Appendix R

Transportation Impact Study

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TRANSPORTATION IMPACT STUDY

AZUSA GREENS REDEVELOPMENT PROJECT

Azusa, California
August 22, 2024

Prepared for:

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LIST OF ABBREVIATIONS

ABBREVIATION	MEANING
AASHTO	American Association of State Highway and Transportation Officials
ADA	Americans with Disabilities Act
AWSC	All-Way Stop Control
CA MUTCD	California Manual on Uniform Traffic Control Devices
CAPCOA	California Air Pollution Control Officers Association
CEQA	California Environmental Quality Act
CMP	Congestion Management Plan
CTR	Commute Trip Reduction
EIR	Environmental Impact Report
FHWA	Federal Highway Administration
HCM	Highway Capacity Manual
ICU	Intersection Capacity Utilization
ISD	Intersection Sight Distance
ITE	Institute of Transportation Engineers
LD-IGR	Local Development and Intergovernmental Review
LOS	Level of Service
OPR	Office of Planning and Research
PCE	Passenger Car Equivalent
PRC	Public Resources Code
RRFB	Rectangular Rapid Flashing Beacon
RTP/SCS	Regional Transportation Plan/Sustainable Communities Strategy
SCAG	Southern California Association of Governments
SGVCOG	San Gabriel Valley Council of Governments
SSD	Stopping Sight Distance
SWITRS	Statewide Integrated Traffic Records System
TAZ	Transportation Analysis Zone
TDM	Transportation Demand Management
TISG	Transportation Impact Study Guide
TWSC	Two-Way Stop Control
VMT	Vehicle Miles Traveled

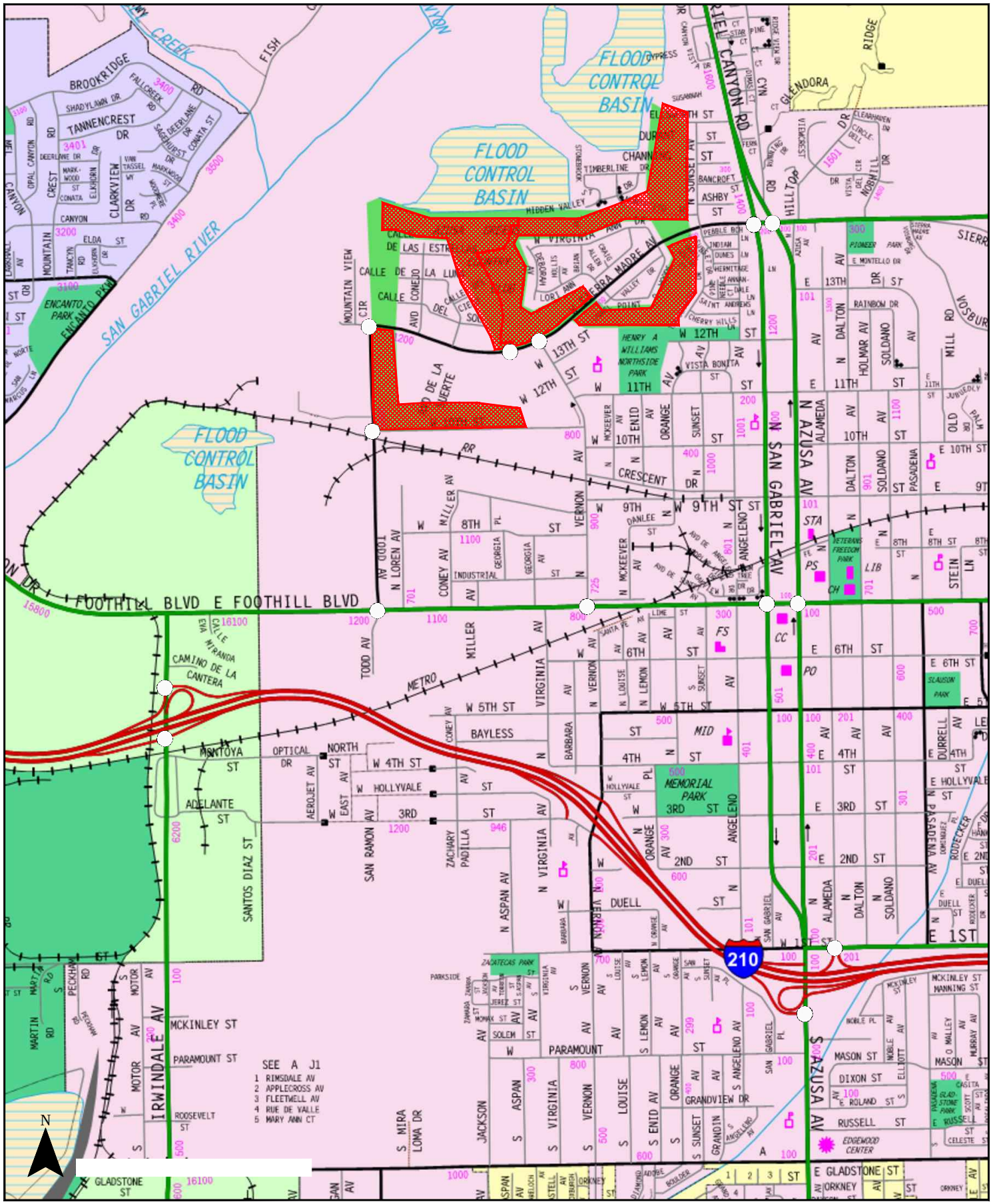
1.0 INTRODUCTION

This transportation impact study has been conducted to identify and evaluate the potential transportation impacts of the proposed Azusa Greens Redevelopment project ("proposed project"). The proposed project site is located in the City of Azusa, California and consists of several parcels which comprise the southerly and westerly portions of the existing Azusa Greens Country Club. The proposed project consists of two non-contiguous redevelopment areas and the remainder of the Azusa Greens Golf Course, which are generally bound by flood control spreading grounds to the north, existing industrial and residential development to the east, Todd Avenue and existing residential development to the west, and 10th Street to the south. The proposed project site and general vicinity are shown in ***Figure 1-1***.

The transportation impact analysis follows the analysis recommendations set forth by the California Governor's Office of Planning and Research (OPR) in the *Technical Advisory on Evaluating Transportation Impacts in CEQA*[1] ("*Technical Advisory*"). Specifically, in compliance with California Environmental Quality Act (CEQA) Sections 15064.3 and 15064.7, this transportation impact analysis utilizes Vehicle Miles Traveled (VMT) for the purpose of analyzing transportation impacts under CEQA. In addition, the City of Azusa requires additional site access studies in order to identify a proposed project's effect on local transportation infrastructure. The site access studies prepared for the proposed project evaluate potential project-related effects on intersection operations and Level of Service (LOS) at 10 key intersections in the vicinity of the project site. The study intersections were determined in consultation with City of Azusa staff. Further, an impact analysis was also completed as it relates to the State Highway System and four (4) freeway ramp intersections under the jurisdiction of the California Department of Transportation.

In summary, this report (i) presents the proposed project's existing transportation network context, (ii) presents existing traffic volumes, (iii) forecasts cumulative baseline conditions, (iv) forecasts project-generated traffic, (v) assesses the potential for project-related transportation impacts consistent with the CEQA based and non-CEQA based metrics, and (vi) recommends transportation network improvement measures, where necessary.

[1] "Technical Advisory on Evaluating Transportation Impacts in CEQA", State of California Governor's Office of Planning and Research, December 2018.



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Project Site

Study Intersection

Figure 1-1
Vicinity Map

1.1 Study Methodology

The CEQA and non-CEQA analysis criteria for this transportation impact report were identified in consultation with City of Azusa staff. The analysis criteria were determined based on the *Technical Advisory*, the proposed project description and location, and the characteristics of the surrounding transportation system. The City of Azusa confirmed the appropriateness of the analysis criteria when it approved the transportation impact analysis Scope of Work memorandum. The approved scoping memorandum is attached to this report in ***Appendix A***.

On September 27, 2013, Governor Brown signed Senate Bill (SB) 743 (Steinberg, 2013). Among other things, SB 743 initiated a change in the methodology to analyze transportation impacts under CEQA (Public Resources Code Section [PRC] 21000 and following). Through PRC Section 21099, which states in part that "automobile delay, as described solely by level of service or similar measures of vehicular capacity or traffic congestion shall not be considered a significant impact on the environment," SB 743 directed the Governor's Office of Planning and Research (OPR) to identify a new metric for evaluating transportation impacts. OPR identified vehicle miles traveled (VMT) as the most appropriate metric, and developed the *Technical Advisory on Evaluating Transportation Impacts in CEQA*, which provides non-binding recommendations on the implementation of VMT analysis methodology that has significantly informed the way VMT analyses are conducted in the State. State-wide implementation of the new metric was required by July 1, 2020.

Pursuant to current statutes, the City of Azusa utilizes VMT as the metric for determining environmental impacts in compliance with SB 743. It is noted that the City of Azusa has not yet adopted transportation assessment guidelines for VMT analyses, therefore, the VMT assessment has been prepared in compliance with the methodology recommended by OPR in the *Technical Advisory*.

The passage of SB 743 and the resulting implementation of VMT does not prevent agencies from continuing to analyze delay or LOS outside of CEQA review for other transportation planning or analysis purposes (i.e., general plans, impact fee programs, corridor studies, congestion reduction, or ongoing network monitoring). The City of Azusa therefore also requires additional studies of the local transportation network. Specifically, the City of Azusa requires an operational analysis of intersections in the vicinity of a proposed project in order to evaluate site access and circulation constraints that may be caused or worsened by project-generated traffic. For purposes of this analysis, a total of 10 study intersections were selected in coordination with City of Azusa staff. The study intersections are summarized in ***Table 1-1***, along with the current traffic controls and the agencies which have jurisdiction at each intersection, and are also illustrated in *Figure 1-1*. This assessment utilizes the Intersection Capacity Utilization (ICU) methodology to evaluate LOS at signalized intersections, and utilizes of the latest version of the Highway Capacity Manual (HCM) methodology to evaluate LOS at unsignalized intersections.

Table 1-1
LIST OF STUDY INTERSECTIONS

NO.	STUDY INTERSECTION	TRAFFIC CONTROL	JURISDICTION(S)
1	Todd Avenue/ Sierra Madre Avenue	Unsignalized	City of Azusa
2	Todd Avenue/ 10th Street	Signalized	City of Azusa
3	Todd Avenue/ Foothill Boulevard	Signalized	City of Azusa
4	Project Driveway/ Sierra Madre Avenue	Unsignalized	City of Azusa
5	Vernon Avenue/ Sierra Madre Avenue	Unsignalized	City of Azusa
6	Vernon Avenue/ Foothill Boulevard	Signalized	City of Azusa
7	San Gabriel Avenue/ Sierra Madre Avenue	Signalized	City of Azusa
8	San Gabriel Avenue/ Foothill Boulevard	Signalized	City of Azusa
9	Azusa Avenue/ Sierra Madre Avenue	Signalized	City of Azusa
10	Azusa Avenue/ Foothill Boulevard	Signalized	City of Azusa
11	Irwindale Avenue/ I-210 Freeway Westbound Ramps	Signalized	City of Irwindale/ Caltrans
12	Irwindale Avenue/ I-210 Freeway Eastbound Ramps	Signalized	City of Irwindale/ Caltrans
13	Azusa Avenue/ I-210 Freeway Eastbound Ramps	Signalized	City of Azusa/ Caltrans
14	I-210 Freeway Westbound Ramps/ 1st Street	Signalized	City of Azusa/ Caltrans

As required by State law, the California Department of Transportation (Caltrans) has also formally adopted VMT as the metric for evaluating the transportation impacts of local development projects on the State Highway System. Caltrans' "Transportation Impact Study Guide"[2] (TISG) relies on the December 2018 *Technical Advisory* prepared by OPR as the basis for its guidance on VMT assessment. For the purpose of this transportation impact analysis, it is understood that the VMT analysis, which is based on the recommendations provided in the *Technical Advisory*, satisfy Caltrans' VMT analysis requirements as well. Therefore, no separate VMT analysis has been prepared for Caltrans' review of the proposed project.

Caltrans' TISG states, "Additional future guidance will include the basis for requesting transportation impact analysis that is not based on VMT. This guidance will include a simplified safety analysis approach that reduces risks to all road users and that focuses on multi-modal conflict analysis as well as access management issues." While the final guidance is still being developed, Caltrans has released the "Interim Local Development and Intergovernmental Review (LD-IGR) Safety Review Practitioners Guidance."[3] The proposed project does not take direct access to/from a State facility; however, it is situated in the vicinity of the I-210 Freeway and is expected to generate net new project trips at four (4) nearby ramp intersections. The off-ramp locations selected for further study are summarized in *Table 1-1*. Therefore, the Caltrans interim safety guidance was reviewed and analyses relevant to the proposed project were identified for inclusion in the transportation impact analysis.

In summary, the proposed project's CEQA transportation impacts have been evaluated based on the VMT screening criteria, methodology, and thresholds set forth in the *Technical Advisory*. In order to evaluate the proposed project's effect on local transportation infrastructure, a non-CEQA analysis of 10 study intersections has been conducted for the weekday AM and PM peak hours, utilizing the City-approved ICU and HCM operational methodologies. Further, the I-210 Freeway ramp intersections under Caltrans' jurisdiction were also evaluated based on HCM operational analysis methodologies.

[2] "Vehicle Miles Traveled-Focused Transportation Impact Study Guide," Caltrans, May 20, 2020.
[3] "Traffic Safety Bulletin 20-02-R1: Interim Local Development Intergovernmental Review Safety Review Practitioners Guidance", Memorandum from Rachel Carpenter, Chief Safety Officer, Caltrans, to District Directors, December 18, 2020.

2.0 PROJECT DESCRIPTION

2.1 Project Location

The Azusa Greens Redevelopment project is located in the City of Azusa, California. The proposed project consists of the redevelopment of several parcels located north and south of Sierra Madre Avenue which comprise the south and west portions of the existing Azusa Greens Country Club, including Assessor Parcel Numbers (APNs) 8617-001-005, 8617-001-013, 8617-011-001, 8617-013-001, 8684-043-002, 8684-013-014, and 8684-013-030. The proposed project consists of two non-contiguous redevelopment areas:

- the northerly portion of the site is generally bound by flood control spreading grounds to the north, existing residential development to the west, and Sierra Madre Avenue to the south; and,

- the southerly portion of the site is generally bound by Sierra Madre Avenue to the north, existing industrial and residential development to the east, Todd Avenue to the west, and 10th Street to the south.

The existing project site is currently zoned as Recreation (REC) by the City of Azusa. An aerial photograph of the existing project site is presented in ***Figure 2-1***.

2.2 Proposed Project Description

The proposed project consists of the redevelopment of portions of the existing Azusa Greens Country Club into two new development areas. The 20.48-acre northerly redevelopment area will be developed with low density age-restricted (55+ active adult) senior housing. The senior housing development will provide a total of 230 dwelling units via two (2) three-story buildings with 150 units total located in the northern portion of the redevelopment area, and 40 single-story duplexes and triplexes totaling 80 units located along the westerly and southerly portions of the redevelopment area adjacent to the existing residential neighborhood to the west. The three-story buildings will provide both one and two-bedroom units and the duplexes/triplexes will consist of two-bedroom units. A 10,932 square-foot amenity/community building will also be provided in the northerly portion of the redevelopment area. Amenities under consideration include outdoor meeting areas, fitness studio, outdoor pool and spa, outdoor recreation areas, multi-purpose meeting rooms, and other uses. The amenity spaces are anticipated to be for use by residents of the senior housing community only and are not planned to be open for public use. Fifteen percent (15%) of the units will be offered at affordable rates, including a mix of unit types and sizes. The senior housing development site is planned to provide 452 parking spaces which will be dispersed throughout the site, and access is planned to be accommodated by two (2) existing driveways along Sierra Madre Avenue. Further discussion of the proposed project site access is provided in *Section 2.3*, below. A conceptual site plan of the senior housing component is provided in ***Figure 2-2***. The senior housing development is expected to begin construction in year 2025, with completion and occupancy of the project by year 2027.

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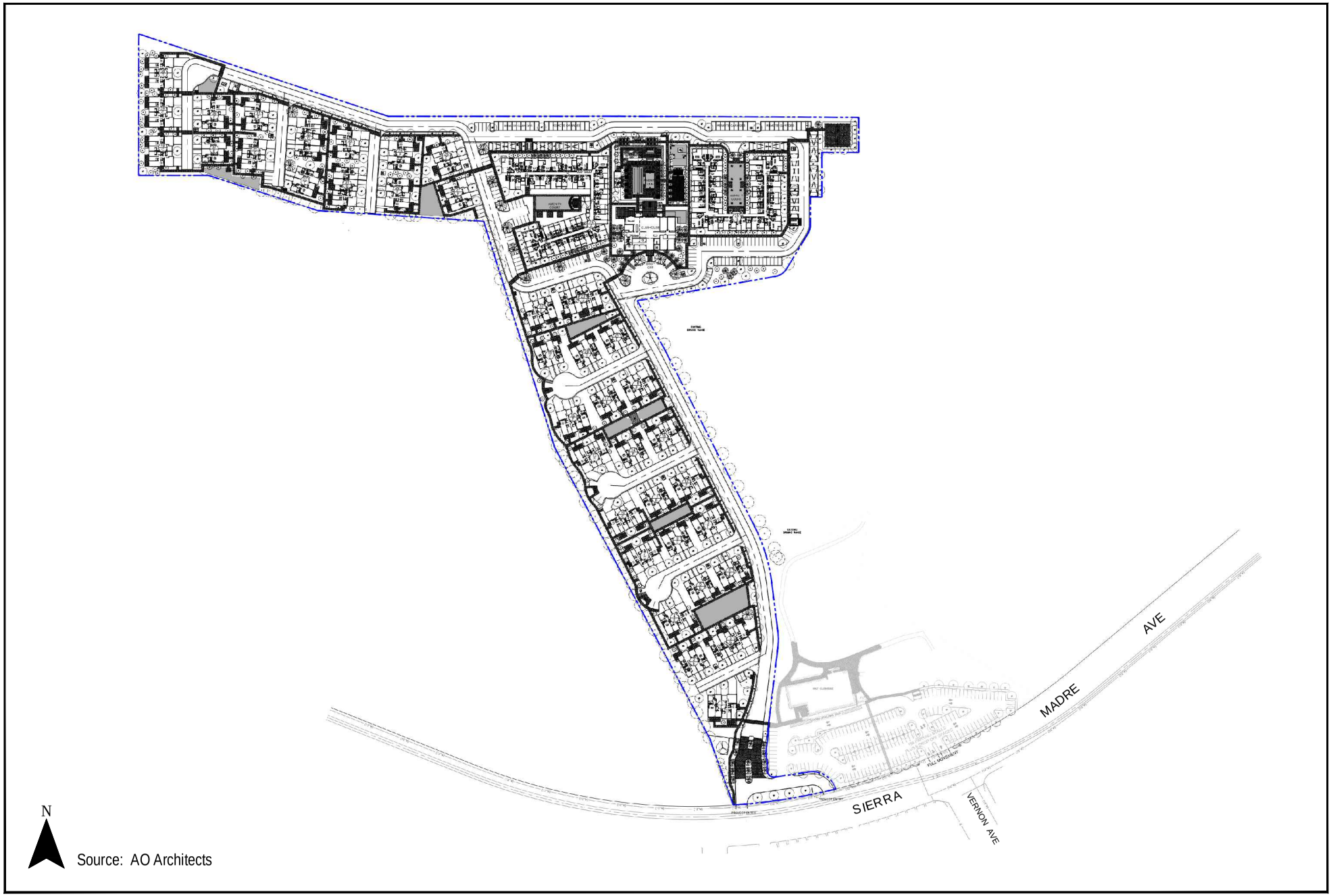
Project Site

Existing Driveway

Figure 2-1
Aerial Photograph of Existing Site

Azusa Greens Redevelopment Project



Source: AO Architects

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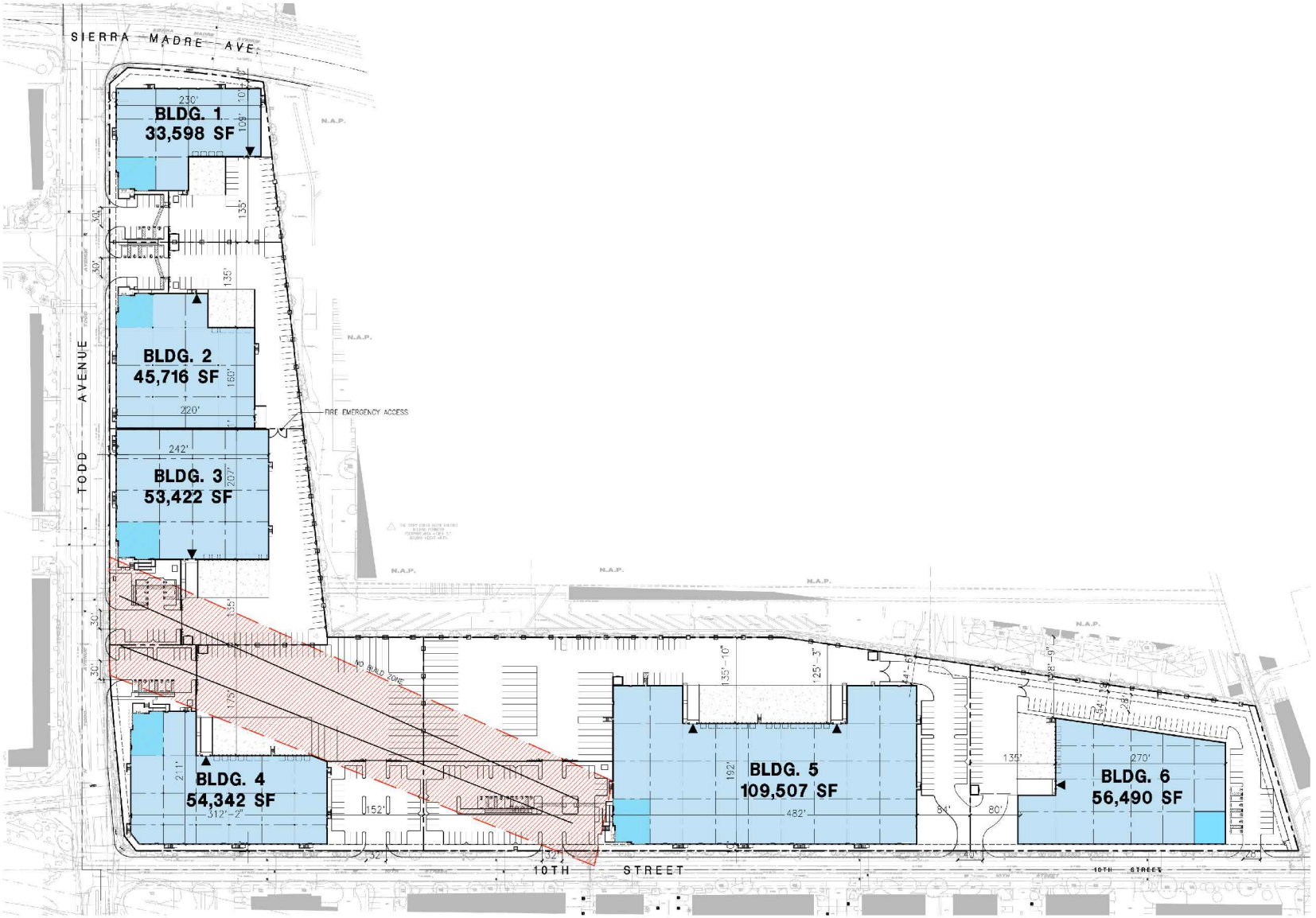
Figure 2-2
Conceptual Site Plan
Senior Housing Component
Azusa Greens Redevelopment Project

The 19.33-acre southerly redevelopment area will be developed with six (6) new tilt-up concrete industrial buildings that will provide a total of 353,075 square feet of industrial space. Each building will provide two-story glass office entries with horizontal and vertical architectural accents to break down the scale of the buildings. Each building will have between 28 and 32 feet of clear height in order to provide large unobstructed spaces that will accommodate many types of activities. Based on information provided by the applicant, potential uses for this site include light manufacturing, direct to consumer marketing, warehouse/distribution, or other uses permitted within the City of Azusa's West End Light Industrial District (DWL) zone. The industrial development is planned to provide 444 parking stalls. Access to the industrial development would be accommodated by four (4) new driveways along Todd Avenue and four (4) new driveways along 10th Street. Further discussion of the proposed project site access is provided in *Section 2.3*, below. A conceptual site plan of the southerly site is provided in ***Figure 2-3***. The industrial component is expected to begin construction in year 2025, with completion and occupancy of the project by the end of year 2025.

