 | Level Of Service: | A |
| Analysis Period: | 1 hour | Volume to Capacity (v/c): | 0.407 |

**Intersection Setup**

| Name | 1st Avenue | | | 1st Avenue | | | Wheeler Avenue | | | Wheeler Avenue | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Approach | Northbound | | | Southbound | | | Eastbound | | | Westbound | | |
| Lane Configuration |  | | |  | | |  | | |  | | |
| Turning Movement | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right |
| Lane Width [ft] | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 |
| No. of Lanes in Entry Pocket | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Entry Pocket Length [ft] | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 |
| No. of Lanes in Exit Pocket | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Exit Pocket Length [ft] | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Speed [mph] | 30.00 | | | 30.00 | | | 30.00 | | | 30.00 | | |
| Grade [%] | 0.00 | | | 0.00 | | | 0.00 | | | 0.00 | | |
| Crosswalk | Yes | | | Yes | | | Yes | | | Yes | | |

**Volumes**

| Name | 1st Avenue | | | 1st Avenue | | | Wheeler Avenue | | | Wheeler Avenue | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Base Volume Input [veh/h] | 61 | 129 | 11 | 8 | 112 | 24 | 29 | 5 | 114 | 40 | 17 | 24 |
| Base Volume Adjustment Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Heavy Vehicles Percentage [%] | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 |
| Growth Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| In-Process Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Site-Generated Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Diverted Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Pass-by Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Existing Site Adjustment Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Other Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Hourly Volume [veh/h] | 61 | 129 | 11 | 8 | 112 | 24 | 29 | 5 | 114 | 40 | 17 | 24 |
| Peak Hour Factor | 0.8710 | 0.8710 | 0.8710 | 0.8710 | 0.8710 | 0.8710 | 0.8710 | 0.8710 | 0.8710 | 0.8710 | 0.8710 | 0.8710 |
| Other Adjustment Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Total 15-Minute Volume [veh/h] | 18 | 37 | 3 | 2 | 32 | 7 | 8 | 1 | 33 | 11 | 5 | 7 |
| Total Analysis Volume [veh/h] | 70 | 148 | 13 | 9 | 129 | 28 | 33 | 6 | 131 | 46 | 20 | 28 |
| Pedestrian Volume [ped/h] | 0 | | | 0 | | | 0 | | | 0 | | |
| Bicycle Volume [bicycles/h] | 0 | | | 0 | | | 0 | | | 0 | | |

**Intersection Settings**

| | |
|---|---|
| Cycle Length [s] | 60 |
| Lost time [s] | 10.00 |

**Phasing & Timing**

| Control Type | Permiss | Permiss | Permiss | Permiss | Permiss | Permiss | Permiss | Permiss | Permiss | Permiss | Permiss | Permiss |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Signal Group | 0 | 6 | 0 | 0 | 2 | 0 | 0 | 8 | 0 | 0 | 4 | 0 |
| Auxiliary Signal Groups | | | | | | | | | | | | |
| Lead / Lag | - | - | - | - | - | - | - | - | - | - | - | - |

**Movement, Approach, & Intersection Results**

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| V/C, Movement V/C Ratio | 0.04 | 0.09 | 0.09 | 0.01 | 0.09 | 0.09 | 0.02 | 0.09 | 0.09 | 0.03 | 0.05 | 0.05 |
| Intersection LOS | A | | | | | | | | | | | |
| Intersection V/C | 0.407 | | | | | | | | | | | |

**Intersection Level Of Service Report**
**Intersection 6: 1st Avenue/Huntington Drive**

| | | | |
|---|---|---|---|
| Control Type: | Signalized | Delay (sec / veh): | - |
| Analysis Method: | ICU 1 | Level Of Service: | C |
| Analysis Period: | 1 hour | Volume to Capacity (v/c): | 0.758 |

**Intersection Setup**

| Name | 1st Avenue | | | 1st Avenue | | | Huntington Drive | | | Huntington Drive | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Approach | Northbound | | | Southbound | | | Eastbound | | | Westbound | | |
| Lane Configuration | | | | | | | | | | | | |
| Turning Movement | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right |
| Lane Width [ft] | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 |
| No. of Lanes in Entry Pocket | 1 | 0 | 1 | 1 | 0 | 1 | 1 | 0 | 0 | 1 | 0 | 0 |
| Entry Pocket Length [ft] | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 |
| No. of Lanes in Exit Pocket | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 |
| Exit Pocket Length [ft] | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 100.00 | 0.00 | 0.00 | 100.00 |
| Speed [mph] | 30.00 | | | 30.00 | | | 30.00 | | | 30.00 | | |
| Grade [%] | 0.00 | | | 0.00 | | | 0.00 | | | 0.00 | | |
| Crosswalk | Yes | | | Yes | | | Yes | | | Yes | | |

**Volumes**

| Name | 1st Avenue | | | 1st Avenue | | | Huntington Drive | | | Huntington Drive | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Base Volume Input [veh/h] | 44 | 104 | 45 | 111 | 181 | 75 | 39 | 1336 | 79 | 102 | 736 | 62 |
| Base Volume Adjustment Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Heavy Vehicles Percentage [%] | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 |
| Growth Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| In-Process Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Site-Generated Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Diverted Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Pass-by Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Existing Site Adjustment Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Other Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Hourly Volume [veh/h] | 44 | 104 | 45 | 111 | 181 | 75 | 39 | 1336 | 79 | 102 | 736 | 62 |
| Peak Hour Factor | 0.9600 | 0.9600 | 0.9600 | 0.9600 | 0.9600 | 0.9600 | 0.9600 | 0.9600 | 0.9600 | 0.9600 | 0.9600 | 0.9600 |
| Other Adjustment Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Total 15-Minute Volume [veh/h] | 11 | 27 | 12 | 29 | 47 | 20 | 10 | 348 | 21 | 27 | 192 | 16 |
| Total Analysis Volume [veh/h] | 46 | 108 | 47 | 116 | 189 | 78 | 41 | 1392 | 82 | 106 | 767 | 65 |
| Pedestrian Volume [ped/h] | 0 | | | 0 | | | 0 | | | 0 | | |
| Bicycle Volume [bicycles/h] | 0 | | | 0 | | | 0 | | | 0 | | |

**Intersection Settings**

| | |
|---|---|
| Cycle Length [s] | 90 |
| Lost time [s] | 10.00 |

**Phasing & Timing**

| Control Type | ProtPer | Permiss | Permiss | ProtPer | Permiss | Permiss | ProtPer | Permiss | Permiss | ProtPer | Permiss | Permiss |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Signal Group | 1 | 6 | 0 | 5 | 2 | 0 | 3 | 8 | 0 | 7 | 4 | 0 |
| Auxiliary Signal Groups | | | | | | | | | | | | |
| Lead / Lag | Lead | - | - | Lead | - | - | Lead | - | - | Lead | - | - |

**Movement, Approach, & Intersection Results**

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| V/C, Movement V/C Ratio | 0.03 | 0.07 | 0.03 | 0.07 | 0.11 | 0.05 | 0.02 | 0.44 | 0.44 | 0.06 | 0.25 | 0.25 |
| Intersection LOS | C | | | | | | | | | | | |
| Intersection V/C | 0.758 | | | | | | | | | | | |

Vistro File: P:\...\Base_Alexan Arcadia_2_wCumu.vistro
Report File: P:\...\Existing + Project AM.pdf
Scenario 3 Existing plus Project
9/23/2021

**Intersection Analysis Summary**

| ID | Intersection Name | Control Type | Method | Worst Mvmt | V/C | Delay (s/veh) | LOS |
|---|---|---|---|---|---|---|---|
| 1 | Santa Anita Avenue/Santa Clara Street | Signalized | ICU 1 | NB Thru | 0.487 | - | A |
| 2 | Santa Anita Avenue/Wheeler Avenue | Two-way stop | HCM 6th Edition | WB Left | 0.148 | 27.0 | D |
| 3 | Santa Anita Avenue/Huntington Drive | Signalized | ICU 1 | WB Thru | 0.830 | - | D |
| 4 | 1st Avenue/Santa Clara Street | Signalized | ICU 1 | WB Thru | 0.328 | - | A |
| 5 | 1st Avenue/Wheeler Avenue | Signalized | ICU 1 | NB Thru | 0.311 | - | A |
| 6 | 1st Avenue/Huntington Drive | Signalized | ICU 1 | WB Thru | 0.624 | - | B |

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. For all other control types, they are taken for the whole intersection.

**Intersection Level Of Service Report**
**Intersection 1: Santa Anita Avenue/Santa Clara Street**

| | | | |
|---|---|---|---|
| Control Type: | Signalized | Delay (sec / veh): | - |
| Analysis Method: | ICU 1 | Level Of Service: | A |
| Analysis Period: | 1 hour | Volume to Capacity (v/c): | 0.487 |

**Intersection Setup**

| Name | Santa Anita Avenue | | | Santa Anita Avenue | | | Santa Clara Street | | | Santa Clara Street | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Approach | Northbound | | | Southbound | | | Eastbound | | | Westbound | | |
| Lane Configuration |  | | |  | | |  | | |  | | |
| Turning Movement | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right |
| Lane Width [ft] | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 |
| No. of Lanes in Entry Pocket | 1 | 0 | 1 | 1 | 0 | 1 | 1 | 0 | 0 | 1 | 0 | 1 |
| Entry Pocket Length [ft] | 100.00 | 100.00 | 100.00 | 90.00 | 100.00 | 70.00 | 115.00 | 100.00 | 100.00 | 50.00 | 100.00 | 100.00 |
| No. of Lanes in Exit Pocket | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Exit Pocket Length [ft] | 0.00 | 0.00 | 100.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Speed [mph] | 30.00 | | | 30.00 | | | 30.00 | | | 30.00 | | |
| Grade [%] | 0.00 | | | 0.00 | | | 0.00 | | | 0.00 | | |
| Crosswalk | Yes | | | Yes | | | Yes | | | Yes | | |

**Volumes**

| Name | Santa Anita Avenue | | | Santa Anita Avenue | | | Santa Clara Street | | | Santa Clara Street | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Base Volume Input [veh/h] | 39 | 628 | 44 | 66 | 632 | 240 | 173 | 83 | 35 | 47 | 104 | 69 |
| Base Volume Adjustment Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Heavy Vehicles Percentage [%] | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 |
| Growth Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| In-Process Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Site-Generated Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Diverted Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Pass-by Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Existing Site Adjustment Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Other Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Hourly Volume [veh/h] | 39 | 628 | 44 | 66 | 632 | 240 | 173 | 83 | 35 | 47 | 104 | 69 |
| Peak Hour Factor | 0.9620 | 0.9620 | 0.9620 | 0.9620 | 0.9620 | 0.9620 | 0.9620 | 0.9620 | 0.9620 | 0.9620 | 0.9620 | 0.9620 |
| Other Adjustment Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Total 15-Minute Volume [veh/h] | 10 | 163 | 11 | 17 | 164 | 62 | 45 | 22 | 9 | 12 | 27 | 18 |
| Total Analysis Volume [veh/h] | 41 | 653 | 46 | 69 | 657 | 249 | 180 | 86 | 36 | 49 | 108 | 72 |
| Pedestrian Volume [ped/h] | 0 | | | 0 | | | 0 | | | 0 | | |
| Bicycle Volume [bicycles/h] | 0 | | | 0 | | | 0 | | | 0 | | |

**Intersection Settings**

| | |
|---|---|
| Cycle Length [s] | 90 |
| Lost time [s] | 10.00 |

**Phasing & Timing**

| Control Type | ProtPer | Permiss | Permiss | ProtPer | Permiss | Overlap | Protecte | Permiss | Permiss | Protecte | Permiss | Permiss |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Signal Group | 1 | 6 | 0 | 5 | 2 | 2 | 3 | 8 | 0 | 7 | 4 | 0 |
| Auxiliary Signal Groups | | | | | | 2,3 | | | | | | |
| Lead / Lag | Lead | - | - | Lead | - | - | Lead | - | - | Lead | - | - |

**Movement, Approach, & Intersection Results**

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| V/C, Movement V/C Ratio | 0.02 | 0.21 | 0.21 | 0.04 | 0.20 | 0.09 | 0.06 | 0.07 | 0.07 | 0.03 | 0.07 | 0.04 |
| Intersection LOS | A | | | | | | | | | | | |
| Intersection V/C | 0.487 | | | | | | | | | | | |

**Intersection Level Of Service Report**
**Intersection 2: Santa Anita Avenue/Wheeler Avenue**

| | | | |
|---|---|---|---|
| Control Type: | Two-way stop | Delay (sec / veh): | 27.0 |
| Analysis Method: | HCM 6th Edition | Level Of Service: | D |
| Analysis Period: | 1 hour | Volume to Capacity (v/c): | 0.148 |

**Intersection Setup**

| Name | Santa Anita Avenue | | | | | |
|---|---|---|---|---|---|---|
| Approach | Northbound | | Southbound | | Westbound | |
| Lane Configuration |  | |  | |  | |
| Turning Movement | Thru | Right | Left | Thru | Left | Right |
| Lane Width [ft] | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 |
| No. of Lanes in Entry Pocket | 0 | 0 | 1 | 0 | 0 | 0 |
| Entry Pocket Length [ft] | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 |
| No. of Lanes in Exit Pocket | 0 | 0 | 0 | 0 | 0 | 0 |
| Exit Pocket Length [ft] | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Speed [mph] | 30.00 | | 30.00 | | 30.00 | |
| Grade [%] | 0.00 | | 0.00 | | 0.00 | |
| Crosswalk | No | | No | | Yes | |

**Volumes**

| Name | Santa Anita Avenue | | | | | |
|---|---|---|---|---|---|---|
| Base Volume Input [veh/h] | 674 | 40 | 58 | 605 | 28 | 37 |
| Base Volume Adjustment Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Heavy Vehicles Percentage [%] | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 |
| Growth Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| In-Process Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 |
| Site-Generated Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 |
| Diverted Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 |
| Pass-by Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 |
| Existing Site Adjustment Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 |
| Other Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Hourly Volume [veh/h] | 674 | 40 | 58 | 605 | 28 | 37 |
| Peak Hour Factor | 0.8730 | 0.8730 | 0.8730 | 0.8730 | 0.8730 | 0.8730 |
| Other Adjustment Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Total 15-Minute Volume [veh/h] | 193 | 11 | 17 | 173 | 8 | 11 |
| Total Analysis Volume [veh/h] | 772 | 46 | 66 | 693 | 32 | 42 |
| Pedestrian Volume [ped/h] | 0 | | 0 | | 0 | |

**Intersection Settings**

| | | | |
|---|---|---|---|
| Priority Scheme | Free | Free | Stop |
| Flared Lane | | | No |
| Storage Area [veh] | 0 | 0 | 0 |
| Two-Stage Gap Acceptance | | | No |
| Number of Storage Spaces in Median | 0 | 0 | 0 |

**Movement, Approach, & Intersection Results**

| | | | | | | |
|---|---|---|---|---|---|---|
| V/C, Movement V/C Ratio | 0.01 | 0.00 | 0.07 | 0.01 | 0.15 | 0.06 |
| d_M, Delay for Movement [s/veh] | 0.00 | 0.00 | 9.37 | 0.00 | 26.96 | 13.58 |
| Movement LOS | A | A | A | A | D | B |
| 95th-Percentile Queue Length [veh/ln] | 0.00 | 0.00 | 0.21 | 0.00 | 0.77 | 0.77 |
| 95th-Percentile Queue Length [ft/ln] | 0.00 | 0.00 | 5.28 | 0.00 | 19.31 | 19.31 |
| d_A, Approach Delay [s/veh] | 0.00 | | 0.82 | | 19.34 | |
| Approach LOS | A | | A | | C | |
| d_I, Intersection Delay [s/veh] | 1.25 | | | | | |
| Intersection LOS | D | | | | | |

**Intersection Level Of Service Report**
**Intersection 3: Santa Anita Avenue/Huntington Drive**

| | | | |
|---|---|---|---|
| Control Type: | Signalized | Delay (sec / veh): | - |
| Analysis Method: | ICU 1 | Level Of Service: | D |
| Analysis Period: | 1 hour | Volume to Capacity (v/c): | 0.830 |

**Intersection Setup**

| Name | Santa Anita Avenue | | | Santa Anita Avenue | | | Huntington Drive | | | Huntington Drive | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Approach | Northbound | | | Southbound | | | Eastbound | | | Westbound | | |
| Lane Configuration |  | | |  | | |  | | |  | | |
| Turning Movement | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right |
| Lane Width [ft] | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 |
| No. of Lanes in Entry Pocket | 1 | 0 | 1 | 1 | 0 | 1 | 1 | 0 | 1 | 1 | 0 | 1 |
| Entry Pocket Length [ft] | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 |
| No. of Lanes in Exit Pocket | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 |
| Exit Pocket Length [ft] | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 100.00 | 0.00 | 0.00 | 0.00 |
| Speed [mph] | 30.00 | | | 30.00 | | | 30.00 | | | 30.00 | | |
| Grade [%] | 0.00 | | | 0.00 | | | 0.00 | | | 0.00 | | |
| Crosswalk | Yes | | | Yes | | | Yes | | | Yes | | |

**Volumes**

| Name | Santa Anita Avenue | | | Santa Anita Avenue | | | Huntington Drive | | | Huntington Drive | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Base Volume Input [veh/h] | 482 | 630 | 126 | 68 | 506 | 69 | 42 | 329 | 108 | 80 | 1072 | 90 |
| Base Volume Adjustment Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Heavy Vehicles Percentage [%] | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 |
| Growth Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| In-Process Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Site-Generated Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Diverted Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Pass-by Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Existing Site Adjustment Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Other Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Hourly Volume [veh/h] | 482 | 630 | 126 | 68 | 506 | 69 | 42 | 329 | 108 | 80 | 1072 | 90 |
| Peak Hour Factor | 0.9250 | 0.9250 | 0.9250 | 0.9250 | 0.9250 | 0.9250 | 0.9250 | 0.9250 | 0.9250 | 0.9250 | 0.9250 | 0.9250 |
| Other Adjustment Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Total 15-Minute Volume [veh/h] | 130 | 170 | 34 | 18 | 137 | 19 | 11 | 89 | 29 | 22 | 290 | 24 |
| Total Analysis Volume [veh/h] | 521 | 681 | 136 | 74 | 547 | 75 | 45 | 356 | 117 | 86 | 1159 | 97 |
| Pedestrian Volume [ped/h] | 0 | | | 0 | | | 0 | | | 0 | | |
| Bicycle Volume [bicycles/h] | 0 | | | 0 | | | 0 | | | 0 | | |

**Intersection Settings**

| | |
|---|---|
| Cycle Length [s] | 70 |
| Lost time [s] | 10.00 |

**Phasing & Timing**

| Control Type | Protecte | Permiss | Overlap | Protecte | Permiss | Overlap | ProtPer | Permiss | Overlap | ProtPer | Permiss | Permiss |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Signal Group | 1 | 6 | 6 | 5 | 2 | 2 | 3 | 8 | 8 | 7 | 4 | 0 |
| Auxiliary Signal Groups | | | 6,7 | | | 2,3 | | | 1,8 | | | |
| Lead / Lag | Lead | - | - | Lead | - | - | Lead | - | - | Lead | - | - |

**Movement, Approach, & Intersection Results**

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| V/C, Movement V/C Ratio | 0.17 | 0.20 | 0.08 | 0.02 | 0.16 | 0.04 | 0.03 | 0.10 | 0.00 | 0.05 | 0.34 | 0.06 |
| Intersection LOS | D | | | | | | | | | | | |
| Intersection V/C | 0.830 | | | | | | | | | | | |

**Intersection Level Of Service Report**
**Intersection 4: 1st Avenue/Santa Clara Street**

| | | | |
|---|---|---|---|
| Control Type: | Signalized | Delay (sec / veh): | - |
| Analysis Method: | ICU 1 | Level Of Service: | A |
| Analysis Period: | 1 hour | Volume to Capacity (v/c): | 0.328 |

**Intersection Setup**

| Name | 1st Avenue | | | 1st Avenue | | | Santa Clara Street | | | Santa Clara Street | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Approach | Northbound | | | Southbound | | | Eastbound | | | Westbound | | |
| Lane Configuration | | | | | | | | | | | | |
| Turning Movement | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right |
| Lane Width [ft] | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 |
| No. of Lanes in Entry Pocket | 1 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 0 |
| Entry Pocket Length [ft] | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 |
| No. of Lanes in Exit Pocket | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Exit Pocket Length [ft] | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Speed [mph] | 30.00 | | | 30.00 | | | 30.00 | | | 30.00 | | |
| Grade [%] | 0.00 | | | 0.00 | | | 0.00 | | | 0.00 | | |
| Crosswalk | Yes | | | Yes | | | Yes | | | Yes | | |

**Volumes**

| Name | 1st Avenue | | | 1st Avenue | | | Santa Clara Street | | | Santa Clara Street | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Base Volume Input [veh/h] | 38 | 75 | 9 | 3 | 51 | 30 | 20 | 78 | 37 | 7 | 149 | 8 |
| Base Volume Adjustment Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Heavy Vehicles Percentage [%] | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 |
| Growth Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| In-Process Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Site-Generated Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Diverted Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Pass-by Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Existing Site Adjustment Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Other Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Hourly Volume [veh/h] | 38 | 75 | 9 | 3 | 51 | 30 | 20 | 78 | 37 | 7 | 149 | 8 |
| Peak Hour Factor | 0.9260 | 0.9260 | 0.9260 | 0.9260 | 0.9260 | 0.9260 | 0.9260 | 0.9260 | 0.9260 | 0.9260 | 0.9260 | 0.9260 |
| Other Adjustment Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Total 15-Minute Volume [veh/h] | 10 | 20 | 2 | 1 | 14 | 8 | 5 | 21 | 10 | 2 | 40 | 2 |
| Total Analysis Volume [veh/h] | 41 | 81 | 10 | 3 | 55 | 32 | 22 | 84 | 40 | 8 | 161 | 9 |
| Pedestrian Volume [ped/h] | 0 | | | 0 | | | 0 | | | 0 | | |
| Bicycle Volume [bicycles/h] | 0 | | | 0 | | | 0 | | | 0 | | |

**Intersection Settings**

| | |
|---|---|
| Cycle Length [s] | 70 |
| Lost time [s] | 10.00 |

**Phasing & Timing**

| Control Type | Protecte | Permiss | Permiss | Protecte | Permiss | Permiss | Protecte | Permiss | Permiss | Protecte | Permiss | Permiss |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Signal Group | 1 | 6 | 0 | 5 | 2 | 0 | 3 | 8 | 0 | 7 | 4 | 0 |
| Auxiliary Signal Groups | | | | | | | | | | | | |
| Lead / Lag | Lead | - | - | Lead | - | - | Lead | - | - | Lead | - | - |