The proposed senior housing and industrial developments will require the demolition of all golf related improvements to the affected redevelopment areas. The remaining 52.31 acres of the Azusa Greens Country Club, including the remaining nine (9) golf holes as well as the Clubhouse, driving range, and parking lot will be retained. The golf holes will be renumbered to provide a nine-hole golf course, and the Clubhouse will be lightly renovated and maintained in working order. The planned renovations to the Clubhouse include relocation of the check-in area as well as updating and adding entryways on the north and east faces of the building. No changes to the prior use of the Clubhouse are anticipated (e.g., special events, facility rentals, etc.). The existing parking lot will be redesigned to accommodate the proposed access to the senior housing development and will be brought to current Municipal Code and Fire Department standards. It is noted that the Azusa Greens Country Club was not operational at the commencement of the transportation study; however, it is understood that the City of Azusa approved the reopening of the reconfigured nine-hole golf course in December 2023 and that the golf course began operating in the spring of 2024. The proposed renovations to the Clubhouse require additional approvals from the City of Azusa.

2.3 Project Site Access

As noted previously, the existing project site is currently occupied by portions of the existing Azusa Greens Country Club. Vehicular access to the Country Club's vehicle parking lot is currently accommodated by four (4) driveways along the north side of Sierra Madre Avenue, two (2) of which align with the T-intersection of Vernon Avenue/Sierra Madre Avenue (i.e., one inbound driveway and one outbound driveway), and two (2) of which are located west of the Vernon Avenue/Sierra Madre Avenue intersection (both driveways accommodating inbound and outbound vehicular traffic). Existing pedestrian and golf cart crossings across Sierra Madre Avenue are provided at the Todd Avenue/Sierra Madre Avenue intersection as well as approximately 250 feet west of the Lori Ann Avenue-Point O Woods Drive/Sierra Madre Avenue intersection and approximately 85 feet west of the Sunset Avenue/Sierra Madre Avenue



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Source: HPA Architecture

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Figure 2-3
Conceptual Site Plan
Industrial Component
Azusa Greens Redevelopment Project

intersection, where marked and signed crossings are provided. The pedestrian and golf cart crossings are not signalized.

The proposed project site access is described in detail below.

2.3.1 *Vehicular Site Access*

As shown in *Figure 2-2*, access to the senior housing development is planned to be provided via two (2) existing driveways located on Sierra Madre Avenue west of Vernon Avenue. Therefore, no new curb cuts on Sierra Madre Avenue are proposed or required in order to accommodate vehicular access to the senior housing development. A raised and landscaped median is currently provided along Sierra Madre Avenue, however median breaks and left-turn pockets are provided in the vicinity of the project site. The proposed project driveways and vehicular access scheme is described in detail below:

- Westerly Sierra Madre Avenue Driveway
  The westerly project driveway on Sierra Madre Avenue is approximately 24 feet wide and accommodates one inbound and one outbound lane. Due to the presence of a median island along Sierra Madre Avenue, this driveway is restricted to right-turning inbound and outbound movements only. It is noted that the westerly project driveway is located approximately 40 to 50 feet east of an existing median break and westbound left-turn pocket. In order to discourage exiting vehicles from attempting to access the provided left-turn pocket to conduct a U-turn maneuver at the median break, which would require motorists to maneuver nearly perpendicular to the westbound travel lanes, it is recommended that the outbound right-turn only restriction should be enforced through signs, on-site pavement markings, and/or physical measures such as bollards or channelizing islands.

- Easterly Sierra Madre Avenue Driveway
  The easterly project driveway on Sierra Madre Avenue is approximately 36 feet wide and accommodates one inbound and one outbound lane. The driveway aligns with an existing median break and eastbound left-turn lane. This project driveway is expected to accommodate full access (i.e., left- and right-turning inbound and outbound movements).

Internal access to the various senior housing buildings, duplexes, and triplexes and the associated parking areas (i.e., surface parking, covered parking, and private garages) will be accommodated by a network of internal private roadways. The proposed roadways will be constructed to the applicable City standards for local roads and would adequately accommodate emergency vehicles as required by the Fire Department.

As shown in *Figure 2-3*, access to the industrial development is planned to be provide via four (4) new driveways along Todd Avenue and four (4) new driveways along 10th Street. The industrial development site is currently occupied by four golf holes, therefore no direct vehicular access to

the site is currently provided and new curb cuts along Todd Avenue and 10th Street are required. The proposed project driveways and vehicular access scheme is described in detail below:

- Todd Avenue Parcel 1 Driveway
  The northernmost driveway on Todd Avenue will provide access to Parcel 1 of the industrial development site. The proposed driveway will be located approximately 60 feet south of the northerly terminus of the existing two-way left-turn lane provided along Todd Avenue. Therefore, this driveway is anticipated to accommodate full access (i.e., left- and right-turning inbound and outbound movements).

- Todd Avenue Parcels 2 and 3 Driveways
  Access to Parcels 2 and 3 of the industrial development site is planned to be provided via one driveway per parcel along Todd Avenue. Todd Avenue currently provides a two-way left-turn lane in the vicinity of these project driveways, therefore each driveway is anticipated to accommodate full access (i.e., left- and right-turning inbound and outbound movements).

- Todd Avenue Parcel 4 Driveway
  The southernmost driveway on Todd Avenue will provide access to Parcel 4 of the industrial development site. The proposed driveway will be located approximately 160 feet north of the terminus of the striped median island, and approximately 60 feet south of the southerly terminus of the existing two-way left-turn lane provided along Todd Avenue. Therefore, this driveway is anticipated to accommodate right-turning inbound and outbound movements only. It is recommended that the right-turn only restriction should be enforced through signs, on-site pavement markings, and/or physical measures such as bollards or channelizing islands.

- 10th Street Parcel 4 Driveway
  The westernmost driveway on 10th Street will provide access to Parcel 4 of the industrial development site. The proposed driveway will be located approximately 400 feet east of the Todd Avenue/10th Street intersection, therefore the driveway is anticipated to accommodate full access (i.e., left- and right-turning inbound and outbound movements).

- 10th Street Parcels 5 and 6 Driveways
  Access to Parcels 5 and 6 of the industrial development site is planned to be provided by one driveway per parcel as well as one shared driveway along 10th Street. Each of the three driveways are anticipated to accommodate full access (i.e., left- and right-turning inbound and outbound movements).

Each driveway for the industrial development site will provide access to the passenger vehicle and trailer parking provided for each of the six proposed buildings. Each building is planned to have individual access and parking schemes, with the exception of Parcels 5 and 6, which will share one driveway along 10th Street.

Access to the nine-hole Azusa Greens golf course will continue to be provided via two (2) existing driveways located on the north side of Sierra Madre Avenue at the Vernon Avenue/Sierra Madre Avenue intersection.

2.3.2 *Pedestrian and Bicycle Access*

The proposed project sites are planned to provide pedestrian and bicycle access as well. At the senior housing development site, the proposed project will provide sidewalks, curb, and gutter along all of the internal project roadways in order to accommodate pedestrian access to the planned residential homes/units. The sidewalks would accommodate Americans with Disabilities Act (ADA) compliant curb ramps and high-contrast tactile warning strips (i.e., yellow truncated dome pads) at all internal project intersections. The internal sidewalks will connect to the public sidewalks provided along Sierra Madre Avenue adjacent to the project site. Thus, the project will provide a comfortable, convenient, and safe environment for pedestrians to access the proposed senior housing project from the public right-of-way. Bicycle access to and from the senior dwelling units is expected to be accommodated by the internal roadway network at the project site.

At the industrial development site, public access is currently limited by fencing around the four existing golf holes, and no public sidewalks are provided. The proposed project will construct new sidewalk, curb, and gutter along the project frontage on Todd Avenue and 10th Street. The sidewalks would accommodate ADA compliant curb ramps and high-contrast tactile warning strips (i.e., yellow truncated dome pads) adjacent to the project site. In addition, ADA compliant walkways will connect from the future public sidewalks to the entryway of each building. The walkways thus minimize the extent of pedestrian and bicycle interaction with vehicles at the site and provide a comfortable, convenient, and safe environment for pedestrians and bicyclists accessing the proposed buildings from outside the project site.

As previously stated, golf cart crossings are currently accommodated at the Todd Avenue/Sierra Madre Avenue intersection. Following the removal of the existing golf holes to accommodate the proposed industrial development, golf cart crossings will no longer be accommodated at this location, however the existing pedestrian crosswalk will be retained and continue to accommodate pedestrians and other roadway users. The two (2) remaining existing golf cart and pedestrian crossings across Sierra Madre Avenue will be retained in order to provide patron access throughout the Azusa Greens Golf Course. A detailed review of the golf cart crossings to remain is provided in *Section 5.8*, herein.

2.4 Project Trip Generation and Distribution

2.4.1 *Project Trip Generation Forecast*

Traffic trip generation is expressed in vehicle trip ends, defined as one-way vehicular movements, either entering or exiting the generating land use. The traffic volumes anticipated to be generated by the proposed project were forecast for the typical weekday AM and PM peak commute hours as well as over a 24-hour period (i.e., daily). Trip generation rate information provided in the

Institute of Transportation Engineers' (ITE) *Trip Generation Manual*, 11th Edition[4] per 1,000 square feet of floor area, per dwelling unit, and per hole were utilized to prepare the trip generation forecast. Specifically, trip generation average rates for the following ITE Land Use Codes were used to forecast the traffic volumes expected to be generated by the proposed project:

- 110: General Light Industrial;
- Land Use 251: Senior Adult Housing - Single-Family;
- Land Use 252: Senior Adult Housing – Multifamily; and
- Land Use 430: Golf Course.

The trip rates published in the *Trip Generation Manual* account for all vehicle trips generated by the land use. In the case of the proposed industrial land use, it is expected that a proportion of the vehicles accessing the project site would consist of delivery trucks and/or tractor-trailer trucks, in addition to passenger vehicles. Truck trips associated with the industrial component of the project were forecast utilizing truck trip generation average rates for ITE Land Use Code 110: General Light Industrial. The truck mix ratios by number of axles identified in the City of Fontana's *Truck Trip Generation Study*[5] for light industrial land uses, along with a passenger car equivalent (PCE) factor based on the number of axles, was applied to the truck trip forecast to account for the effect of the larger vehicles on intersection traffic operations.

The proposed project will result in the demolition of seven (7) existing golf holes and all related golf improvements at the senior housing and industrial development sites. As previously described, the Azusa Greens Country Club was not operational at the commencement of the transportation study; however, it is understood that the City of Azusa approved the reopening of the reconfigured nine-hole golf course in December 2023 and that the golf course began operating in the spring of 2024. Since the golf course was not generating vehicle trips which would be removed from the roadway network due to the development of the proposed project at the commencement of the study, no existing use trip credits have been applied to the proposed project's trip generation forecast due to the removal of the existing golf holes. The proposed project also includes light renovations to the existing Clubhouse and surface parking areas, however these minor improvements will not expand the floor area of the Clubhouse. It should be noted that the trip rates associated with ITE Land Use 430: Golf Course includes trips generated by other typical golf course facilities such as driving range and clubhouse with pro shop, restaurant, lounge, or banquet facilities, in addition to golf holes. Therefore, no separate trip forecast for the driving range or clubhouse is included.

[4] Institute of Transportation Engineers *Trip Generation Manual*, 11th Edition, Washington D.C., 2021.
[5] *Truck Trip Generation Study, City of Fontana, County of San Bernardino, State of California*, prepared by Transportation Engineering and Planning, Inc., August 2003.

The trip generation forecast for the proposed project is summarized in ***Table 2-1***. As presented in *Table 2-1*, the proposed project is expected to generate 332 PCE-adjusted trips (262 inbound trips and 70 outbound trips) during the weekday AM peak hour. During the weekday PM peak hour, the proposed project is expected to generate 323 PCE-adjusted trips (85 inbound trips and 238 outbound trips). Over a 24-hour period, the proposed project is forecast to generate 2,823 non-PCE-adjusted daily trip ends (approximately 1,412 inbound trips and approximately 1,411 outbound trips) on a typical weekday.

2.4.2 *Project Trip Distribution and Assignment*

Project traffic volumes both entering and exiting the site have been distributed and assigned to the adjacent street system based on the following considerations:

- The site's proximity to major traffic corridors (i.e., Todd Avenue, Vernon Avenue, San Gabriel Avenue, Azusa Avenue, Sierra Madre Avenue, and Foothill Boulevard);
- Expected localized traffic flow patterns based on adjacent roadway channelization and presence of traffic signals;
- Existing intersection traffic volumes;
- Truck route designations;
- Planned access scheme for the proposed developments;
- Nearby population and employment centers; and,
- Input from City of Azusa staff.

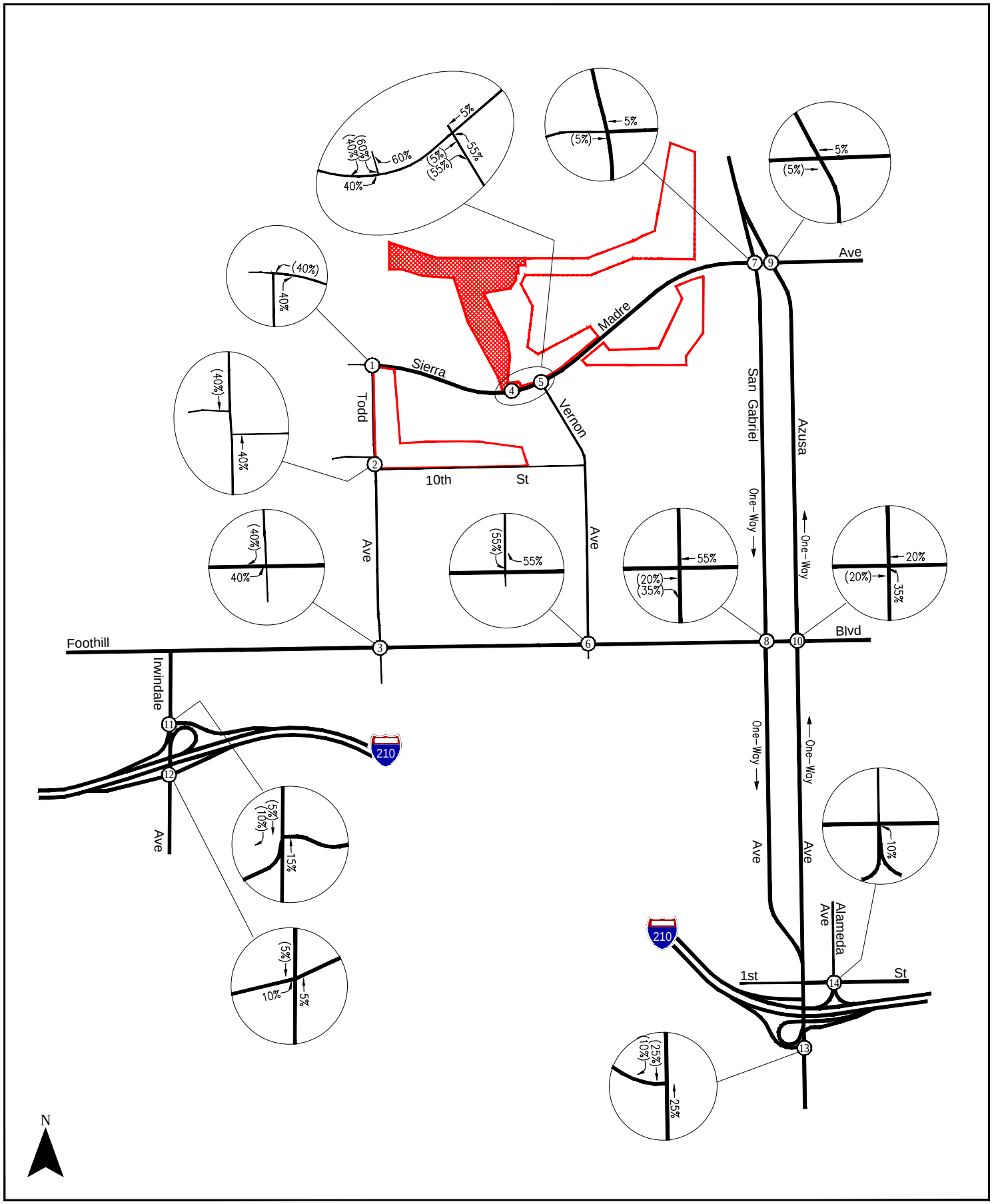
The general, directional traffic distribution patterns for the proposed project are presented in ***Figures 2-4*** through ***2-6***. *Figure 2-4* presents the distribution pattern for the senior housing development component. *Figure 2-5* presents the distribution pattern for the industrial development component. *Figure 2-6* presents the distribution pattern for the golf course component. It should be noted that in order to assess the adequacy of the proposed access scheme for the senior housing component, all project trips to and from the senior housing component have been assumed to utilize the easterly project driveway in order to provide a conservative assessment of operations along Sierra Madre Avenue. The forecast net new weekday AM and PM peak hour project traffic volumes at the study intersections associated with the proposed project are presented in ***Figures 2-7*** and ***2-8***, respectively. The traffic volume assignments presented in *Figures 2-7* and *2-8* reflect the traffic distribution characteristics shown in *Figures 2-4* through *2-6* and the project trip generation forecasts presented in *Table 2-1*.

Table 2-1
PROJECT TRIP GENERATION FORECAST

TRIP GENERATION RATES [1]									
	ITE LAND USE		WEEKDAY	WEEKDAY AM PEAK HOUR			WEEKDAY PM PEAK HOUR		
ITE LAND USE CATEGORY	CODE	VARIABLE	DAILY	IN (%)	OUT (%)	TOTAL	IN (%)	OUT (%)	TOTAL
General Light Industrial	110	Per 1,000 SF	4.87	88%	12%	0.74	14%	86%	0.65
General Light Industrial (Trucks)	110-T	Per 1,000 SF	0.25	60%	40%	0.01	50%	50%	0.01
Senior Adult Housing - Single-Family	251	Per Dwelling Unit	4.31	33%	67%	0.24	61%	39%	0.30
Senior Adult Housing - Multifamily	252	Per Dwelling Unit	3.24	34%	66%	0.20	56%	44%	0.25
Golf Course	430	Per Hole	30.38	79%	21%	1.76	53%	47%	2.91

PROJECT TRIP GENERATION FORECAST									
	ITE LAND USE		DAILY TRIP ENDS [2]	AM PEAK HOUR VOLUMES [2]			PM PEAK HOUR VOLUMES [2]		
LAND USE	CODE	SIZE	VOLUMES	IN	OUT	TOTAL	IN	OUT	TOTAL
Senior Housing Component									
Senior Housing - Multifamily Units	252	150 DU	486	10	20	30	21	17	38
Senior Housing - Duplex and Triplex Units	251	80 DU	345	6	13	19	15	9	24
Subtotal Senior Housing Component			***831***	***16***	***33***	***49***	***36***	***26***	***62***
Industrial Component									
[A] Light Industrial (All Vehicle Trip Ends)	110	353,075 GSF	***1,719***	230	31	261	32	197	229
[B] - Truck Trip Ends	110-T		88	2	2	4	2	2	4
- 2-Axle (32.7% of All Trucks) [3]				1	1	2	1	1	2
- 3-Axle (17.9% of All Trucks) [3]				0	0	0	0	0	0
- 4+-Axle (49.4% of All Trucks) [3]				1	1	2	1	1	2
- 2-Axle (1.5 PCE)				2	2	4	2	2	4
- 3-Axle (2.0 PCE)				0	0	0	0	0	0
- 4-Axle (3.0 PCE)				3	3	6	3	3	6
[C] Subtotal Trucks (PCE Adjusted)				***5***	***5***	***10***	***5***	***5***	***10***
[A-B] - Passenger Car Trip Ends				***228***	***29***	***257***	***30***	***195***	***225***
Subtotal Industrial Component [4]			***1,719***	***233***	***34***	***267***	***35***	***200***	***235***
Golf Course Component									
Azusa Greens Golf Course	430	9 Holes	273	13	3	16	14	12	26
Subtotal Golf Course Component			***273***	***13***	***3***	***16***	***14***	***12***	***26***
NET NEW PROJECT TRIPS			***2,823***	***262***	***70***	***332***	***85***	***238***	***323***

[1] Source: ITE "Trip Generation Manual", 11th Edition, 2021.
[2] Trips are one-way traffic movements, entering or leaving.
[3] Based on information contained in the "Truck Trip Generation Study for City of Fontana, County of San Bernardino, State of California" prepared by Transportation Engineering and Planning, Inc., August 2003 for Light Industrial land uses. A PCE factor of 1.5 was applied to all 2-axle trucks, while a PCE factor of 2.0 was applied to all 3-axle trucks and a PCE factor of 3.0 was applied to all 4 or more axle trucks.
[4] The daily trip subtotal represents all daily vehicle trip ends ([A]), while the weekday AM and PM peak hour trip subtotals represent the sum of the passenger vehicle trip ends and the PCE-adjusted truck trip ends ([A-B] + [C]).



Project Site

Study Intersection

Figure 2-4
Project Trip Distribution
Senior Housing Component
Azusa Greens Redevelopment Project

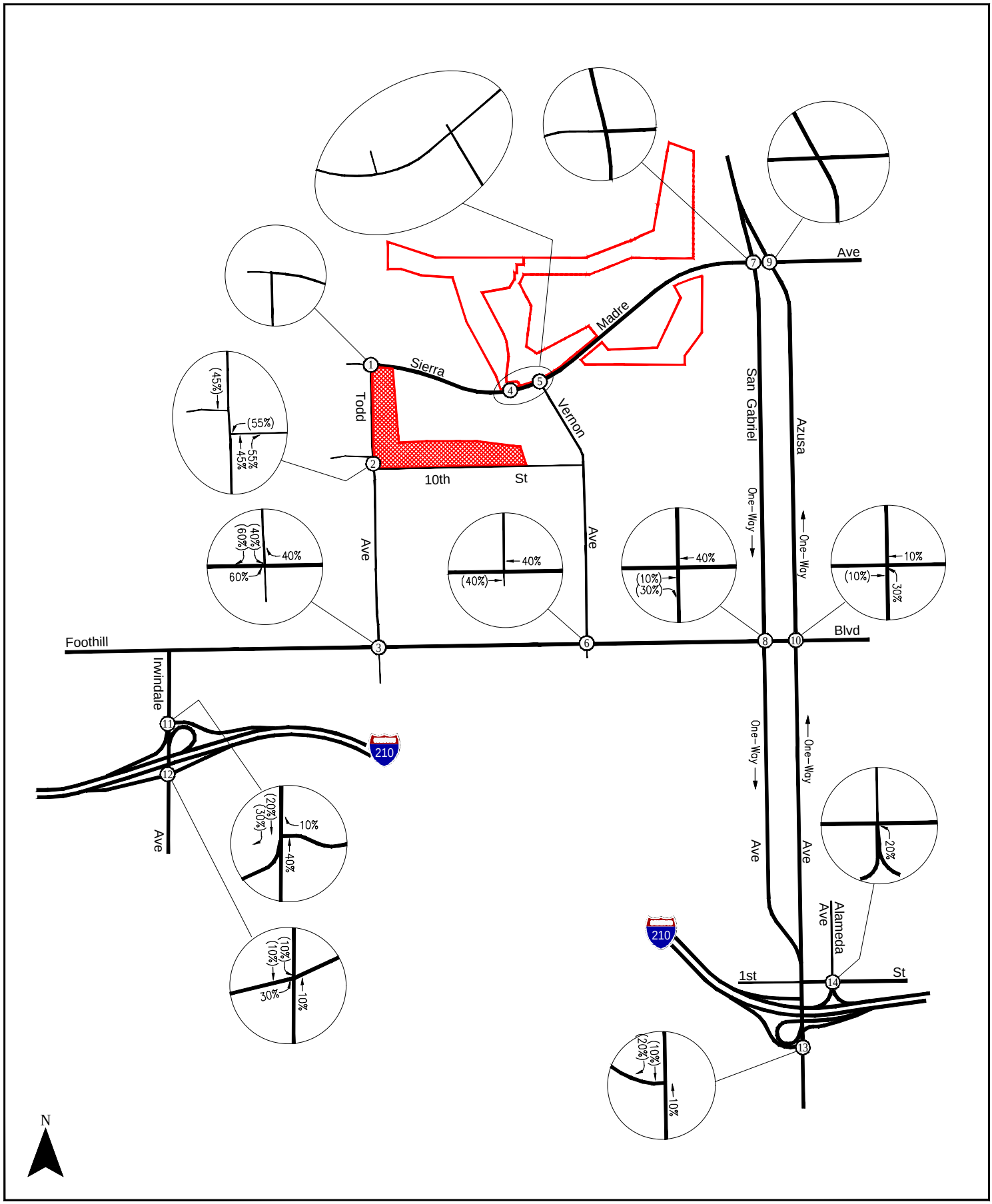
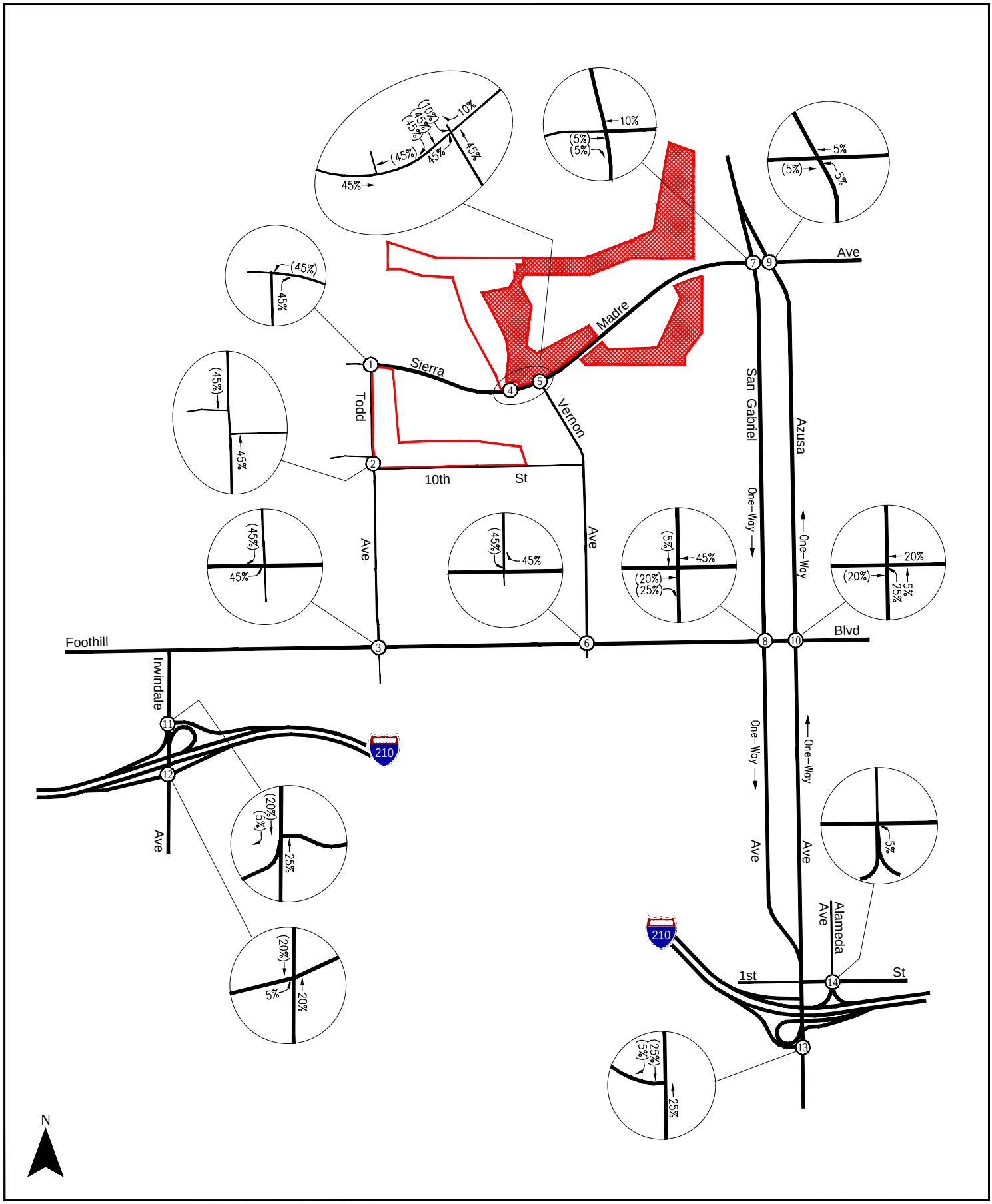


Figure 2-5
Project Trip Distribution
Industrial Component
Azusa Greens Redevelopment Project



Project Site

Study Intersection

Figure 2-6
Project Trip Distribution
Golf Course Component
Azusa Greens Redevelopment Project

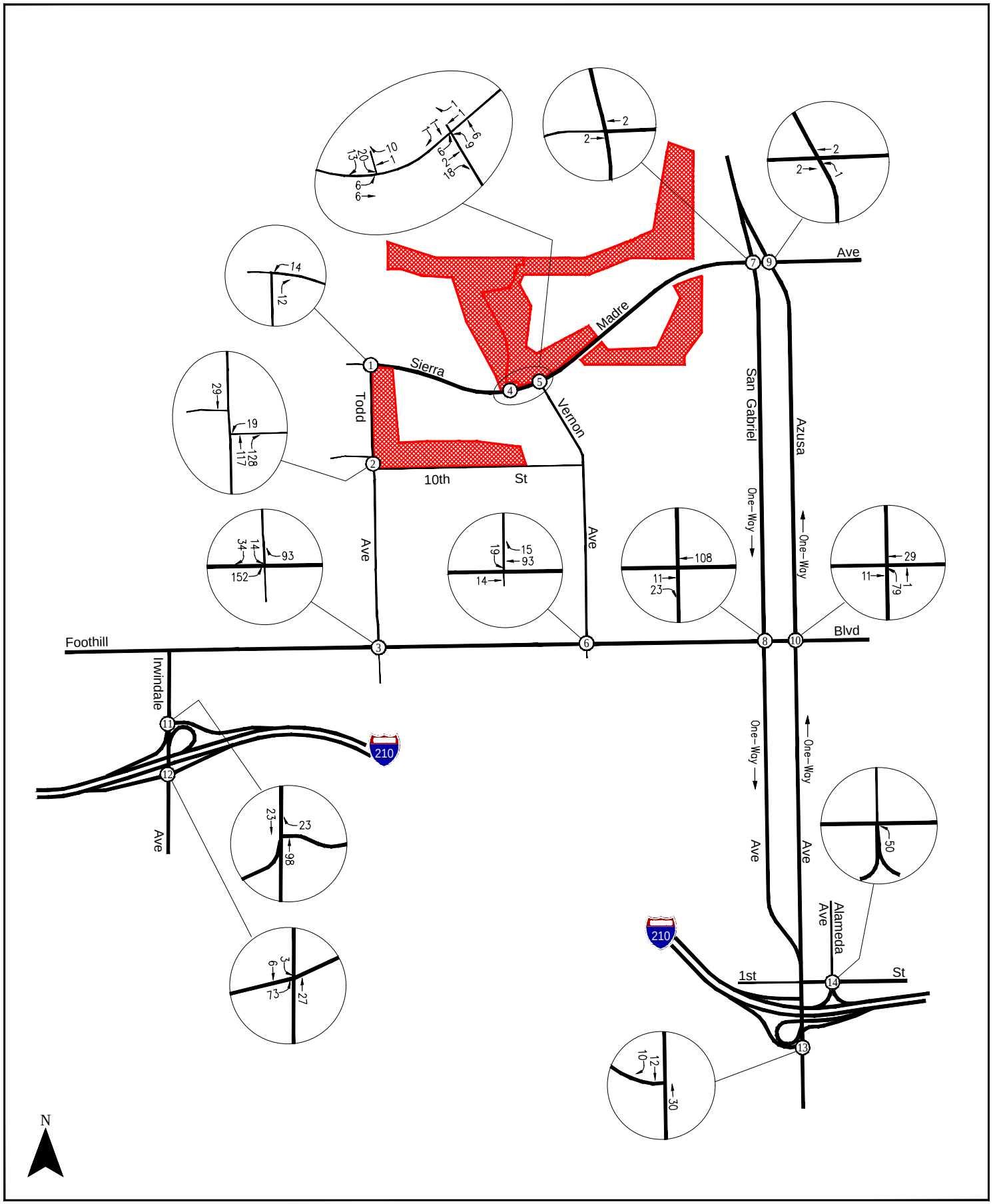
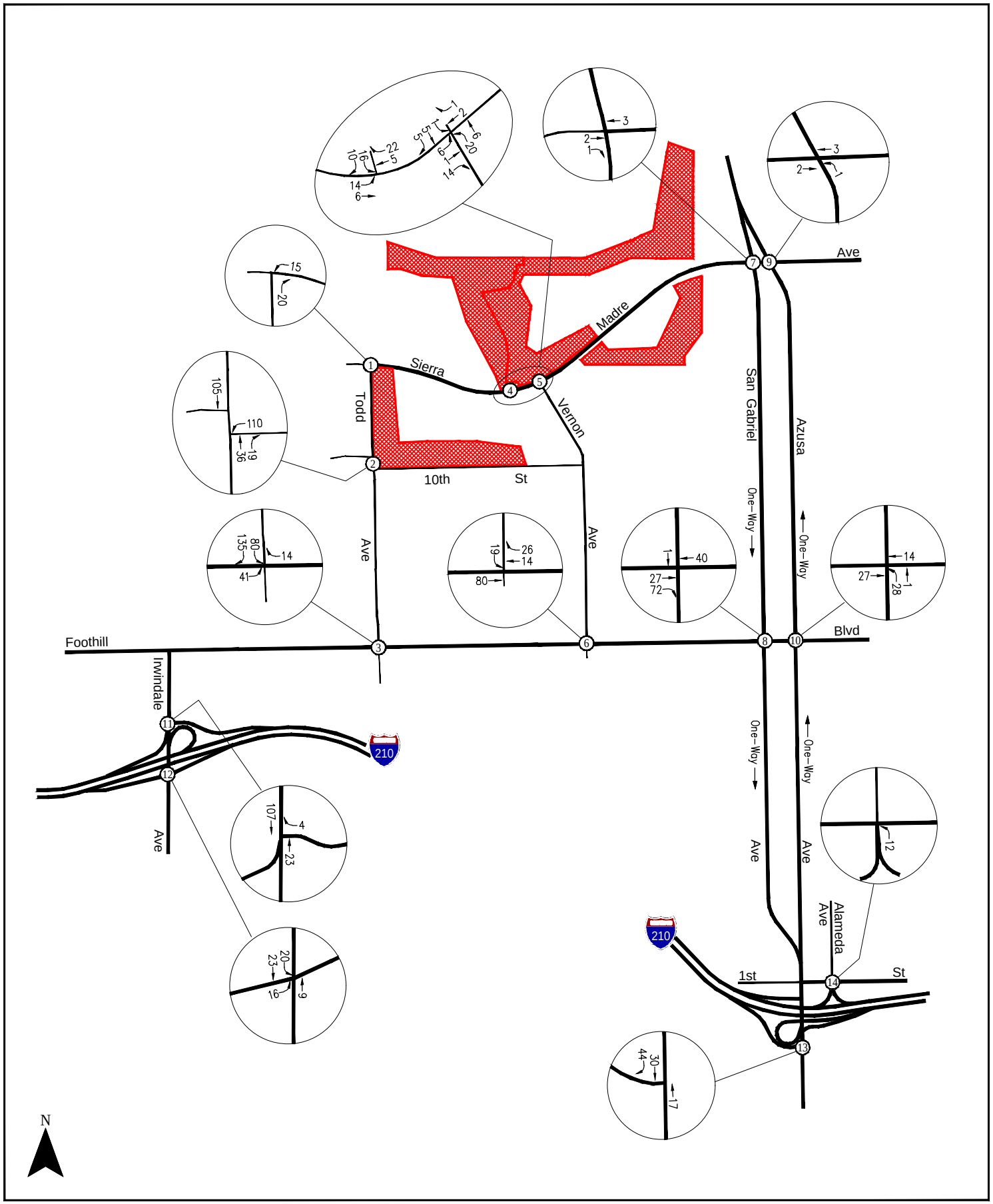


Figure 2-7
Project Traffic Volumes
Weekday AM Peak Hour
Azusa Greens Redevelopment Project



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Project Site

Study Intersection

Figure 2-8
Project Traffic Volumes
Weekday PM Peak Hour
Azusa Greens Redevelopment Project

3.0 PROJECT SITE CONTEXT

The project site is located within a well-established multi-modal transportation network maintained by the City of Azusa. The following sections will provide an overview of the transportation infrastructure in the vicinity of the proposed project, including infrastructure which supports both motorized and non-motorized transportation modes.

3.1 Active Transportation Network

Active transportation generally encompasses walking, biking, and other active transportation modes. Distinct facilities are often provided for these non-vehicular modes. Most prominently, paved sidewalks are typically provided to facilitate pedestrian travel outside of the roadway. In some cases, bicycle facilities such as painted bike lanes or separated bike paths are provided within the roadway in order to separate bike traffic from vehicular traffic. Roadways which are designed to prioritize non-vehicular transportation modes utilize complimentary non-vehicular infrastructure in order to promote comfortable, safe travel for both pedestrians and bicyclists. A review of the pedestrian and bicycle infrastructure provided in the vicinity of the project site is provided below.

3.1.1 *Pedestrian System*

Pedestrian infrastructure consists of facilities such as sidewalks, crosswalks, pedestrian signals, curb access ramps, Americans with Disabilities Act (ADA) compliant tactile warning strips, and curb extensions, among other things. These facilities are generally provided within the study area. Public sidewalks are provided along most roadways within the vicinity of the project site, including along Todd Avenue, Vernon Avenue, San Gabriel Avenue, Azusa Avenue, Sierra Madre Avenue, and Foothill Boulevard. It is noted that the proposed project site frontage along Todd Avenue and 10th Street does not currently provide public sidewalks separated from the roadway by curb and gutter, although public sidewalks are provided elsewhere along these roadways. The proposed project will construct new sidewalk, curb, and gutter to comply with current City of Azusa standards.

Striped crosswalks with pedestrian signals are provided at the signalized intersections in the vicinity of the project site. Striped crosswalks are provided across the east and west legs of Sierra Madre Avenue at the unsignalized intersections of Todd Avenue/Sierra Madre Avenue and Vernon Avenue/Sierra Madre Avenue. In addition, speed feedback signs are provided for the westbound approach at Vernon Avenue/Sierra Madre Avenue, and flashing lights activated by pedestrian push-buttons are installed at the crosswalks. It should be noted that the push-button activated flashing lights were non-operational at the time the facilities were reviewed. Additionally, ADA curb ramps with tactile warning strips consisting of yellow or grey truncated dome pads are provided at most major intersections in the vicinity of the project site, although truncated dome pads are not provided for all existing curb ramps at the intersections of Todd Avenue/Sierra Madre Avenue adjacent to the project site.

3.1.2 *Bicycle System*

Bicycle infrastructure consists of both facilities within the roadway as well as public bicycle parking spaces. The Federal and State transportation systems recognize three primary bikeway facilities: Bicycle Paths (Class I), Bicycle Lanes (Class II), and Bicycle Routes (Class III). Bicycle Paths (Class I) are exclusive car free facilities that are typically not located within a roadway area. Bicycle Lanes (Class II) are part of the street design that is dedicated only for bicycles and identified by a striped lane separating vehicle lanes from bicycle lanes. Bicycle Routes (Class III) are preferably located on collector and lower volume arterial streets.

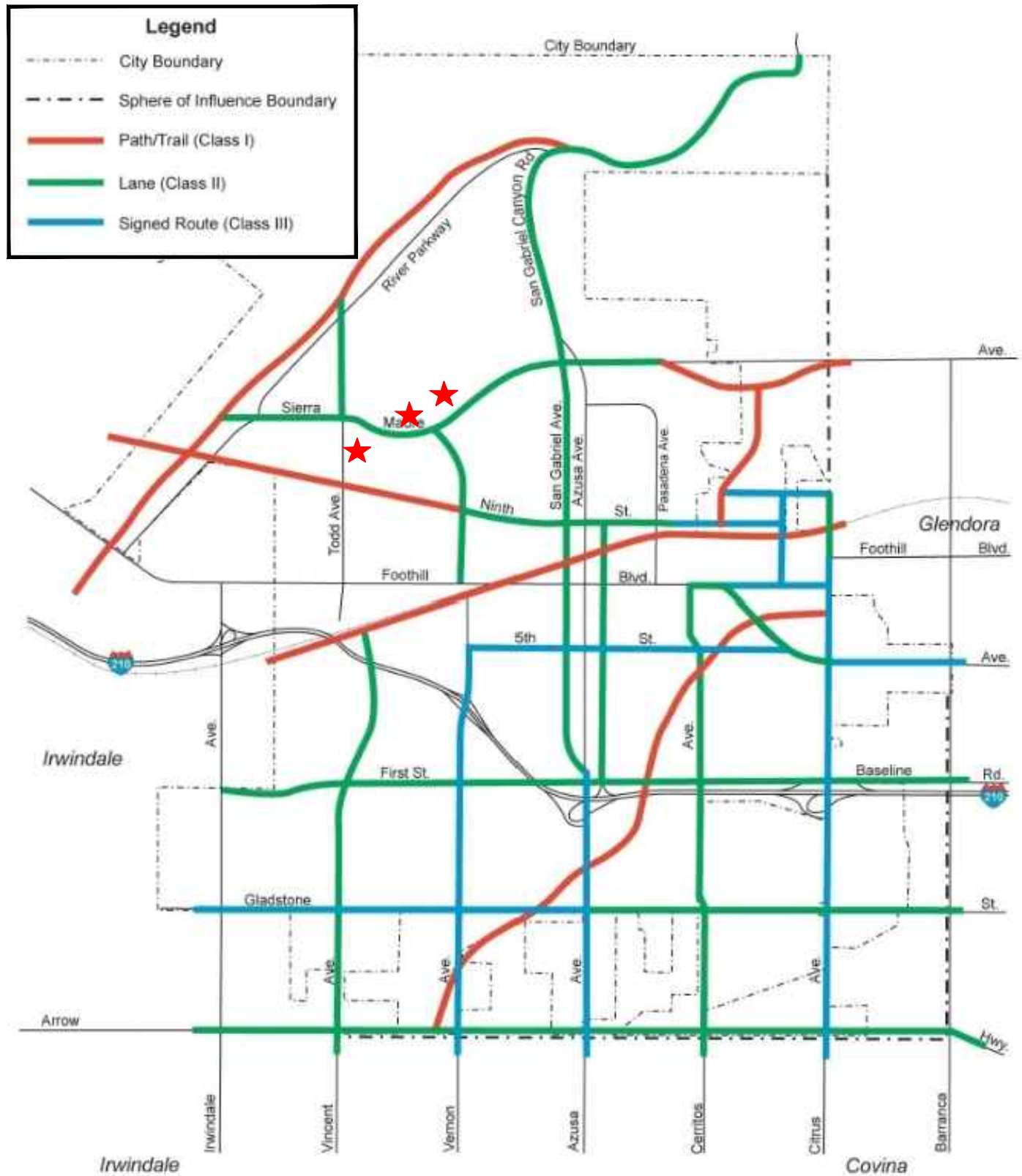
Currently, the San Gabriel River Bicycle Path, a Class I facility, is provided west of the project site. A Class I bicycle path connector is provided between the Azusa Rockery and Geology Park located along the San Gabriel River Bicycle Path and the Todd Avenue/Sierra Madre Avenue intersection. The City of Azusa General Plan[6] Mobility section, which provides the existing and planned citywide bicycle network, identifies planned Class II bicycle lanes for Sierra Madre Avenue, Vernon Avenue, San Gabriel Avenue, and 9th Street east of Vernon Avenue in the vicinity of the proposed project. It also identifies additional Class I bicycle paths adjacent to an existing railroad right-of-way west of Vernon Avenue. Based on a field review of the project study area, these bicycle facilities have not yet been constructed. The Azusa General Plan bicycle network is illustrated in ***Figure 3-1***. Since there are no existing bicycle facilities providing direct access to either the senior housing or industrial sites, bicyclists traveling to and from the project site will be required to share the existing roadway system with all other motorists, and the rules of the road contained within the State's Vehicle Code, as it relates to bicyclists, must be adhered to.

3.2 Transit Network

Public transit services are provided within the project study area by Foothill Transit and Los Angeles County Metropolitan Transportation Authority (LA Metro). The existing public transit routes in the vicinity of the project site are illustrated in ***Figure 3-2***. A summary of the existing transit service within approximately 1.0 mile of the project site, including the transit line number, corridor(s) served, nearest stop, and typical number of buses or trains per hour is presented in ***Table 3-1***. As summarized in *Table 3-1*, a total of four (4) public transit bus routes provide service along in the vicinity of the project site. Each line provides service approximately every 15-30 minutes during the morning and evening peak commute hours.

Regular public bus transit services are provided along Foothill Boulevard, San Gabriel Avenue, and Azua Avenue to the south and east of the proposed project site. No public transit bus lines currently provide service along Todd Avenue or Sierra Madre Avenue. The nearest public bus stop to the project site is provided for Foothill Transit Line 185 over 0.5-miles away at San Gabriel Avenue/Sierra Madre Avenue, where no transit supportive street furniture (e.g., bus benches, shelters, or public trash receptacles) is provided. Additional bus stops for Foothill Transit Lines

[6] "Gateway to the American Dream: Azusa General Plan", April 2004.