**Movement, Approach, & Intersection Results**

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| V/C, Movement V/C Ratio | 0.02 | 0.05 | 0.05 | 0.00 | 0.05 | 0.05 | 0.01 | 0.07 | 0.07 | 0.00 | 0.10 | 0.10 |
| Intersection LOS | A | | | | | | | | | | | |
| Intersection V/C | 0.328 | | | | | | | | | | | |

**Intersection Level Of Service Report**
**Intersection 5: 1st Avenue/Wheeler Avenue**

| | | | |
|---|---|---|---|
| Control Type: | Signalized | Delay (sec / veh): | - |
| Analysis Method: | ICU 1 | Level Of Service: | A |
| Analysis Period: | 1 hour | Volume to Capacity (v/c): | 0.311 |

**Intersection Setup**

| Name | 1st Avenue | | | 1st Avenue | | | Wheeler Avenue | | | Wheeler Avenue | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Approach | Northbound | | | Southbound | | | Eastbound | | | Westbound | | |
| Lane Configuration |  | | |  | | |  | | |  | | |
| Turning Movement | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right |
| Lane Width [ft] | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 |
| No. of Lanes in Entry Pocket | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Entry Pocket Length [ft] | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 |
| No. of Lanes in Exit Pocket | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Exit Pocket Length [ft] | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Speed [mph] | 30.00 | | | 30.00 | | | 30.00 | | | 30.00 | | |
| Grade [%] | 0.00 | | | 0.00 | | | 0.00 | | | 0.00 | | |
| Crosswalk | Yes | | | Yes | | | Yes | | | Yes | | |

**Volumes**

| Name | 1st Avenue | | | 1st Avenue | | | Wheeler Avenue | | | Wheeler Avenue | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Base Volume Input [veh/h] | 81 | 96 | 15 | 8 | 91 | 10 | 6 | 13 | 37 | 14 | 8 | 11 |
| Base Volume Adjustment Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Heavy Vehicles Percentage [%] | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 |
| Growth Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| In-Process Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Site-Generated Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Diverted Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Pass-by Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Existing Site Adjustment Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Other Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Hourly Volume [veh/h] | 81 | 96 | 15 | 8 | 91 | 10 | 6 | 13 | 37 | 14 | 8 | 11 |
| Peak Hour Factor | 0.7930 | 0.7930 | 0.7930 | 0.7930 | 0.7930 | 0.7930 | 0.7930 | 0.7930 | 0.7930 | 0.7930 | 0.7930 | 0.7930 |
| Other Adjustment Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Total 15-Minute Volume [veh/h] | 26 | 30 | 5 | 3 | 29 | 3 | 2 | 4 | 12 | 4 | 3 | 3 |
| Total Analysis Volume [veh/h] | 102 | 121 | 19 | 10 | 115 | 13 | 8 | 16 | 47 | 18 | 10 | 14 |
| Pedestrian Volume [ped/h] | 0 | | | 0 | | | 0 | | | 0 | | |
| Bicycle Volume [bicycles/h] | 0 | | | 0 | | | 0 | | | 0 | | |

**Intersection Settings**

| | |
|---|---|
| Cycle Length [s] | 65 |
| Lost time [s] | 10.00 |

**Phasing & Timing**

| Control Type | Permiss | Permiss | Permiss | Permiss | Permiss | Permiss | Permiss | Permiss | Permiss | Permiss | Permiss | Permiss |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Signal Group | 0 | 6 | 0 | 0 | 2 | 0 | 0 | 8 | 0 | 0 | 4 | 0 |
| Auxiliary Signal Groups | | | | | | | | | | | | |
| Lead / Lag | - | - | - | - | - | - | - | - | - | - | - | - |

**Movement, Approach, & Intersection Results**

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| V/C, Movement V/C Ratio | 0.05 | 0.07 | 0.07 | 0.01 | 0.06 | 0.06 | 0.00 | 0.04 | 0.04 | 0.01 | 0.02 | 0.02 |
| Intersection LOS | A | | | | | | | | | | | |
| Intersection V/C | 0.311 | | | | | | | | | | | |

**Intersection Level Of Service Report**
**Intersection 6: 1st Avenue/Huntington Drive**

| | | | |
|---|---|---|---|
| Control Type: | Signalized | Delay (sec / veh): | - |
| Analysis Method: | ICU 1 | Level Of Service: | B |
| Analysis Period: | 1 hour | Volume to Capacity (v/c): | 0.624 |

**Intersection Setup**

| Name | 1st Avenue | | | 1st Avenue | | | Huntington Drive | | | Huntington Drive | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Approach | Northbound | | | Southbound | | | Eastbound | | | Westbound | | |
| Lane Configuration |  | | |  | | |  | | |  | | |
| Turning Movement | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right |
| Lane Width [ft] | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 |
| No. of Lanes in Entry Pocket | 1 | 0 | 1 | 1 | 0 | 1 | 1 | 0 | 0 | 1 | 0 | 0 |
| Entry Pocket Length [ft] | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 |
| No. of Lanes in Exit Pocket | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 |
| Exit Pocket Length [ft] | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 100.00 | 0.00 | 0.00 | 100.00 |
| Speed [mph] | 30.00 | | | 30.00 | | | 30.00 | | | 30.00 | | |
| Grade [%] | 0.00 | | | 0.00 | | | 0.00 | | | 0.00 | | |
| Crosswalk | Yes | | | Yes | | | Yes | | | Yes | | |

**Volumes**

| Name | 1st Avenue | | | 1st Avenue | | | Huntington Drive | | | Huntington Drive | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Base Volume Input [veh/h] | 65 | 96 | 64 | 52 | 76 | 25 | 47 | 432 | 37 | 53 | 1141 | 111 |
| Base Volume Adjustment Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Heavy Vehicles Percentage [%] | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 |
| Growth Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| In-Process Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Site-Generated Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Diverted Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Pass-by Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Existing Site Adjustment Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Other Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Hourly Volume [veh/h] | 65 | 96 | 64 | 52 | 76 | 25 | 47 | 432 | 37 | 53 | 1141 | 111 |
| Peak Hour Factor | 0.9790 | 0.9790 | 0.9790 | 0.9790 | 0.9790 | 0.9790 | 0.9790 | 0.9790 | 0.9790 | 0.9790 | 0.9790 | 0.9790 |
| Other Adjustment Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Total 15-Minute Volume [veh/h] | 17 | 25 | 16 | 13 | 19 | 6 | 12 | 110 | 9 | 14 | 291 | 28 |
| Total Analysis Volume [veh/h] | 66 | 98 | 65 | 53 | 78 | 26 | 48 | 441 | 38 | 54 | 1165 | 113 |
| Pedestrian Volume [ped/h] | 0 | | | 0 | | | 0 | | | 0 | | |
| Bicycle Volume [bicycles/h] | 0 | | | 0 | | | 0 | | | 0 | | |

**Intersection Settings**

| | |
|---|---|
| Cycle Length [s] | 90 |
| Lost time [s] | 10.00 |

**Phasing & Timing**

| Control Type | ProtPer | Permiss | Permiss | ProtPer | Permiss | Permiss | ProtPer | Permiss | Permiss | ProtPer | Permiss | Permiss |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Signal Group | 1 | 6 | 0 | 5 | 2 | 0 | 3 | 8 | 0 | 7 | 4 | 0 |
| Auxiliary Signal Groups | | | | | | | | | | | | |
| Lead / Lag | Lead | - | - | Lead | - | - | Lead | - | - | Lead | - | - |

**Movement, Approach, & Intersection Results**

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| V/C, Movement V/C Ratio | 0.04 | 0.06 | 0.04 | 0.03 | 0.05 | 0.02 | 0.03 | 0.15 | 0.15 | 0.03 | 0.39 | 0.39 |
| Intersection LOS | B | | | | | | | | | | | |
| Intersection V/C | 0.624 | | | | | | | | | | | |

Vistro File: P:\...\Base_Alexan Arcadia_2_wCumu_PM.vistro
Report File: P:\...\Existing + Project PM.pdf
Scenario 3 Existing plus Project
9/23/2021

**Intersection Analysis Summary**

| ID | Intersection Name | Control Type | Method | Worst Mvmt | V/C | Delay (s/veh) | LOS |
|---|---|---|---|---|---|---|---|
| 1 | Santa Anita Avenue/Santa Clara Street | Signalized | ICU 1 | SB Thru | 0.608 | - | B |
| 2 | Santa Anita Avenue/Wheeler Avenue | Two-way stop | HCM 6th Edition | WB Left | 0.273 | 36.6 | E |
| 3 | Santa Anita Avenue/Huntington Drive | Signalized | ICU 1 | EB Thru | 0.872 | - | D |
| 4 | 1st Avenue/Santa Clara Street | Signalized | ICU 1 | EB Thru | 0.443 | - | A |
| 5 | 1st Avenue/Wheeler Avenue | Signalized | ICU 1 | EB Thru | 0.428 | - | A |
| 6 | 1st Avenue/Huntington Drive | Signalized | ICU 1 | EB Thru | 0.765 | - | C |

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. For all other control types, they are taken for the whole intersection.

**Intersection Level Of Service Report**
**Intersection 1: Santa Anita Avenue/Santa Clara Street**

| | | | |
|---|---|---|---|
| Control Type: | Signalized | Delay (sec / veh): | - |
| Analysis Method: | ICU 1 | Level Of Service: | B |
| Analysis Period: | 1 hour | Volume to Capacity (v/c): | 0.608 |

**Intersection Setup**

| Name | Santa Anita Avenue | | | Santa Anita Avenue | | | Santa Clara Street | | | Santa Clara Street | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Approach | Northbound | | | Southbound | | | Eastbound | | | Westbound | | |
| Lane Configuration |  | | |  | | |  | | |  | | |
| Turning Movement | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right |
| Lane Width [ft] | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 |
| No. of Lanes in Entry Pocket | 1 | 0 | 1 | 1 | 0 | 1 | 1 | 0 | 0 | 1 | 0 | 1 |
| Entry Pocket Length [ft] | 100.00 | 100.00 | 100.00 | 90.00 | 100.00 | 70.00 | 115.00 | 100.00 | 100.00 | 50.00 | 100.00 | 100.00 |
| No. of Lanes in Exit Pocket | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Exit Pocket Length [ft] | 0.00 | 0.00 | 100.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Speed [mph] | 30.00 | | | 30.00 | | | 30.00 | | | 30.00 | | |
| Grade [%] | 0.00 | | | 0.00 | | | 0.00 | | | 0.00 | | |
| Crosswalk | Yes | | | Yes | | | Yes | | | Yes | | |

**Volumes**

| Name | Santa Anita Avenue | | | Santa Anita Avenue | | | Santa Clara Street | | | Santa Clara Street | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Base Volume Input [veh/h] | 26 | 653 | 58 | 137 | 840 | 251 | 327 | 154 | 44 | 89 | 121 | 76 |
| Base Volume Adjustment Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Heavy Vehicles Percentage [%] | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 |
| Growth Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| In-Process Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Site-Generated Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Diverted Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Pass-by Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Existing Site Adjustment Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Other Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Hourly Volume [veh/h] | 26 | 653 | 58 | 137 | 840 | 251 | 327 | 154 | 44 | 89 | 121 | 76 |
| Peak Hour Factor | 0.9380 | 0.9380 | 0.9380 | 0.9380 | 0.9380 | 0.9380 | 0.9380 | 0.9380 | 0.9380 | 0.9380 | 0.9380 | 0.9380 |
| Other Adjustment Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Total 15-Minute Volume [veh/h] | 7 | 174 | 15 | 37 | 224 | 67 | 87 | 41 | 12 | 24 | 32 | 20 |
| Total Analysis Volume [veh/h] | 28 | 696 | 62 | 146 | 896 | 268 | 349 | 164 | 47 | 95 | 129 | 81 |
| Pedestrian Volume [ped/h] | 0 | | | 0 | | | 0 | | | 0 | | |
| Bicycle Volume [bicycles/h] | 0 | | | 0 | | | 0 | | | 0 | | |

**Intersection Settings**

| | |
|---|---|
| Cycle Length [s] | 90 |
| Lost time [s] | 10.00 |

**Phasing & Timing**

| Control Type | ProtPer | Permiss | Permiss | ProtPer | Permiss | Overlap | Protecte | Permiss | Permiss | Protecte | Permiss | Permiss |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Signal Group | 1 | 6 | 0 | 5 | 2 | 2 | 3 | 8 | 0 | 7 | 4 | 0 |
| Auxiliary Signal Groups | | | | | | 2,3 | | | | | | |
| Lead / Lag | Lead | - | - | Lead | - | - | Lead | - | - | Lead | - | - |

**Movement, Approach, & Intersection Results**

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| V/C, Movement V/C Ratio | 0.02 | 0.22 | 0.22 | 0.09 | 0.26 | 0.04 | 0.11 | 0.12 | 0.12 | 0.06 | 0.08 | 0.05 |
| Intersection LOS | B | | | | | | | | | | | |
| Intersection V/C | 0.608 | | | | | | | | | | | |

**Intersection Level Of Service Report**
**Intersection 2: Santa Anita Avenue/Wheeler Avenue**

| | | | |
|---|---|---|---|
| Control Type: | Two-way stop | Delay (sec / veh): | 36.6 |
| Analysis Method: | HCM 6th Edition | Level Of Service: | E |
| Analysis Period: | 1 hour | Volume to Capacity (v/c): | 0.273 |

**Intersection Setup**

| Name | Santa Anita Avenue | | | | | |
|---|---|---|---|---|---|---|
| Approach | Northbound | | Southbound | | Westbound | |
| Lane Configuration |  | |  | |  | |
| Turning Movement | Thru | Right | Left | Thru | Left | Right |
| Lane Width [ft] | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 |
| No. of Lanes in Entry Pocket | 0 | 0 | 1 | 0 | 0 | 0 |
| Entry Pocket Length [ft] | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 |
| No. of Lanes in Exit Pocket | 0 | 0 | 0 | 0 | 0 | 0 |
| Exit Pocket Length [ft] | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Speed [mph] | 30.00 | | 30.00 | | 30.00 | |
| Grade [%] | 0.00 | | 0.00 | | 0.00 | |
| Crosswalk | No | | No | | Yes | |

**Volumes**

| Name | Santa Anita Avenue | | | | | |
|---|---|---|---|---|---|---|
| Base Volume Input [veh/h] | 670 | 62 | 67 | 847 | 41 | 62 |
| Base Volume Adjustment Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Heavy Vehicles Percentage [%] | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 |
| Growth Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| In-Process Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 |
| Site-Generated Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 |
| Diverted Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 |
| Pass-by Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 |
| Existing Site Adjustment Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 |
| Other Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Hourly Volume [veh/h] | 670 | 62 | 67 | 847 | 41 | 62 |
| Peak Hour Factor | 0.9470 | 0.9470 | 0.9470 | 0.9470 | 0.9470 | 0.9470 |
| Other Adjustment Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Total 15-Minute Volume [veh/h] | 177 | 16 | 18 | 224 | 11 | 16 |
| Total Analysis Volume [veh/h] | 707 | 65 | 71 | 894 | 43 | 65 |
| Pedestrian Volume [ped/h] | 0 | | 0 | | 0 | |

**Intersection Settings**

| | | | |
|---|---|---|---|
| Priority Scheme | Free | Free | Stop |
| Flared Lane | | | No |
| Storage Area [veh] | 0 | 0 | 0 |
| Two-Stage Gap Acceptance | | | No |
| Number of Storage Spaces in Median | 0 | 0 | 0 |

**Movement, Approach, & Intersection Results**

| | | | | | | |
|---|---|---|---|---|---|---|
| V/C, Movement V/C Ratio | 0.01 | 0.00 | 0.08 | 0.01 | 0.27 | 0.10 |
| d_M, Delay for Movement [s/veh] | 0.00 | 0.00 | 9.49 | 0.00 | 36.59 | 18.32 |
| Movement LOS | A | A | A | A | E | C |
| 95th-Percentile Queue Length [veh/ln] | 0.00 | 0.00 | 0.25 | 0.00 | 1.74 | 1.74 |
| 95th-Percentile Queue Length [ft/ln] | 0.00 | 0.00 | 6.27 | 0.00 | 43.43 | 43.43 |
| d_A, Approach Delay [s/veh] | 0.00 | | 0.70 | | 25.59 | |
| Approach LOS | A | | A | | D | |
| d_I, Intersection Delay [s/veh] | 1.87 | | | | | |
| Intersection LOS | E | | | | | |

**Intersection Level Of Service Report**
**Intersection 3: Santa Anita Avenue/Huntington Drive**

| | | | |
|---|---|---|---|
| Control Type: | Signalized | Delay (sec / veh): | - |
| Analysis Method: | ICU 1 | Level Of Service: | D |
| Analysis Period: | 1 hour | Volume to Capacity (v/c): | 0.872 |

**Intersection Setup**

| Name | Santa Anita Avenue | | | Santa Anita Avenue | | | Huntington Drive | | | Huntington Drive | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Approach | Northbound | | | Southbound | | | Eastbound | | | Westbound | | |
| Lane Configuration |  | | |  | | |  | | |  | | |
| Turning Movement | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right |
| Lane Width [ft] | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 |
| No. of Lanes in Entry Pocket | 1 | 0 | 1 | 1 | 0 | 1 | 1 | 0 | 1 | 1 | 0 | 1 |
| Entry Pocket Length [ft] | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 |
| No. of Lanes in Exit Pocket | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 |
| Exit Pocket Length [ft] | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 100.00 | 0.00 | 0.00 | 0.00 |
| Speed [mph] | 30.00 | | | 30.00 | | | 30.00 | | | 30.00 | | |
| Grade [%] | 0.00 | | | 0.00 | | | 0.00 | | | 0.00 | | |
| Crosswalk | Yes | | | Yes | | | Yes | | | Yes | | |

**Volumes**

| Name | Santa Anita Avenue | | | Santa Anita Avenue | | | Huntington Drive | | | Huntington Drive | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Base Volume Input [veh/h] | 210 | 601 | 122 | 128 | 723 | 85 | 71 | 1214 | 647 | 132 | 628 | 72 |
| Base Volume Adjustment Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Heavy Vehicles Percentage [%] | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 |
| Growth Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| In-Process Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Site-Generated Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Diverted Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Pass-by Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Existing Site Adjustment Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Other Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Hourly Volume [veh/h] | 210 | 601 | 122 | 128 | 723 | 85 | 71 | 1214 | 647 | 132 | 628 | 72 |
| Peak Hour Factor | 0.9600 | 0.9600 | 0.9600 | 0.9600 | 0.9600 | 0.9600 | 0.9600 | 0.9600 | 0.9600 | 0.9600 | 0.9600 | 0.9600 |
| Other Adjustment Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Total 15-Minute Volume [veh/h] | 55 | 157 | 32 | 33 | 188 | 22 | 18 | 316 | 168 | 34 | 164 | 19 |
| Total Analysis Volume [veh/h] | 219 | 626 | 127 | 133 | 753 | 89 | 74 | 1265 | 674 | 138 | 654 | 75 |
| Pedestrian Volume [ped/h] | 0 | | | 0 | | | 0 | | | 0 | | |
| Bicycle Volume [bicycles/h] | 0 | | | 0 | | | 0 | | | 0 | | |

**Intersection Settings**

| | |
|---|---|
| Cycle Length [s] | 90 |
| Lost time [s] | 10.00 |

**Phasing & Timing**

| Control Type | Protecte | Permiss | Overlap | Protecte | Permiss | Overlap | ProtPer | Permiss | Overlap | ProtPer | Permiss | Permiss |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Signal Group | 1 | 6 | 6 | 5 | 2 | 2 | 3 | 8 | 8 | 7 | 4 | 0 |
| Auxiliary Signal Groups | | | 6,7 | | | 2,3 | | | 1,8 | | | |
| Lead / Lag | Lead | - | - | Lead | - | - | Lead | - | - | Lead | - | - |

**Movement, Approach, & Intersection Results**

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| V/C, Movement V/C Ratio | 0.07 | 0.19 | 0.08 | 0.04 | 0.23 | 0.05 | 0.04 | 0.38 | 0.33 | 0.08 | 0.20 | 0.05 |
| Intersection LOS | D | | | | | | | | | | | |
| Intersection V/C | 0.872 | | | | | | | | | | | |

**Intersection Level Of Service Report**
**Intersection 4: 1st Avenue/Santa Clara Street**

| | | | |
|---|---|---|---|
| Control Type: | Signalized | Delay (sec / veh): | - |
| Analysis Method: | ICU 1 | Level Of Service: | A |
| Analysis Period: | 1 hour | Volume to Capacity (v/c): | 0.443 |

**Intersection Setup**

| Name | 1st Avenue | | | 1st Avenue | | | Santa Clara Street | | | Santa Clara Street | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Approach | Northbound | | | Southbound | | | Eastbound | | | Westbound | | |
| Lane Configuration | | | | | | | | | | | | |
| Turning Movement | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right |
| Lane Width [ft] | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 |
| No. of Lanes in Entry Pocket | 1 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 0 |
| Entry Pocket Length [ft] | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 |
| No. of Lanes in Exit Pocket | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Exit Pocket Length [ft] | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Speed [mph] | 30.00 | | | 30.00 | | | 30.00 | | | 30.00 | | |
| Grade [%] | 0.00 | | | 0.00 | | | 0.00 | | | 0.00 | | |
| Crosswalk | Yes | | | Yes | | | Yes | | | Yes | | |

**Volumes**

| Name | 1st Avenue | | | 1st Avenue | | | Santa Clara Street | | | Santa Clara Street | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Base Volume Input [veh/h] | 46 | 105 | 38 | 7 | 103 | 43 | 27 | 190 | 41 | 19 | 125 | 10 |
| Base Volume Adjustment Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Heavy Vehicles Percentage [%] | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 |
| Growth Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| In-Process Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Site-Generated Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Diverted Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Pass-by Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Existing Site Adjustment Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Other Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Hourly Volume [veh/h] | 46 | 105 | 38 | 7 | 103 | 43 | 27 | 190 | 41 | 19 | 125 | 10 |
| Peak Hour Factor | 0.8600 | 0.8600 | 0.8600 | 0.8600 | 0.8600 | 0.8600 | 0.8600 | 0.8600 | 0.8600 | 0.8600 | 0.8600 | 0.8600 |
| Other Adjustment Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Total 15-Minute Volume [veh/h] | 13 | 31 | 11 | 2 | 30 | 13 | 8 | 55 | 12 | 6 | 36 | 3 |
| Total Analysis Volume [veh/h] | 53 | 122 | 44 | 8 | 120 | 50 | 31 | 221 | 48 | 22 | 145 | 12 |
| Pedestrian Volume [ped/h] | 0 | | | 0 | | | 0 | | | 0 | | |
| Bicycle Volume [bicycles/h] | 0 | | | 0 | | | 0 | | | 0 | | |