Source: Azusa General Plan, 2004

★ Project Site

Figure 3-1
Azusa General Plan Bicycle Network

★ Project Site

Figure 3-2
Existing Public Transit Routes

Table 3-1
EXISTING TRANSIT ROUTES [1]

ROUTE	DESTINATIONS	TRANSIT CORRIDOR(S) IN VICINITY OF SITE	TRANSIT STOP NEAREST TO SITE	NO. OF BUSES DURING PEAK HOUR		
				DIR	AM	PM
Foothill Transit 185	Azusa to West Covina Puente Hills Mall via Irwindale	San Gabriel Boulevard, Azusa Avenue, Foothill Boulevard	San Gabriel Boulevard/ Sierra Madre Avenue	NB SB	2 2	2 2
Foothill Transit 187	Azusa to Pasadena via Duarte, Arcadia	Foothill Boulevard	San Gabriel Boulevard/ Foothill Boulevard	EB WB	4 4	4 4
Foothill Transit 188	Azusa to Montclair Transit Center via Glendora, San Dimas, La Verne, Claremont	Foothill Boulevard	San Gabriel Boulevard/ Foothill Boulevard	EB WB	4 4	4 4
Foothill Transit 280	Azusa to Puente Hills Mall via West Covina, Valinda, La Puente, Industry	San Gabriel Boulevard, Azusa Avenue, Foothill Boulevard	San Gabriel Boulevard/ Foothill Boulevard	NB SB	4 4	4 4
Metro A Line	Azusa to Long Beach via Duarte, Arcadia, Pasadena, Los Angeles, Florence, Watts, Willow Brook Compton, Carson	A Line Corridor	Azusa Avenue/ Foothill Boulevard	NB SB	6 6	6 6
TOTAL					**40**	**40**

[1] Sources: Foothill Transit and Los Angeles County Metropolitan Transportation Authority (LA Metro) websites, 2023.

185, 187, 188, and 280 are provided at the San Gabriel Avenue/Foothill Boulevard intersection over 1.0 mile away, where bus benches, shelters and public trash receptacles are provided on the northwest and southeast corners and a bus bench with a public trash receptacle is provided southwest corner along Foothill Boulevard. In addition, a bus bench, shelter, and public trash receptacle is provided on the southwest corner along San Gabriel Avenue.

As summarized in *Table 3-1*, public light rail transit is provided in the vicinity by the LA Metro A (previously L/Gold) Line. The Azusa Downtown Station is located northeast of the Azusa Avenue/Foothill Boulevard intersection, over one mile from the project site. Light rail transit service is provided approximately every 10 minutes during the morning and evening peak commute hours.

3.3 Vehicle Network

3.3.1 *Roadway Classifications*

The City of Azusa utilizes the roadway categories recognized by regional, state and federal transportation agencies. There are four general categories in the roadway hierarchy, ranging from freeways with the highest capacity to two-lane undivided roadways with the lowest capacity. The roadway categories are summarized as follows:

- *Freeways* are limited-access and high speed travel ways included in the state and federal highway systems. Their purpose is to carry regional through-traffic. Access is provided by interchanges with typical spacing of one mile or greater. No local access is provided to adjacent land uses.

- *Arterial* roadways are major streets that primarily serve through-traffic and provide access to abutting properties as a secondary function. Arterials are generally designed with four to six travel lanes and their major intersections are signalized. This roadway type is divided into two categories: principal and secondary arterials. Principal arterials are typically four-or-more lane roadways and serve both local and regional through-traffic. Secondary arterials are typically two-to-four lane streets that service local and commute traffic.

- *Collector* roadways are streets that provide access and traffic circulation within residential and non-residential (e.g., commercial and industrial) areas. Collector roadways connect local streets to arterials and are typically designed with two through travel lanes (i.e., one through travel lane in each direction) that may accommodate on-street parking. They may also provide access to abutting properties.

- *Local* roadways distribute traffic within a neighborhood, or similar adjacent neighborhoods, and are not intended for use as a through-street or a link between higher capacity facilities such as collector or arterial roadways. Local streets are fronted by residential uses and do not typically serve commercial uses.

3.3.2 *Regional Highway Access*

Primary regional access is provided by the I-210 Freeway as shown in *Figure 1-1*. The *Foothill (I-210) Freeway* is a major east-west freeway located south of the project site. The I-210 Freeway connects the foothill communities from the westerly terminus in Sylmar to the easterly terminus in Redlands. In the project vicinity, four mixed-flow mainline lanes and one High Occupancy Vehicle lane are provided in each direction on the I-210 Freeway. Full access interchanges (i.e., eastbound and westbound on- and off-ramps) are provided at Irwindale Avenue to the west of the project site, and Azusa Avenue to the east of the project site.

A full access interchange is also provided at Vernon Avenue, however it should be noted that Vernon Avenue is discontinuous between 6th Street and Foothill Boulevard due to the presence of the LA Metro A (previously L/Gold) Line tracks. Vehicles utilizing the Vernon Avenue freeway ramps would be required to travel east to San Gabriel Avenue and/or Azusa Avenue or conduct a lengthy diversion to the south and west to Irwindale Avenue in order to travel to and from the project site.

3.3.3 *Roadway Descriptions*

The current lane configurations and traffic control measures at each study intersection are presented in ***Figure 3-3***. Descriptions of the roadways which make up the study area are provided in ***Table 3-2***, including the roadway classification, number of lanes, median types, and speed limits designated by the City of Azusa and other agencies with jurisdiction over the roadways in the study area.

3.4 Vehicle, Pedestrian, and Bicycle Count Data

Manual counts of vehicle, pedestrian, and bicycle volumes were conducted at each of the 14 study intersections during the weekday morning (AM) and afternoon (PM) peak periods to determine the peak hour traffic volumes. The manual counts were conducted in May 2023 by an independent traffic count subconsultant (Counts Unlimited, Inc.) at the study intersections on a typical weekday from 7:00 AM to 9:00 AM and from 4:00 PM to 6:00 PM to determine the AM and PM peak commute hours, respectively. It is noted that all traffic counts were conducted when local schools were in regular, in-person session.

In conjunction with the manual turning movement vehicle counts, a count of bicycle and pedestrian volumes were collected during the peak periods at all 14 study intersections. Based on the pedestrian and bicycle counts, it is noted that pedestrian activity is low in the immediate vicinity of the project site, however significant pedestrian activity was documented along Foothill Boulevard, and in particular in the vicinity of San Gabriel Avenue/Foothill Boulevard and Azusa Avenue/Foothill Boulevard. As requested by City staff, a count of adult and school age pedestrians was collected at the intersection of Vernon Avenue/Sierra Madre Avenue, due to the presence of Victor Hodge Elementary School to the south. It is noted that a total of five (5) adult pedestrians and one (1) school age pedestrian was observed to cross the intersection during the AM count

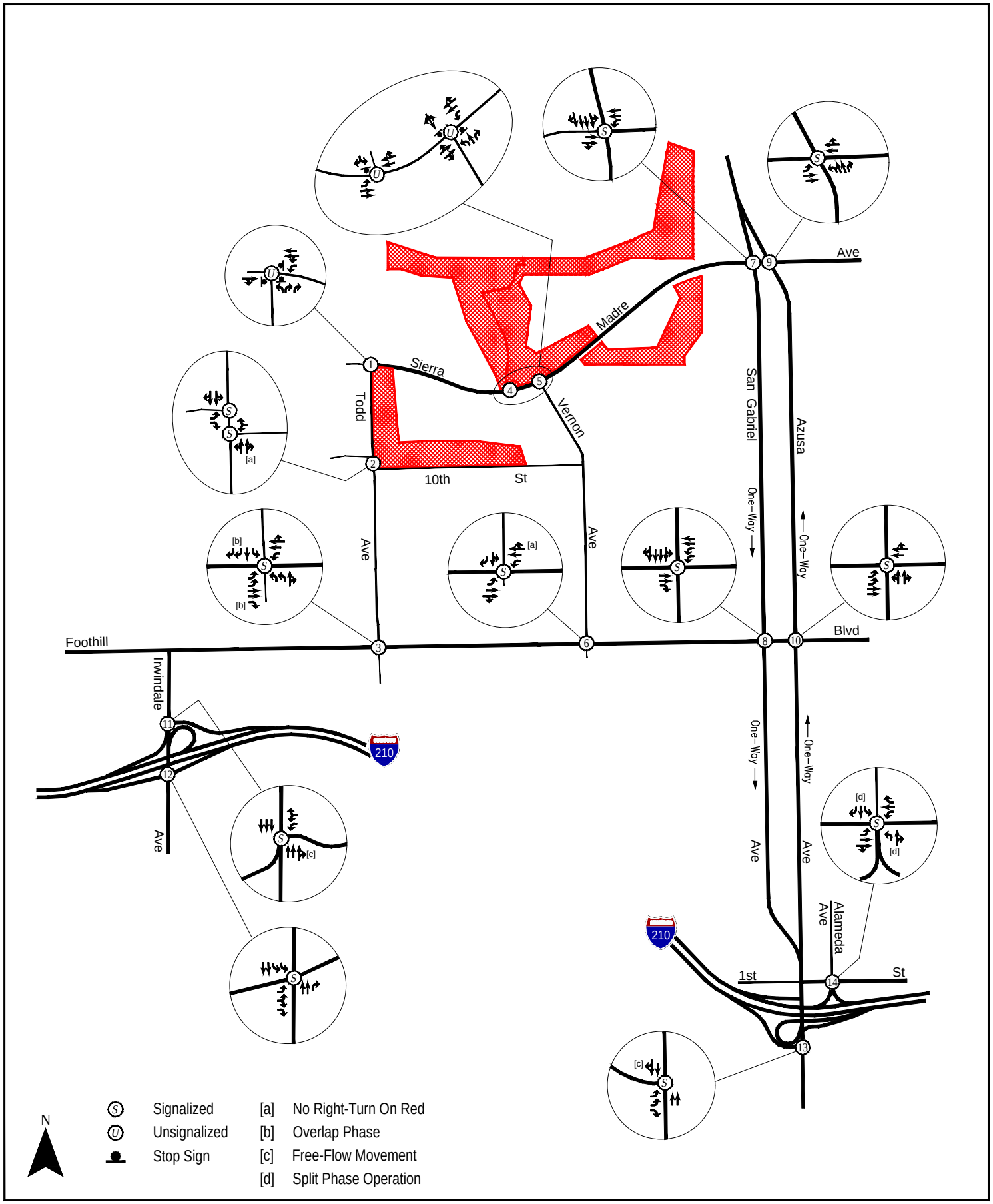


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Figure 3-3
Existing Lane Configurations

Table 3-2
EXISTING ROADWAY DESCRIPTIONS

ROADWAY	CLASSIFICATION [1]	TRUCK ROUTE [1]	TRAVEL LANES		MEDIAN TYPES [4]	SPEED LIMIT
			DIRECTION [2]	NO. LANES [3]		
Todd Avenue	Secondary Arterial	Truck Route	NB-SB	4	2WLT-N/A	40
Vernon Avenue	Collector	-	NB-SB	4	RMI-N/A	35
San Gabriel Avenue	Local Street Collector	-	SB	4	N/A	35
Azusa Avenue	Secondary Arterial	-	NB	2-3	N/A	35
Sierra Madre Avenue	Secondary Arterial	Truck Route	EB-WB	4	RMI	40
10th Street	Local Street	-	EB-WB	2	N/A	25
Foothill Boulevard	Principal Arterial	Truck Route	EB-WB	4	RMI	45-35
Irwindale Avenue	Major Highway [5]	Truck Route	NB-SB	6	N/A	40
1st Street	Secondary Arterial	Truck Route	EB-WB	4	RMI	35

[1] Roadway and truck route classifications obtained from the *Azusa General Plan,* April 2004, except where noted below.
[2] Direction of roadways in the project area: NB-SB = northbound and southbound; and EB-WB = eastbound and westbound.
[3] Number of lanes in both directions on the roadway.
[4] Median type of the road: RMI = Raised Median Island; 2WLT = 2-Way Left-Turn Lane; and N/A = Not Applicable.
[5] *City of Irwindale General Plan Update,* June 2008.

period (7:00-9:00 AM), and a total of seven (7) adult pedestrians and one (1) school age pedestrian was observed to cross the intersection during the PM count period (4:00-6:00 PM).

The existing weekday AM and PM peak hour intersection vehicle traffic volumes by approach are summarized in ***Table 3-3***. The existing traffic volumes at the study intersections during the weekday AM and PM peak hours are shown in ***Figures 3-4*** and ***3-5***, respectively. Summary data worksheets of the manual traffic counts of the study intersections are contained in ***Appendix B***.

3.5 Future Cumulative Traffic Forecast

The forecast of future cumulative pre-project conditions was prepared in accordance to procedures outlined in Section 15130 of the CEQA Guidelines. Specifically, the CEQA Guidelines provide two options for developing the future traffic volume forecast:

> "(A) A list of past, present, and probable future projects producing related or cumulative impacts, including, if necessary, those projects outside the control of the [lead] agency, or
>
> (B) A summary of projections contained in an adopted local, regional or statewide plan, or related planning document, that describes or evaluates conditions contributing to the cumulative effect. Such plans may include: a general plan, regional transportation plan, or plans for the reduction of greenhouse gas emissions. A summary of projections may also be contained in an adopted or certified prior environmental document for such a plan. Such projections may be supplemented with additional information such as a regional modeling program. Any such document shall be referenced and made available to the public at a location specified by the lead agency."

This traffic analysis provides a forecast of future cumulative traffic volumes through incorporation of traffic associated with other known development projects located in the project study area as well as an ambient traffic growth rate (i.e., option "A" and "B" above).

3.5.1 *Cumulative Development Projects*

A forecast of future on-street traffic conditions was prepared by incorporating the potential trips associated with other known development projects (related projects) in the area (i.e., within an approximate 1.0-mile radius from the project site). With this information, the potential impact of the proposed project can be evaluated within the context of the cumulative impacts of all ongoing development. The related projects research was based on information on file with the Cities of Azusa, Duarte, and Irwindale, and with the County of Los Angeles. The list of related projects in the project site area is presented in ***Table 3-4***. The location of the related projects is shown in ***Figure 3-6***.

Traffic volumes expected to be generated by the related projects were calculated using rates provided in the ITE *Trip Generation Manual*, or they were obtained from other jurisdictions as noted. The related projects' respective traffic generation for the weekday AM and PM peak hours, as well as on a daily basis for a typical weekday, is summarized in *Table 3-4*. The related projects

Table 3-3
EXISTING TRAFFIC VOLUMES [1]
WEEKDAY AM AND PM PEAK HOURS

NO.	INTERSECTION	DATE	DIR	AM PEAK HOUR		PM PEAK HOUR	
				BEGAN	VOLUME	BEGAN	VOLUME
1	Todd Avenue/ Sierra Madre Avenue	05/24/2023	NB SB EB WB	7:00 AM	178 0 15 1,022	4:15 PM	633 0 64 222
2	Todd Avenue/ 10th Street	05/24/2023	NB SB EB WB	7:00 AM	244 1,008 3 100	4:15 PM	705 271 16 57
3	Todd Avenue/ Foothill Boulevard	05/24/2023	NB SB EB WB	8:00 AM	310 890 962 648	4:30 PM	497 500 1,786 419
4	Project Driveway/ Sierra Madre Avenue	05/24/2023	NB SB EB WB	7:00 AM	0 0 196 971	5:00 PM	0 0 620 261
5	Vernon Avenue/ Sierra Madre Avenue	05/24/2023	NB SB EB WB	7:15 AM	73 0 234 921	5:00 PM	98 0 612 240
6	Vernon Avenue/ Foothill Boulevard	05/24/2023	NB SB EB WB	7:45 AM	1 287 508 813	4:00 PM	18 346 1,076 414
7	San Gabriel Avenue/ Sierra Madre Avenue	05/24/2023	NB SB EB WB	7:15 AM	0 311 291 821	4:15 PM	0 261 645 276
8	San Gabriel Avenue/ Foothill Boulevard	05/24/2023	NB SB EB WB	7:30 AM	0 756 430 840	5:00 PM	0 677 1,070 484
9	Azusa Avenue/ Sierra Madre Avenue	05/24/2023	NB SB EB WB	7:45 AM	190 0 306 669	4:30 PM	229 0 583 245
10	Azusa Avenue/ Foothill Boulevard	05/24/2023	NB SB EB WB	7:30 AM	400 0 424 776	4:30 PM	513 0 1,019 499

Table 3-3 (Continued)
EXISTING TRAFFIC VOLUMES [1]
WEEKDAY AM AND PM PEAK HOURS

NO.	INTERSECTION	DATE	DIR	AM PEAK HOUR		PM PEAK HOUR	
				BEGAN	VOLUME	BEGAN	VOLUME
11	Irwindale Avenue/ I-210 Freeway WB Ramps	05/24/2023	NB SB EB WB	7:45 AM	1,536 890 0 283	4:30 PM	1,195 1,244 0 334
12	Irwindale Avenue/ I-210 Freeway EB Ramps	05/24/2023	NB SB EB WB	7:30 AM	1,249 438 1,136 0	4:45 PM	1,144 968 746 0
13	Azusa Avenue/ I-210 Freeway EB Ramps	05/24/2023	NB SB EB WB	7:30 AM	1,147 894 425 0	5:00 PM	997 951 650 0
14	I-210 Freeway WB Ramps/ 1st Street	05/24/2023	NB SB EB WB	7:30 AM	103 188 563 1,028	4:45 PM	502 124 519 461

[1] Counts conducted by Counts Unlimited, Inc.

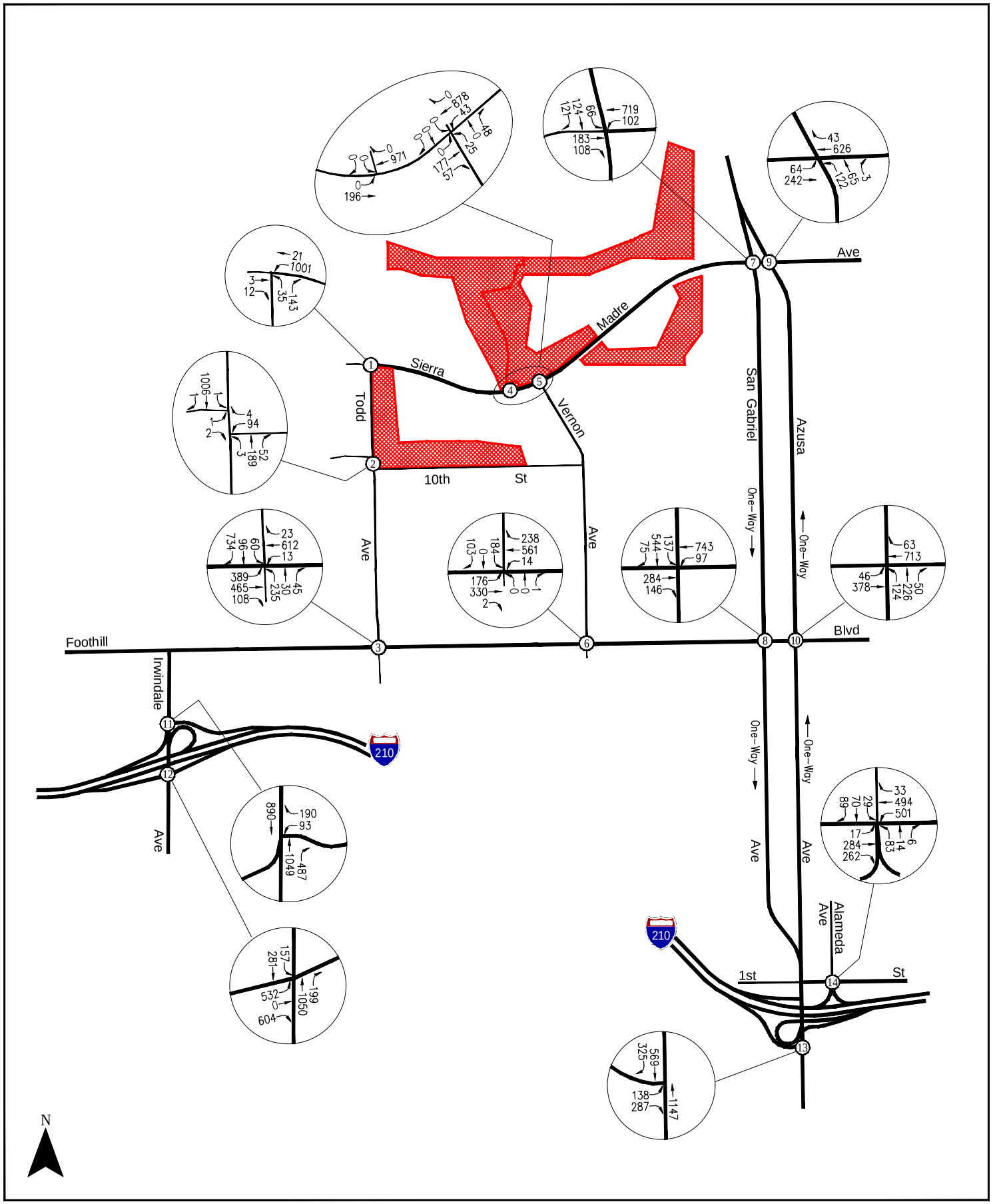

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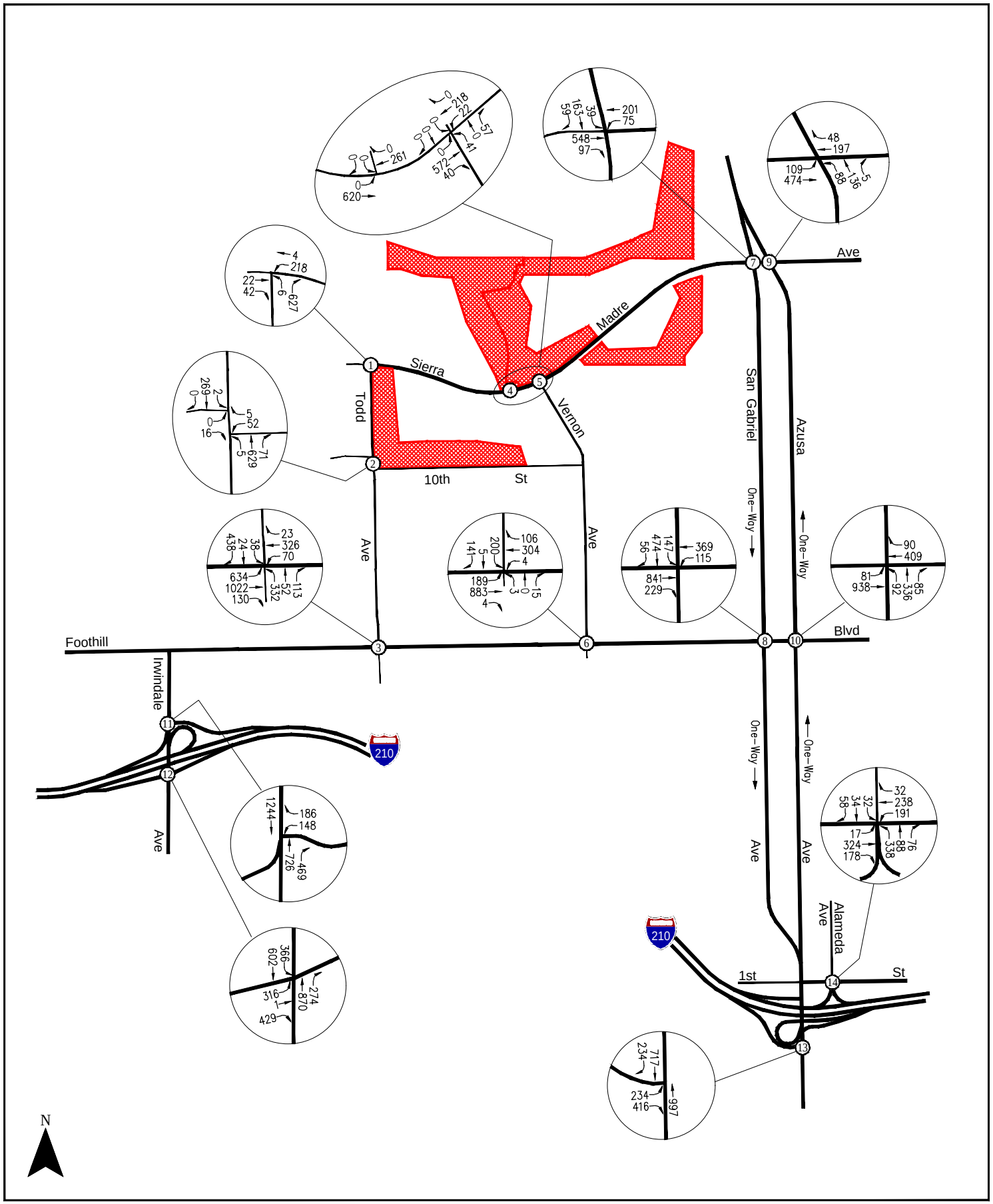
Figure 3-4
Existing Traffic Volumes
Weekday AM Peak Hour
Azusa Greens Redevelopment Project



Project Site

Study Intersection

Figure 3-5
Existing Traffic Volumes
Weekday PM Peak Hour
Azusa Greens Redevelopment Project

Table 3-4
RELATED PROJECTS LIST AND TRIP GENERATION [1]

MAP NO.	PROJECT STATUS	PROJECT NAME/NUMBER ADDRESS/LOCATION	LAND USE DATA		PROJECT DATA SOURCE	DAILY TRIP ENDS [2]	AM PEAK HOUR VOLUMES [2]			PM PEAK HOUR VOLUMES [2]		
			LAND-USE	SIZE		VOLUMES	IN	OUT	TOTAL	IN	OUT	TOTAL
City of Azusa												
A1	Proposed	198 S. Peckham Road	Warehousing	12,184 GSF	[3]	21	2	0	2	1	1	2
A2	Proposed	230 S. Irwindale Avenue	Industrial	6,380 GSF	[4]	31	4	1	5	1	3	4
A3	Proposed	300 W. Foothill Boulevard	Townhomes	7 DU	[5]	47	1	2	3	3	1	4
			Commercial	633 GLSF	[6]	34	1	0	1	2	2	4
A4	Proposed	326 N. Azusa Avenue	Townhomes	8 DU	[5]	54	1	2	3	3	1	4
A5	Proposed	333 N. Azusa Avenue	Townhomes	4 DU	[5]	27	0	2	2	1	1	2
			Retail	1,000 GLSF	[6]	54	1	1	2	4	3	7
A6	Under Construction	619 N. San Gabriel Avenue	Townhomes	6 DU	[5]	40	0	2	2	2	1	3
			Retail	888 GLSF	[6]	48	1	1	2	3	3	6
A7	Under Construction	Lumia 800 N. Azusa Avenue	Residential	127 DU	[7]	503	6	23	29	20	13	33
			Retail	12,000 GLSF	[6]	653	17	11	28	40	39	79
A8	Proposed	Azusa Great Park and Residential 807 The Promenade	Single Family Residential	23 DU	[8]	166	3	8	11	8	5	13
			Park	9 Acres	[9]	7	0	0	0	1	0	1
A9	Under Construction	820 N. Soldano Avenue	Townhomes	6 DU	[5]	40	0	2	2	2	1	3
A10	Under Construction	Azusa Self-Storage 900 W. Foothill Boulevard	Self-Storage	138,454 GSF	[10]	201	7	5	12	10	11	21
A11	Under Construction	OneLegacy 1303 Optical Drive	Office	45,000 GSF	[11]	488	60	8	68	11	54	65
A12	Proposed	742 N. Todd Avenue	Warehousing	16,040 GSF	[3]	27	2	1	3	1	2	3
A13	Proposed	120 N. Aspan Avenue	Single Family Residential	22 DU	[12]	207	4	11	15	13	8	21
A14	Proposed	229 S. Azusa Avenue	Hotel	23 Rooms	[13]	184	6	5	11	7	7	14
A15	Proposed	710 S. Azusa Avenue	Starbucks	1,055 GSF	[14]	563	46	45	91	21	20	41

Table 3-4 (Continued)
RELATED PROJECTS LIST AND TRIP GENERATION [1]

MAP NO.	PROJECT STATUS	PROJECT NAME/NUMBER ADDRESS/LOCATION	LAND USE DATA		PROJECT DATA SOURCE	DAILY TRIP ENDS [2] VOLUMES	AM PEAK HOUR VOLUMES [2]			PM PEAK HOUR VOLUMES [2]		
			LAND-USE	SIZE			IN	OUT	TOTAL	IN	OUT	TOTAL
City of Irwindale												
I1	Proposed	Reliance II 15990 Foothill Boulevard	Industrial Retail	1,853,500 GSF 10,000 GLSF	[15] [6]	6,246 545	510 14	120 10	630 24	139 33	491 33	630 66
City of Duarte												
D1	Under Construction	City of Hope 1500 Duarte Road	Medical Outpatient Clinic	356,000 GSF	[16]	11,342	773	181	954	253	758	1,011
D2	Under Construction	Solana 1750 Business Center Drive	Apartments	292 DU	[17]	1,387	33	60	93	55	30	85
TOTAL						22,915	1,492	501	1,993	634	1,488	2,122

[1] Sources: City of Azusa Economic & Community Development Department - Planning Division, City of Duarte Community Development Department - Planning Division, City of Irwindale Community Development - Planning D except as noted below. The peak hour traffic volumes were forecast on trip data provided in the ITE "Trip Generation Manual", 11th Edition, 2021. It is noted that the County of Los Angeles either did not have records of related within the project study area or had related projects that were deemed nominal.
[2] Trips are one-way traffic movements, entering or leaving.
[3] ITE Land Use Code 150 (Warehouse) trip generation average rates.
[4] ITE Land Use Code 110 (General Light Industrial) trip generation average rates.
[5] ITE Land Use Code 220 (Multifamily Housing (Low-Rise) Not Close to Rail Transit) trip generation average rates.
[6] ITE Land Use Code 822 (Strip Retail Plaza (<40k)) trip generation average rates.
[7] ITE Land Use Code 222 (Multifamily Housing (High-Rise) Close to Rail Transit) trip generation average rates.
[8] ITE Land Use Code 215 (Single-Family Attached Housing) trip generation average rates.
[9] ITE Land Use Code 411 (Public Park) trip generation average rates.
[10] ITE Land Use Code 151 (Mini-Warehouse) trip generation average rates.
[11] ITE Land Use Code 710 (General Office) trip generation average rates.
[12] ITE Land Use Code 215 (Single-Family Attached Housing) trip generation average rates.
[13] ITE Land Use Code 310 (Hotel) trip generation average rates.
[14] ITE Land Use Code 937 (Coffee/Donut Shop with Drive-Through) trip generation average rates.
[15] ITE Land Use Code 130 (Industrial Park) trip generation average rates.
[16] ITE Land Use Code 720 (Medical-Dental Office Building Within/Near Hospital Campus) trip generation average rates.
[17] ITE Land Use Code 221 (Multifamily Housing (Mid-Rise) Close to Rail Transit) trip generation average rates.

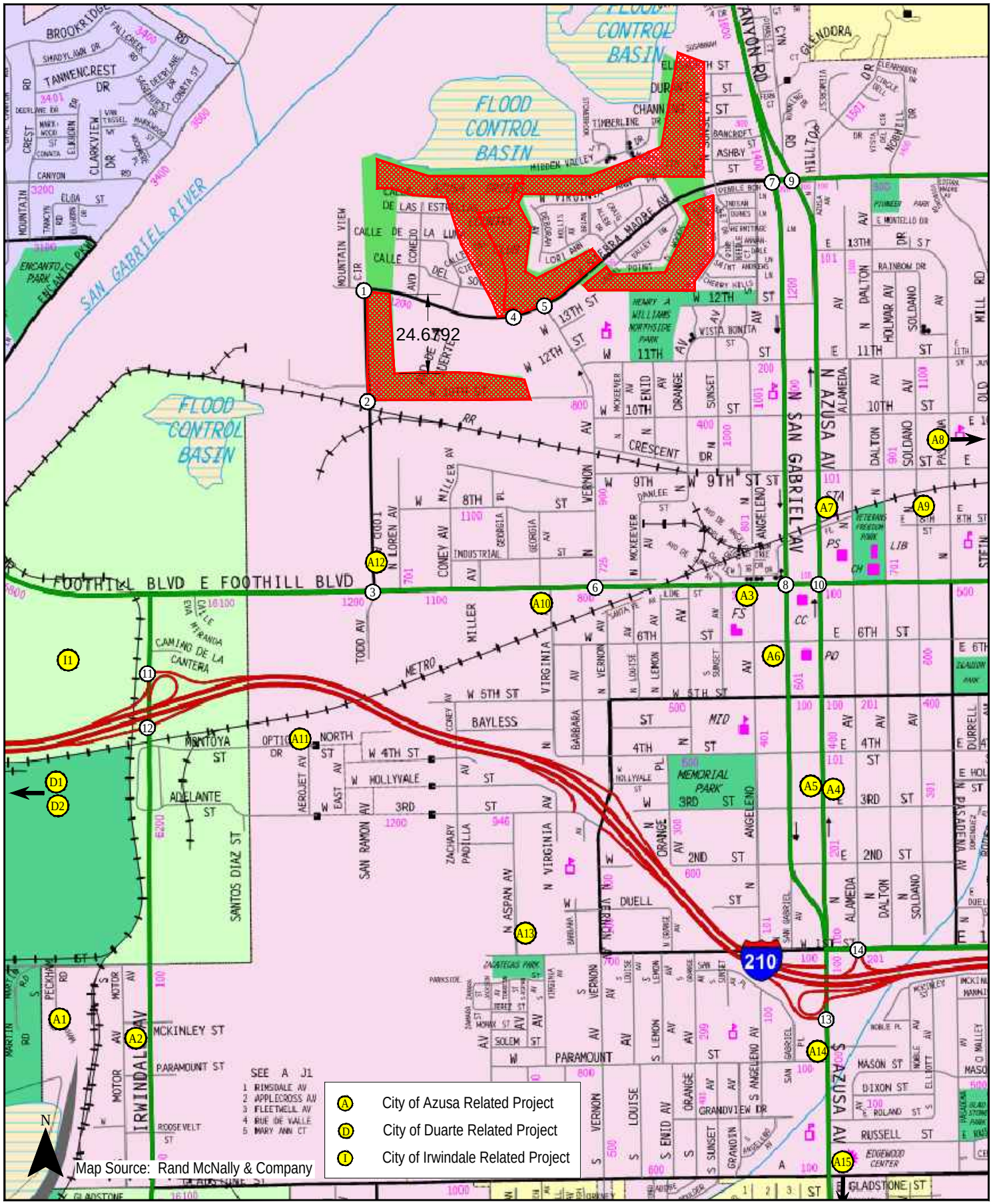


Figure 3-6
Location of Related Projects

traffic volumes were distributed and assigned to the street system based on the projects' locations in relation to the study intersections, their proximity to major traffic corridors, proposed land uses, nearby population and employment centers, etc. The distribution of the related projects traffic volumes to the study intersections during the weekday AM and PM peak hours are displayed in ***Figures 3-7*** and ***3-8***, respectively.

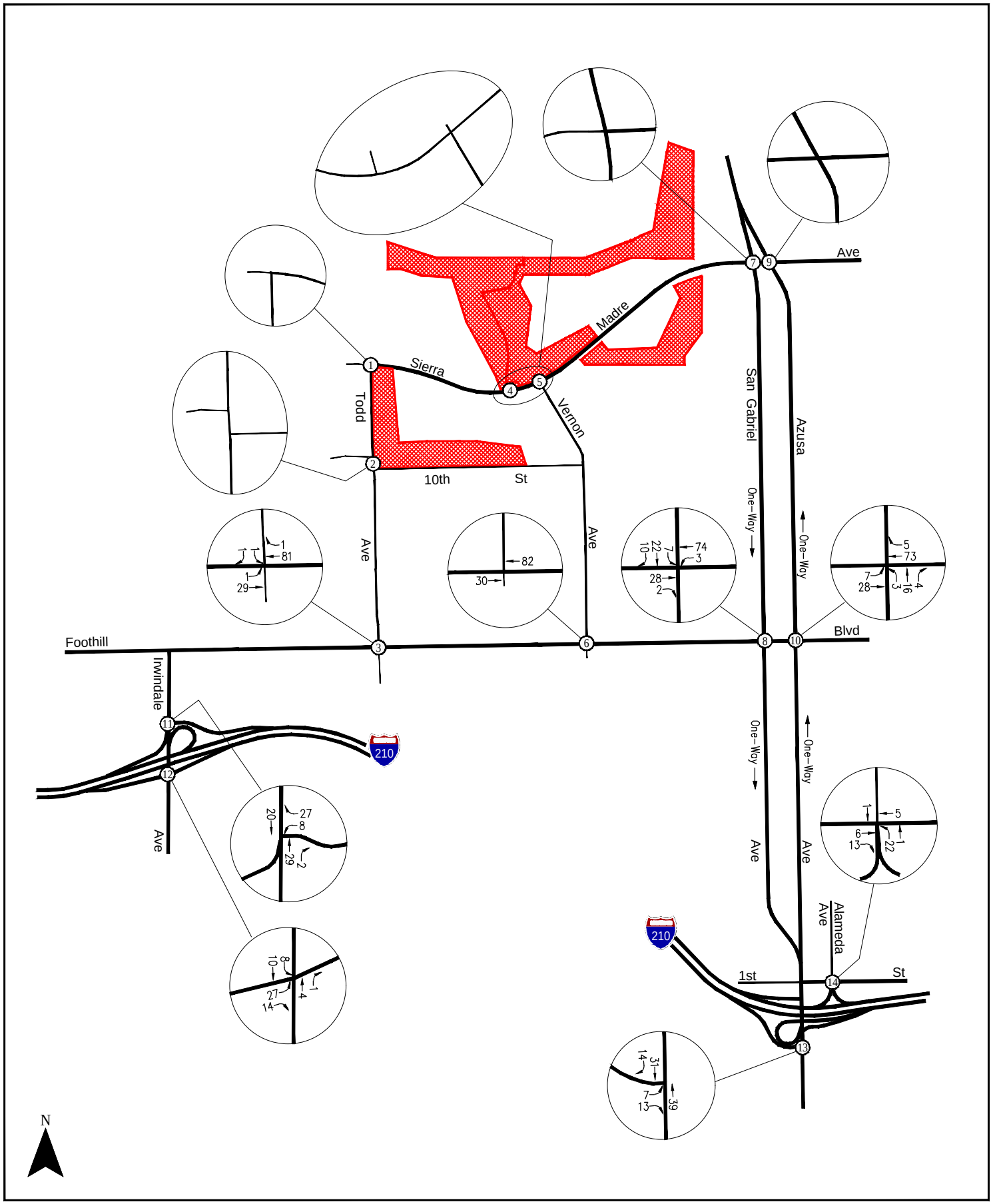
3.5.2 *Ambient Growth Factor*

In order to account for area-wide regional growth beyond the listed related projects, the existing traffic volumes were increased at an annual compounding rate of 0.38 percent (0.38%) between existing year 2023 and the future build-out year of 2027, resulting in a total growth factor of 1.53% applied to the existing year 2023 traffic volumes. The ambient growth factor was based on general traffic growth factors provided in the Los Angeles County 2010 Congestion Management Program (CMP) manual for the project study area (i.e., RSA 26, which is generally bounded by Azusa, Glendora, West Covina, Diamond Bar, and Hacienda Heights) and determined in consultation with City of Azusa staff. Based on information provided by the CMP manual, existing traffic volumes are expected to increase at an annual compounding rate of 0.38% per year between the years 2020 and 2025 (i.e., [1.066/1.046]^(1/5) = 1.0038 or 0.38%), and at an annual compounding rate of 0.37% between the years 2025 and 2030 (i.e., [1.086/1.066]^(1/5) = 1.0037 or 0.37%). In order to forecast the future year 2027 traffic conditions, the more conservative growth rate of 0.38% per year was applied between the years 2023 and 2027, resulting in a total growth factor of 1.53% (i.e., [1+0.0038]^(2027-2023) = 1.0153 or 1.53%). Thus, application of this annual growth factor in addition to the forecast traffic generated by the related projects allows for a conservative forecast of future baseline year 2027 traffic volumes in the project study area, as incorporation of both (i.e., an ambient traffic growth rate and a detailed list of cumulative development projects) is expected to overstate potential future traffic volumes. The cumulative development projects should already be incorporated as part of the growth rate projection per the adopted local and regional planning documents (i.e., which account for the future population, housing, and employment [socio-economic data] projections).

3.5.3 *State Route 39 (San Gabriel Canyon Road) Reopening Project*

In addition to reviewing development data on file with local jurisdictions, the "Draft Environmental Impact Report/Environmental Assessment (DEIR/EA) for the California State Route 39 (San Gabriel Canyon Road) Reopening Project"[7] was reviewed to determine the potential changes in traffic volumes resulting from the proposed improvements and rehabilitation of the 4.4-mile segment of SR-39 south of SR-2 (Angeles Crest Highway) which has been closed to public traffic since 1978. The proposed reopening project consists of four alternatives, as summarized below:

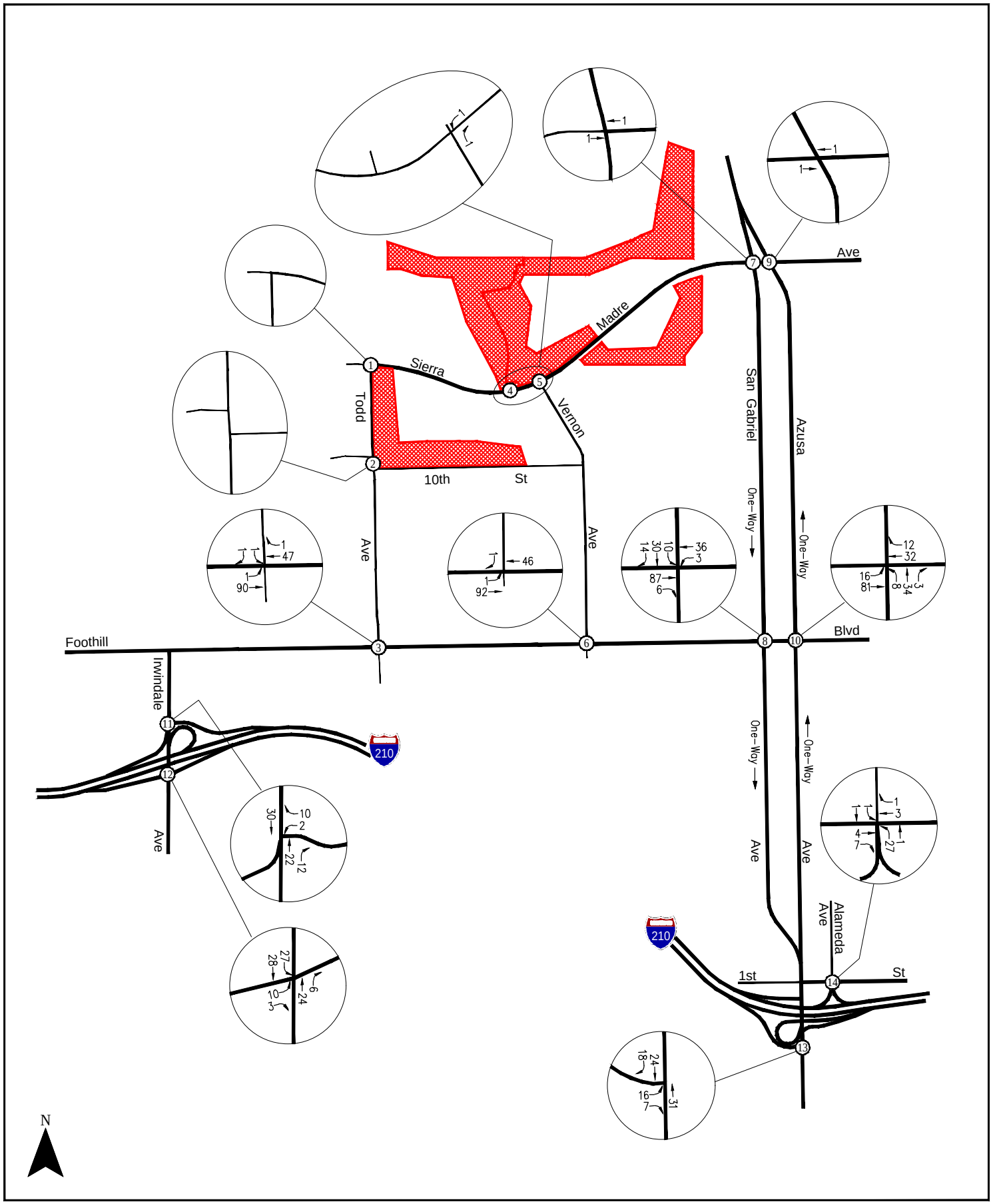
[7] "California State Route 39 (San Gabriel Canyon Road) Reopening Project Draft Environmental Impact Report/Environmental Assessment [DEIR/EA]", prepared by the California Department of Transportation, February 2024. Discussion of anticipated traffic volumes is provided in Chapter 2.1.8 – Traffic and Transportation/Pedestrian and Bicycle Facilities.



Project Site

Study Intersection

Figure 3-7
Related Projects Traffic Volumes
Weekday AM Peak Hour
Azusa Greens Redevelopment Project



Project Site

Study Intersection

Figure 3-8
Related Projects Traffic Volumes
Weekday PM Peak Hour
Azusa Greens Redevelopment Project

- Alternative 1 – No-Build Alternative: This alternative proposes to maintain the existing conditions of the roadway without any improvements.

- Alternative 2 – Evacuation Route (Minimum Build): This alternative proposes limited roadway restoration. Access to the roadway would be strictly for emergency service responders and maintenance access.

- Alternative 3 – Active Transportation Access (Shuttle and Bicycle Path Facilities): This alternative proposes to restrict access to the roadway to recreational related activities (e.g., enjoying vista views, hiking, biking, picnicking, camping, fishing, etc.) and allow only an onsite shuttle service to operate and ferry national forest visitors through the restricted roadway. The road would remain closed to public vehicles.

- Alternative 4 – Full Opening: This alternative proposes to rehabilitate and reopen the closed segment of SR-39 to public traffic and provide unrestricted access and a through-traffic connection between Interstate 210 (Foothill Freeway) ad SR-2 (Angeles Crest Highway). A roundabout feature is also proposed at the SR-2/SR-39 junction.

As stated in the DEIR/EA, it is anticipated that changes to traffic due to the proposed project would range from none (i.e., associated with no implementation of the project or reopening for emergency access only) to negligible (i.e., associated with reopening for active transportation modes, shuttles, and emergency vehicles only). The DEIR/EA further concludes that any proposed full reopening of SR-39 would not contribute to induced traffic levels, and that traffic levels would remain similar to those currently experienced on the southern portion of SR-39. Therefore, for the purposes of this transportation study, no changes to future volume forecasts have been assumed as a result of the proposed SR-39 Reopening project.