**Intersection Settings**

| | |
|---|---|
| Cycle Length [s] | 60 |
| Lost time [s] | 10.00 |

**Phasing & Timing**

| Control Type | Protecte | Permiss | Permiss | Protecte | Permiss | Permiss | Protecte | Permiss | Permiss | Protecte | Permiss | Permiss |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Signal Group | 1 | 6 | 0 | 5 | 2 | 0 | 3 | 8 | 0 | 7 | 4 | 0 |
| Auxiliary Signal Groups | | | | | | | | | | | | |
| Lead / Lag | Lead | - | - | Lead | - | - | Lead | - | - | Lead | - | - |

**Movement, Approach, & Intersection Results**

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| V/C, Movement V/C Ratio | 0.03 | 0.09 | 0.09 | 0.00 | 0.09 | 0.09 | 0.02 | 0.14 | 0.14 | 0.01 | 0.08 | 0.08 |
| Intersection LOS | A | | | | | | | | | | | |
| Intersection V/C | 0.443 | | | | | | | | | | | |

**Intersection Level Of Service Report**
**Intersection 5: 1st Avenue/Wheeler Avenue**

| | | | |
|---|---|---|---|
| Control Type: | Signalized | Delay (sec / veh): | - |
| Analysis Method: | ICU 1 | Level Of Service: | A |
| Analysis Period: | 1 hour | Volume to Capacity (v/c): | 0.428 |

**Intersection Setup**

| Name | 1st Avenue | | | 1st Avenue | | | Wheeler Avenue | | | Wheeler Avenue | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Approach | Northbound | | | Southbound | | | Eastbound | | | Westbound | | |
| Lane Configuration |  | | |  | | |  | | |  | | |
| Turning Movement | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right |
| Lane Width [ft] | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 |
| No. of Lanes in Entry Pocket | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Entry Pocket Length [ft] | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 |
| No. of Lanes in Exit Pocket | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Exit Pocket Length [ft] | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Speed [mph] | 30.00 | | | 30.00 | | | 30.00 | | | 30.00 | | |
| Grade [%] | 0.00 | | | 0.00 | | | 0.00 | | | 0.00 | | |
| Crosswalk | Yes | | | Yes | | | Yes | | | Yes | | |

**Volumes**

| Name | 1st Avenue | | | 1st Avenue | | | Wheeler Avenue | | | Wheeler Avenue | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Base Volume Input [veh/h] | 67 | 148 | 11 | 8 | 120 | 29 | 31 | 5 | 126 | 40 | 17 | 24 |
| Base Volume Adjustment Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Heavy Vehicles Percentage [%] | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 |
| Growth Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| In-Process Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Site-Generated Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Diverted Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Pass-by Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Existing Site Adjustment Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Other Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Hourly Volume [veh/h] | 67 | 148 | 11 | 8 | 120 | 29 | 31 | 5 | 126 | 40 | 17 | 24 |
| Peak Hour Factor | 0.8710 | 0.8710 | 0.8710 | 0.8710 | 0.8710 | 0.8710 | 0.8710 | 0.8710 | 0.8710 | 0.8710 | 0.8710 | 0.8710 |
| Other Adjustment Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Total 15-Minute Volume [veh/h] | 19 | 42 | 3 | 2 | 34 | 8 | 9 | 1 | 36 | 11 | 5 | 7 |
| Total Analysis Volume [veh/h] | 77 | 170 | 13 | 9 | 138 | 33 | 36 | 6 | 145 | 46 | 20 | 28 |
| Pedestrian Volume [ped/h] | 0 | | | 0 | | | 0 | | | 0 | | |
| Bicycle Volume [bicycles/h] | 0 | | | 0 | | | 0 | | | 0 | | |

**Intersection Settings**

| | |
|---|---|
| Cycle Length [s] | 60 |
| Lost time [s] | 10.00 |

**Phasing & Timing**

| Control Type | Permiss | Permiss | Permiss | Permiss | Permiss | Permiss | Permiss | Permiss | Permiss | Permiss | Permiss | Permiss |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Signal Group | 0 | 6 | 0 | 0 | 2 | 0 | 0 | 8 | 0 | 0 | 4 | 0 |
| Auxiliary Signal Groups | | | | | | | | | | | | |
| Lead / Lag | - | - | - | - | - | - | - | - | - | - | - | - |

**Movement, Approach, & Intersection Results**

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| V/C, Movement V/C Ratio | 0.04 | 0.10 | 0.10 | 0.01 | 0.09 | 0.09 | 0.02 | 0.10 | 0.10 | 0.03 | 0.05 | 0.05 |
| Intersection LOS | A | | | | | | | | | | | |
| Intersection V/C | 0.428 | | | | | | | | | | | |

**Intersection Level Of Service Report**
**Intersection 6: 1st Avenue/Huntington Drive**

| | | | |
|---|---|---|---|
| Control Type: | Signalized | Delay (sec / veh): | - |
| Analysis Method: | ICU 1 | Level Of Service: | C |
| Analysis Period: | 1 hour | Volume to Capacity (v/c): | 0.765 |

**Intersection Setup**

| Name | 1st Avenue | | | 1st Avenue | | | Huntington Drive | | | Huntington Drive | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Approach | Northbound | | | Southbound | | | Eastbound | | | Westbound | | |
| Lane Configuration | | | | | | | | | | | | |
| Turning Movement | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right |
| Lane Width [ft] | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 |
| No. of Lanes in Entry Pocket | 1 | 0 | 1 | 1 | 0 | 1 | 1 | 0 | 0 | 1 | 0 | 0 |
| Entry Pocket Length [ft] | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 |
| No. of Lanes in Exit Pocket | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 |
| Exit Pocket Length [ft] | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 100.00 | 0.00 | 0.00 | 100.00 |
| Speed [mph] | 30.00 | | | 30.00 | | | 30.00 | | | 30.00 | | |
| Grade [%] | 0.00 | | | 0.00 | | | 0.00 | | | 0.00 | | |
| Crosswalk | Yes | | | Yes | | | Yes | | | Yes | | |

**Volumes**

| Name | 1st Avenue | | | 1st Avenue | | | Huntington Drive | | | Huntington Drive | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Base Volume Input [veh/h] | 44 | 110 | 45 | 127 | 185 | 75 | 39 | 1336 | 79 | 102 | 736 | 81 |
| Base Volume Adjustment Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Heavy Vehicles Percentage [%] | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 |
| Growth Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| In-Process Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Site-Generated Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Diverted Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Pass-by Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Existing Site Adjustment Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Other Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Hourly Volume [veh/h] | 44 | 110 | 45 | 127 | 185 | 75 | 39 | 1336 | 79 | 102 | 736 | 81 |
| Peak Hour Factor | 0.9600 | 0.9600 | 0.9600 | 0.9600 | 0.9600 | 0.9600 | 0.9600 | 0.9600 | 0.9600 | 0.9600 | 0.9600 | 0.9600 |
| Other Adjustment Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Total 15-Minute Volume [veh/h] | 11 | 29 | 12 | 33 | 48 | 20 | 10 | 348 | 21 | 27 | 192 | 21 |
| Total Analysis Volume [veh/h] | 46 | 115 | 47 | 132 | 193 | 78 | 41 | 1392 | 82 | 106 | 767 | 84 |
| Pedestrian Volume [ped/h] | 0 | | | 0 | | | 0 | | | 0 | | |
| Bicycle Volume [bicycles/h] | 0 | | | 0 | | | 0 | | | 0 | | |

**Intersection Settings**

| | |
|---|---|
| Cycle Length [s] | 90 |
| Lost time [s] | 10.00 |

**Phasing & Timing**

| Control Type | ProtPer | Permiss | Permiss | ProtPer | Permiss | Permiss | ProtPer | Permiss | Permiss | ProtPer | Permiss | Permiss |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Signal Group | 1 | 6 | 0 | 5 | 2 | 0 | 3 | 8 | 0 | 7 | 4 | 0 |
| Auxiliary Signal Groups | | | | | | | | | | | | |
| Lead / Lag | Lead | - | - | Lead | - | - | Lead | - | - | Lead | - | - |

**Movement, Approach, & Intersection Results**

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| V/C, Movement V/C Ratio | 0.03 | 0.07 | 0.03 | 0.08 | 0.12 | 0.05 | 0.02 | 0.44 | 0.44 | 0.06 | 0.26 | 0.26 |
| Intersection LOS | C | | | | | | | | | | | |
| Intersection V/C | 0.765 | | | | | | | | | | | |

Vistro File: P:\...\Base_Alexan Arcadia_2_wCumu.vistro
Report File: P:\...\Opening Year AM.pdf
Scenario 5 Opening Year (2024)
9/23/2021

**Intersection Analysis Summary**

| ID | Intersection Name | Control Type | Method | Worst Mvmt | V/C | Delay (s/veh) | LOS |
|---|---|---|---|---|---|---|---|
| 1 | Santa Anita Avenue/Santa Clara Street | Signalized | ICU 1 | NB Right | 0.526 | - | A |
| 2 | Santa Anita Avenue/Wheeler Avenue | Two-way stop | HCM 6th Edition | WB Left | 0.107 | 27.5 | D |
| 3 | Santa Anita Avenue/Huntington Drive | Signalized | ICU 1 | WB Thru | 0.872 | - | D |
| 4 | 1st Avenue/Santa Clara Street | Signalized | ICU 1 | WB Thru | 0.367 | - | A |
| 5 | 1st Avenue/Wheeler Avenue | Signalized | ICU 1 | NB Thru | 0.319 | - | A |
| 6 | 1st Avenue/Huntington Drive | Signalized | ICU 1 | WB Thru | 0.660 | - | B |

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. For all other control types, they are taken for the whole intersection.

**Intersection Level Of Service Report**
**Intersection 1: Santa Anita Avenue/Santa Clara Street**

| | | | |
|---|---|---|---|
| Control Type: | Signalized | Delay (sec / veh): | - |
| Analysis Method: | ICU 1 | Level Of Service: | A |
| Analysis Period: | 1 hour | Volume to Capacity (v/c): | 0.526 |

**Intersection Setup**

| Name | Santa Anita Avenue | | | Santa Anita Avenue | | | Santa Clara Street | | | Santa Clara Street | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Approach | Northbound | | | Southbound | | | Eastbound | | | Westbound | | |
| Lane Configuration |  | | |  | | |  | | |  | | |
| Turning Movement | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right |
| Lane Width [ft] | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 |
| No. of Lanes in Entry Pocket | 1 | 0 | 1 | 1 | 0 | 1 | 1 | 0 | 0 | 1 | 0 | 1 |
| Entry Pocket Length [ft] | 100.00 | 100.00 | 100.00 | 90.00 | 100.00 | 70.00 | 115.00 | 100.00 | 100.00 | 50.00 | 100.00 | 100.00 |
| No. of Lanes in Exit Pocket | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Exit Pocket Length [ft] | 0.00 | 0.00 | 100.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Speed [mph] | 30.00 | | | 30.00 | | | 30.00 | | | 30.00 | | |
| Grade [%] | 0.00 | | | 0.00 | | | 0.00 | | | 0.00 | | |
| Crosswalk | Yes | | | Yes | | | Yes | | | Yes | | |

**Volumes**

| Name | Santa Anita Avenue | | | Santa Anita Avenue | | | Santa Clara Street | | | Santa Clara Street | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Base Volume Input [veh/h] | 40 | 631 | 40 | 65 | 640 | 246 | 178 | 81 | 36 | 40 | 96 | 61 |
| Base Volume Adjustment Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Heavy Vehicles Percentage [%] | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 |
| Growth Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| In-Process Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Site-Generated Trips [veh/h] | 0 | 11 | 2 | 10 | 18 | 46 | 48 | 24 | 0 | 9 | 25 | 25 |
| Diverted Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Pass-by Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Existing Site Adjustment Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Other Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Hourly Volume [veh/h] | 40 | 642 | 42 | 75 | 658 | 292 | 226 | 105 | 36 | 49 | 121 | 86 |
| Peak Hour Factor | 0.9620 | 0.9620 | 0.9620 | 0.9620 | 0.9620 | 0.9620 | 0.9620 | 0.9620 | 0.9620 | 0.9620 | 0.9620 | 0.9620 |
| Other Adjustment Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Total 15-Minute Volume [veh/h] | 10 | 167 | 11 | 19 | 171 | 76 | 59 | 27 | 9 | 13 | 31 | 22 |
| Total Analysis Volume [veh/h] | 42 | 667 | 44 | 78 | 684 | 304 | 235 | 109 | 37 | 51 | 126 | 89 |
| Pedestrian Volume [ped/h] | 0 | | | 0 | | | 0 | | | 0 | | |
| Bicycle Volume [bicycles/h] | 0 | | | 0 | | | 0 | | | 0 | | |

**Intersection Settings**

| | |
|---|---|
| Cycle Length [s] | 90 |
| Lost time [s] | 10.00 |

**Phasing & Timing**

| Control Type | ProtPer | Permiss | Permiss | ProtPer | Permiss | Overlap | Protecte | Permiss | Permiss | Protecte | Permiss | Permiss |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Signal Group | 1 | 6 | 0 | 5 | 2 | 2 | 3 | 8 | 0 | 7 | 4 | 0 |
| Auxiliary Signal Groups | | | | | | 2,3 | | | | | | |
| Lead / Lag | Lead | - | - | Lead | - | - | Lead | - | - | Lead | - | - |

**Movement, Approach, & Intersection Results**

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| V/C, Movement V/C Ratio | 0.03 | 0.21 | 0.21 | 0.05 | 0.21 | 0.10 | 0.08 | 0.09 | 0.09 | 0.03 | 0.08 | 0.05 |
| Intersection LOS | A | | | | | | | | | | | |
| Intersection V/C | 0.526 | | | | | | | | | | | |

**Intersection Level Of Service Report**
**Intersection 2: Santa Anita Avenue/Wheeler Avenue**

| | | | |
|---|---|---|---|
| Control Type: | Two-way stop | Delay (sec / veh): | 27.5 |
| Analysis Method: | HCM 6th Edition | Level Of Service: | D |
| Analysis Period: | 1 hour | Volume to Capacity (v/c): | 0.107 |

**Intersection Setup**

| Name | Santa Anita Avenue | | | | | |
|---|---|---|---|---|---|---|
| Approach | Northbound | | Southbound | | Westbound | |
| Lane Configuration |  | |  | |  | |
| Turning Movement | Thru | Right | Left | Thru | Left | Right |
| Lane Width [ft] | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 |
| No. of Lanes in Entry Pocket | 0 | 0 | 1 | 0 | 0 | 0 |
| Entry Pocket Length [ft] | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 |
| No. of Lanes in Exit Pocket | 0 | 0 | 0 | 0 | 0 | 0 |
| Exit Pocket Length [ft] | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Speed [mph] | 30.00 | | 30.00 | | 30.00 | |
| Grade [%] | 0.00 | | 0.00 | | 0.00 | |
| Crosswalk | No | | No | | Yes | |

**Volumes**

| Name | Santa Anita Avenue | | | | | |
|---|---|---|---|---|---|---|
| Base Volume Input [veh/h] | 687 | 34 | 51 | 613 | 12 | 34 |
| Base Volume Adjustment Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Heavy Vehicles Percentage [%] | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 |
| Growth Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| In-Process Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 |
| Site-Generated Trips [veh/h] | 30 | 0 | 4 | 9 | 7 | 14 |
| Diverted Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 |
| Pass-by Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 |
| Existing Site Adjustment Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 |
| Other Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Hourly Volume [veh/h] | 717 | 34 | 55 | 622 | 19 | 48 |
| Peak Hour Factor | 0.8730 | 0.8730 | 0.8730 | 0.8730 | 0.8730 | 0.8730 |
| Other Adjustment Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Total 15-Minute Volume [veh/h] | 205 | 10 | 16 | 178 | 5 | 14 |
| Total Analysis Volume [veh/h] | 821 | 39 | 63 | 712 | 22 | 55 |
| Pedestrian Volume [ped/h] | 0 | | 0 | | 0 | |

**Intersection Settings**

| | | | |
|---|---|---|---|
| Priority Scheme | Free | Free | Stop |
| Flared Lane | | | No |
| Storage Area [veh] | 0 | 0 | 0 |
| Two-Stage Gap Acceptance | | | No |
| Number of Storage Spaces in Median | 0 | 0 | 0 |

**Movement, Approach, & Intersection Results**

| | | | | | | |
|---|---|---|---|---|---|---|
| V/C, Movement V/C Ratio | 0.01 | 0.00 | 0.06 | 0.01 | 0.11 | 0.08 |
| d_M, Delay for Movement [s/veh] | 0.00 | 0.00 | 9.50 | 0.00 | 27.46 | 13.01 |
| Movement LOS | A | A | A | A | D | B |
| 95th-Percentile Queue Length [veh/ln] | 0.00 | 0.00 | 0.21 | 0.00 | 0.67 | 0.67 |
| 95th-Percentile Queue Length [ft/ln] | 0.00 | 0.00 | 5.16 | 0.00 | 16.83 | 16.83 |
| d_A, Approach Delay [s/veh] | 0.00 | | 0.77 | | 17.11 | |
| Approach LOS | A | | A | | C | |
| d_I, Intersection Delay [s/veh] | 1.12 | | | | | |
| Intersection LOS | D | | | | | |

**Intersection Level Of Service Report**
**Intersection 3: Santa Anita Avenue/Huntington Drive**

| | | | |
|---|---|---|---|
| Control Type: | Signalized | Delay (sec / veh): | - |
| Analysis Method: | ICU 1 | Level Of Service: | D |
| Analysis Period: | 1 hour | Volume to Capacity (v/c): | 0.872 |

**Intersection Setup**

| Name | Santa Anita Avenue | | | Santa Anita Avenue | | | Huntington Drive | | | Huntington Drive | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Approach | Northbound | | | Southbound | | | Eastbound | | | Westbound | | |
| Lane Configuration |  | | |  | | |  | | |  | | |
| Turning Movement | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right |
| Lane Width [ft] | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 |
| No. of Lanes in Entry Pocket | 1 | 0 | 1 | 1 | 0 | 1 | 1 | 0 | 1 | 1 | 0 | 1 |
| Entry Pocket Length [ft] | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 |
| No. of Lanes in Exit Pocket | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 |
| Exit Pocket Length [ft] | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 100.00 | 0.00 | 0.00 | 0.00 |
| Speed [mph] | 30.00 | | | 30.00 | | | 30.00 | | | 30.00 | | |
| Grade [%] | 0.00 | | | 0.00 | | | 0.00 | | | 0.00 | | |
| Crosswalk | Yes | | | Yes | | | Yes | | | Yes | | |

**Volumes**

| Name | Santa Anita Avenue | | | Santa Anita Avenue | | | Huntington Drive | | | Huntington Drive | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Base Volume Input [veh/h] | 494 | 640 | 130 | 70 | 504 | 62 | 38 | 338 | 111 | 82 | 1099 | 93 |
| Base Volume Adjustment Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Heavy Vehicles Percentage [%] | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 |
| Growth Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| In-Process Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Site-Generated Trips [veh/h] | 25 | 18 | 0 | 0 | 6 | 10 | 12 | 31 | 36 | 0 | 49 | 0 |
| Diverted Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Pass-by Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Existing Site Adjustment Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Other Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Hourly Volume [veh/h] | 519 | 658 | 130 | 70 | 510 | 72 | 50 | 369 | 147 | 82 | 1148 | 93 |
| Peak Hour Factor | 0.9250 | 0.9250 | 0.9250 | 0.9250 | 0.9250 | 0.9250 | 0.9250 | 0.9250 | 0.9250 | 0.9250 | 0.9250 | 0.9250 |
| Other Adjustment Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Total 15-Minute Volume [veh/h] | 140 | 178 | 35 | 19 | 138 | 19 | 14 | 100 | 40 | 22 | 310 | 25 |
| Total Analysis Volume [veh/h] | 561 | 711 | 141 | 76 | 551 | 78 | 54 | 399 | 159 | 89 | 1241 | 101 |
| Pedestrian Volume [ped/h] | 0 | | | 0 | | | 0 | | | 0 | | |
| Bicycle Volume [bicycles/h] | 0 | | | 0 | | | 0 | | | 0 | | |

**Intersection Settings**

| | |
|---|---|
| Cycle Length [s] | 70 |
| Lost time [s] | 10.00 |

**Phasing & Timing**

| Control Type | Protecte | Permiss | Overlap | Protecte | Permiss | Overlap | ProtPer | Permiss | Overlap | ProtPer | Permiss | Permiss |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Signal Group | 1 | 6 | 6 | 5 | 2 | 2 | 3 | 8 | 8 | 7 | 4 | 0 |
| Auxiliary Signal Groups | | | 6,7 | | | 2,3 | | | 1,8 | | | |
| Lead / Lag | Lead | - | - | Lead | - | - | Lead | - | - | Lead | - | - |

**Movement, Approach, & Intersection Results**

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| V/C, Movement V/C Ratio | 0.18 | 0.21 | 0.08 | 0.02 | 0.16 | 0.05 | 0.03 | 0.12 | 0.00 | 0.05 | 0.36 | 0.06 |
| Intersection LOS | D | | | | | | | | | | | |
| Intersection V/C | 0.872 | | | | | | | | | | | |

**Intersection Level Of Service Report**
**Intersection 4: 1st Avenue/Santa Clara Street**

| | | | |
|---|---|---|---|
| Control Type: | Signalized | Delay (sec / veh): | - |
| Analysis Method: | ICU 1 | Level Of Service: | A |
| Analysis Period: | 1 hour | Volume to Capacity (v/c): | 0.367 |

**Intersection Setup**

| Name | 1st Avenue | | | 1st Avenue | | | Santa Clara Street | | | Santa Clara Street | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Approach | Northbound | | | Southbound | | | Eastbound | | | Westbound | | |
| Lane Configuration | | | | | | | | | | | | |
| Turning Movement | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right |
| Lane Width [ft] | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 |
| No. of Lanes in Entry Pocket | 1 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 0 |
| Entry Pocket Length [ft] | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 |
| No. of Lanes in Exit Pocket | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Exit Pocket Length [ft] | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Speed [mph] | 30.00 | | | 30.00 | | | 30.00 | | | 30.00 | | |
| Grade [%] | 0.00 | | | 0.00 | | | 0.00 | | | 0.00 | | |
| Crosswalk | Yes | | | Yes | | | Yes | | | Yes | | |

**Volumes**

| Name | 1st Avenue | | | 1st Avenue | | | Santa Clara Street | | | Santa Clara Street | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Base Volume Input [veh/h] | 30 | 76 | 8 | 4 | 52 | 29 | 17 | 72 | 27 | 7 | 153 | 9 |
| Base Volume Adjustment Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Heavy Vehicles Percentage [%] | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 |
| Growth Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| In-Process Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Site-Generated Trips [veh/h] | 15 | 4 | 3 | 0 | 1 | 12 | 9 | 20 | 7 | 0 | 32 | 0 |
| Diverted Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Pass-by Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Existing Site Adjustment Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Other Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Hourly Volume [veh/h] | 45 | 80 | 11 | 4 | 53 | 41 | 26 | 92 | 34 | 7 | 185 | 9 |
| Peak Hour Factor | 0.9260 | 0.9260 | 0.9260 | 0.9260 | 0.9260 | 0.9260 | 0.9260 | 0.9260 | 0.9260 | 0.9260 | 0.9260 | 0.9260 |
| Other Adjustment Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Total 15-Minute Volume [veh/h] | 12 | 22 | 3 | 1 | 14 | 11 | 7 | 25 | 9 | 2 | 50 | 2 |
| Total Analysis Volume [veh/h] | 49 | 86 | 12 | 4 | 57 | 44 | 28 | 99 | 37 | 8 | 200 | 10 |
| Pedestrian Volume [ped/h] | 0 | | | 0 | | | 0 | | | 0 | | |
| Bicycle Volume [bicycles/h] | 0 | | | 0 | | | 0 | | | 0 | | |

**Intersection Settings**

| | |
|---|---|
| Cycle Length [s] | 70 |
| Lost time [s] | 10.00 |

**Phasing & Timing**

| Control Type | Protecte | Permiss | Permiss | Protecte | Permiss | Permiss | Protecte | Permiss | Permiss | Protecte | Permiss | Permiss |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Signal Group | 1 | 6 | 0 | 5 | 2 | 0 | 3 | 8 | 0 | 7 | 4 | 0 |
| Auxiliary Signal Groups | | | | | | | | | | | | |
| Lead / Lag | Lead | - | - | Lead | - | - | Lead | - | - | Lead | - | - |

**Movement, Approach, & Intersection Results**

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| V/C, Movement V/C Ratio | 0.03 | 0.06 | 0.06 | 0.00 | 0.06 | 0.06 | 0.02 | 0.08 | 0.08 | 0.00 | 0.12 | 0.12 |
| Intersection LOS | A | | | | | | | | | | | |
| Intersection V/C | 0.367 | | | | | | | | | | | |

**Intersection Level Of Service Report**
**Intersection 5: 1st Avenue/Wheeler Avenue**

| | | | |
|---|---|---|---|
| Control Type: | Signalized | Delay (sec / veh): | - |
| Analysis Method: | ICU 1 | Level Of Service: | A |
| Analysis Period: | 1 hour | Volume to Capacity (v/c): | 0.319 |

**Intersection Setup**

| Name | 1st Avenue | | | 1st Avenue | | | Wheeler Avenue | | | Wheeler Avenue | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Approach | Northbound | | | Southbound | | | Eastbound | | | Westbound | | |
| Lane Configuration |  | | |  | | |  | | |  | | |
| Turning Movement | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right |
| Lane Width [ft] | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 |
| No. of Lanes in Entry Pocket | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Entry Pocket Length [ft] | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 |
| No. of Lanes in Exit Pocket | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Exit Pocket Length [ft] | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Speed [mph] | 30.00 | | | 30.00 | | | 30.00 | | | 30.00 | | |
| Grade [%] | 0.00 | | | 0.00 | | | 0.00 | | | 0.00 | | |
| Crosswalk | Yes | | | Yes | | | Yes | | | Yes | | |

**Volumes**

| Name | 1st Avenue | | | 1st Avenue | | | Wheeler Avenue | | | Wheeler Avenue | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Base Volume Input [veh/h] | 78 | 90 | 16 | 9 | 82 | 9 | 4 | 14 | 24 | 15 | 9 | 12 |
| Base Volume Adjustment Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Heavy Vehicles Percentage [%] | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 |
| Growth Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| In-Process Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Site-Generated Trips [veh/h] | 14 | 10 | 0 | 1 | 7 | 0 | 0 | 0 | 4 | 14 | 7 | 12 |
| Diverted Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Pass-by Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Existing Site Adjustment Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Other Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Hourly Volume [veh/h] | 92 | 100 | 16 | 10 | 89 | 9 | 4 | 14 | 28 | 29 | 16 | 24 |
| Peak Hour Factor | 0.7930 | 0.7930 | 0.7930 | 0.7930 | 0.7930 | 0.7930 | 0.7930 | 0.7930 | 0.7930 | 0.7930 | 0.7930 | 0.7930 |
| Other Adjustment Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Total 15-Minute Volume [veh/h] | 29 | 32 | 5 | 3 | 28 | 3 | 1 | 4 | 9 | 9 | 5 | 8 |
| Total Analysis Volume [veh/h] | 116 | 126 | 20 | 13 | 112 | 11 | 5 | 18 | 35 | 37 | 20 | 30 |
| Pedestrian Volume [ped/h] | 0 | | | 0 | | | 0 | | | 0 | | |
| Bicycle Volume [bicycles/h] | 0 | | | 0 | | | 0 | | | 0 | | |

**Intersection Settings**

| | |
|---|---|
| Cycle Length [s] | 65 |
| Lost time [s] | 10.00 |

**Phasing & Timing**

| Control Type | Permiss | Permiss | Permiss | Permiss | Permiss | Permiss | Permiss | Permiss | Permiss | Permiss | Permiss | Permiss |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Signal Group | 0 | 6 | 0 | 0 | 2 | 0 | 0 | 8 | 0 | 0 | 4 | 0 |
| Auxiliary Signal Groups | | | | | | | | | | | | |
| Lead / Lag | - | - | - | - | - | - | - | - | - | - | - | - |

**Movement, Approach, & Intersection Results**

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| V/C, Movement V/C Ratio | 0.06 | 0.07 | 0.07 | 0.01 | 0.06 | 0.06 | 0.00 | 0.03 | 0.03 | 0.02 | 0.04 | 0.04 |
| Intersection LOS | A | | | | | | | | | | | |
| Intersection V/C | 0.319 | | | | | | | | | | | |

**Intersection Level Of Service Report**
**Intersection 6: 1st Avenue/Huntington Drive**

| | | | |
|---|---|---|---|
| Control Type: | Signalized | Delay (sec / veh): | - |
| Analysis Method: | ICU 1 | Level Of Service: | B |
| Analysis Period: | 1 hour | Volume to Capacity (v/c): | 0.660 |

**Intersection Setup**

| Name | 1st Avenue | | | 1st Avenue | | | Huntington Drive | | | Huntington Drive | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Approach | Northbound | | | Southbound | | | Eastbound | | | Westbound | | |
| Lane Configuration |  | | |  | | |  | | |  | | |
| Turning Movement | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right |
| Lane Width [ft] | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 |
| No. of Lanes in Entry Pocket | 1 | 0 | 1 | 1 | 0 | 1 | 1 | 0 | 0 | 1 | 0 | 0 |
| Entry Pocket Length [ft] | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 |
| No. of Lanes in Exit Pocket | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 |
| Exit Pocket Length [ft] | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 100.00 | 0.00 | 0.00 | 100.00 |
| Speed [mph] | 30.00 | | | 30.00 | | | 30.00 | | | 30.00 | | |
| Grade [%] | 0.00 | | | 0.00 | | | 0.00 | | | 0.00 | | |
| Crosswalk | Yes | | | Yes | | | Yes | | | Yes | | |

**Volumes**

| Name | 1st Avenue | | | 1st Avenue | | | Huntington Drive | | | Huntington Drive | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Base Volume Input [veh/h] | 67 | 96 | 66 | 34 | 73 | 26 | 49 | 443 | 38 | 55 | 1170 | 103 |
| Base Volume Adjustment Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Heavy Vehicles Percentage [%] | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 |
| Growth Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| In-Process Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Site-Generated Trips [veh/h] | 15 | 13 | 0 | 10 | 15 | 0 | 0 | 31 | 0 | 0 | 34 | 11 |
| Diverted Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Pass-by Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Existing Site Adjustment Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Other Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Hourly Volume [veh/h] | 82 | 109 | 66 | 44 | 88 | 26 | 49 | 474 | 38 | 55 | 1204 | 114 |
| Peak Hour Factor | 0.9790 | 0.9790 | 0.9790 | 0.9790 | 0.9790 | 0.9790 | 0.9790 | 0.9790 | 0.9790 | 0.9790 | 0.9790 | 0.9790 |
| Other Adjustment Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Total 15-Minute Volume [veh/h] | 21 | 28 | 17 | 11 | 22 | 7 | 13 | 121 | 10 | 14 | 307 | 29 |
| Total Analysis Volume [veh/h] | 84 | 111 | 67 | 45 | 90 | 27 | 50 | 484 | 39 | 56 | 1230 | 116 |
| Pedestrian Volume [ped/h] | 0 | | | 0 | | | 0 | | | 0 | | |
| Bicycle Volume [bicycles/h] | 0 | | | 0 | | | 0 | | | 0 | | |

**Intersection Settings**

| | |
|---|---|
| Cycle Length [s] | 90 |
| Lost time [s] | 10.00 |

**Phasing & Timing**

| Control Type | ProtPer | Permiss | Permiss | ProtPer | Permiss | Permiss | ProtPer | Permiss | Permiss | ProtPer | Permiss | Permiss |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Signal Group | 1 | 6 | 0 | 5 | 2 | 0 | 3 | 8 | 0 | 7 | 4 | 0 |
| Auxiliary Signal Groups | | | | | | | | | | | | |
| Lead / Lag | Lead | - | - | Lead | - | - | Lead | - | - | Lead | - | - |

**Movement, Approach, & Intersection Results**

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| V/C, Movement V/C Ratio | 0.05 | 0.07 | 0.04 | 0.03 | 0.06 | 0.02 | 0.03 | 0.16 | 0.16 | 0.03 | 0.41 | 0.41 |
| Intersection LOS | B | | | | | | | | | | | |
| Intersection V/C | 0.660 | | | | | | | | | | | |

Vistro File: P:\...\Base_Alexan Arcadia_2_wCumu_PM.vistro
Report File: P:\...\Opening Year PM.pdf
Scenario 5 Opening Year (2024)
9/23/2021

**Intersection Analysis Summary**

| ID | Intersection Name | Control Type | Method | Worst Mvmt | V/C | Delay (s/veh) | LOS |
|---|---|---|---|---|---|---|---|
| 1 | Santa Anita Avenue/Santa Clara Street | Signalized | ICU 1 | SB Thru | 0.670 | - | B |
| 2 | Santa Anita Avenue/Wheeler Avenue | Two-way stop | HCM 6th Edition | WB Left | 0.220 | 37.3 | E |
| 3 | Santa Anita Avenue/Huntington Drive | Signalized | ICU 1 | EB Thru | 0.914 | - | E |
| 4 | 1st Avenue/Santa Clara Street | Signalized | ICU 1 | EB Right | 0.474 | - | A |
| 5 | 1st Avenue/Wheeler Avenue | Signalized | ICU 1 | EB Thru | 0.447 | - | A |
| 6 | 1st Avenue/Huntington Drive | Signalized | ICU 1 | EB Thru | 0.807 | - | D |

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. For all other control types, they are taken for the whole intersection.

**Intersection Level Of Service Report**
**Intersection 1: Santa Anita Avenue/Santa Clara Street**

| | | | |
|---|---|---|---|
| Control Type: | Signalized | Delay (sec / veh): | - |
| Analysis Method: | ICU 1 | Level Of Service: | B |
| Analysis Period: | 1 hour | Volume to Capacity (v/c): | 0.670 |

**Intersection Setup**

| Name | Santa Anita Avenue | | | Santa Anita Avenue | | | Santa Clara Street | | | Santa Clara Street | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Approach | Northbound | | | Southbound | | | Eastbound | | | Westbound | | |
| Lane Configuration |  | | |  | | |  | | |  | | |
| Turning Movement | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right |
| Lane Width [ft] | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 |
| No. of Lanes in Entry Pocket | 1 | 0 | 1 | 1 | 0 | 1 | 1 | 0 | 0 | 1 | 0 | 1 |
| Entry Pocket Length [ft] | 100.00 | 100.00 | 100.00 | 90.00 | 100.00 | 70.00 | 115.00 | 100.00 | 100.00 | 50.00 | 100.00 | 100.00 |
| No. of Lanes in Exit Pocket | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Exit Pocket Length [ft] | 0.00 | 0.00 | 100.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Speed [mph] | 30.00 | | | 30.00 | | | 30.00 | | | 30.00 | | |
| Grade [%] | 0.00 | | | 0.00 | | | 0.00 | | | 0.00 | | |
| Crosswalk | Yes | | | Yes | | | Yes | | | Yes | | |

**Volumes**

| Name | Santa Anita Avenue | | | Santa Anita Avenue | | | Santa Clara Street | | | Santa Clara Street | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Base Volume Input [veh/h] | 27 | 655 | 51 | 131 | 846 | 258 | 336 | 147 | 46 | 85 | 116 | 73 |
| Base Volume Adjustment Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Heavy Vehicles Percentage [%] | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 |
| Growth Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| In-Process Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Site-Generated Trips [veh/h] | 0 | 28 | 13 | 34 | 20 | 61 | 46 | 21 | 0 | 6 | 27 | 19 |
| Diverted Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Pass-by Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Existing Site Adjustment Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Other Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Hourly Volume [veh/h] | 27 | 683 | 64 | 165 | 866 | 319 | 382 | 168 | 46 | 91 | 143 | 92 |
| Peak Hour Factor | 0.9380 | 0.9380 | 0.9380 | 0.9380 | 0.9380 | 0.9380 | 0.9380 | 0.9380 | 0.9380 | 0.9380 | 0.9380 | 0.9380 |
| Other Adjustment Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Total 15-Minute Volume [veh/h] | 7 | 182 | 17 | 44 | 231 | 85 | 102 | 45 | 12 | 24 | 38 | 25 |
| Total Analysis Volume [veh/h] | 29 | 728 | 68 | 176 | 923 | 340 | 407 | 179 | 49 | 97 | 152 | 98 |
| Pedestrian Volume [ped/h] | 0 | | | 0 | | | 0 | | | 0 | | |
| Bicycle Volume [bicycles/h] | 0 | | | 0 | | | 0 | | | 0 | | |

**Intersection Settings**

| | |
|---|---|
| Cycle Length [s] | 90 |
| Lost time [s] | 10.00 |

**Phasing & Timing**

| Control Type | ProtPer | Permiss | Permiss | ProtPer | Permiss | Overlap | Protecte | Permiss | Permiss | Protecte | Permiss | Permiss |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Signal Group | 1 | 6 | 0 | 5 | 2 | 2 | 3 | 8 | 0 | 7 | 4 | 0 |
| Auxiliary Signal Groups | | | | | | 2,3 | | | | | | |
| Lead / Lag | Lead | - | - | Lead | - | - | Lead | - | - | Lead | - | - |

**Movement, Approach, & Intersection Results**

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| V/C, Movement V/C Ratio | 0.02 | 0.23 | 0.23 | 0.10 | 0.27 | 0.07 | 0.13 | 0.13 | 0.13 | 0.06 | 0.09 | 0.06 |
| Intersection LOS | B | | | | | | | | | | | |
| Intersection V/C | 0.670 | | | | | | | | | | | |

**Intersection Level Of Service Report**
**Intersection 2: Santa Anita Avenue/Wheeler Avenue**

| | | | |
|---|---|---|---|
| Control Type: | Two-way stop | Delay (sec / veh): | 37.3 |
| Analysis Method: | HCM 6th Edition | Level Of Service: | E |
| Analysis Period: | 1 hour | Volume to Capacity (v/c): | 0.220 |

**Intersection Setup**

| Name | Santa Anita Avenue | | | | | |
|---|---|---|---|---|---|---|
| Approach | Northbound | | Southbound | | Westbound | |
| Lane Configuration |  | |  | |  | |
| Turning Movement | Thru | Right | Left | Thru | Left | Right |
| Lane Width [ft] | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 |
| No. of Lanes in Entry Pocket | 0 | 0 | 1 | 0 | 0 | 0 |
| Entry Pocket Length [ft] | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 |
| No. of Lanes in Exit Pocket | 0 | 0 | 0 | 0 | 0 | 0 |
| Exit Pocket Length [ft] | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Speed [mph] | 30.00 | | 30.00 | | 30.00 | |
| Grade [%] | 0.00 | | 0.00 | | 0.00 | |
| Crosswalk | No | | No | | Yes | |

**Volumes**

| Name | Santa Anita Avenue | | | | | |
|---|---|---|---|---|---|---|
| Base Volume Input [veh/h] | 676 | 49 | 51 | 863 | 26 | 64 |
| Base Volume Adjustment Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Heavy Vehicles Percentage [%] | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 |
| Growth Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| In-Process Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 |
| Site-Generated Trips [veh/h] | 20 | 0 | 21 | 41 | 4 | 9 |
| Diverted Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 |
| Pass-by Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 |
| Existing Site Adjustment Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 |
| Other Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Hourly Volume [veh/h] | 696 | 49 | 72 | 904 | 30 | 73 |
| Peak Hour Factor | 0.9470 | 0.9470 | 0.9470 | 0.9470 | 0.9470 | 0.9470 |
| Other Adjustment Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Total 15-Minute Volume [veh/h] | 184 | 13 | 19 | 239 | 8 | 19 |
| Total Analysis Volume [veh/h] | 735 | 52 | 76 | 955 | 32 | 77 |
| Pedestrian Volume [ped/h] | 0 | | 0 | | 0 | |

**Intersection Settings**

| | | | |
|---|---|---|---|
| Priority Scheme | Free | Free | Stop |
| Flared Lane | | | No |
| Storage Area [veh] | 0 | 0 | 0 |
| Two-Stage Gap Acceptance | | | No |
| Number of Storage Spaces in Median | 0 | 0 | 0 |

**Movement, Approach, & Intersection Results**

| | | | | | | |
|---|---|---|---|---|---|---|
| V/C, Movement V/C Ratio | 0.01 | 0.00 | 0.08 | 0.01 | 0.22 | 0.12 |
| d_M, Delay for Movement [s/veh] | 0.00 | 0.00 | 9.58 | 0.00 | 37.30 | 16.70 |
| Movement LOS | A | A | A | A | E | C |
| 95th-Percentile Queue Length [veh/ln] | 0.00 | 0.00 | 0.27 | 0.00 | 1.50 | 1.50 |
| 95th-Percentile Queue Length [ft/ln] | 0.00 | 0.00 | 6.86 | 0.00 | 37.48 | 37.48 |
| d_A, Approach Delay [s/veh] | 0.00 | | 0.71 | | 22.70 | |
| Approach LOS | A | | A | | C | |
| d_I, Intersection Delay [s/veh] | 1.66 | | | | | |
| Intersection LOS | E | | | | | |

**Intersection Level Of Service Report**
**Intersection 3: Santa Anita Avenue/Huntington Drive**

| | | | |
|---|---|---|---|
| Control Type: | Signalized | Delay (sec / veh): | - |
| Analysis Method: | ICU 1 | Level Of Service: | E |
| Analysis Period: | 1 hour | Volume to Capacity (v/c): | 0.914 |

**Intersection Setup**

| Name | Santa Anita Avenue | | | Santa Anita Avenue | | | Huntington Drive | | | Huntington Drive | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Approach | Northbound | | | Southbound | | | Eastbound | | | Westbound | | |
| Lane Configuration |  | | |  | | |  | | |  | | |
| Turning Movement | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right |
| Lane Width [ft] | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 |
| No. of Lanes in Entry Pocket | 1 | 0 | 1 | 1 | 0 | 1 | 1 | 0 | 1 | 1 | 0 | 1 |
| Entry Pocket Length [ft] | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 |
| No. of Lanes in Exit Pocket | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 |
| Exit Pocket Length [ft] | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 100.00 | 0.00 | 0.00 | 0.00 |
| Speed [mph] | 30.00 | | | 30.00 | | | 30.00 | | | 30.00 | | |
| Grade [%] | 0.00 | | | 0.00 | | | 0.00 | | | 0.00 | | |
| Crosswalk | Yes | | | Yes | | | Yes | | | Yes | | |

**Volumes**

| Name | Santa Anita Avenue | | | Santa Anita Avenue | | | Huntington Drive | | | Huntington Drive | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Base Volume Input [veh/h] | 216 | 600 | 126 | 132 | 728 | 79 | 62 | 1245 | 664 | 136 | 644 | 74 |
| Base Volume Adjustment Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Heavy Vehicles Percentage [%] | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 |
| Growth Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| In-Process Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Site-Generated Trips [veh/h] | 28 | 12 | 0 | 0 | 24 | 21 | 8 | 30 | 34 | 0 | 52 | 0 |
| Diverted Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Pass-by Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Existing Site Adjustment Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Other Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Hourly Volume [veh/h] | 244 | 612 | 126 | 132 | 752 | 100 | 70 | 1275 | 698 | 136 | 696 | 74 |
| Peak Hour Factor | 0.9600 | 0.9600 | 0.9600 | 0.9600 | 0.9600 | 0.9600 | 0.9600 | 0.9600 | 0.9600 | 0.9600 | 0.9600 | 0.9600 |
| Other Adjustment Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Total 15-Minute Volume [veh/h] | 64 | 159 | 33 | 34 | 196 | 26 | 18 | 332 | 182 | 35 | 181 | 19 |
| Total Analysis Volume [veh/h] | 254 | 638 | 131 | 138 | 783 | 104 | 73 | 1328 | 727 | 142 | 725 | 77 |
| Pedestrian Volume [ped/h] | 0 | | | 0 | | | 0 | | | 0 | | |
| Bicycle Volume [bicycles/h] | 0 | | | 0 | | | 0 | | | 0 | | |