4.0 CEQA TRANSPORTATION ANALYSIS

The State of California Governor's Office of Planning and Research (OPR) issued proposed updates to the CEQA guidelines in November 2017 that amends the Appendix G question for transportation impacts to delete reference to vehicle delay and level of service and instead refer to Section 15064.3, subdivision (b)(1) of the CEQA Guidelines asking if the project will result in a substantial increase in VMT. The California Natural Resources Agency certified and adopted the revisions to the CEQA Guidelines in December of 2018, and as of July 1, 2020 the provisions of the new section are in effect statewide. Concurrently, OPR developed the *Technical Advisory on Evaluating Transportation Impacts in CEQA,* which provides non-binding recommendations on the implementation of VMT methodology that have significantly informed the way VMT analyses are conducted in the State. The City of Azusa has not yet adopted transportation assessment guidelines for VMT analyses, therefore, the VMT assessment has been prepared in compliance with the methodology recommended in the *Technical Advisory*.

4.1 VMT Project Screening

Traditionally, public agencies have set certain thresholds to determine whether a project requires detailed transportation analysis or if it can be assumed to have less than significant environmental impacts without additional study. In the *Technical Advisory*, OPR recommends various screening criteria which may be applied to screen proposed projects out of detailed VMT analysis. Proposed projects are not required to satisfy all of the screening criteria in order to screen out of further VMT analysis; satisfaction of one criterion is sufficient for screening purposes. The following sections provide a detailed explanation of each screening criteria as it relates to the proposed project.

4.1.1 *Small Project Screening*

In the *Technical Advisory*, OPR recommends that projects which generate less than 110 daily vehicle trips may be presumed to have a less than significant transportation impact. The proposed project is forecast to generate 2,823 daily vehicle trips, with the senior housing component forecast to generate 831 daily vehicle trips, the industrial component forecast to generate 1,719 non-PCE-adjusted daily vehicle trips, and the golf course component forecast to generate 273 daily vehicle trips (refer to *Section 2.4.1 – Project Trip Generation Forecast*, herein). Therefore, the small project screening criteria is not met.

4.1.2 *Low VMT Area Screening*

It is assumed that projects which will be located within areas which currently exhibit low VMT, and that incorporate similar features pertaining to density, land use mix, and transit availability, will tend to exhibit similarly low VMT. In areas where the existing VMT generation already falls below the applicable thresholds, and where projects are likely to generate similar levels of VMT, projects may be screened out of preparing detailed VMT analysis. OPR notes that such screening is appropriate for residential and office projects. Based on the VMT generating characteristics of the industrial component (i.e., the majority of trips are assumed to be made by employees who

travel from their homes to the site each day as part of a daily commute, and who remain on-site during the day to perform their various duties), the industrial component is analyzed using the recommended screening criteria, methodology, and thresholds recommended for office projects.

The San Gabriel Valley Council of Governments (SGVCOG) Vehicle Miles Traveled Evaluation Tool ("VMT Evaluation Tool"), which was developed by Fehr & Peers as part of the SB 743 VMT Implementation Study effort, is available for use in conducting VMT screening and evaluation in the City of Azusa. The SCAG Travel Demand Forecasting Model was used to establish VMT performance for individual Traffic Analysis Zones (TAZ). The VMT values for each TAZ are then compared to the applicable City thresholds (i.e., VMT per capita, per employee, or per service population) to determine if the TAZ can be considered a low VMT area. Locations within the City of Azusa which qualify for the low VMT area screening may be identified through the VMT Evaluation Tool. VMT screening and evaluation worksheets generated by the VMT Evaluation Tool for the proposed project are provided in ***Appendix C***.

As reported in the worksheets provided in *Appendix C*, the project is situated within TAZ 22324100, which exhibits 18.8 home-based work VMT per capita and 22.4 home-based work VMT per employee without the project. The corresponding thresholds are noted as 15.3 VMT per capita and 16.7 VMT per employee, respectively. Therefore, the TAZ does not currently exhibit VMT below the applicable thresholds and cannot be considered a low VMT area. The proposed project site therefore fails the low VMT area screening.

4.1.3 *Transit Priority Area Screening*

CEQA Guidelines Section 15064.3(b)(1) states in part: "Generally, projects within one-half mile of either an existing major transit stop or a stop along an existing high quality transit corridor should be presumed to cause a less than significant transportation impact." OPR recommends additional screening criteria for projects which meet the statutory screening threshold, noting that certain project-specific or location-specific information might indicate that the presumption is not appropriate.

As described in *Section 3.2*, public transit service is provided in the vicinity of the proposed project. The LA Metro A (previously L/Gold) Line Azusa Downtown Station qualifies as a major transit stop[8], and Foothill Transit Lines 187, 188, and 280, meet the criteria for a high-quality transit corridor[9], however the nearest transit stops for each service are located over 0.5-miles from the project site. The project site is not located within 0.5-miles of a major transit stop or high quality transit corridor, therefore the project site fails the transit screening. The SGVCOG VMT

[8] Public Resources Code Section 21064.3: ""Major transit stop" means a site containing any of the following: (a) An existing rail or bus rapid transit station. (b) A ferry terminal served by either a bus or rail transit service. (c) 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."

[9] Public Resources Code Section 21155(b): "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."

Evaluation Tool likewise concludes that the project fails the transit screening. VMT screening and evaluation worksheets generated by the tool for the proposed project are included in *Appendix C*.

4.1.4 *Summary of Screening Conclusions*

The proposed project does not satisfy any of the screening criteria and is not screened out of further analysis. Therefore, a VMT analysis is required in order to determine whether the proposed project will result in any significant transportation impacts.

4.2 Methodology

The *Technical Advisory* recommends that residential projects be evaluated based on home-based VMT and that office projects be evaluated based on home-based work trip VMT. It further recommends that for projects with more than one land-use type, each component can be analyzed separately and evaluated against the applicable significance thresholds.

Consistent with the recommendations in the *Technical Advisory*, the senior housing component is analyzed using the recommended methodology and thresholds recommended for residential projects. Based on the VMT generating characteristics of the industrial component (i.e., the majority of trips are assumed to be made by employees who travel from their homes to the site each day as part of a daily commute, and who remain on-site during the day to perform their various duties), the industrial component is analyzed using the recommended screening criteria, methodology, and thresholds recommended for office projects.

It should be noted that the Azusa Greens Golf Course has already been approved by the City of Azusa and has begun operating, and thus is not required to provide a CEQA-compliant VMT analysis. Therefore, the VMT expected to be generated by golf course patrons will be reviewed on a qualitative basis only. However, as additional approvals are required for the renovation of the clubhouse, the golf course clubhouse component will be analyzed quantitatively. The *Technical Advisory* does not provide recommended methodology for recreational land uses, however the VMT generating characteristics of the clubhouse most closely resembles that of a commercial land use (i.e., VMT is generated by both patrons and employees who remain on-site to perform their various duties). The clubhouse is therefore analyzed using the methodology incorporated into the SGVCOG VMT Evaluation Tool for commercial land uses.

The VMT analysis methodology applied to the proposed project is summarized as follows:

- The senior living component is analyzed on the basis of home-based VMT per capita;
- The industrial component is analyzed on the basis of home-based work VMT per employee;
- The golf course clubhouse is analyzed on the basis of home-based work VMT per employee; and,

- The VMT generated by golf course patrons will be assessed quantitatively.

As previously stated, the SGVCOG VMT Evaluation Tool is available for use in conducting VMT evaluations in the City of Azusa. The SGVCOG VMT Evaluation Tool provides an assessment of both home-based VMT per capita for residential projects and home-based work VMT per worker (i.e., employee) for office, industrial, and commercial land use projects.

4.3 Impact Criteria

The *Technical Advisory* asserts that a reasonable threshold of significance would be a VMT per capita or VMT per employee which is 15% below that of existing development. A residential project exceeding a level of 15% below (i.e., 0% to <15% below) existing VMT per capita may indicate a significant transportation impact. An office or industrial project exceeding a level of 15% below (i.e., 0% to <15% below) existing VMT per employee may indicate a significant transportation impact.

The City's baseline VMT for the SGVCOG subarea utilizes the 2016 Southern California Association of Governments' (SCAG) Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS). The Baseline VMT per capita and VMT per employee thresholds used in the SGVCOG VMT Evaluation Tool are interpolated to be consistent with the year that the transportation study begins, which in this case is year 2023. The baseline average VMT and corresponding thresholds as provided in the VMT Evaluation Tool are summarized below. VMT evaluation worksheets generated by the tool for the proposed project are included in *Appendix C*.

- The residential baseline VMT for the year 2023 is 18.0 total VMT per capita. Therefore, a significant transportation impact would result if the project exceeds 15.3 total VMT per capita.

- The industrial baseline VMT for the year 2023 is 19.64 total VMT per employee. Therefore, a significant transportation impact would result if the project exceeds 16.7 total VMT per employee.

- The commercial baseline VMT for the year 2023 is 19.64 total VMT per employee. Therefore, a significant transportation impact would result if the project exceeds 16.7 total VMT per employee.

4.4 VMT Impact Analysis

4.4.1 *Project-Generated VMT Analysis*

The proposed project's daily residential VMT per capita for the senior housing component and daily VMT per employee for the industrial and golf course clubhouse components were forecast using the SGVCOG VMT Evaluation Tool. Copies of the VMT Evaluation Tool summary worksheets are contained in *Appendix C*. The City confirmed the appropriateness of the use of the SGVCOG VMT Evaluation Tool for analysis of the proposed project when it approved the

transportation impact analysis Scope of Work. As stated on the summary worksheets, the project is forecast to generate the following:

- The senior housing component is forecast to generate 18.0 VMT per capita[10], which exceeds the threshold of 15.3 VMT per capita.

- The industrial component is forecast to generate 21.7 VMT per employee[10], which exceeds the threshold of 16.7 VMT per employee.

- The golf course clubhouse is forecast to generate 21.7 VMT per employee[10], which exceeds the threshold of 16.7 VMT per employee.

The proposed project is therefore expected to result in a significant VMT impact.

The approved and reopened nine-hole Azusa Greens Golf Course is expected to result in shorter trips by golf course patrons in the region. In the absence of the Azusa Greens Golf Course, patrons in the region would be required to travel to other golf courses in the region. Public golf courses are provided in the City of Arcadia at the Santa Anita Golf Course and the Arcadia Golf Course, in the City of Duarte at the Rancho Duarte Golf Course, and in the City of Glendora at the Glen Oaks Golf Course. By adding a golfing destination in the City of Azusa, the Azusa Greens Golf Course is presumed to result in the substitution of shorter trips in place of longer ones, thus reducing the VMT generated by golf patrons in the San Gabriel Valley region. Therefore, the VMT generated by patrons of the Azusa Greens Golf Course is presumed to have a less than significant impact.

4.4.2 *Cumulative VMT Analysis*

A project's cumulative impacts are determined on the basis of whether the incremental effects of an individual project are considerable when viewed in connection with the effects of past projects, the effects of current projects, and the effects of probable future projects. A proposed project's direct effects are evaluated in the detailed project-level VMT analysis, while cumulative impacts are determined through consistency with compliance with adopted regional plans, such as the current Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS). The current RTP/SCS which applies to the City of Azusa is SCAG's 2020-2045 RTP/SCS, which is called Connect SoCal. Connect SoCal is the regional plan that demonstrates compliance with air quality conformity requirements and greenhouse gas reduction targets. As such, projects that are consistent with this plan in terms of development location, density, and intensity are part of the regional solution for meeting air pollution and greenhouse gas goals. Projects that are deemed to be consistent would have a less than significant cumulative impact on VMT. Developments in a

[10] The project-generated VMT forecast includes Tier 1-3 VMT Reductions, which are described in detail in *Section 4.5*, herein.

location where the RTP/SCS does not specify any development may indicate a significant impact on transportation.

The *Technical Advisory* provides the following additional discussion of cumulative impacts: "[M]etrics such as VMT per capita or VMT per employee, i.e., metrics framed in terms of efficiency (as recommended below for use on residential and office projects), cannot be summed because they employ a denominator. A project that falls below an efficiency-based threshold that is aligned with long-term goals and relevant plans has no cumulative impact distinct from the project impact. Accordingly, a finding of a less-than-significant project impact would imply a less than significant cumulative impact, and vice-versa."

The proposed project has been determined to have a significant project-level impact in comparison to the applicable efficiency-based VMT impact thresholds. Therefore, it is conservatively concluded that the proposed project potentially contributes toward a cumulative VMT impact.

4.5 Transportation Demand Management Measures

The SGVCOG VMT Evaluation Tool estimates the effectiveness of potential VMT reduction strategies in addition to estimating whether a development project exceeds the VMT thresholds. Strategies are built into the SGVCOG VMT Evaluation Tool, covering several categories including parking, transit, education and encouragement, commute trip reductions, shared mobility, bicycle infrastructure, and neighborhood enhancements. These strategies address the potential VMT reductions available due to certain types of project site modifications, programming, and operational changes which are collectively known as Transportation Demand Management (TDM) strategies. The effectiveness of each strategy is primarily based on research documented in the California Air Pollution Control Officers Association (CAPCOA) *Quantifying Greenhouse Gas Mitigation Measures*[11] ("2010 Report").

The VMT Estimation Tool utilizes the methodology provided in the CAPCOA document, which includes the application of caps or VMT reduction maximums based on a project's locational context or place type. The purpose of the VMT reduction caps is to ensure that strategies that target travel behavior in similar ways are not over counted and that combined reductions are reasonable for a project's neighborhood place type. The maximum VMT reduction in the SGVCOG VMT Evaluation Tool is capped at 20% for the proposed project, which corresponds to the VMT reduction cap for Suburban place types (i.e., Suburban with Multi-family Housing and/or Suburban with Single Family Homes). As displayed on the VMT Evaluation Tool worksheets, with the maximum VMT reductions applied, the VMT per employee can be reduced at most to 17.9 VMT per employee. It is therefore determined that even if the maximum allowable VMT reductions were to be applied, the proposed project's VMT impacts would remain significant and unavoidable as the VMT per employee would still exceed the 16.7 VMT per employee significance threshold.

[11] *Quantifying Greenhouse Gas Mitigation Measures*, California Air Pollution Control Officers Association (CAPCOA), 2010.

CEQA requires the implementation of mitigation measures to reduce an identified significant impact to the greatest extent possible. The TDM strategies provided in the SGVCOG VMT Evaluation Tool were therefore reviewed for applicability to the proposed project based on land use type, location, and feasibility of implementation. The measures which have been applied to reduce the project-generated VMT are described in further detail below.

Tier 1: Project Characteristics

This category is comprised of strategies that change land use characteristics such as density, mix of uses, and housing affordability. These strategies reduce VMT by increasing access to amenities or by attracting residents who generate lower VMT than the average household. These strategies are considered project design features and do not generally require on-going programmatic or operational actions by the project developer or future project tenants/operators.

- PC01 Increase Residential Density
  Increased residential density, measured in dwelling units per existing residential acreage in a given area, affects the distances people travel and provides greater options for the mode of travel they choose. This strategy applies to residential land uses only.

  - The proposed project will result in the construction of new residential senior living dwelling units where no residential units currently exist, resulting in greater residential density in the TAZ where the project is situated. This strategy is a project design feature, and does not require any action by the project applicant or future project tenants/operators.

- PC02 Increase Residential Diversity
  Having different types of land uses near one another can decrease VMT since trips between land use types are shorter and may be accommodated by non-auto modes of transport. This strategy applies to residential and employment land uses.

  - The proposed project will provide a mix of land use types (e.g., industrial and residential) and residential dwelling types (e.g., multi-family senior housing and duplex/triplex units offered at both affordable and market rates), resulting in greater land use diversity in the TAZ where the project is situated. This strategy is a project design feature, and does not require any action by the project applicant or future project tenants/operators.

- PC03 Affordable Housing
  This strategy encourages building a greater percentage of affordable and below market rate (BMR) housing to allow for lower income families to live at the project. This strategy applies to residential land-uses only.

  - The proposed project will offer a minimum of 15% of the senior living dwelling units at affordable rates.

- PC04 Increase Employment Density

Like increasing residential density, increasing employment density affects the distances people commute and provides greater options for the modes of travel they choose. Employment includes office, retail, industrial, and other employment. This strategy applies to employment land uses only.

- The proposed project will result in the construction of new industrial space where no commercial development currently exists, resulting in greater employment density in the TAZ where the project is situated. This strategy is a project design feature, and does not require any action by the project applicant or future project tenants/operators.

Tier 2: Multimodal Infrastructure

These strategies require project developers to provide funding for and/or construct improvements to the surrounding transportation network that encourage the use of biking, walking, and transit instead of driving.

- MI05 Pedestrian Networks
  This strategy requires the project design to include pedestrian improvements both on-site and in the surrounding neighborhood. Providing a pedestrian accessible network encourages people to walk instead of drive, thereby reducing VMT. The pedestrian improvements include but are not limited to buffered sidewalks on both sides of the street, marked or signalized pedestrian crossings at intersections (enhanced crosswalks), lighting, and curb ramps. This strategy applies to both residential and employment land uses.

  - As described in *Section 2.3.2*, the proposed project will construct public sidewalks where none are currently provided on Todd Avenue and 10th Street adjacent to the industrial component, thus reducing the existing gaps in the pedestrian network. The sidewalks would accommodate ADA compliant curb ramps and high-contrast tactile warning strips (i.e., yellow truncated dome pads) adjacent to the project site. It is further recommended that the project provide a financial contribution to the City of Azusa in order to repair the push-button activated flashing lights at the pedestrian crossings located across Sierra Madre Avenue at the intersection of Vernon Avenue/Sierra Madre Avenue.

Tier 3: Parking

Strategies in this category reduce automobile parking supply, making driving less attractive, and provide high-quality bicycle parking, making biking more attractive.

- PK02 Provide Bike Facilities
  This strategy requires the project developer (and subsequent project operators) to provide and maintain facilities for bicycle users at the project site. Providing end of trip facilities encourages people to bike instead of drive, thereby reducing VMT. Examples of end of trip facilities include bike parking, bicycle lockers, showers, and personal lockers. The extent of

the VMT reduction is based on whether the project provides only secure bike parking or secure bike parking and additional facilities. This strategy applies to employment land uses only.

- The proposed project should ensure that secure, well-lit, long-term bicycle parking be provided for use by employees at each of the six (6) industrial buildings proposed for the industrial component. Similarly, the proposed project should ensure that secure, well-lit, long-term bicycle parking be provided for use by employees at the golf course clubhouse.

Tier 4: TDM Programs

Included in this category are programmatic strategies that reduce VMT by providing alternatives to driving alone, as well as incentives, such as ride sharing programs, transit subsidies, and shuttle services. These strategies are required to be implemented on an ongoing basis once the project is occupied.

- TP04 Commute Trip Reduction (CTR) Marketing and Education
  This strategy requires implementing a marketing campaign, targeting all project employees and visitors, that encourages the use of transit, shared rides, and active modes and thereby reducing VMT. Marketing strategies may include new employee orientation on alternative commute options, event promotions, and publications. The strategy applies to employment land uses only.

  - The future tenants of the six (6) industrial buildings as well as the operator of the golf course should provide information on available travel options to and from the project site in a clear and easily accessible location (e.g., a bulletin board in a common employee area and/or employee welcome package with travel information), including information on where transit passes may be purchased online or in person. The industrial tenants and golf course operator should designate an employee transportation coordinator or Human Resources representative who will be able to provide information and/or administer a guaranteed ride home service. Such services may consist of providing free or subsidized rides upon request via taxis or other transportation network companies such as Uber or Lyft for employees who utilize alternate travel modes. The CTR marketing campaign should be directed at all employees of the industrial component and all employees of the Azusa Greens Golf Course.

- TP13 Ride-Sharing Programs
  This strategy would require project employers or building operators to organize a carpool matching program for individuals who have similar commute patterns. This strategy encourages the use of carpooling, reducing the number of vehicle trips and thereby reducing VMT. The strategy applies to employment land uses only.

  - Each of the six (6) industrial tenants as well as the golf course operator should provide designated parking spaces for carpool vehicles in a convenient/preferential location, and a

designated waiting area for employees participating in ridesharing which is comfortable and convenient. The industrial tenants and golf course operator should facilitate the process of arranging ridesharing or carpooling matches, either through a website/app or via an employee transportation coordinator or Human Resources representative (refer to strategy TP04 above). The ridesharing program should be offered to all employees of the industrial component. In order to provide a conservative analysis, a maximum of 2% of eligible employees are assumed to participate in the program.

The combination of project design features (i.e., Tier 1), TDM strategies (i.e., Tier 2 and 3), and TDM programs (i.e., Tier 4) described above are not expected to reduce the project's VMT impact to less than significant levels. As presented on the summary worksheets, after application of all VMT reductions (Tier 1 through 4) the project is forecast to generate the following:

- The senior housing component is forecast to generate 18.0 VMT per capita after application of all VMT reductions[12], which exceeds the threshold of 15.3 VMT per capita.

- The industrial component is forecast to generate 20.6 VMT per employee after application of all VMT reductions[11], which exceeds the threshold of 16.7 VMT per employee.

- The golf course clubhouse is forecast to generate 20.6 VMT per employee after application of all VMT reductions[11], which exceeds the threshold of 16.7 VMT per employee.

When comparing the project-generated VMT per capita to the applicable thresholds of significance, the project-generated VMT per capita impacts would remain significant and unavoidable As previously described, the maximum VMT reduction for projects in a Suburban location setting is capped at 20% by the SGVCOG VMT Evaluation Tool in compliance with the VMT reduction methodology provided in the CAPCOA 2010 Report. When comparing the project-generated VMT per employee to the applicable thresholds of significance, the project-generated VMT per employee impacts would remain significant and unavoidable even if the maximum allowable VMT reductions were to be applied. Therefore, although the project Applicant has provided a good faith effort at reducing the proposed project's environmental impacts to the greatest extent possible, it is concluded that significant and unavoidable VMT impacts would remain.

4.6 Active Transportation and Transit Program, Plan, Ordinance, or Policy Analysis

Pursuant to the Appendix G question (a) for transportation impacts, a significant impact may also occur if the proposed project would conflict with a program, plan, ordinance, or policy addressing the circulation system, including the transit, roadway, bicycle, and pedestrian facilities. The following section provides a brief review of the City's adopted policies, plans, and programs pertaining to active transportation and public transit analysis. As previously noted, vehicle LOS

[12] As stated in *Section 4.4.1*, the project-generated VMT forecast includes Tier 1-3 VMT reductions. The project-generated VMT with all VMT reductions reflects the application of Tier 4 TDM programs.

and similar measures of congestion or delay are no longer considered impacts in CEQA. Therefore, the consistency review focuses on programs, plans, ordinances, or policies relevant to active transportation and transit.

4.6.1 *Adopted Programs, Plans, Ordinances, or Policies*

The following documents were reviewed to identify policies, plans, and programs pertaining to active transportation and public transit analysis:

Azusa General Plan

The City's current Mobility section of the General Plan sets forth goals, policies, and programs to promote pedestrian, bicycle, and transit facilities and usage throughout the City. Relevant adopted goals, policies, and programs include:

- Goal 3: Provide a connected, balanced, and integrated transportation system that enables Azusans to walk, bike, and take transit, rather than using their car.
  - Policy 3.1 Develop and maintain a citywide pedestrian network of both on-street and off-street walkways. Network shall link new neighborhoods with existing neighborhoods, connect neighborhood centers, schools, parks, commercial centers, and citywide destinations such as Downtown, the San Gabriel River, and Civic Center.
  - Policy 3.3 Provide pedestrian amenities (such as benches, seats, water fountains, shady street trees, etc.) and conditions that enhance the pedestrian experience along the pedestrian network.
  - Policy 3.4 Develop and maintain a citywide bicycle network of both on-street bike lanes and off-street bike paths in accordance with the Bicycle Routes. The network provides for off-street paths along the San Gabriel River, railroad rights-of-way, alongside flood control channels, and within existing and new neighborhoods, where feasible. The network improves connections between residential neighborhoods, schools and commercial centers, as well as providing connections to citywide destinations such as Downtown, the University District, the San Gabriel River, and Civic Center.