**Intersection Settings**

| | |
|---|---|
| Cycle Length [s] | 90 |
| Lost time [s] | 10.00 |

**Phasing & Timing**

| Control Type | Protecte | Permiss | Overlap | Protecte | Permiss | Overlap | ProtPer | Permiss | Overlap | ProtPer | Permiss | Permiss |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Signal Group | 1 | 6 | 6 | 5 | 2 | 2 | 3 | 8 | 8 | 7 | 4 | 0 |
| Auxiliary Signal Groups | | | 6,7 | | | 2,3 | | | 1,8 | | | |
| Lead / Lag | Lead | - | - | Lead | - | - | Lead | - | - | Lead | - | - |

**Movement, Approach, & Intersection Results**

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| V/C, Movement V/C Ratio | 0.08 | 0.19 | 0.08 | 0.05 | 0.24 | 0.06 | 0.04 | 0.40 | 0.35 | 0.09 | 0.22 | 0.05 |
| Intersection LOS | E | | | | | | | | | | | |
| Intersection V/C | 0.914 | | | | | | | | | | | |

**Intersection Level Of Service Report**
**Intersection 4: 1st Avenue/Santa Clara Street**

| | | | |
|---|---|---|---|
| Control Type: | Signalized | Delay (sec / veh): | - |
| Analysis Method: | ICU 1 | Level Of Service: | A |
| Analysis Period: | 1 hour | Volume to Capacity (v/c): | 0.474 |

**Intersection Setup**

| Name | 1st Avenue | | | 1st Avenue | | | Santa Clara Street | | | Santa Clara Street | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Approach | Northbound | | | Southbound | | | Eastbound | | | Westbound | | |
| Lane Configuration | | | | | | | | | | | | |
| Turning Movement | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right |
| Lane Width [ft] | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 |
| No. of Lanes in Entry Pocket | 1 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 0 |
| Entry Pocket Length [ft] | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 |
| No. of Lanes in Exit Pocket | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Exit Pocket Length [ft] | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Speed [mph] | 30.00 | | | 30.00 | | | 30.00 | | | 30.00 | | |
| Grade [%] | 0.00 | | | 0.00 | | | 0.00 | | | 0.00 | | |
| Crosswalk | Yes | | | Yes | | | Yes | | | Yes | | |

**Volumes**

| Name | 1st Avenue | | | 1st Avenue | | | Santa Clara Street | | | Santa Clara Street | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Base Volume Input [veh/h] | 28 | 107 | 37 | 8 | 104 | 40 | 25 | 187 | 34 | 17 | 120 | 11 |
| Base Volume Adjustment Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Heavy Vehicles Percentage [%] | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 |
| Growth Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| In-Process Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Site-Generated Trips [veh/h] | 13 | 3 | 2 | 0 | 1 | 11 | 11 | 34 | 23 | 0 | 28 | 0 |
| Diverted Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Pass-by Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Existing Site Adjustment Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Other Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Hourly Volume [veh/h] | 41 | 110 | 39 | 8 | 105 | 51 | 36 | 221 | 57 | 17 | 148 | 11 |
| Peak Hour Factor | 0.8600 | 0.8600 | 0.8600 | 0.8600 | 0.8600 | 0.8600 | 0.8600 | 0.8600 | 0.8600 | 0.8600 | 0.8600 | 0.8600 |
| Other Adjustment Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Total 15-Minute Volume [veh/h] | 12 | 32 | 11 | 2 | 31 | 15 | 10 | 64 | 17 | 5 | 43 | 3 |
| Total Analysis Volume [veh/h] | 48 | 128 | 45 | 9 | 122 | 59 | 42 | 257 | 66 | 20 | 172 | 13 |
| Pedestrian Volume [ped/h] | 0 | | | 0 | | | 0 | | | 0 | | |
| Bicycle Volume [bicycles/h] | 0 | | | 0 | | | 0 | | | 0 | | |

**Intersection Settings**

| | |
|---|---|
| Cycle Length [s] | 60 |
| Lost time [s] | 10.00 |

**Phasing & Timing**

| Control Type | Protecte | Permiss | Permiss | Protecte | Permiss | Permiss | Protecte | Permiss | Permiss | Protecte | Permiss | Permiss |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Signal Group | 1 | 6 | 0 | 5 | 2 | 0 | 3 | 8 | 0 | 7 | 4 | 0 |
| Auxiliary Signal Groups | | | | | | | | | | | | |
| Lead / Lag | Lead | - | - | Lead | - | - | Lead | - | - | Lead | - | - |

**Movement, Approach, & Intersection Results**

| V/C, Movement V/C Ratio | 0.03 | 0.09 | 0.09 | 0.01 | 0.10 | 0.10 | 0.02 | 0.17 | 0.17 | 0.01 | 0.10 | 0.10 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Intersection LOS | A | | | | | | | | | | | |
| Intersection V/C | 0.474 | | | | | | | | | | | |

**Intersection Level Of Service Report**
**Intersection 5: 1st Avenue/Wheeler Avenue**

| | | | |
|---|---|---|---|
| Control Type: | Signalized | Delay (sec / veh): | - |
| Analysis Method: | ICU 1 | Level Of Service: | A |
| Analysis Period: | 1 hour | Volume to Capacity (v/c): | 0.447 |

**Intersection Setup**

| Name | 1st Avenue | | | 1st Avenue | | | Wheeler Avenue | | | Wheeler Avenue | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Approach | Northbound | | | Southbound | | | Eastbound | | | Westbound | | |
| Lane Configuration | | | | | | | | | | | | |
| Turning Movement | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right |
| Lane Width [ft] | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 |
| No. of Lanes in Entry Pocket | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Entry Pocket Length [ft] | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 |
| No. of Lanes in Exit Pocket | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Exit Pocket Length [ft] | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Speed [mph] | 30.00 | | | 30.00 | | | 30.00 | | | 30.00 | | |
| Grade [%] | 0.00 | | | 0.00 | | | 0.00 | | | 0.00 | | |
| Crosswalk | Yes | | | Yes | | | Yes | | | Yes | | |

**Volumes**

| Name | 1st Avenue | | | 1st Avenue | | | Wheeler Avenue | | | Wheeler Avenue | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Base Volume Input [veh/h] | 63 | 133 | 12 | 9 | 115 | 25 | 30 | 6 | 117 | 41 | 18 | 25 |
| Base Volume Adjustment Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Heavy Vehicles Percentage [%] | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 |
| Growth Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| In-Process Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Site-Generated Trips [veh/h] | 9 | 8 | 0 | 11 | 13 | 0 | 0 | 0 | 21 | 9 | 4 | 10 |
| Diverted Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Pass-by Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Existing Site Adjustment Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Other Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Hourly Volume [veh/h] | 72 | 141 | 12 | 20 | 128 | 25 | 30 | 6 | 138 | 50 | 22 | 35 |
| Peak Hour Factor | 0.8710 | 0.8710 | 0.8710 | 0.8710 | 0.8710 | 0.8710 | 0.8710 | 0.8710 | 0.8710 | 0.8710 | 0.8710 | 0.8710 |
| Other Adjustment Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Total 15-Minute Volume [veh/h] | 21 | 40 | 3 | 6 | 37 | 7 | 9 | 2 | 40 | 14 | 6 | 10 |
| Total Analysis Volume [veh/h] | 83 | 162 | 14 | 23 | 147 | 29 | 34 | 7 | 158 | 57 | 25 | 40 |
| Pedestrian Volume [ped/h] | 0 | | | 0 | | | 0 | | | 0 | | |
| Bicycle Volume [bicycles/h] | 0 | | | 0 | | | 0 | | | 0 | | |

**Intersection Settings**

| | |
|---|---|
| Cycle Length [s] | 60 |
| Lost time [s] | 10.00 |

**Phasing & Timing**

| Control Type | Permiss | Permiss | Permiss | Permiss | Permiss | Permiss | Permiss | Permiss | Permiss | Permiss | Permiss | Permiss |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Signal Group | 0 | 6 | 0 | 0 | 2 | 0 | 0 | 8 | 0 | 0 | 4 | 0 |
| Auxiliary Signal Groups | | | | | | | | | | | | |
| Lead / Lag | - | - | - | - | - | - | - | - | - | - | - | - |

**Movement, Approach, & Intersection Results**

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| V/C, Movement V/C Ratio | 0.05 | 0.10 | 0.10 | 0.01 | 0.10 | 0.10 | 0.02 | 0.11 | 0.11 | 0.03 | 0.07 | 0.07 |
| Intersection LOS | A | | | | | | | | | | | |
| Intersection V/C | 0.447 | | | | | | | | | | | |

**Intersection Level Of Service Report**
**Intersection 6: 1st Avenue/Huntington Drive**

| | | | |
|---|---|---|---|
| Control Type: | Signalized | Delay (sec / veh): | - |
| Analysis Method: | ICU 1 | Level Of Service: | D |
| Analysis Period: | 1 hour | Volume to Capacity (v/c): | 0.807 |

**Intersection Setup**

| Name | 1st Avenue | | | 1st Avenue | | | Huntington Drive | | | Huntington Drive | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Approach | Northbound | | | Southbound | | | Eastbound | | | Westbound | | |
| Lane Configuration |  | | |  | | |  | | |  | | |
| Turning Movement | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right |
| Lane Width [ft] | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 |
| No. of Lanes in Entry Pocket | 1 | 0 | 1 | 1 | 0 | 1 | 1 | 0 | 0 | 1 | 0 | 0 |
| Entry Pocket Length [ft] | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 |
| No. of Lanes in Exit Pocket | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 |
| Exit Pocket Length [ft] | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 100.00 | 0.00 | 0.00 | 100.00 |
| Speed [mph] | 30.00 | | | 30.00 | | | 30.00 | | | 30.00 | | |
| Grade [%] | 0.00 | | | 0.00 | | | 0.00 | | | 0.00 | | |
| Crosswalk | Yes | | | Yes | | | Yes | | | Yes | | |

**Volumes**

| Name | 1st Avenue | | | 1st Avenue | | | Huntington Drive | | | Huntington Drive | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Base Volume Input [veh/h] | 46 | 107 | 47 | 114 | 186 | 77 | 40 | 1370 | 81 | 105 | 755 | 64 |
| Base Volume Adjustment Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Heavy Vehicles Percentage [%] | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 |
| Growth Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| In-Process Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Site-Generated Trips [veh/h] | 15 | 10 | 0 | 22 | 21 | 0 | 0 | 30 | 0 | 0 | 37 | 7 |
| Diverted Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Pass-by Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Existing Site Adjustment Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Other Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Hourly Volume [veh/h] | 61 | 117 | 47 | 136 | 207 | 77 | 40 | 1400 | 81 | 105 | 792 | 71 |
| Peak Hour Factor | 0.9600 | 0.9600 | 0.9600 | 0.9600 | 0.9600 | 0.9600 | 0.9600 | 0.9600 | 0.9600 | 0.9600 | 0.9600 | 0.9600 |
| Other Adjustment Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Total 15-Minute Volume [veh/h] | 16 | 30 | 12 | 35 | 54 | 20 | 10 | 365 | 21 | 27 | 206 | 18 |
| Total Analysis Volume [veh/h] | 64 | 122 | 49 | 142 | 216 | 80 | 42 | 1458 | 84 | 109 | 825 | 74 |
| Pedestrian Volume [ped/h] | 0 | | | 0 | | | 0 | | | 0 | | |
| Bicycle Volume [bicycles/h] | 0 | | | 0 | | | 0 | | | 0 | | |

**Intersection Settings**

| | |
|---|---|
| Cycle Length [s] | 90 |
| Lost time [s] | 10.00 |

**Phasing & Timing**

| Control Type | ProtPer | Permiss | Permiss | ProtPer | Permiss | Permiss | ProtPer | Permiss | Permiss | ProtPer | Permiss | Permiss |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Signal Group | 1 | 6 | 0 | 5 | 2 | 0 | 3 | 8 | 0 | 7 | 4 | 0 |
| Auxiliary Signal Groups | | | | | | | | | | | | |
| Lead / Lag | Lead | - | - | Lead | - | - | Lead | - | - | Lead | - | - |

**Movement, Approach, & Intersection Results**

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| V/C, Movement V/C Ratio | 0.04 | 0.07 | 0.03 | 0.09 | 0.13 | 0.05 | 0.03 | 0.46 | 0.46 | 0.07 | 0.27 | 0.27 |
| Intersection LOS | D | | | | | | | | | | | |
| Intersection V/C | 0.807 | | | | | | | | | | | |

Vistro File: P:\...\Base_Alexan Arcadia_2_wCumu.vistro
Report File: P:\...\Opening Year + Project AM.pdf

Scenario 6 Opening Year (2024) plus Project
9/23/2021

**Intersection Analysis Summary**

| ID | Intersection Name | Control Type | Method | Worst Mvmt | V/C | Delay (s/veh) | LOS |
|---|---|---|---|---|---|---|---|
| 1 | Santa Anita Avenue/Santa Clara Street | Signalized | ICU 1 | NB Right | 0.540 | - | A |
| 2 | Santa Anita Avenue/Wheeler Avenue | Two-way stop | HCM 6th Edition | WB Left | 0.214 | 31.6 | D |
| 3 | Santa Anita Avenue/Huntington Drive | Signalized | ICU 1 | WB Thru | 0.880 | - | D |
| 4 | 1st Avenue/Santa Clara Street | Signalized | ICU 1 | WB Thru | 0.377 | - | A |
| 5 | 1st Avenue/Wheeler Avenue | Signalized | ICU 1 | NB Thru | 0.341 | - | A |
| 6 | 1st Avenue/Huntington Drive | Signalized | ICU 1 | WB Thru | 0.666 | - | B |

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. For all other control types, they are taken for the whole intersection.

**Intersection Level Of Service Report**
**Intersection 1: Santa Anita Avenue/Santa Clara Street**

| | | | |
|---|---|---|---|
| Control Type: | Signalized | Delay (sec / veh): | - |
| Analysis Method: | ICU 1 | Level Of Service: | A |
| Analysis Period: | 1 hour | Volume to Capacity (v/c): | 0.540 |

**Intersection Setup**

| Name | Santa Anita Avenue | | | Santa Anita Avenue | | | Santa Clara Street | | | Santa Clara Street | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Approach | Northbound | | | Southbound | | | Eastbound | | | Westbound | | |
| Lane Configuration |  | | |  | | |  | | |  | | |
| Turning Movement | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right |
| Lane Width [ft] | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 |
| No. of Lanes in Entry Pocket | 1 | 0 | 1 | 1 | 0 | 1 | 1 | 0 | 0 | 1 | 0 | 1 |
| Entry Pocket Length [ft] | 100.00 | 100.00 | 100.00 | 90.00 | 100.00 | 70.00 | 115.00 | 100.00 | 100.00 | 50.00 | 100.00 | 100.00 |
| No. of Lanes in Exit Pocket | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Exit Pocket Length [ft] | 0.00 | 0.00 | 100.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Speed [mph] | 30.00 | | | 30.00 | | | 30.00 | | | 30.00 | | |
| Grade [%] | 0.00 | | | 0.00 | | | 0.00 | | | 0.00 | | |
| Crosswalk | Yes | | | Yes | | | Yes | | | Yes | | |

**Volumes**

| Name | Santa Anita Avenue | | | Santa Anita Avenue | | | Santa Clara Street | | | Santa Clara Street | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Base Volume Input [veh/h] | 40 | 644 | 45 | 68 | 648 | 246 | 178 | 85 | 36 | 48 | 107 | 71 |
| Base Volume Adjustment Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Heavy Vehicles Percentage [%] | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 |
| Growth Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| In-Process Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Site-Generated Trips [veh/h] | 0 | 11 | 2 | 10 | 18 | 46 | 48 | 24 | 0 | 9 | 25 | 25 |
| Diverted Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Pass-by Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Existing Site Adjustment Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Other Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Hourly Volume [veh/h] | 40 | 655 | 47 | 78 | 666 | 292 | 226 | 109 | 36 | 57 | 132 | 96 |
| Peak Hour Factor | 0.9620 | 0.9620 | 0.9620 | 0.9620 | 0.9620 | 0.9620 | 0.9620 | 0.9620 | 0.9620 | 0.9620 | 0.9620 | 0.9620 |
| Other Adjustment Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Total 15-Minute Volume [veh/h] | 10 | 170 | 12 | 20 | 173 | 76 | 59 | 28 | 9 | 15 | 34 | 25 |
| Total Analysis Volume [veh/h] | 42 | 681 | 49 | 81 | 692 | 304 | 235 | 113 | 37 | 59 | 137 | 100 |
| Pedestrian Volume [ped/h] | 0 | | | 0 | | | 0 | | | 0 | | |
| Bicycle Volume [bicycles/h] | 0 | | | 0 | | | 0 | | | 0 | | |

**Intersection Settings**

| | |
|---|---|
| Cycle Length [s] | 90 |
| Lost time [s] | 10.00 |

**Phasing & Timing**

| Control Type | ProtPer | Permiss | Permiss | ProtPer | Permiss | Overlap | Protecte | Permiss | Permiss | Protecte | Permiss | Permiss |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Signal Group | 1 | 6 | 0 | 5 | 2 | 2 | 3 | 8 | 0 | 7 | 4 | 0 |
| Auxiliary Signal Groups | | | | | | 2,3 | | | | | | |
| Lead / Lag | Lead | - | - | Lead | - | - | Lead | - | - | Lead | - | - |

**Movement, Approach, & Intersection Results**

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| V/C, Movement V/C Ratio | 0.03 | 0.22 | 0.22 | 0.05 | 0.21 | 0.10 | 0.08 | 0.09 | 0.09 | 0.04 | 0.08 | 0.06 |
| Intersection LOS | A | | | | | | | | | | | |
| Intersection V/C | 0.540 | | | | | | | | | | | |

**Intersection Level Of Service Report**
**Intersection 2: Santa Anita Avenue/Wheeler Avenue**

| | | | |
|---|---|---|---|
| Control Type: | Two-way stop | Delay (sec / veh): | 31.6 |
| Analysis Method: | HCM 6th Edition | Level Of Service: | D |
| Analysis Period: | 1 hour | Volume to Capacity (v/c): | 0.214 |

**Intersection Setup**

| Name | Santa Anita Avenue | | | | | |
|---|---|---|---|---|---|---|
| Approach | Northbound | | Southbound | | Westbound | |
| Lane Configuration |  | |  | |  | |
| Turning Movement | Thru | Right | Left | Thru | Left | Right |
| Lane Width [ft] | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 |
| No. of Lanes in Entry Pocket | 0 | 0 | 1 | 0 | 0 | 0 |
| Entry Pocket Length [ft] | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 |
| No. of Lanes in Exit Pocket | 0 | 0 | 0 | 0 | 0 | 0 |
| Exit Pocket Length [ft] | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Speed [mph] | 30.00 | | 30.00 | | 30.00 | |
| Grade [%] | 0.00 | | 0.00 | | 0.00 | |
| Crosswalk | No | | No | | Yes | |

**Volumes**

| Name | Santa Anita Avenue | | | | | |
|---|---|---|---|---|---|---|
| Base Volume Input [veh/h] | 691 | 41 | 60 | 620 | 29 | 38 |
| Base Volume Adjustment Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Heavy Vehicles Percentage [%] | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 |
| Growth Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| In-Process Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 |
| Site-Generated Trips [veh/h] | 30 | 0 | 4 | 9 | 7 | 14 |
| Diverted Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 |
| Pass-by Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 |
| Existing Site Adjustment Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 |
| Other Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Hourly Volume [veh/h] | 721 | 41 | 64 | 629 | 36 | 52 |
| Peak Hour Factor | 0.8730 | 0.8730 | 0.8730 | 0.8730 | 0.8730 | 0.8730 |
| Other Adjustment Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Total 15-Minute Volume [veh/h] | 206 | 12 | 18 | 180 | 10 | 15 |
| Total Analysis Volume [veh/h] | 826 | 47 | 73 | 721 | 41 | 60 |
| Pedestrian Volume [ped/h] | 0 | | 0 | | 0 | |

**Intersection Settings**

| | | | |
|---|---|---|---|
| Priority Scheme | Free | Free | Stop |
| Flared Lane | | | No |
| Storage Area [veh] | 0 | 0 | 0 |
| Two-Stage Gap Acceptance | | | No |
| Number of Storage Spaces in Median | 0 | 0 | 0 |

**Movement, Approach, & Intersection Results**

| | | | | | | |
|---|---|---|---|---|---|---|
| V/C, Movement V/C Ratio | 0.01 | 0.00 | 0.08 | 0.01 | 0.21 | 0.08 |
| d_M, Delay for Movement [s/veh] | 0.00 | 0.00 | 9.60 | 0.00 | 31.56 | 16.00 |
| Movement LOS | A | A | A | A | D | C |
| 95th-Percentile Queue Length [veh/ln] | 0.00 | 0.00 | 0.25 | 0.00 | 1.26 | 1.26 |
| 95th-Percentile Queue Length [ft/ln] | 0.00 | 0.00 | 6.13 | 0.00 | 31.49 | 31.49 |
| d_A, Approach Delay [s/veh] | 0.00 | | 0.89 | | 22.36 | |
| Approach LOS | A | | A | | C | |
| d_I, Intersection Delay [s/veh] | 1.67 | | | | | |
| Intersection LOS | D | | | | | |

**Intersection Level Of Service Report**
**Intersection 3: Santa Anita Avenue/Huntington Drive**

| | | | |
|---|---|---|---|
| Control Type: | Signalized | Delay (sec / veh): | - |
| Analysis Method: | ICU 1 | Level Of Service: | D |
| Analysis Period: | 1 hour | Volume to Capacity (v/c): | 0.880 |

**Intersection Setup**

| Name | Santa Anita Avenue | | | Santa Anita Avenue | | | Huntington Drive | | | Huntington Drive | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Approach | Northbound | | | Southbound | | | Eastbound | | | Westbound | | |
| Lane Configuration |  | | |  | | |  | | |  | | |
| Turning Movement | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right |
| Lane Width [ft] | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 |
| No. of Lanes in Entry Pocket | 1 | 0 | 1 | 1 | 0 | 1 | 1 | 0 | 1 | 1 | 0 | 1 |
| Entry Pocket Length [ft] | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 |
| No. of Lanes in Exit Pocket | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 |
| Exit Pocket Length [ft] | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 100.00 | 0.00 | 0.00 | 0.00 |
| Speed [mph] | 30.00 | | | 30.00 | | | 30.00 | | | 30.00 | | |
| Grade [%] | 0.00 | | | 0.00 | | | 0.00 | | | 0.00 | | |
| Crosswalk | Yes | | | Yes | | | Yes | | | Yes | | |

**Volumes**

| Name | Santa Anita Avenue | | | Santa Anita Avenue | | | Huntington Drive | | | Huntington Drive | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Base Volume Input [veh/h] | 494 | 646 | 130 | 70 | 519 | 71 | 43 | 338 | 111 | 82 | 1099 | 93 |
| Base Volume Adjustment Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Heavy Vehicles Percentage [%] | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 |
| Growth Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| In-Process Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Site-Generated Trips [veh/h] | 25 | 18 | 0 | 0 | 6 | 10 | 12 | 31 | 36 | 0 | 49 | 0 |
| Diverted Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Pass-by Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Existing Site Adjustment Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Other Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Hourly Volume [veh/h] | 519 | 664 | 130 | 70 | 525 | 81 | 55 | 369 | 147 | 82 | 1148 | 93 |
| Peak Hour Factor | 0.9250 | 0.9250 | 0.9250 | 0.9250 | 0.9250 | 0.9250 | 0.9250 | 0.9250 | 0.9250 | 0.9250 | 0.9250 | 0.9250 |
| Other Adjustment Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Total 15-Minute Volume [veh/h] | 140 | 179 | 35 | 19 | 142 | 22 | 15 | 100 | 40 | 22 | 310 | 25 |
| Total Analysis Volume [veh/h] | 561 | 718 | 141 | 76 | 568 | 88 | 59 | 399 | 159 | 89 | 1241 | 101 |
| Pedestrian Volume [ped/h] | 0 | | | 0 | | | 0 | | | 0 | | |
| Bicycle Volume [bicycles/h] | 0 | | | 0 | | | 0 | | | 0 | | |

**Intersection Settings**

| | |
|---|---|
| Cycle Length [s] | 70 |
| Lost time [s] | 10.00 |

**Phasing & Timing**

| Control Type | Protecte | Permiss | Overlap | Protecte | Permiss | Overlap | ProtPer | Permiss | Overlap | ProtPer | Permiss | Permiss |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Signal Group | 1 | 6 | 6 | 5 | 2 | 2 | 3 | 8 | 8 | 7 | 4 | 0 |
| Auxiliary Signal Groups | | | 6,7 | | | 2,3 | | | 1,8 | | | |
| Lead / Lag | Lead | - | - | Lead | - | - | Lead | - | - | Lead | - | - |

**Movement, Approach, & Intersection Results**

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| V/C, Movement V/C Ratio | 0.18 | 0.21 | 0.08 | 0.02 | 0.16 | 0.05 | 0.03 | 0.12 | 0.00 | 0.05 | 0.36 | 0.06 |
| Intersection LOS | D | | | | | | | | | | | |
| Intersection V/C | 0.880 | | | | | | | | | | | |

**Intersection Level Of Service Report**
**Intersection 4: 1st Avenue/Santa Clara Street**

| | | | |
|---|---|---|---|
| Control Type: | Signalized | Delay (sec / veh): | - |
| Analysis Method: | ICU 1 | Level Of Service: | A |
| Analysis Period: | 1 hour | Volume to Capacity (v/c): | 0.377 |

**Intersection Setup**

| Name | 1st Avenue | | | 1st Avenue | | | Santa Clara Street | | | Santa Clara Street | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Approach | Northbound | | | Southbound | | | Eastbound | | | Westbound | | |
| Lane Configuration | | | | | | | | | | | | |
| Turning Movement | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right |
| Lane Width [ft] | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 |
| No. of Lanes in Entry Pocket | 1 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 0 |
| Entry Pocket Length [ft] | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 |
| No. of Lanes in Exit Pocket | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Exit Pocket Length [ft] | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Speed [mph] | 30.00 | | | 30.00 | | | 30.00 | | | 30.00 | | |
| Grade [%] | 0.00 | | | 0.00 | | | 0.00 | | | 0.00 | | |
| Crosswalk | Yes | | | Yes | | | Yes | | | Yes | | |

**Volumes**

| Name | 1st Avenue | | | 1st Avenue | | | Santa Clara Street | | | Santa Clara Street | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Base Volume Input [veh/h] | 39 | 77 | 10 | 4 | 53 | 31 | 21 | 80 | 38 | 8 | 153 | 9 |
| Base Volume Adjustment Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Heavy Vehicles Percentage [%] | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 |
| Growth Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| In-Process Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Site-Generated Trips [veh/h] | 15 | 4 | 3 | 0 | 1 | 12 | 9 | 20 | 7 | 0 | 32 | 0 |
| Diverted Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Pass-by Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Existing Site Adjustment Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Other Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Hourly Volume [veh/h] | 54 | 81 | 13 | 4 | 54 | 43 | 30 | 100 | 45 | 8 | 185 | 9 |
| Peak Hour Factor | 0.9260 | 0.9260 | 0.9260 | 0.9260 | 0.9260 | 0.9260 | 0.9260 | 0.9260 | 0.9260 | 0.9260 | 0.9260 | 0.9260 |
| Other Adjustment Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Total 15-Minute Volume [veh/h] | 15 | 22 | 4 | 1 | 15 | 12 | 8 | 27 | 12 | 2 | 50 | 2 |
| Total Analysis Volume [veh/h] | 58 | 87 | 14 | 4 | 58 | 46 | 32 | 108 | 49 | 9 | 200 | 10 |
| Pedestrian Volume [ped/h] | 0 | | | 0 | | | 0 | | | 0 | | |
| Bicycle Volume [bicycles/h] | 0 | | | 0 | | | 0 | | | 0 | | |

**Intersection Settings**

| | |
|---|---|
| Cycle Length [s] | 70 |
| Lost time [s] | 10.00 |

**Phasing & Timing**

| Control Type | Protecte | Permiss | Permiss | Protecte | Permiss | Permiss | Protecte | Permiss | Permiss | Protecte | Permiss | Permiss |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Signal Group | 1 | 6 | 0 | 5 | 2 | 0 | 3 | 8 | 0 | 7 | 4 | 0 |
| Auxiliary Signal Groups | | | | | | | | | | | | |
| Lead / Lag | Lead | - | - | Lead | - | - | Lead | - | - | Lead | - | - |

**Movement, Approach, & Intersection Results**

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| V/C, Movement V/C Ratio | 0.03 | 0.06 | 0.06 | 0.00 | 0.06 | 0.06 | 0.02 | 0.09 | 0.09 | 0.01 | 0.12 | 0.12 |
| Intersection LOS | A | | | | | | | | | | | |
| Intersection V/C | 0.377 | | | | | | | | | | | |

**Intersection Level Of Service Report**
**Intersection 5: 1st Avenue/Wheeler Avenue**

| | | | |
|---|---|---|---|
| Control Type: | Signalized | Delay (sec / veh): | - |
| Analysis Method: | ICU 1 | Level Of Service: | A |
| Analysis Period: | 1 hour | Volume to Capacity (v/c): | 0.341 |

**Intersection Setup**

| Name | 1st Avenue | | | 1st Avenue | | | Wheeler Avenue | | | Wheeler Avenue | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Approach | Northbound | | | Southbound | | | Eastbound | | | Westbound | | |
| Lane Configuration | | | | | | | | | | | | |
| Turning Movement | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right |
| Lane Width [ft] | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 |
| No. of Lanes in Entry Pocket | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Entry Pocket Length [ft] | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 |
| No. of Lanes in Exit Pocket | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Exit Pocket Length [ft] | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Speed [mph] | 30.00 | | | 30.00 | | | 30.00 | | | 30.00 | | |
| Grade [%] | 0.00 | | | 0.00 | | | 0.00 | | | 0.00 | | |
| Crosswalk | Yes | | | Yes | | | Yes | | | Yes | | |

**Volumes**

| Name | 1st Avenue | | | 1st Avenue | | | Wheeler Avenue | | | Wheeler Avenue | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Base Volume Input [veh/h] | 83 | 99 | 16 | 9 | 93 | 11 | 7 | 14 | 38 | 15 | 9 | 12 |
| Base Volume Adjustment Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Heavy Vehicles Percentage [%] | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 |
| Growth Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| In-Process Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Site-Generated Trips [veh/h] | 14 | 10 | 0 | 1 | 7 | 0 | 0 | 0 | 4 | 14 | 7 | 12 |
| Diverted Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Pass-by Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Existing Site Adjustment Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Other Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Hourly Volume [veh/h] | 97 | 109 | 16 | 10 | 100 | 11 | 7 | 14 | 42 | 29 | 16 | 24 |
| Peak Hour Factor | 0.7930 | 0.7930 | 0.7930 | 0.7930 | 0.7930 | 0.7930 | 0.7930 | 0.7930 | 0.7930 | 0.7930 | 0.7930 | 0.7930 |
| Other Adjustment Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Total 15-Minute Volume [veh/h] | 31 | 34 | 5 | 3 | 32 | 3 | 2 | 4 | 13 | 9 | 5 | 8 |
| Total Analysis Volume [veh/h] | 122 | 137 | 20 | 13 | 126 | 14 | 9 | 18 | 53 | 37 | 20 | 30 |
| Pedestrian Volume [ped/h] | 0 | | | 0 | | | 0 | | | 0 | | |
| Bicycle Volume [bicycles/h] | 0 | | | 0 | | | 0 | | | 0 | | |

**Intersection Settings**

| | |
|---|---|
| Cycle Length [s] | 65 |
| Lost time [s] | 10.00 |

**Phasing & Timing**

| Control Type | Permiss | Permiss | Permiss | Permiss | Permiss | Permiss | Permiss | Permiss | Permiss | Permiss | Permiss | Permiss |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Signal Group | 0 | 6 | 0 | 0 | 2 | 0 | 0 | 8 | 0 | 0 | 4 | 0 |
| Auxiliary Signal Groups | | | | | | | | | | | | |
| Lead / Lag | - | - | - | - | - | - | - | - | - | - | - | - |

**Movement, Approach, & Intersection Results**

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| V/C, Movement V/C Ratio | 0.06 | 0.08 | 0.08 | 0.01 | 0.07 | 0.07 | 0.00 | 0.04 | 0.04 | 0.02 | 0.04 | 0.04 |
| Intersection LOS | A | | | | | | | | | | | |
| Intersection V/C | 0.341 | | | | | | | | | | | |

**Intersection Level Of Service Report**
**Intersection 6: 1st Avenue/Huntington Drive**

| | | | |
|---|---|---|---|
| Control Type: | Signalized | Delay (sec / veh): | - |
| Analysis Method: | ICU 1 | Level Of Service: | B |
| Analysis Period: | 1 hour | Volume to Capacity (v/c): | 0.666 |

**Intersection Setup**

| Name | 1st Avenue | | | 1st Avenue | | | Huntington Drive | | | Huntington Drive | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Approach | Northbound | | | Southbound | | | Eastbound | | | Westbound | | |
| Lane Configuration |  | | |  | | |  | | |  | | |
| Turning Movement | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right |
| Lane Width [ft] | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 |
| No. of Lanes in Entry Pocket | 1 | 0 | 1 | 1 | 0 | 1 | 1 | 0 | 0 | 1 | 0 | 0 |
| Entry Pocket Length [ft] | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 |
| No. of Lanes in Exit Pocket | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 |
| Exit Pocket Length [ft] | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 100.00 | 0.00 | 0.00 | 100.00 |
| Speed [mph] | 30.00 | | | 30.00 | | | 30.00 | | | 30.00 | | |
| Grade [%] | 0.00 | | | 0.00 | | | 0.00 | | | 0.00 | | |
| Crosswalk | Yes | | | Yes | | | Yes | | | Yes | | |

**Volumes**

| Name | 1st Avenue | | | 1st Avenue | | | Huntington Drive | | | Huntington Drive | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Base Volume Input [veh/h] | 67 | 99 | 66 | 53 | 78 | 26 | 49 | 443 | 38 | 55 | 1170 | 114 |
| Base Volume Adjustment Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Heavy Vehicles Percentage [%] | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 |
| Growth Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| In-Process Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Site-Generated Trips [veh/h] | 15 | 13 | 0 | 10 | 15 | 0 | 0 | 31 | 0 | 0 | 34 | 11 |
| Diverted Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Pass-by Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Existing Site Adjustment Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Other Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Hourly Volume [veh/h] | 82 | 112 | 66 | 63 | 93 | 26 | 49 | 474 | 38 | 55 | 1204 | 125 |
| Peak Hour Factor | 0.9790 | 0.9790 | 0.9790 | 0.9790 | 0.9790 | 0.9790 | 0.9790 | 0.9790 | 0.9790 | 0.9790 | 0.9790 | 0.9790 |
| Other Adjustment Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Total 15-Minute Volume [veh/h] | 21 | 29 | 17 | 16 | 24 | 7 | 13 | 121 | 10 | 14 | 307 | 32 |
| Total Analysis Volume [veh/h] | 84 | 114 | 67 | 64 | 95 | 27 | 50 | 484 | 39 | 56 | 1230 | 128 |
| Pedestrian Volume [ped/h] | 0 | | | 0 | | | 0 | | | 0 | | |
| Bicycle Volume [bicycles/h] | 0 | | | 0 | | | 0 | | | 0 | | |

**Intersection Settings**

| | |
|---|---|
| Cycle Length [s] | 90 |
| Lost time [s] | 10.00 |

**Phasing & Timing**

| Control Type | ProtPer | Permiss | Permiss | ProtPer | Permiss | Permiss | ProtPer | Permiss | Permiss | ProtPer | Permiss | Permiss |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Signal Group | 1 | 6 | 0 | 5 | 2 | 0 | 3 | 8 | 0 | 7 | 4 | 0 |
| Auxiliary Signal Groups | | | | | | | | | | | | |
| Lead / Lag | Lead | - | - | Lead | - | - | Lead | - | - | Lead | - | - |

**Movement, Approach, & Intersection Results**

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| V/C, Movement V/C Ratio | 0.05 | 0.07 | 0.04 | 0.04 | 0.06 | 0.02 | 0.03 | 0.16 | 0.16 | 0.03 | 0.42 | 0.42 |
| Intersection LOS | B | | | | | | | | | | | |
| Intersection V/C | 0.666 | | | | | | | | | | | |

Vistro File: P:\...\Base_Alexan Arcadia_2_wCumu_PM.vistro
Report File: P:\...\Opening Year + Project PM.pdf
Scenario 6 Opening Year (2024) plus Project
9/23/2021

**Intersection Analysis Summary**

| ID | Intersection Name | Control Type | Method | Worst Mvmt | V/C | Delay (s/veh) | LOS |
|---|---|---|---|---|---|---|---|
| 1 | Santa Anita Avenue/Santa Clara Street | Signalized | ICU 1 | SB Thru | 0.688 | - | B |
| 2 | Santa Anita Avenue/Wheeler Avenue | Two-way stop | HCM 6th Edition | WB Left | 0.377 | 49.0 | E |
| 3 | Santa Anita Avenue/Huntington Drive | Signalized | ICU 1 | EB Thru | 0.918 | - | E |
| 4 | 1st Avenue/Santa Clara Street | Signalized | ICU 1 | EB Thru | 0.502 | - | A |
| 5 | 1st Avenue/Wheeler Avenue | Signalized | ICU 1 | EB Thru | 0.468 | - | A |
| 6 | 1st Avenue/Huntington Drive | Signalized | ICU 1 | EB Thru | 0.811 | - | D |

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. For all other control types, they are taken for the whole intersection.

**Intersection Level Of Service Report**
**Intersection 1: Santa Anita Avenue/Santa Clara Street**

| | | | |
|---|---|---|---|
| Control Type: | Signalized | Delay (sec / veh): | - |
| Analysis Method: | ICU 1 | Level Of Service: | B |
| Analysis Period: | 1 hour | Volume to Capacity (v/c): | 0.688 |

**Intersection Setup**

| Name | Santa Anita Avenue | | | Santa Anita Avenue | | | Santa Clara Street | | | Santa Clara Street | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Approach | Northbound | | | Southbound | | | Eastbound | | | Westbound | | |
| Lane Configuration |  | | |  | | |  | | |  | | |
| Turning Movement | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right |
| Lane Width [ft] | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 |
| No. of Lanes in Entry Pocket | 1 | 0 | 1 | 1 | 0 | 1 | 1 | 0 | 0 | 1 | 0 | 1 |
| Entry Pocket Length [ft] | 100.00 | 100.00 | 100.00 | 90.00 | 100.00 | 70.00 | 115.00 | 100.00 | 100.00 | 50.00 | 100.00 | 100.00 |
| No. of Lanes in Exit Pocket | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Exit Pocket Length [ft] | 0.00 | 0.00 | 100.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Speed [mph] | 30.00 | | | 30.00 | | | 30.00 | | | 30.00 | | |
| Grade [%] | 0.00 | | | 0.00 | | | 0.00 | | | 0.00 | | |
| Crosswalk | Yes | | | Yes | | | Yes | | | Yes | | |

**Volumes**

| Name | Santa Anita Avenue | | | Santa Anita Avenue | | | Santa Clara Street | | | Santa Clara Street | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Base Volume Input [veh/h] | 27 | 669 | 60 | 141 | 861 | 258 | 336 | 158 | 46 | 92 | 124 | 78 |
| Base Volume Adjustment Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Heavy Vehicles Percentage [%] | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 |
| Growth Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| In-Process Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Site-Generated Trips [veh/h] | 0 | 28 | 13 | 34 | 20 | 61 | 46 | 21 | 0 | 6 | 27 | 19 |
| Diverted Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Pass-by Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Existing Site Adjustment Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Other Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Hourly Volume [veh/h] | 27 | 697 | 73 | 175 | 881 | 319 | 382 | 179 | 46 | 98 | 151 | 97 |
| Peak Hour Factor | 0.9380 | 0.9380 | 0.9380 | 0.9380 | 0.9380 | 0.9380 | 0.9380 | 0.9380 | 0.9380 | 0.9380 | 0.9380 | 0.9380 |
| Other Adjustment Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Total 15-Minute Volume [veh/h] | 7 | 186 | 19 | 47 | 235 | 85 | 102 | 48 | 12 | 26 | 40 | 26 |
| Total Analysis Volume [veh/h] | 29 | 743 | 78 | 187 | 939 | 340 | 407 | 191 | 49 | 104 | 161 | 103 |
| Pedestrian Volume [ped/h] | 0 | | | 0 | | | 0 | | | 0 | | |
| Bicycle Volume [bicycles/h] | 0 | | | 0 | | | 0 | | | 0 | | |

**Intersection Settings**

| | |
|---|---|
| Cycle Length [s] | 90 |
| Lost time [s] | 10.00 |

**Phasing & Timing**

| Control Type | ProtPer | Permiss | Permiss | ProtPer | Permiss | Overlap | Protecte | Permiss | Permiss | Protecte | Permiss | Permiss |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Signal Group | 1 | 6 | 0 | 5 | 2 | 2 | 3 | 8 | 0 | 7 | 4 | 0 |
| Auxiliary Signal Groups | | | | | | 2,3 | | | | | | |
| Lead / Lag | Lead | - | - | Lead | - | - | Lead | - | - | Lead | - | - |

**Movement, Approach, & Intersection Results**

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| V/C, Movement V/C Ratio | 0.02 | 0.24 | 0.24 | 0.11 | 0.28 | 0.07 | 0.13 | 0.14 | 0.14 | 0.06 | 0.09 | 0.06 |
| Intersection LOS | B | | | | | | | | | | | |
| Intersection V/C | 0.688 | | | | | | | | | | | |

**Intersection Level Of Service Report**
**Intersection 2: Santa Anita Avenue/Wheeler Avenue**

| | | | |
|---|---|---|---|
| Control Type: | Two-way stop | Delay (sec / veh): | 49.0 |
| Analysis Method: | HCM 6th Edition | Level Of Service: | E |
| Analysis Period: | 1 hour | Volume to Capacity (v/c): | 0.377 |

**Intersection Setup**

| Name | Santa Anita Avenue | | | | | |
|---|---|---|---|---|---|---|
| Approach | Northbound | | Southbound | | Westbound | |
| Lane Configuration |  | |  | |  | |
| Turning Movement | Thru | Right | Left | Thru | Left | Right |
| Lane Width [ft] | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 |
| No. of Lanes in Entry Pocket | 0 | 0 | 1 | 0 | 0 | 0 |
| Entry Pocket Length [ft] | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 |
| No. of Lanes in Exit Pocket | 0 | 0 | 0 | 0 | 0 | 0 |
| Exit Pocket Length [ft] | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Speed [mph] | 30.00 | | 30.00 | | 30.00 | |
| Grade [%] | 0.00 | | 0.00 | | 0.00 | |
| Crosswalk | No | | No | | Yes | |

**Volumes**

| Name | Santa Anita Avenue | | | | | |
|---|---|---|---|---|---|---|
| Base Volume Input [veh/h] | 687 | 64 | 69 | 868 | 42 | 64 |
| Base Volume Adjustment Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Heavy Vehicles Percentage [%] | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 |
| Growth Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| In-Process Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 |
| Site-Generated Trips [veh/h] | 20 | 0 | 21 | 41 | 4 | 9 |
| Diverted Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 |
| Pass-by Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 |
| Existing Site Adjustment Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 |
| Other Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Hourly Volume [veh/h] | 707 | 64 | 90 | 909 | 46 | 73 |
| Peak Hour Factor | 0.9470 | 0.9470 | 0.9470 | 0.9470 | 0.9470 | 0.9470 |
| Other Adjustment Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Total 15-Minute Volume [veh/h] | 187 | 17 | 24 | 240 | 12 | 19 |
| Total Analysis Volume [veh/h] | 747 | 68 | 95 | 960 | 49 | 77 |
| Pedestrian Volume [ped/h] | 0 | | 0 | | 0 | |

**Intersection Settings**

| | | | |
|---|---|---|---|
| Priority Scheme | Free | Free | Stop |
| Flared Lane | | | No |
| Storage Area [veh] | 0 | 0 | 0 |
| Two-Stage Gap Acceptance | | | No |
| Number of Storage Spaces in Median | 0 | 0 | 0 |

**Movement, Approach, & Intersection Results**

| | | | | | | |
|---|---|---|---|---|---|---|
| V/C, Movement V/C Ratio | 0.01 | 0.00 | 0.11 | 0.01 | 0.38 | 0.12 |
| d_M, Delay for Movement [s/veh] | 0.00 | 0.00 | 9.80 | 0.00 | 49.02 | 25.40 |
| Movement LOS | A | A | A | A | E | D |
| 95th-Percentile Queue Length [veh/ln] | 0.00 | 0.00 | 0.36 | 0.00 | 2.82 | 2.82 |
| 95th-Percentile Queue Length [ft/ln] | 0.00 | 0.00 | 9.00 | 0.00 | 70.51 | 70.51 |
| d_A, Approach Delay [s/veh] | 0.00 | | 0.88 | | 34.53 | |
| Approach LOS | A | | A | | D | |
| d_I, Intersection Delay [s/veh] | 2.64 | | | | | |
| Intersection LOS | E | | | | | |