- Goal 4: Design/redesign streets to encourage pedestrians and bicycles and to accommodate vehicles. Make city streets more pedestrian-friendly and bicycle-friendly.
  - Policy 4.3 Provide sidewalks on all city streets, as appropriate (see Mobility Policy 3.1).
  - Policy 4.4 Provide bicycle lanes where possible on city streets (see Mobility Policy 3.4).

- Goal 6: Improve/enhance local and regional transit service in the City.
  - Policy 6.1 Consider supplementing the existing Azusa Transit service by establishing an area-to-area service of flexible routes that cover the whole city.
  - Policy 6.2 Encourage Foothill Transit to enhance regional transit connections to/from Azusa, by:
    - adding routes;
    - improving service frequencies;

    - providing transit routes closer to residential
    - neighborhoods; and
    - providing transit routes to Azusa transit centers or stations.
  - Policy 6.3 Encourage and assist the development of regional light rail transit in the city including two stations in Azusa (Downtown and Monrovia Nursery).

Mobility Program M6 Capital Improvement Program:
Through the CIP:

- plan for and construct bike network facilities (bike routes, lanes, and paths) in the existing areas of the city;
- include a bicycle amenities program that installs bicycle lockers, and parking spaces, at the Civic Center and other public buildings or areas such as parks, pool, etc.;
- provide bus stop amenities including bus shelters, shade/rain protection, seats, transit information, etc.;
- build park and ride lots at rail stations/transit centers and near freeway inter-changes, to encourage ridesharing and transit use;

Mobility Program M8 Sidewalks and Pedestrian Trails:

- Construct on-street sidewalks on all local streets and off -street pedestrian trails, to provide a connected pedestrian system. This includes the construction of:
  - on-street sidewalks on all roadways with a collector or arterial designation; and
  - off -street pedestrian trails in existing neighborhoods (in combination with bike paths where feasible and appropriate) to connect to neighborhood centers and citywide destinations.
- Require all new developments to plan for and construct on-street sidewalks and/or off-street paths connecting to surrounding neighborhoods, districts, and destinations.

Mobility Program M9 Pedestrian Amenities Program:
In the CIP, create a pedestrian amenities program that installs pedestrian facilities such as benches, water fountains, streets, etc. Pedestrian amenities program shall:

- establish streetscape requirements for new or renovated developments along corridors and in districts; and
- establish streetscape design and amenities to be installed by the City.

Mobility Program M11 New Development and Substantially Renovated Development Circulation Requirements:

- Require new developments to include both on-street bike lanes and/or off street bike paths linking the developments to the surrounding neighborhoods, districts, and centers.
- Consider requiring new developments, employers with many employees, and significantly renovated development projects to contribute to a park and ride construction and maintenance fund.
- Require new developments and substantially renovated developments to install and implement transit amenities including bus turnouts, pedestrian shelters, and other streetscape.

- Require new developments to develop TDM programs to minimize auto trips and to encourage use of transit, ridesharing, bicycling and walking.

Mobility Program M12 Bicycle Amenities:

- Modify the City Code to require provision of bicycle parking spaces, bicycle lockers, and, as appropriate, showers for bicycle riders at new buildings providing significant employment, at transit stations, and in the districts.
- Encourage the provision of bicycle parking spaces, bicycle lockers, and showers for bicycle riders at existing buildings providing significant employment, commercial and recreational destinations in the City.
- Provide traffic control push button devices at convenient locations for bicyclists at intersections.

As presented above, the Azusa General Plan sets for a variety of specific goals, policies, and programs to promote active transportation and transit usage.

Azusa Walks: City of Azusa Pedestrian Plan[13]

Azusa Walks is the City's 2022 Pedestrian Master Plan that prioritizes and guides investments to create a saver and more walkable Azusa. The Plan goals are to:

- Transform Azusa into a more livable community
- Educate the community on the benefits of walkable communities
- Address mobility as population and congestion grows
- Increase pedestrian access to key destinations
- Create more walkable communities alongside new transit and economic development investments.

The Plan identifies the intersection of San Gabriel Avenue/Foothill Boulevard (Study Int. 8, herein) as a priority intersection for pedestrian improvements, and portions of San Gabriel Avenue, Azusa Avenue, and Foothill Boulevard within the study area as priority roadway segments. Priority intersections and segments represent locations and corridors that have the greatest impact towards equity, safety connectivity, and access factors if improved.

Specifically, at the San Gabriel Avenue/Foothill Boulevard intersection, high visibility crosswalks are recommended for each leg as well as and curb extensions into San Gabriel Avenue (e.g., bulb-outs) on each corner. Other recommendations in the Plan include providing high visibility crosswalks and installing missing curb ramps at Vernon Avenue/Foothill Boulevard (Study Int. 6),

[13] "Azusa Walks: City of Azusa Pedestrian Plan", Approved March 7, 2022 per Resolution No. 2022-C18.

and high visibility crosswalks and leading pedestrian intervals across all legs of Azusa Avenue/Foothill Boulevard (Study Int. 10).

4.6.2 *Qualitative Impact Conclusions*

The proposed project is not expected to have a significant impact on active transportation or public transit in the vicinity of the project site. As described in *Section 2.3.2*, the proposed project will construct public sidewalks where none are currently provided on Todd Avenue and 10th Street adjacent to the industrial component, thus reducing the existing gaps in the pedestrian network. The sidewalks would accommodate ADA compliant curb ramps and high-contrast tactile warning strips (i.e., yellow truncated dome pads) adjacent to the project site. In addition, the project will provide sidewalks along all internal project roadways planned for the senior housing component, and will provide exclusive pedestrian and bicycle walkways from the future public sidewalks to each of the proposed industrial buildings. The proposed project will minimize the extent of pedestrian and bicycle interaction with vehicles at the site and provide a comfortable, convenient, and safe environment which in turn can encourage use of active transportation modes. The proposed project is not expected to preclude the City from constructing pedestrian, bicycle, or transit improvements along local roadways in the study area, therefore the project does not conflict with the goals, policies, and programs set forth in the Azusa General Plan.

The project site is not adjacent to any of the priority intersections or priority roadway segments in the Azusa Walks Pedestrian Plan. The proposed project will not preclude the City from installing any of the pedestrian infrastructure improvements recommended for the intersections of Vernon Avenue/Foothill Boulevard, San Gabriel Avenue/Foothill Boulevard, or Azusa Avenue/Foothill Boulevard. Development of the proposed project will not preclude the City from enacting any other systemic pedestrian improvements or pursuing effective roadway safety countermeasures. Therefore, the project does not conflict with the Azusa Walks Pedestrian Plan.

Since the proposed project is not found to result in conflicts with adopted policies, plans, or programs, nor is it expected to negatively affect the performance or safety of existing or planned pedestrian, bicycle, or transit facilities, it is determined that the proposed project will have a less than significant impact on active transportation and public transit in the vicinity of the project site.

5.0 NON-CEQA LOCAL TRANSPORTATION ANALYSIS

Pursuant to PRC Section 21099, "automobile delay, as described solely by level of service or similar measures of vehicular capacity or traffic congestion shall not be considered a significant impact on the environment." As a result of SB 743 and the revisions to the CEQA Guidelines, LOS may no longer be used to identify transportation impacts in CEQA. However, the implementation of VMT does not prevent agencies from continuing to analyze delay or LOS outside of CEQA review for other transportation planning or analysis purposes. As part of a project's discretionary review and approval process, the City has the authority to require additional local transportation network analyses and site access studies. Specifically, the City of Azusa requires an operational analysis of intersections in the vicinity of a proposed project in order to evaluate site access and circulation constraints that may be caused or worsened by project-generated traffic. The following section presents the operational (i.e., Level of Service) analysis prepared for the proposed project pursuant to this requirement.

5.1 Methodology

Signalized study intersections under the jurisdiction of the City of Azusa have been evaluated using the Intersection Capacity Utilization (ICU) method of analysis. The ICU method determines the Volume-to-Capacity (*v/c*) ratios on a critical lane basis (i.e., based on the individual *v/c* ratios for key conflicting traffic movements). The ICU numerical value represents the percent signal (green) time, and thus capacity, required by existing and/or future traffic. It should be noted that the ICU methodology assumes uniform traffic distribution per intersection approach lane and optimal signal timing. The overall intersection *v/c* ratio is subsequently assigned a Level of Service (LOS) value to describe intersection operations. Level of Service varies from LOS A (free flow conditions) to LOS F (jammed condition). A detailed description of the ICU method and corresponding Levels of Service is provided in ***Appendix D***.

Unsignalized intersections under the jurisdiction of the City of Azusa such as two-way stop-controlled (TWSC) and all-way stop-controlled (AWSC) intersections are analyzed using the Highway Capacity Manual (HCM) method of analysis. The HCM methodology determines the average control delay (expressed in seconds per vehicle) at the intersection. Average control delay for any particular movement is a function of the capacity of the approach and the degree of saturation. For unsignalized intersections, the average control delay includes delay due to deceleration to a stop at the back of the queue from free-flow speed, move-up time within the queue, stopped delay at the front of the queue, and delay due to acceleration back to free-flow speed. It should be noted that the TWSC methodology estimates the average control delay for each minor-street movement (or shared movement) as well as major-street left-turns and determines the LOS for each constrained movement. As no delays are calculated for the uncontrolled major-street approaches, the weighted average of approach delays is not utilized to determine overall intersection delay at TWSC intersections. Instead, the most constrained minor street approach at the intersection is reported in order to determine the intersection LOS. A detailed description of

the HCM method for unsignalized intersections and corresponding Level of Service is also provided in *Appendix D*.

Signalized intersections which are under the jurisdiction of Caltrans have been evaluated using the HCM method for signalized intersections. The HCM methodology determines the average control delay (expressed in seconds per vehicle) at the intersection. Average control delay for any particular movement is a function of the capacity of the approach and the degree of saturation. For signalized intersections, the average control delay for signalized intersections represents the delay attributed to the traffic control facility as compared to a reference travel time in the absence of traffic control, geometric delay, incidents, and the influence of other vehicles. A detailed description of the HCM method for signalized intersections and corresponding Level of Service is also provided in *Appendix D*. The current signal timing and phasing data obtained from Caltrans in August 2023 were utilized in the analysis of each intersection under Caltrans' jurisdiction.

5.2 Analysis Criteria

The relative effect of the forecast project-generated traffic volumes during the weekday AM and PM peak hours was evaluated based on analysis of operating conditions at the study intersections without and with the proposed project. The previously discussed capacity analysis procedures were utilized to evaluate the future *v/c* or delay relationships and service level characteristics at each study intersection. The effect of project-generated traffic at each study intersection was compared to the City of Azusa's intersection LOS standards as presented below. The acceptable LOS for most intersections in the City is D or better as established in the City's General Plan. Any intersections operating at a LOS of E or F are considered deficient. Study intersections will require improvement if one of the following conditions is met:

- The addition of project traffic results in the intersection's LOS to change from acceptable operations (LOS D or better) to unacceptable operations (LOS E or F).

- The project-related increase in volume-to-capacity (V/C) is equal to or greater than 0.020 (2%), or the project related increase in delay is equal to or greater than 2.0 seconds, at an intersection that is projected to operate at LOS E or F with the addition of project traffic.

5.3 Analysis Scenarios

As determined in coordination with City staff, LOS calculations have been prepared for the following scenarios:

[a] Existing conditions.

[b] Future (Opening Year 2027) Without Project Conditions, consisting of condition [a] plus 0.38% per year annual ambient traffic growth through year 2027 and with completion and occupancy of the related projects.

[c] Future (Opening Year 2027) With Project Conditions, consisting of condition [b] with completion and occupancy of the proposed project.

The weekday AM and PM peak hour LOS analysis prepared for the study intersections using the ICU and HCM methodology is summarized in ***Table 5-1***. The ICU and HCM data worksheets for the analyzed intersections are provided in *Appendix D*.

5.4 Existing Conditions

As indicated in column [a] of *Table 5-1*, all of the 14 study intersections are presently operating at LOS D or better during the weekday AM and PM peak hours under existing conditions. The existing traffic volumes at the study intersections during the weekday AM and PM peak hours are displayed in *Figures 3-4* and *3-5*.

5.5 Future (Opening Year 2027) Conditions

5.5.1 *Future Without Project Traffic Conditions*

The future without project conditions were forecast based on the addition of traffic generated by the completion and occupancy of the related projects, as well as the growth in traffic due to the combined effects of continuing development, intensification of existing developments and other factors (i.e., ambient growth). The *v/c* ratios or delays at all of the study intersections are incrementally increased with the addition of ambient traffic and traffic generated by the related projects listed in *Table 3-4*. As presented in column [b] of *Table 5-1*, all of the 14 study intersections are expected to operate at LOS D or better during the weekday AM and PM peak hours with the addition of growth in ambient traffic and related projects traffic under the future without project conditions. The future without project traffic volumes at the study intersections during the weekday AM and PM peak hours are displayed in ***Figures 5-1*** and ***5-2***.

5.5.2 *Future With Project Traffic Conditions*

In order to determine the future with project conditions, traffic expected to be generated by the proposed project was added to the future without project traffic conditions. The *v/*c ratios or delays at the study intersections incrementally increase with the addition of project-generated traffic. As shown in column [c] of *Table 5-1,* all of the 14 study intersections are expected to operate at LOS D or better during the weekday AM and PM peak hours under the future with project conditions.

Since all of the study intersections are forecast to continue operating at an acceptable level of service, and the incremental increases in *v/c* ratios or delays do not exceed the City's criteria, no project-specific intersection improvements or project-specific transportation demand management measures are required or proposed. The future with project traffic volumes at the study intersections during the weekday AM and PM peak hours are displayed in ***Figures 5-3*** and ***5-4***.

Table 5-1
SUMMARY OF DELAY, VOLUME TO CAPACITY RATIOS, AND LEVELS OF SERVICE
WEEKDAY AM AND PM PEAK HOURS

NO.	INTERSECTION	TRAFFIC CONTROL	PEAK HOUR	[a] YEAR 2023 EXISTING V/C or DELAY	[a] LOS [1]	[b] YEAR 2027 FUTURE PRE-PROJECT V/C or DELAY	[b] LOS [1]	[c] YEAR 2027 FUTURE W/ PROJECT V/C or DELAY	[c] LOS [1]	[c] CHANGE V/C or DELAY [(c)-(b)]	[c] IMPROVE-MENTS REQUIRED [2]
1	Todd Avenue/ Sierra Madre Avenue	AWSC	AM PM	30.5 9.5	D A	32.1 9.5	D A	34.4 9.8	D A	2.3 0.3	No No
2	Todd Avenue/ 10th Street	Signalized	AM PM	0.479 0.363	A A	0.484 0.368	A A	0.505 0.453	A A	0.021 0.085	No No
3	Todd Avenue/ Foothill Boulevard	Signalized	AM PM	0.635 0.593	B A	0.669 0.629	B B	0.710 0.677	C B	0.041 0.048	No No
4	Project Driveway/ Sierra Madre Avenue	TWSC	AM PM	0.0 0.0	A A	0.0 0.0	A A	24.1 12.8	C B	24.1 12.8	No No
5	Vernon Avenue/ Sierra Madre Avenue	TWSC	AM PM	13.2 15.2	B C	13.4 15.5	B B	22.4 18.5	C B	9.0 3.0	No No
6	Vernon Avenue/ Foothill Boulevard	Signalized	AM PM	0.575 0.516	A A	0.609 0.551	B A	0.654 0.588	B A	0.045 0.037	No No
7	San Gabriel Avenue/ Sierra Madre Avenue	Signalized	AM PM	0.373 0.389	A A	0.378 0.394	A A	0.378 0.395	A A	0.000 0.001	No No
8	San Gabriel Avenue/ Foothill Boulevard	Signalized	AM PM	0.450 0.509	A A	0.485 0.552	A A	0.518 0.560	A A	0.033 0.008	No No
9	Azusa Avenue/ Sierra Madre Avenue	Signalized	AM PM	0.425 0.303	A A	0.431 0.306	A A	0.432 0.308	A A	0.001 0.002	No No
10	Azusa Avenue/ Foothill Boulevard	Signalized	AM PM	0.483 0.553	A A	0.523 0.599	A A	0.558 0.617	A B	0.035 0.018	No No
11	Irwindale Avenue/ I-210 Freeway WB Ramps	Signalized	AM PM	15.1 14.4	B B	16.2 12.8	B B	17.2 12.6	B B	1.0 0.0	No No
12	Irwindale Avenue/ I-210 Freeway EB Ramps	Signalized	AM PM	29.5 24.3	C C	30.9 24.7	C C	32.6 24.9	C C	1.7 0.2	No No
13	Azusa Avenue/ I-210 Freeway EB Ramps	Signalized	AM PM	16.3 22.9	B C	16.4 23.9	B C	17.0 24.3	B C	0.0 0.0	No No
14	I-210 Freeway WB Ramps/ 1st Street	Signalized	AM PM	20.1 25.7	C C	23.5 26.7	C C	28.9 27.1	C C	5.4 0.4	No No

[1] Level of Service (LOS) is based on the reported ICU value (reported as *v/c* ratio) or delay value (reported as seconds per vehicle).
[2] Study intersections require improvements if project traffic changes acceptable operations (LOS D or better) to unacceptable conditions (LOS E or F); or if the project-related increase in the *v/c* ratio is ≥ 0.020 (2%) or the project related increase in delay is ≥ 2.0 seconds for intersections projected to operate at LOS E or F with the addition of project traffic.

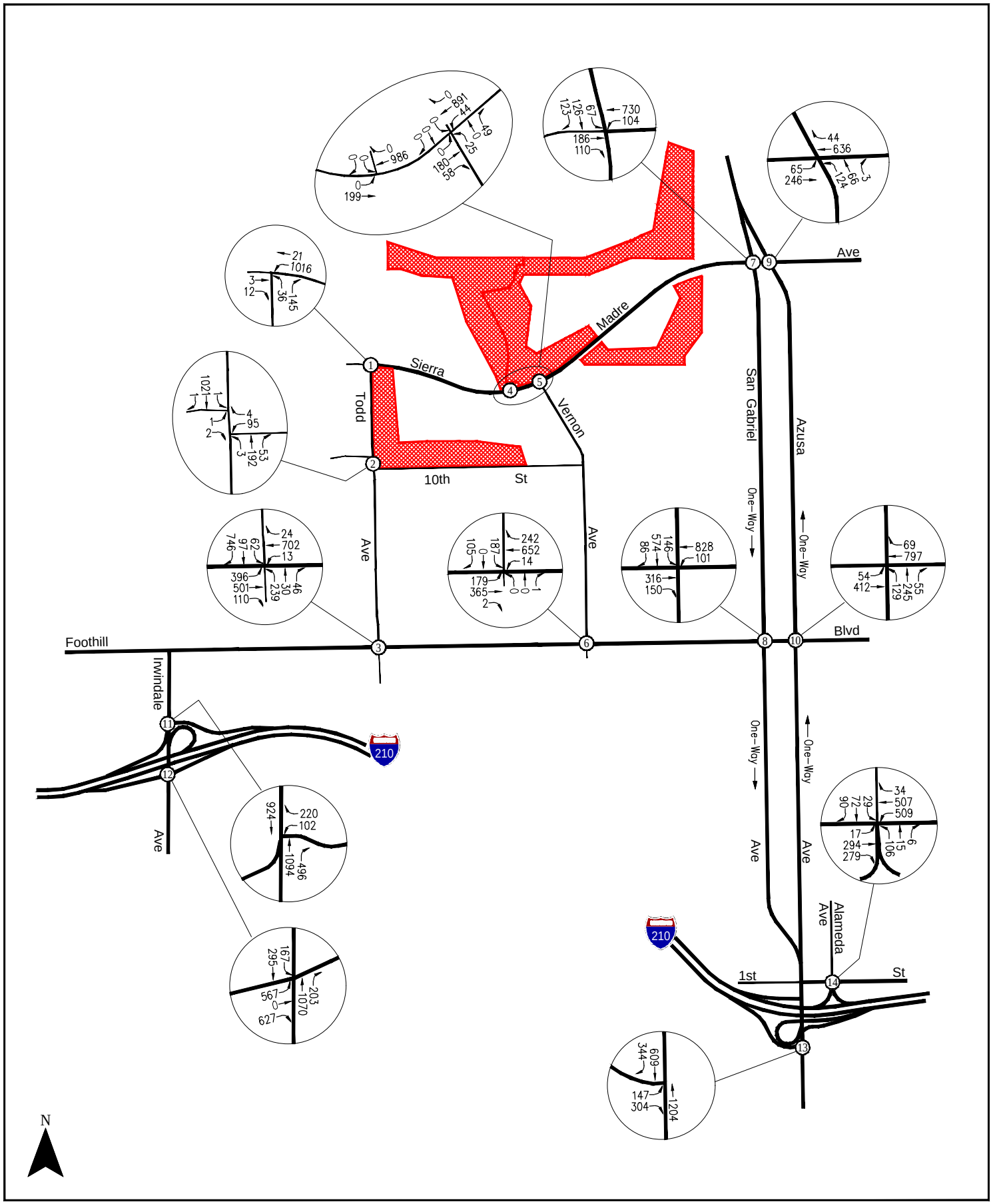


Figure 5-1
Future Without Project Traffic Volumes
Weekday AM Peak Hour
Azusa Greens Redevelopment Project