**Intersection Level Of Service Report**
**Intersection 3: Santa Anita Avenue/Huntington Drive**

| | | | |
|---|---|---|---|
| Control Type: | Signalized | Delay (sec / veh): | - |
| Analysis Method: | ICU 1 | Level Of Service: | E |
| Analysis Period: | 1 hour | Volume to Capacity (v/c): | 0.918 |

**Intersection Setup**

| Name | Santa Anita Avenue | | | Santa Anita Avenue | | | Huntington Drive | | | Huntington Drive | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Approach | Northbound | | | Southbound | | | Eastbound | | | Westbound | | |
| Lane Configuration |  | | |  | | |  | | |  | | |
| Turning Movement | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right |
| Lane Width [ft] | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 |
| No. of Lanes in Entry Pocket | 1 | 0 | 1 | 1 | 0 | 1 | 1 | 0 | 1 | 1 | 0 | 1 |
| Entry Pocket Length [ft] | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 |
| No. of Lanes in Exit Pocket | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 |
| Exit Pocket Length [ft] | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 100.00 | 0.00 | 0.00 | 0.00 |
| Speed [mph] | 30.00 | | | 30.00 | | | 30.00 | | | 30.00 | | |
| Grade [%] | 0.00 | | | 0.00 | | | 0.00 | | | 0.00 | | |
| Crosswalk | Yes | | | Yes | | | Yes | | | Yes | | |

**Volumes**

| Name | Santa Anita Avenue | | | Santa Anita Avenue | | | Huntington Drive | | | Huntington Drive | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Base Volume Input [veh/h] | 216 | 616 | 126 | 132 | 741 | 87 | 73 | 1245 | 664 | 136 | 644 | 74 |
| Base Volume Adjustment Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Heavy Vehicles Percentage [%] | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 |
| Growth Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| In-Process Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Site-Generated Trips [veh/h] | 28 | 12 | 0 | 0 | 24 | 21 | 8 | 30 | 34 | 0 | 52 | 0 |
| Diverted Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Pass-by Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Existing Site Adjustment Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Other Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Hourly Volume [veh/h] | 244 | 628 | 126 | 132 | 765 | 108 | 81 | 1275 | 698 | 136 | 696 | 74 |
| Peak Hour Factor | 0.9600 | 0.9600 | 0.9600 | 0.9600 | 0.9600 | 0.9600 | 0.9600 | 0.9600 | 0.9600 | 0.9600 | 0.9600 | 0.9600 |
| Other Adjustment Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Total 15-Minute Volume [veh/h] | 64 | 164 | 33 | 34 | 199 | 28 | 21 | 332 | 182 | 35 | 181 | 19 |
| Total Analysis Volume [veh/h] | 254 | 654 | 131 | 138 | 797 | 113 | 84 | 1328 | 727 | 142 | 725 | 77 |
| Pedestrian Volume [ped/h] | 0 | | | 0 | | | 0 | | | 0 | | |
| Bicycle Volume [bicycles/h] | 0 | | | 0 | | | 0 | | | 0 | | |

**Intersection Settings**

| | |
|---|---|
| Cycle Length [s] | 90 |
| Lost time [s] | 10.00 |

**Phasing & Timing**

| Control Type | Protecte | Permiss | Overlap | Protecte | Permiss | Overlap | ProtPer | Permiss | Overlap | ProtPer | Permiss | Permiss |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Signal Group | 1 | 6 | 6 | 5 | 2 | 2 | 3 | 8 | 8 | 7 | 4 | 0 |
| Auxiliary Signal Groups | | | 6,7 | | | 2,3 | | | 1,8 | | | |
| Lead / Lag | Lead | - | - | Lead | - | - | Lead | - | - | Lead | - | - |

**Movement, Approach, & Intersection Results**

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| V/C, Movement V/C Ratio | 0.08 | 0.20 | 0.08 | 0.05 | 0.24 | 0.07 | 0.05 | 0.40 | 0.35 | 0.09 | 0.22 | 0.05 |
| Intersection LOS | E | | | | | | | | | | | |
| Intersection V/C | 0.918 | | | | | | | | | | | |

**Intersection Level Of Service Report**
**Intersection 4: 1st Avenue/Santa Clara Street**

| | | | |
|---|---|---|---|
| Control Type: | Signalized | Delay (sec / veh): | - |
| Analysis Method: | ICU 1 | Level Of Service: | A |
| Analysis Period: | 1 hour | Volume to Capacity (v/c): | 0.502 |

**Intersection Setup**

| Name | 1st Avenue | | | 1st Avenue | | | Santa Clara Street | | | Santa Clara Street | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Approach | Northbound | | | Southbound | | | Eastbound | | | Westbound | | |
| Lane Configuration | | | | | | | | | | | | |
| Turning Movement | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right |
| Lane Width [ft] | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 |
| No. of Lanes in Entry Pocket | 1 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 0 |
| Entry Pocket Length [ft] | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 |
| No. of Lanes in Exit Pocket | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Exit Pocket Length [ft] | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Speed [mph] | 30.00 | | | 30.00 | | | 30.00 | | | 30.00 | | |
| Grade [%] | 0.00 | | | 0.00 | | | 0.00 | | | 0.00 | | |
| Crosswalk | Yes | | | Yes | | | Yes | | | Yes | | |

**Volumes**

| Name | 1st Avenue | | | 1st Avenue | | | Santa Clara Street | | | Santa Clara Street | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Base Volume Input [veh/h] | 47 | 108 | 39 | 8 | 106 | 44 | 28 | 195 | 42 | 20 | 128 | 11 |
| Base Volume Adjustment Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Heavy Vehicles Percentage [%] | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 |
| Growth Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| In-Process Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Site-Generated Trips [veh/h] | 13 | 3 | 2 | 0 | 1 | 11 | 11 | 34 | 23 | 0 | 28 | 0 |
| Diverted Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Pass-by Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Existing Site Adjustment Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Other Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Hourly Volume [veh/h] | 60 | 111 | 41 | 8 | 107 | 55 | 39 | 229 | 65 | 20 | 156 | 11 |
| Peak Hour Factor | 0.8600 | 0.8600 | 0.8600 | 0.8600 | 0.8600 | 0.8600 | 0.8600 | 0.8600 | 0.8600 | 0.8600 | 0.8600 | 0.8600 |
| Other Adjustment Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Total 15-Minute Volume [veh/h] | 17 | 32 | 12 | 2 | 31 | 16 | 11 | 67 | 19 | 6 | 45 | 3 |
| Total Analysis Volume [veh/h] | 70 | 129 | 48 | 9 | 124 | 64 | 45 | 266 | 76 | 23 | 181 | 13 |
| Pedestrian Volume [ped/h] | 0 | | | 0 | | | 0 | | | 0 | | |
| Bicycle Volume [bicycles/h] | 0 | | | 0 | | | 0 | | | 0 | | |

**Intersection Settings**

| | |
|---|---|
| Cycle Length [s] | 60 |
| Lost time [s] | 10.00 |

**Phasing & Timing**

| Control Type | Protecte | Permiss | Permiss | Protecte | Permiss | Permiss | Protecte | Permiss | Permiss | Protecte | Permiss | Permiss |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Signal Group | 1 | 6 | 0 | 5 | 2 | 0 | 3 | 8 | 0 | 7 | 4 | 0 |
| Auxiliary Signal Groups | | | | | | | | | | | | |
| Lead / Lag | Lead | - | - | Lead | - | - | Lead | - | - | Lead | - | - |

**Movement, Approach, & Intersection Results**

| V/C, Movement V/C Ratio | 0.04 | 0.10 | 0.10 | 0.01 | 0.10 | 0.10 | 0.02 | 0.18 | 0.18 | 0.01 | 0.10 | 0.10 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Intersection LOS | A | | | | | | | | | | | |
| Intersection V/C | 0.502 | | | | | | | | | | | |

**Intersection Level Of Service Report**
**Intersection 5: 1st Avenue/Wheeler Avenue**

| | | | |
|---|---|---|---|
| Control Type: | Signalized | Delay (sec / veh): | - |
| Analysis Method: | ICU 1 | Level Of Service: | A |
| Analysis Period: | 1 hour | Volume to Capacity (v/c): | 0.468 |

**Intersection Setup**

| Name | 1st Avenue | | | 1st Avenue | | | Wheeler Avenue | | | Wheeler Avenue | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Approach | Northbound | | | Southbound | | | Eastbound | | | Westbound | | |
| Lane Configuration | | | | | | | | | | | | |
| Turning Movement | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right |
| Lane Width [ft] | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 |
| No. of Lanes in Entry Pocket | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Entry Pocket Length [ft] | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 |
| No. of Lanes in Exit Pocket | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Exit Pocket Length [ft] | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Speed [mph] | 30.00 | | | 30.00 | | | 30.00 | | | 30.00 | | |
| Grade [%] | 0.00 | | | 0.00 | | | 0.00 | | | 0.00 | | |
| Crosswalk | Yes | | | Yes | | | Yes | | | Yes | | |

**Volumes**

| Name | 1st Avenue | | | 1st Avenue | | | Wheeler Avenue | | | Wheeler Avenue | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Base Volume Input [veh/h] | 69 | 152 | 12 | 9 | 123 | 30 | 32 | 6 | 129 | 41 | 18 | 25 |
| Base Volume Adjustment Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Heavy Vehicles Percentage [%] | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 |
| Growth Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| In-Process Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Site-Generated Trips [veh/h] | 9 | 8 | 0 | 11 | 13 | 0 | 0 | 0 | 21 | 9 | 4 | 10 |
| Diverted Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Pass-by Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Existing Site Adjustment Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Other Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Hourly Volume [veh/h] | 78 | 160 | 12 | 20 | 136 | 30 | 32 | 6 | 150 | 50 | 22 | 35 |
| Peak Hour Factor | 0.8710 | 0.8710 | 0.8710 | 0.8710 | 0.8710 | 0.8710 | 0.8710 | 0.8710 | 0.8710 | 0.8710 | 0.8710 | 0.8710 |
| Other Adjustment Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Total 15-Minute Volume [veh/h] | 22 | 46 | 3 | 6 | 39 | 9 | 9 | 2 | 43 | 14 | 6 | 10 |
| Total Analysis Volume [veh/h] | 90 | 184 | 14 | 23 | 156 | 34 | 37 | 7 | 172 | 57 | 25 | 40 |
| Pedestrian Volume [ped/h] | 0 | | | 0 | | | 0 | | | 0 | | |
| Bicycle Volume [bicycles/h] | 0 | | | 0 | | | 0 | | | 0 | | |

**Intersection Settings**

| | |
|---|---|
| Cycle Length [s] | 60 |
| Lost time [s] | 10.00 |

**Phasing & Timing**

| Control Type | Permiss | Permiss | Permiss | Permiss | Permiss | Permiss | Permiss | Permiss | Permiss | Permiss | Permiss | Permiss |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Signal Group | 0 | 6 | 0 | 0 | 2 | 0 | 0 | 8 | 0 | 0 | 4 | 0 |
| Auxiliary Signal Groups | | | | | | | | | | | | |
| Lead / Lag | - | - | - | - | - | - | - | - | - | - | - | - |

**Movement, Approach, & Intersection Results**

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| V/C, Movement V/C Ratio | 0.05 | 0.11 | 0.11 | 0.01 | 0.10 | 0.10 | 0.02 | 0.12 | 0.12 | 0.03 | 0.07 | 0.07 |
| Intersection LOS | A | | | | | | | | | | | |
| Intersection V/C | 0.468 | | | | | | | | | | | |

**Intersection Level Of Service Report**
**Intersection 6: 1st Avenue/Huntington Drive**

| | | | |
|---|---|---|---|
| Control Type: | Signalized | Delay (sec / veh): | - |
| Analysis Method: | ICU 1 | Level Of Service: | D |
| Analysis Period: | 1 hour | Volume to Capacity (v/c): | 0.811 |

**Intersection Setup**

| Name | 1st Avenue | | | 1st Avenue | | | Huntington Drive | | | Huntington Drive | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Approach | Northbound | | | Southbound | | | Eastbound | | | Westbound | | |
| Lane Configuration | | | | | | | | | | | | |
| Turning Movement | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right |
| Lane Width [ft] | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 |
| No. of Lanes in Entry Pocket | 1 | 0 | 1 | 1 | 0 | 1 | 1 | 0 | 0 | 1 | 0 | 0 |
| Entry Pocket Length [ft] | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 |
| No. of Lanes in Exit Pocket | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 |
| Exit Pocket Length [ft] | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 100.00 | 0.00 | 0.00 | 100.00 |
| Speed [mph] | 30.00 | | | 30.00 | | | 30.00 | | | 30.00 | | |
| Grade [%] | 0.00 | | | 0.00 | | | 0.00 | | | 0.00 | | |
| Crosswalk | Yes | | | Yes | | | Yes | | | Yes | | |

**Volumes**

| Name | 1st Avenue | | | 1st Avenue | | | Huntington Drive | | | Huntington Drive | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Base Volume Input [veh/h] | 46 | 113 | 47 | 130 | 190 | 77 | 40 | 1370 | 81 | 105 | 755 | 83 |
| Base Volume Adjustment Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Heavy Vehicles Percentage [%] | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 |
| Growth Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| In-Process Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Site-Generated Trips [veh/h] | 15 | 10 | 0 | 22 | 21 | 0 | 0 | 30 | 0 | 0 | 37 | 7 |
| Diverted Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Pass-by Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Existing Site Adjustment Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Other Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Hourly Volume [veh/h] | 61 | 123 | 47 | 152 | 211 | 77 | 40 | 1400 | 81 | 105 | 792 | 90 |
| Peak Hour Factor | 0.9600 | 0.9600 | 0.9600 | 0.9600 | 0.9600 | 0.9600 | 0.9600 | 0.9600 | 0.9600 | 0.9600 | 0.9600 | 0.9600 |
| Other Adjustment Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Total 15-Minute Volume [veh/h] | 16 | 32 | 12 | 40 | 55 | 20 | 10 | 365 | 21 | 27 | 206 | 23 |
| Total Analysis Volume [veh/h] | 64 | 128 | 49 | 158 | 220 | 80 | 42 | 1458 | 84 | 109 | 825 | 94 |
| Pedestrian Volume [ped/h] | 0 | | | 0 | | | 0 | | | 0 | | |
| Bicycle Volume [bicycles/h] | 0 | | | 0 | | | 0 | | | 0 | | |

**Intersection Settings**

| | |
|---|---|
| Cycle Length [s] | 90 |
| Lost time [s] | 10.00 |

**Phasing & Timing**

| Control Type | ProtPer | Permiss | Permiss | ProtPer | Permiss | Permiss | ProtPer | Permiss | Permiss | ProtPer | Permiss | Permiss |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Signal Group | 1 | 6 | 0 | 5 | 2 | 0 | 3 | 8 | 0 | 7 | 4 | 0 |
| Auxiliary Signal Groups | | | | | | | | | | | | |
| Lead / Lag | Lead | - | - | Lead | - | - | Lead | - | - | Lead | - | - |

**Movement, Approach, & Intersection Results**

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| V/C, Movement V/C Ratio | 0.04 | 0.08 | 0.03 | 0.10 | 0.13 | 0.05 | 0.03 | 0.46 | 0.46 | 0.07 | 0.28 | 0.28 |
| Intersection LOS | D | | | | | | | | | | | |
| Intersection V/C | 0.811 | | | | | | | | | | | |

# Attachment C

## SimTraffic Queueing Worksheet

## Intersection: 1: Santa Anita Avenue & Santa Clara Street

| Movement | EB | EB | EB | WB | WB | WB | NB | NB | NB | SB | SB | SB |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Directions Served | L | L | TR | L | T | R | L | T | TR | L | T | T |
| Maximum Queue (ft) | 107 | 151 | 95 | 49 | 119 | 111 | 83 | 188 | 200 | 114 | 424 | 442 |
| Average Queue (ft) | 19 | 75 | 39 | 33 | 66 | 38 | 20 | 101 | 108 | 59 | 227 | 223 |
| 95th Queue (ft) | 65 | 130 | 82 | 63 | 120 | 85 | 56 | 167 | 177 | 129 | 374 | 385 |
| Link Distance (ft) | | 863 | 863 | | 112 | | | 223 | 223 | | 454 | 454 |
| Upstream Blk Time (%) | | | | | 3 | 0 | | 0 | 0 | | 1 | 1 |
| Queuing Penalty (veh) | | | | | 6 | 0 | | 0 | 0 | | 0 | 0 |
| Storage Bay Dist (ft) | 115 | | | 50 | | 100 | 100 | | | 90 | | |
| Storage Blk Time (%) | 0 | 2 | | 9 | 18 | 0 | | 7 | | 0 | 40 | 30 |
| Queuing Penalty (veh) | 0 | 2 | | 17 | 22 | 0 | | 3 | | 1 | 28 | 72 |

## Intersection: 1: Santa Anita Avenue & Santa Clara Street

| Movement | SB |
|---|---|
| Directions Served | R |
| Maximum Queue (ft) | 95 |
| Average Queue (ft) | 91 |
| 95th Queue (ft) | 105 |
| Link Distance (ft) | |
| Upstream Blk Time (%) | |
| Queuing Penalty (veh) | |
| Storage Bay Dist (ft) | 70 |
| Storage Blk Time (%) | 36 |
| Queuing Penalty (veh) | 117 |

## Intersection: 2: Santa Anita Avenue & Wheeler Avenue

| Movement | WB | NB | SB | SB | SB |
|---|---|---|---|---|---|
| Directions Served | LR | TR | L | T | T |
| Maximum Queue (ft) | 87 | 23 | 43 | 63 | 6 |
| Average Queue (ft) | 35 | 1 | 20 | 9 | 0 |
| 95th Queue (ft) | 66 | 10 | 47 | 44 | 4 |
| Link Distance (ft) | 88 | 336 | | 51 | 51 |
| Upstream Blk Time (%) | 0 | | 1 | 0 | |
| Queuing Penalty (veh) | 0 | | 0 | 1 | |
| Storage Bay Dist (ft) | | | 50 | | |
| Storage Blk Time (%) | | | 1 | 0 | |
| Queuing Penalty (veh) | | | 3 | 0 | |

## Intersection: 7: Project Driveway (Northwest) & Santa Clara Street

| Movement | WB | NB |
|---|---|---|
| Directions Served | T | R |
| Maximum Queue (ft) | 62 | 31 |
| Average Queue (ft) | 4 | 8 |
| 95th Queue (ft) | 29 | 30 |
| Link Distance (ft) | 195 | 72 |
| Upstream Blk Time (%) | | |
| Queuing Penalty (veh) | | |
| Storage Bay Dist (ft) | | |
| Storage Blk Time (%) | | |
| Queuing Penalty (veh) | | |

## Intersection: 8: Access Alley Driveway (Northeast) & Santa Clara Street

| Movement | WB | NB |
|---|---|---|
| Directions Served | L | LTR |
| Maximum Queue (ft) | 30 | 66 |
| Average Queue (ft) | 3 | 25 |
| 95th Queue (ft) | 18 | 54 |
| Link Distance (ft) | | 99 |
| Upstream Blk Time (%) | | 0 |
| Queuing Penalty (veh) | | 0 |
| Storage Bay Dist (ft) | 150 | |
| Storage Blk Time (%) | | |
| Queuing Penalty (veh) | | |

## Intersection: 9: Project Driveway (West) & Santa Anita Avenue

| Movement | WB | NB | NB | SB |
|---|---|---|---|---|
| Directions Served | R | T | T | T |
| Maximum Queue (ft) | 29 | 16 | 11 | 12 |
| Average Queue (ft) | 11 | 1 | 0 | 0 |
| 95th Queue (ft) | 33 | 8 | 5 | 6 |
| Link Distance (ft) | 69 | 38 | 38 | 223 |
| Upstream Blk Time (%) | | 0 | 0 | |
| Queuing Penalty (veh) | | 0 | 0 | |
| Storage Bay Dist (ft) | | | | |
| Storage Blk Time (%) | | | | |
| Queuing Penalty (veh) | | | | |

## Intersection: 10: Wheeler Avenue & Project Driveway (Southwest)

| Movement | EB | WB | SB |
|---|---|---|---|
| Directions Served | LTR | LTR | LTR |
| Maximum Queue (ft) | 45 | 12 | 64 |
| Average Queue (ft) | 4 | 0 | 25 |
| 95th Queue (ft) | 21 | 6 | 50 |
| Link Distance (ft) | 88 | 186 | 112 |
| Upstream Blk Time (%) | | | |
| Queuing Penalty (veh) | | | |
| Storage Bay Dist (ft) | | | |
| Storage Blk Time (%) | | | |
| Queuing Penalty (veh) | | | |

## Zone Summary

Zone wide Queuing Penalty: 272

## Intersection: 1: Santa Anita Avenue & Santa Clara Street

| Movement | EB | EB | EB | WB | WB | WB | NB | NB | NB | SB | SB | SB |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Directions Served | L | L | TR | L | T | R | L | T | TR | L | T | T |
| Maximum Queue (ft) | 140 | 269 | 169 | 52 | 139 | 112 | 124 | 226 | 232 | 115 | 488 | 484 |
| Average Queue (ft) | 94 | 149 | 78 | 45 | 93 | 57 | 22 | 128 | 136 | 85 | 377 | 370 |
| 95th Queue (ft) | 180 | 235 | 143 | 61 | 144 | 113 | 75 | 213 | 222 | 142 | 537 | 538 |
| Link Distance (ft) | | 863 | 863 | | 112 | | | 223 | 223 | | 454 | 454 |
| Upstream Blk Time (%) | | | | | 12 | 0 | | 1 | 1 | | 15 | 21 |
| Queuing Penalty (veh) | | | | | 33 | 0 | | 2 | 3 | | 0 | 0 |
| Storage Bay Dist (ft) | 115 | | | 50 | | 100 | 100 | | | 90 | | |
| Storage Blk Time (%) | 1 | 24 | | 34 | 21 | 1 | 0 | 15 | | 8 | 51 | 37 |
| Queuing Penalty (veh) | 2 | 39 | | 78 | 40 | 1 | 0 | 4 | | 33 | 73 | 92 |

## Intersection: 1: Santa Anita Avenue & Santa Clara Street

| Movement | SB |
|---|---|
| Directions Served | R |
| Maximum Queue (ft) | 95 |
| Average Queue (ft) | 94 |
| 95th Queue (ft) | 99 |
| Link Distance (ft) | |
| Upstream Blk Time (%) | |
| Queuing Penalty (veh) | |
| Storage Bay Dist (ft) | 70 |
| Storage Blk Time (%) | 47 |
| Queuing Penalty (veh) | 198 |

## Intersection: 2: Santa Anita Avenue & Wheeler Avenue

| Movement | WB | NB | SB | SB | SB |
|---|---|---|---|---|---|
| Directions Served | LR | TR | L | T | T |
| Maximum Queue (ft) | 98 | 30 | 44 | 68 | 24 |
| Average Queue (ft) | 58 | 3 | 21 | 11 | 2 |
| 95th Queue (ft) | 94 | 16 | 47 | 46 | 15 |
| Link Distance (ft) | 88 | 336 | | 51 | 51 |
| Upstream Blk Time (%) | 3 | | 1 | 1 | 0 |
| Queuing Penalty (veh) | 4 | | 0 | 3 | 1 |
| Storage Bay Dist (ft) | | | 50 | | |
| Storage Blk Time (%) | | | 1 | 1 | |
| Queuing Penalty (veh) | | | 4 | 0 | |

## Intersection: 7: Project Driveway (Northwest) & Santa Clara Street

| Movement | WB | NB |
|---|---|---|
| Directions Served | T | R |
| Maximum Queue (ft) | 124 | 52 |
| Average Queue (ft) | 31 | 19 |
| 95th Queue (ft) | 105 | 47 |
| Link Distance (ft) | 195 | 72 |
| Upstream Blk Time (%) | | 0 |
| Queuing Penalty (veh) | | 0 |
| Storage Bay Dist (ft) | | |
| Storage Blk Time (%) | | |
| Queuing Penalty (veh) | | |

## Intersection: 8: Access Alley Driveway (Northeast) & Santa Clara Street

| Movement | EB | WB | NB |
|---|---|---|---|
| Directions Served | TR | L | LTR |
| Maximum Queue (ft) | 49 | 35 | 44 |
| Average Queue (ft) | 5 | 4 | 20 |
| 95th Queue (ft) | 27 | 22 | 45 |
| Link Distance (ft) | 79 | | 99 |
| Upstream Blk Time (%) | | | |
| Queuing Penalty (veh) | | | |
| Storage Bay Dist (ft) | | 150 | |
| Storage Blk Time (%) | | | |
| Queuing Penalty (veh) | | | |

## Intersection: 9: Project Driveway (West) & Santa Anita Avenue

| Movement | WB | NB | NB | SB | SB |
|---|---|---|---|---|---|
| Directions Served | R | T | T | T | T |
| Maximum Queue (ft) | 39 | 35 | 44 | 15 | 15 |
| Average Queue (ft) | 13 | 2 | 2 | 1 | 1 |
| 95th Queue (ft) | 38 | 18 | 17 | 11 | 11 |
| Link Distance (ft) | 69 | 38 | 38 | 223 | 223 |
| Upstream Blk Time (%) | 0 | 0 | 0 | | |
| Queuing Penalty (veh) | 0 | 0 | 1 | | |
| Storage Bay Dist (ft) | | | | | |
| Storage Blk Time (%) | | | | | |
| Queuing Penalty (veh) | | | | | |

## Intersection: 10: Wheeler Avenue & Project Driveway (Southwest)

| Movement | EB | WB | SB |
|---|---|---|---|
| Directions Served | LTR | LTR | LTR |
| Maximum Queue (ft) | 42 | 38 | 84 |
| Average Queue (ft) | 5 | 1 | 35 |
| 95th Queue (ft) | 27 | 14 | 63 |
| Link Distance (ft) | 88 | 186 | 112 |
| Upstream Blk Time (%) | | | 0 |
| Queuing Penalty (veh) | | | 0 |
| Storage Bay Dist (ft) | | | |
| Storage Blk Time (%) | | | |
| Queuing Penalty (veh) | | | |

## Zone Summary

Zone wide Queuing Penalty: 613

## Intersection: 1: Santa Anita Avenue & Santa Clara Street

| Movement | EB | EB | EB | WB | WB | WB | NB | NB | NB | SB | SB | SB |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Directions Served | L | L | TR | L | T | R | L | T | TR | L | T | T |
| Maximum Queue (ft) | 135 | 163 | 109 | 57 | 142 | 112 | 109 | 197 | 218 | 114 | 474 | 486 |
| Average Queue (ft) | 36 | 91 | 46 | 42 | 85 | 55 | 23 | 91 | 109 | 71 | 361 | 392 |
| 95th Queue (ft) | 101 | 148 | 95 | 64 | 138 | 107 | 65 | 169 | 192 | 139 | 543 | 567 |
| Link Distance (ft) | | 863 | 863 | | 112 | | | 223 | 223 | | 454 | 454 |
| Upstream Blk Time (%) | | | | | 7 | 0 | | 0 | 0 | | 12 | 36 |
| Queuing Penalty (veh) | | | | | 20 | 0 | | 0 | 1 | | 0 | 0 |
| Storage Bay Dist (ft) | 115 | | | 50 | | 100 | 100 | | | 90 | | |
| Storage Blk Time (%) | 0 | 5 | | 21 | 21 | 0 | 0 | 7 | | 2 | 52 | 32 |
| Queuing Penalty (veh) | 0 | 6 | | 48 | 34 | 1 | 0 | 3 | | 5 | 42 | 93 |

## Intersection: 1: Santa Anita Avenue & Santa Clara Street

| Movement | SB |
|---|---|
| Directions Served | R |
| Maximum Queue (ft) | 95 |
| Average Queue (ft) | 94 |
| 95th Queue (ft) | 100 |
| Link Distance (ft) | |
| Upstream Blk Time (%) | |
| Queuing Penalty (veh) | |
| Storage Bay Dist (ft) | 70 |
| Storage Blk Time (%) | 56 |
| Queuing Penalty (veh) | 191 |

## Intersection: 2: Santa Anita Avenue & Wheeler Avenue

| Movement | WB | NB | SB | SB | SB |
|---|---|---|---|---|---|
| Directions Served | LR | TR | L | T | T |
| Maximum Queue (ft) | 91 | 19 | 51 | 61 | 14 |
| Average Queue (ft) | 42 | 1 | 24 | 9 | 0 |
| 95th Queue (ft) | 73 | 10 | 52 | 40 | 7 |
| Link Distance (ft) | 88 | 336 | | 51 | 51 |
| Upstream Blk Time (%) | 1 | | 1 | 0 | 0 |
| Queuing Penalty (veh) | 1 | | 0 | 1 | 0 |
| Storage Bay Dist (ft) | | | 50 | | |
| Storage Blk Time (%) | | | 1 | 0 | |
| Queuing Penalty (veh) | | | 2 | 0 | |

## Intersection: 7: Project Driveway (Northwest) & Santa Clara Street

| Movement | WB | NB |
|---|---|---|
| Directions Served | T | R |
| Maximum Queue (ft) | 157 | 35 |
| Average Queue (ft) | 22 | 8 |
| 95th Queue (ft) | 92 | 31 |
| Link Distance (ft) | 195 | 72 |
| Upstream Blk Time (%) | 0 | |
| Queuing Penalty (veh) | 0 | |
| Storage Bay Dist (ft) | | |
| Storage Blk Time (%) | | |
| Queuing Penalty (veh) | | |

## Intersection: 8: Access Alley Driveway (Northeast) & Santa Clara Street

| Movement | WB | NB |
|---|---|---|
| Directions Served | L | LTR |
| Maximum Queue (ft) | 38 | 68 |
| Average Queue (ft) | 5 | 27 |
| 95th Queue (ft) | 25 | 56 |
| Link Distance (ft) | | 99 |
| Upstream Blk Time (%) | | 0 |
| Queuing Penalty (veh) | | 0 |
| Storage Bay Dist (ft) | 150 | |
| Storage Blk Time (%) | | |
| Queuing Penalty (veh) | | |

## Intersection: 9: Project Driveway (West) & Santa Anita Avenue

| Movement | WB | NB | NB | SB |
|---|---|---|---|---|
| Directions Served | R | T | T | T |
| Maximum Queue (ft) | 33 | 6 | 12 | 25 |
| Average Queue (ft) | 10 | 0 | 1 | 1 |
| 95th Queue (ft) | 33 | 4 | 7 | 11 |
| Link Distance (ft) | 69 | 38 | 38 | 223 |
| Upstream Blk Time (%) | | 0 | 0 | |
| Queuing Penalty (veh) | | 0 | 0 | |
| Storage Bay Dist (ft) | | | | |
| Storage Blk Time (%) | | | | |
| Queuing Penalty (veh) | | | | |

## Intersection: 10: Wheeler Avenue & Project Driveway (Southwest)

| Movement | EB | WB | SB |
|---|---|---|---|
| Directions Served | LTR | LTR | LTR |
| Maximum Queue (ft) | 35 | 12 | 54 |
| Average Queue (ft) | 7 | 0 | 27 |
| 95th Queue (ft) | 28 | 6 | 49 |
| Link Distance (ft) | 88 | 186 | 112 |
| Upstream Blk Time (%) | | | |
| Queuing Penalty (veh) | | | |
| Storage Bay Dist (ft) | | | |
| Storage Blk Time (%) | | | |
| Queuing Penalty (veh) | | | |

## Zone Summary

Zone wide Queuing Penalty: 448

## Intersection: 1: Santa Anita Avenue & Santa Clara Street

| Movement | EB | EB | EB | WB | WB | WB | NB | NB | NB | SB | SB | SB |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Directions Served | L | L | TR | L | T | R | L | T | TR | L | T | T |
| Maximum Queue (ft) | 140 | 314 | 177 | 66 | 143 | 112 | 73 | 229 | 228 | 115 | 490 | 500 |
| Average Queue (ft) | 103 | 174 | 77 | 45 | 104 | 72 | 15 | 128 | 139 | 95 | 465 | 474 |
| 95th Queue (ft) | 185 | 277 | 140 | 66 | 152 | 127 | 53 | 217 | 224 | 146 | 493 | 492 |
| Link Distance (ft) | | 863 | 863 | | 112 | | | 223 | 223 | | 454 | 454 |
| Upstream Blk Time (%) | | | | | 19 | 1 | | 1 | 1 | | 37 | 78 |
| Queuing Penalty (veh) | | | | | 65 | 0 | | 4 | 5 | | 0 | 0 |
| Storage Bay Dist (ft) | 115 | | | 50 | | 100 | 100 | | | 90 | | |
| Storage Blk Time (%) | 3 | 30 | | 36 | 27 | 2 | | 15 | | 11 | 54 | 32 |
| Queuing Penalty (veh) | 6 | 57 | | 101 | 62 | 4 | | 4 | | 49 | 99 | 102 |

## Intersection: 1: Santa Anita Avenue & Santa Clara Street

| Movement | SB |
|---|---|
| Directions Served | R |
| Maximum Queue (ft) | 95 |
| Average Queue (ft) | 95 |
| 95th Queue (ft) | 95 |
| Link Distance (ft) | |
| Upstream Blk Time (%) | |
| Queuing Penalty (veh) | |
| Storage Bay Dist (ft) | 70 |
| Storage Blk Time (%) | 59 |
| Queuing Penalty (veh) | 260 |

## Intersection: 2: Santa Anita Avenue & Wheeler Avenue

| Movement | WB | NB | SB | SB | SB |
|---|---|---|---|---|---|
| Directions Served | LR | TR | L | T | T |
| Maximum Queue (ft) | 100 | 35 | 46 | 69 | 48 |
| Average Queue (ft) | 57 | 3 | 19 | 13 | 2 |
| 95th Queue (ft) | 96 | 17 | 48 | 52 | 18 |
| Link Distance (ft) | 88 | 336 | | 51 | 51 |
| Upstream Blk Time (%) | 4 | | 1 | 1 | 0 |
| Queuing Penalty (veh) | 6 | | 0 | 3 | 0 |
| Storage Bay Dist (ft) | | | 50 | | |
| Storage Blk Time (%) | | | 2 | 1 | |
| Queuing Penalty (veh) | | | 7 | 1 | |

## Intersection: 7: Project Driveway (Northwest) & Santa Clara Street

| Movement | WB | NB |
|---|---|---|
| Directions Served | T | R |
| Maximum Queue (ft) | 199 | 58 |
| Average Queue (ft) | 54 | 19 |
| 95th Queue (ft) | 165 | 49 |
| Link Distance (ft) | 195 | 72 |
| Upstream Blk Time (%) | 2 | 0 |
| Queuing Penalty (veh) | 6 | 0 |
| Storage Bay Dist (ft) | | |
| Storage Blk Time (%) | | |
| Queuing Penalty (veh) | | |

## Intersection: 8: Access Alley Driveway (Northeast) & Santa Clara Street

| Movement | WB | WB | NB |
|---|---|---|---|
| Directions Served | L | TR | LTR |
| Maximum Queue (ft) | 31 | 30 | 59 |
| Average Queue (ft) | 10 | 2 | 21 |
| 95th Queue (ft) | 32 | 22 | 48 |
| Link Distance (ft) | | 411 | 99 |
| Upstream Blk Time (%) | | | |
| Queuing Penalty (veh) | | | |
| Storage Bay Dist (ft) | 150 | | |
| Storage Blk Time (%) | | | |
| Queuing Penalty (veh) | | | |

## Intersection: 9: Project Driveway (West) & Santa Anita Avenue

| Movement | WB | NB | NB | SB |
|---|---|---|---|---|
| Directions Served | R | T | T | T |
| Maximum Queue (ft) | 34 | 34 | 49 | 17 |
| Average Queue (ft) | 13 | 4 | 3 | 1 |
| 95th Queue (ft) | 37 | 22 | 21 | 10 |
| Link Distance (ft) | 69 | 38 | 38 | 223 |
| Upstream Blk Time (%) | 0 | 0 | 0 | |
| Queuing Penalty (veh) | 0 | 1 | 2 | |
| Storage Bay Dist (ft) | | | | |
| Storage Blk Time (%) | | | | |
| Queuing Penalty (veh) | | | | |

## Intersection: 10: Wheeler Avenue & Project Driveway (Southwest)

| Movement | EB | WB | SB |
|---|---|---|---|
| Directions Served | LTR | LTR | LTR |
| Maximum Queue (ft) | 44 | 79 | 76 |
| Average Queue (ft) | 5 | 6 | 35 |
| 95th Queue (ft) | 26 | 42 | 60 |
| Link Distance (ft) | 88 | 186 | 112 |
| Upstream Blk Time (%) | | 0 | 0 |
| Queuing Penalty (veh) | | 0 | 0 |
| Storage Bay Dist (ft) | | | |
| Storage Blk Time (%) | | | |
| Queuing Penalty (veh) | | | |

## Zone Summary

Zone wide Queuing Penalty: 842

# Attachment D

## SJVCOG VMT Screening Tool Report

# SGVCOG VMT Evaluation Tool Report



## Project Details

Timestamp of Analysis: September 09, 2021, 02:25:59 PM

Project Name: Alexan Arcadia Project

Project Description: Construction of a new 7-story residential building including 319 units within four fully developed parcels in downtown Arcadia.

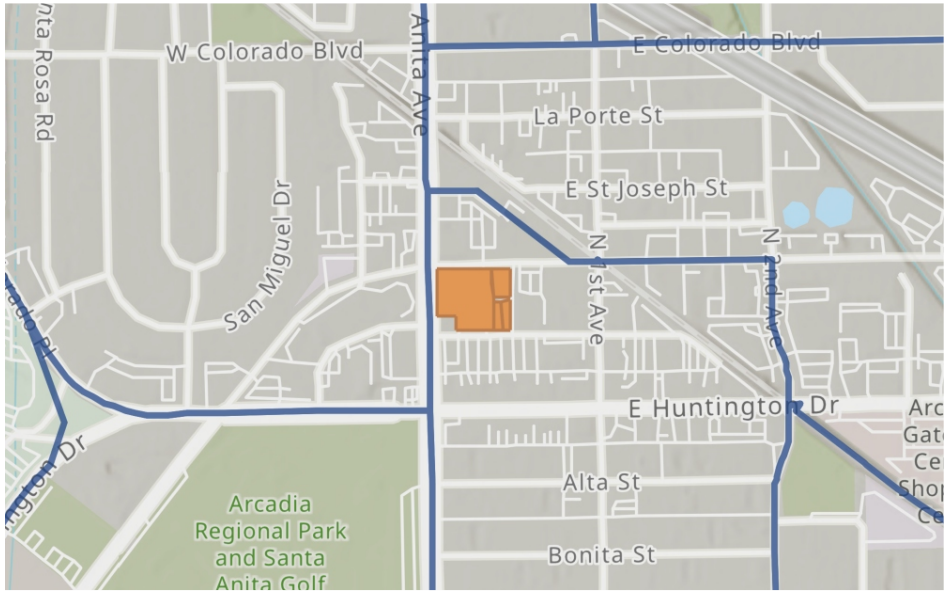
## Project Location

Jurisdiction: Arcadia

| APN | TAZ | APN | TAZ | APN | TAZ |
|---|---|---|---|---|---|
| 5773-006-010 | 22229300 | 5773-006-004 | 22229300 | 5773-006-005 | 22229300 |
| | | 5773-006-036 | 22229300 | | |

Inside a TPA?

Yes (Pass)




## Analysis Details

Data Version: SCAG Regional Travel Demand Model 2016 RTP Base Year 2012

Analysis Methodology: TAZ

Baseline Year: 2021

## Project Land Use

### Residential:

| | |
|---|---|
| Single Family DU: | |
| Multifamily DU: | 319 |
| Total DUs: | 319 |

### Non-Residential:

| | |
|---|---|
| Office KSF: | 9 |
| Local Serving Retail KSF: | |
| Industrial KSF: | |

### Residential Affordability (percent of all units):

| | |
|---|---|
| Extremely Low Income: | 0 % |
| Very Low Income: | 11 % |
| Low Income: | 0 % |

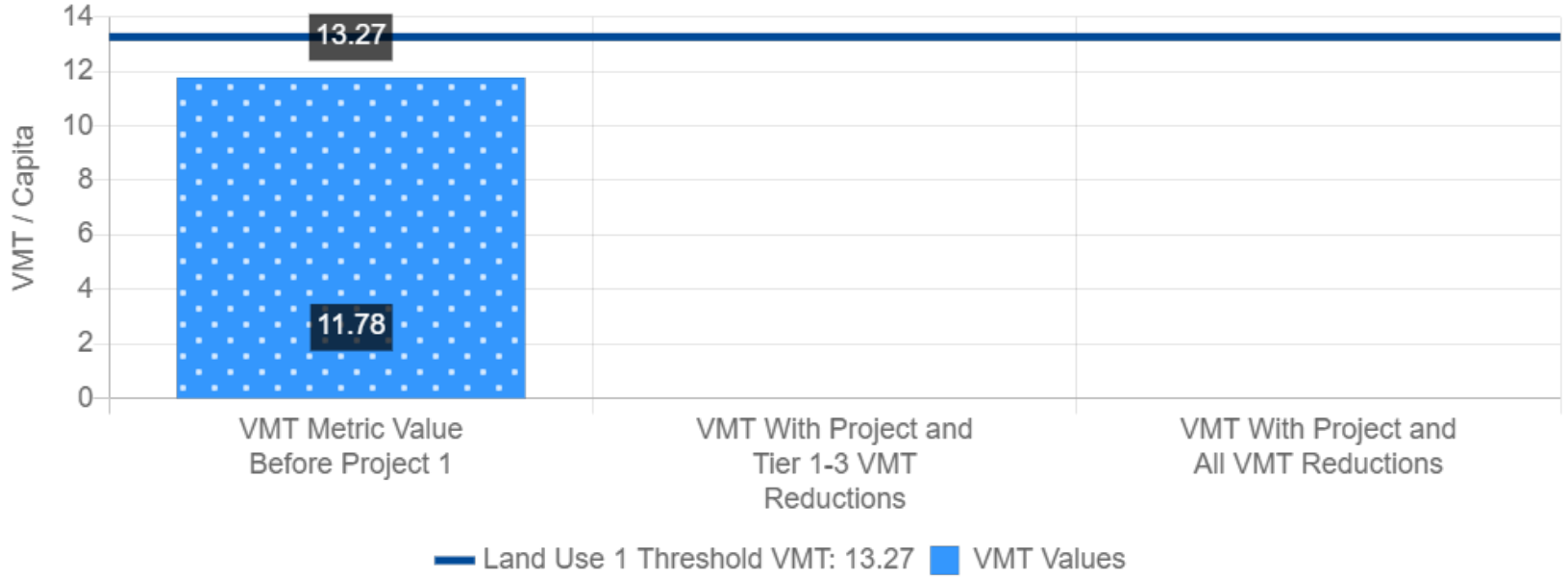
### Parking:

| | |
|---|---|
| Motor Vehicle Parking: | 368 |
| Bicycle Parking: | 82 |

## Residential Vehicle Miles Traveled (VMT) Screening Results

| | |
|---|---|
| Land Use Type 1: | Residential |
| VMT Without Project 1: | Home-based VMT per Capita |
| VMT Baseline Description 1: | Subarea |
| VMT Baseline Value 1: | 15.61 |
| VMT Threshold Description 1: | -15% |
| Land Use 1 has been Pre-Screened by the Local Jurisdiction: | N/A |

| | Without Project | With Project & Tier 1-3 VMT Reductions | With Project & All VMT Reductions |
|---|---|---|---|
| Project Generated Vehicle Miles Traveled (VMT) Rate | 11.78 | null | null |
| Low VMT Screening Analysis | Yes (Pass) | null | null |



## Office Vehicle Miles Traveled (VMT) Screening Results

| | |
|---|---|
| Land Use Type 2: | Office |
| VMT Without Project 2: | Home-based Work VMT per Worker |
| VMT Baseline Description 2: | Subarea |
| VMT Baseline Value 2: | 19.17 |
| VMT Threshold Description 2: | -15% |
| Land Use 2 has been Pre-Screened by the Local Jurisdiction: | N/A |

| | Without Project | With Project & Tier 1-3 VMT Reductions | With Project & All VMT Reductions |
|---|---|---|---|
| Project Generated Vehicle Miles Traveled (VMT) Rate | 15.45 | null | null |
| Low VMT Screening Analysis | Yes (Pass) | null | null |