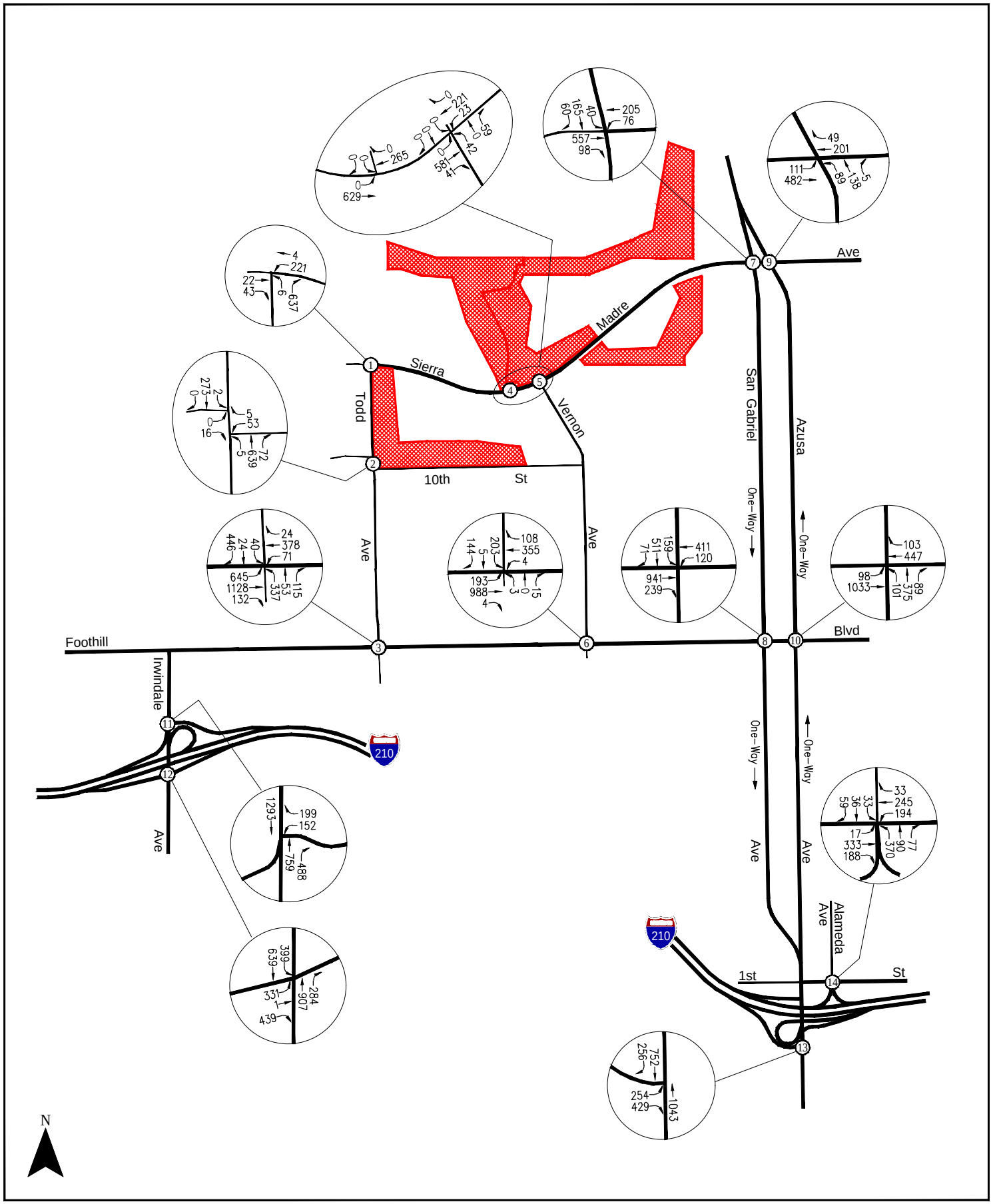


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Figure 5-2
Future Without Project Traffic Volumes
Weekday PM Peak Hour
Azusa Greens Redevelopment Project

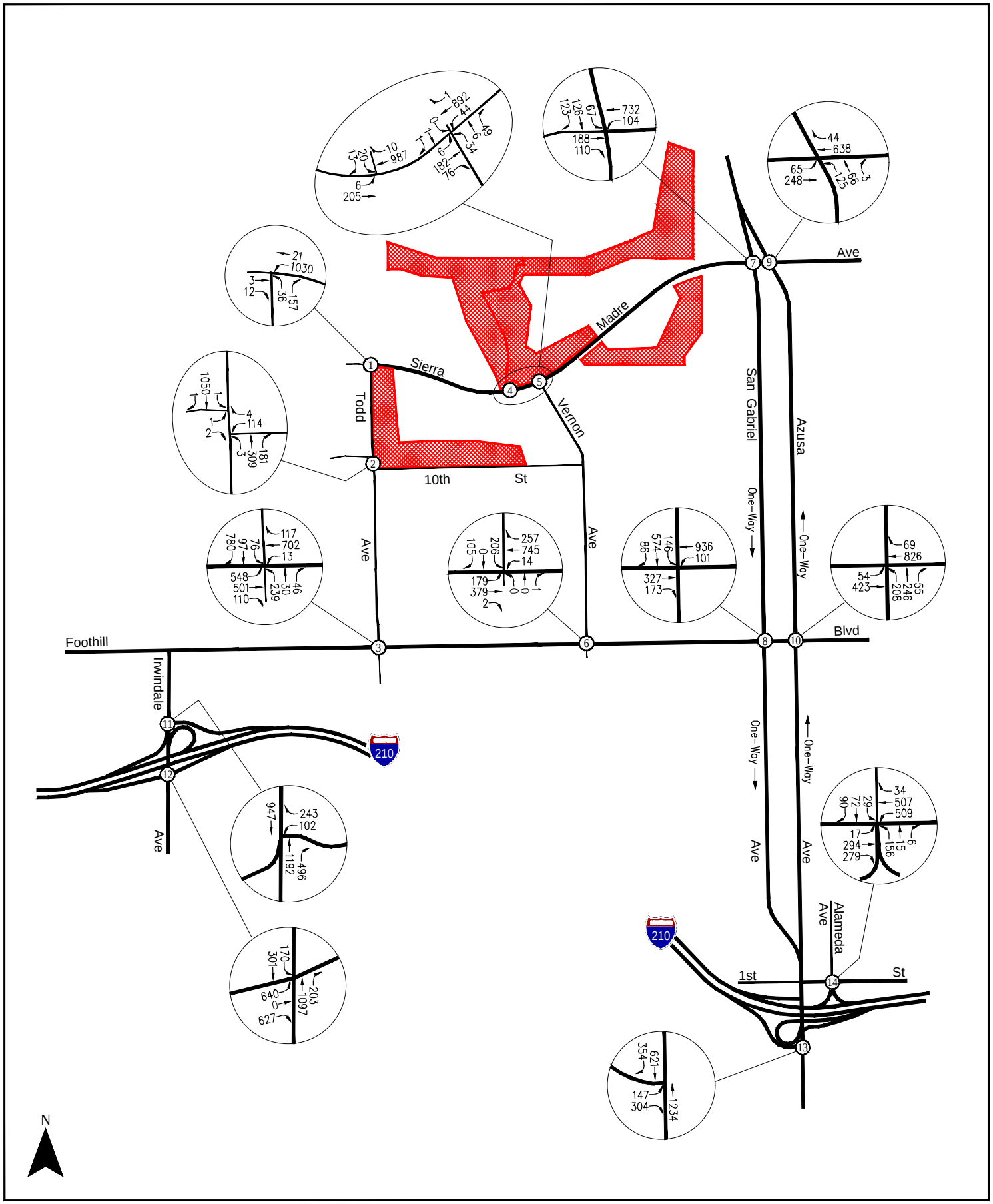

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Figure 5-3
Future With Project Traffic Volumes
Weekday AM Peak Hour
Azusa Greens Redevelopment Project

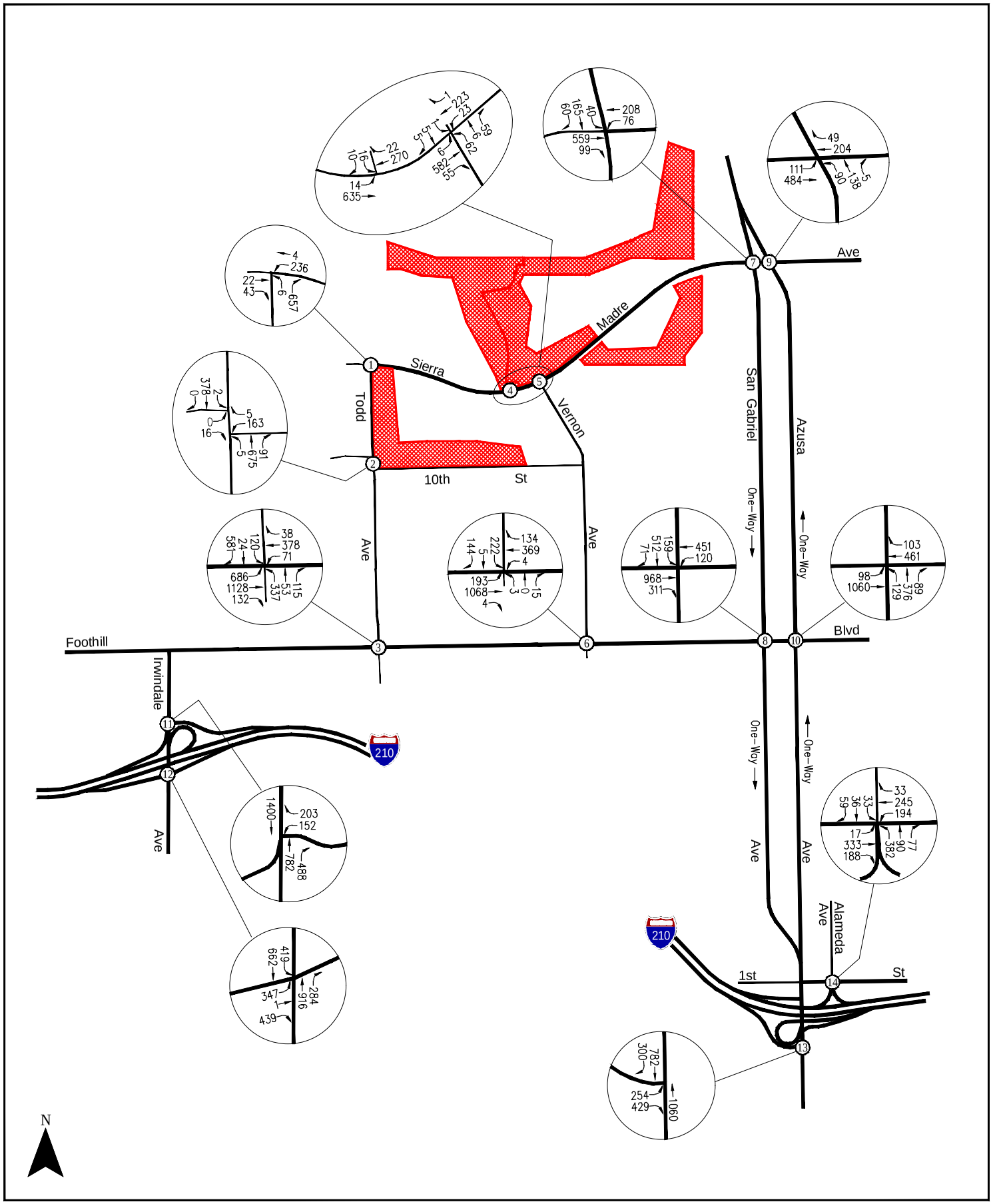

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Figure 5-4
Future With Project Traffic Volumes
Weekday PM Peak Hour
Azusa Greens Redevelopment Project

5.6 Traffic Signal Warrant Analysis

Traffic signal warrant analyses have been prepared to determine whether a traffic signal installation is formally warranted at either of the unsignalized study intersections on Sierra Madre Avenue (i.e., Vernon Avenue/Sierra Madre Avenue and Todd Avenue/Sierra Madre Avenue) upon completion and occupancy of the proposed project. The warrant analysis is consistent with the signal warrants outlined in Chapter 4C of the *California Manual on Uniform Traffic Control Devices*[14] (CA MUTCD). It is important to note that the satisfaction of a traffic signal warrant is not necessarily justification for the installation of a traffic signal. Delay, congestion, approach conditions, driver confusion, future land use or other evidence of the need for right-of-way assignment beyond that which could be provided by stop sign control may be demonstrated. Conversely, if a traffic signal warrant is not met, these other factors may be just cause for consideration of a traffic signal installation.

Traffic signal warrants were prepared for the Vernon Avenue/Sierra Madre Avenue and Todd Avenue/Sierra Madre Avenue intersections. Specifically, Warrant No. 3 (Peak Hour Volume) was prepared for the forecast future with project traffic conditions, and Warrant No. 7 (Crash Experience) was prepared based on a review of existing collision records. The traffic signal warrant worksheets are provided in ***Appendix E***. The following paragraphs provide detailed discussions of the traffic signal warrants prepared for the intersection.

Warrant 3: Peak Hour Volume

The Peak Hour Warrant consists of Part A and Part B and is intended for application where traffic conditions are such that for one hour of the day minor street traffic suffers undue delay in entering or crossing the major street. The Peak Hour warrant applies when one of the following criteria are satisfied:

- Part A. If all three of the following conditions exist for the same 1 hour (any four consecutive 15-minute periods) of an average day:

    - The total stopped time delay experienced by the traffic on one minor-street approach (one direction only) controlled by a STOP sign equals or exceeds 4 vehicle-hours for a one-lane approach, or 5 vehicle-hours for a two-lane approach, and

    - The volume on the same minor-street approach (one direction only) equals or exceeds 100 vehicles per hour for one moving lane of traffic or 150 vehicles per hour for two moving lanes, and

[14] *California Manual on Uniform Traffic Control Devices,* State of California Business, Transportation and Housing Agency, Department of Transportation, 2014 Edition, Revision 6, March 30, 2021.

- The total entering volume serviced during the hour equals or exceeds 650 vehicles per hour for intersections with three approaches or 800 vehicles per hour for intersections with four or more approaches.

- Part B of Warrant No. 3 is satisfied when the plotted point, representing the vehicles per hour on the major street (total of both approaches) and the corresponding vehicles per hour on the higher volume minor street approach (one direction only) for one hour of an average day, falls above the applicable curves in Figure 4C-3 or 4C-4 for the applicable number of approach lanes. In urban settings, the lower threshold for a minor street approach with two or more lanes is 150 vehicles per hour while the lower threshold for a minor street approach with one lane is 100 vehicles per hour. In rural settings, the lower threshold for a minor street approach with two or more lanes is 100 vehicles per hour while the lower threshold for a minor street approach with one lane is 75 vehicles per hour. As shown in the worksheets contained in *Appendix B*, the signal warrant is met when the plotted point falls above the appropriate curve.

Warrant 7: Crash Experience

The Crash Experience Warrant is intended for application where the severity and frequency of collisions are the primary reasons to consider installation of a traffic signal. The Crash Experience warrant applies when the following criteria are satisfied:

- Condition A or B of Warrant No. 1 is satisfied to the extent of 80 percent or more of the stated numerical values, or Warrant No. 4 (Pedestrian Volume) is satisfied to the extent of 80 percent or more of the stated numerical values, and

- Adequate trial of less restrictive remedies has failed to reduce the accident frequency, and

- Five or more reported accidents of types susceptible to correction by traffic signal control have occurred within the most recent 12-month period, or two per year during the most recent three-year period.

5.6.1 *Vernon Avenue/Sierra Madre Avenue*

As described above, traffic signal warrants were prepared for the Vernon Avenue/Sierra Madre Avenue intersection, which is currently two-way stop controlled, with stop signs facing Vernon Avenue in the northbound direction, and a private driveway which is assumed to be stop controlled in the southbound direction. The following assumptions and data have been utilized for the signal warrant analysis:

- Sierra Madre Avenue was assumed to be the major street while Vernon Avenue was assumed to be the minor street.

- The forecast future with project peak hour traffic volume conditions are presented in *Figures 5-3* and *5-4*.

- The lane configurations stated below have been assumed for this intersection.

    - Northbound Vernon Avenue: one left-turn lane, one through lane, and one right-turn lane.

    - Eastbound Sierra Madre Avenue: one shared left-through lane and one shared through-right-turn lane.

    - Westbound Sierra Madre Avenue: one left-turn lane, one through lane, and one shared through-right-turn lane.

The resulting traffic signal warrant analysis conclusions are described below:

Warrant 3 – Peak Hour Volume: As previously described, when either all three criteria of Part A are met, or when Part B of the Peak Hour Volume Warrant is met, the warrant can be considered satisfied. As shown in the worksheets provided in *Appendix E*, during the AM peak hour, two of the three criteria for Part A are not met. Further, as shown in Figure 4C-4 for Part B, the plotted point for the AM peak hour under future with project conditions falls below the applicable curve for the subject intersection. Therefore, neither Part A nor Part B is met under AM peak hour conditions. During the PM peak hour, one of the three criteria for Part A is not met. Further, as shown in Figure 4C-4 for Part B, the plotted point for the PM peak hour under future with project conditions falls below the applicable curve for the subject intersection. Therefore, neither Part A nor Part B is met under PM peak hour conditions. Thus, Warrant No. 3 is not satisfied under peak hour future with project conditions for the Vernon Avenue/Sierra Madre Avenue intersection.

Warrant 7 – Crash Experience: Research was conducted of available collision records in order to determine the existing collision history at the subject intersection. Collision records for the existing Vernon Avenue/Sierra Madre Avenue intersection were requested from the California Highway Patrol's (CHP) online Statewide Integrated Traffic Records System (SWITRS) for the most recent five-year period, which consists of July 1, 2018 through June 30, 2023. ***Appendix Table E-1*** provides a summary of the collision records data for the subject intersection. As shown in the collision data, a total of six (6) collisions occurred over the most recent five-year period in the vicinity of this location. Since at least one of the three conditions is not satisfied, Warrant No. 7 is not met based on strict application of the warrant criteria.

It is therefore determined that none of the traffic signal warrants which have been evaluated for the Vernon Avenue/Sierra Madre Avenue intersection are satisfied under future with project conditions.

5.6.2 *Todd Avenue/Sierra Madre Avenue*

As described above, traffic signal warrants were prepared for the Todd Avenue/Sierra Madre Avenue intersection, which is currently all-way stop controlled, with stop signs facing Sierra Madre Avenue in the eastbound and westbound directions, and facing Todd Avenue in the northbound direction. The following assumptions and data have been utilized for the signal warrant analysis:

- Sierra Madre Avenue was assumed to be the major street while Todd Avenue was assumed to be the minor street.

- The forecast future with project peak hour traffic volume conditions are presented in *Figures 5-3* and *5-4*.

- The lane configurations stated below have been assumed for this intersection.

  - Northbound Todd Avenue: one left-turn lane and two right-turn lanes.

  - Eastbound Sierra Madre Avenue: one shared through-right-turn lane.

  - Westbound Sierra Madre Avenue: one left-turn lane, one shared left-through lane, one through lane.

The resulting traffic signal warrant analysis conclusions are described below:

Warrant 3 – Peak Hour Volume: As previously described, when either all three criteria of Part A are met, or when Part B of the Peak Hour Volume Warrant is met, the warrant can be considered satisfied. As shown in the worksheets provided in *Appendix E*, during the AM peak hour, one of the three criteria for Part A is not met. Further, as shown in Figure 4C-4 for Part B, the plotted point for the AM peak hour under future with project conditions falls below the applicable curve for the subject intersection. Therefore, neither Part A nor Part B is met under AM peak hour conditions. During the PM peak hour, one of the three criteria for Part A is not met. Further, as shown in Figure 4C-4 for Part B, the plotted point for the PM peak hour under future with project conditions falls below the applicable curve for the subject intersection. Therefore, neither Part A nor Part B is met under PM peak hour conditions. Thus, Warrant No. 3 is not satisfied under peak hour future with project conditions for the Todd Avenue/Sierra Madre Avenue intersection.

Warrant 7 – Crash Experience: Research was conducted of available collision records in order to determine the existing collision history at the subject intersection. Collision records for the existing Todd Avenue/Sierra Madre Avenue intersection were requested from SWITRS for the most recent five-year period, which consists of July 1, 2018 through June 30, 2023. *Appendix Table E-1* provides a summary of the collision records data for the subject intersection. As shown in the collision data, a total of five (5) collisions occurred over the most recent five-year period in the vicinity of this location. Since at least one of the three conditions is not satisfied, Warrant No. 7 is not met based on strict application of the warrant criteria.

It is therefore determined that none of the traffic signal warrants which have been evaluated for the Todd Avenue/Sierra Madre Avenue intersection are satisfied under future with project conditions.

5.7 Sight Distance Analysis

Based on input provided by City staff, a sight distance analysis was prepared for the intersection of Vernon Avenue/Sierra Madre Boulevard (Study Int. 5). In addition, a sight distance analysis was also prepared for the Project Driveway/Sierra Madre Avenue study location (Study Int. 4), which is planned to accommodate full access (i.e., left- and right-turning inbound and outbound movements) to and from the senior housing component of the proposed project. The sight distance analysis is based on criteria set forth in the American Association of State Highway and Transportation Officials' (AASHTO) *A Policy on Geometric Design of Highways and Streets*[15] (AASHTO "Green Book").

Stopping sight distance is the distance that a driver of a vehicle, traveling at a specific speed, is able to bring the vehicle to a stop after an object on the road becomes visible. As indicated in the AASHTO document, the sight distance calculations are based on the assumption that the driver's eye is 3.5 feet above the road surface and set back 14.5 feet from the edge of traveled way (i.e., edge of the through travel lane). At minor approach stop controlled intersections, sight distance along the intersection roadway should be sufficient to permit the driver on the minor road to anticipate and avoid potential collisions. If available sight distance for an entering or crossing vehicle is at least equal to the appropriate stopping sight distance for the major roadway, then drivers have sufficient sight distance to anticipate and avoid collisions. In some cases, a major-road vehicle may need to slow to accommodate the maneuver by a minor-road vehicle. Intersection sign distances that exceed stopping sight distances are desirable along the major road.

Sierra Madre Avenue provides two 12-foot through travel lanes and one parking lane in each direction of travel, as well as an approximately 16-foot wide median which also accommodates left-turn lane pockets. As stated in the AASHTO Green Book, this roadway configuration requires an adjustment to the default passenger vehicle time gap assumed for left-turns from the minor approach. Left-turning vehicles are assumed to cross two (2) near lanes and the equivalent of 1.33 lanes in the median[16], which results in an assumed time gap of 8.67 seconds (7.5 s + 2.33*0.5 s = 8.67 s). In order to provide a conservative sight distance assessment, the required sight distances were calculated using an 8.75-second time gap. Further, Sierra Madre Avenue currently has a posted speed limit of 40 MPH. In recognition that actual travel speeds may exceed the posted speed limit, a design speed of 45 MPH was utilized. Since Sierra Madre Avenue is level and has no

[15] *A Policy on Geometric Design of Highways and Streets*, 7th Edition, American Association of State Highway and Transportation Officials (AASHTO), 2018.

[16] Pursuant to the methodology provided in the AASHTO Green Book, median widths are converted to an equivalent number of 12-foot lanes. The 16-foot median along Sierra Madre Avenue is therefore the equivalent of 1.33 lanes (16 ft / 12 ft/lane = 1.33 lanes).

vertical curves in the vicinity of the subject study locations, it is assumed that vertical sight distances are met. Therefore, this analysis reviews the adequacy of horizontal sight distances only.

Pursuant to the methodology provided in the AASHTO Green Book, the above parameters results in the following sight distances:

- Intersection Sight Distance (ISD) for Left-Turn from Stop = 580 feet
- Intersection Sight Distance (ISD) for Right-Turn from Stop = 430 feet
- Stopping Sight Distance (SSD) = 360 feet

It is noted that left-turns from the minor approach require a clear sight to the left in order to cross the near travel lanes, as well as a clear sight to the right to enter the appropriate through travel lanes. The required sight distance to the left for left-turning vehicles is the same as the sight distance for right-turns. Therefore, the sight distance analysis for each minor street approach evaluates the intersection sight distance for left- and right-turns, as well as the stopping sight distance along the major street. As previously stated, it is desirable to provide intersection sight distances in order for drivers on the minor approach to identify conflicting vehicles and avoid collisions. However, at a minimum, provision of the appropriate stopping sight distance along the major road is assumed to be sufficient for drivers to anticipate and avoid collisions.

The sight distances are displayed in plan view in ***Appendix F***. Left- and right-turning sight distances for the Vernon Avenue approach, which makes up the south leg of Study Int. 5, are displayed in ***Appendix Figures F-1*** and ***F-2***, respectively. Left- and right-turning sight distances for the existing golf course driveway which makes up the north leg of Study Int. 5 are displayed in ***Appendix Figures F-3*** and ***F-4***, respectively. In addition, left- and right-turning sight distances for the existing project driveway, which makes up the north leg of Study Int. 4, are displayed in ***Appendix Figures F-5*** and ***F-6***, respectively.

5.7.1 *Vernon Avenue/Sierra Madre Avenue*

As shown in *Appendix Figure F-1*, a 14.5-foot setback from the edge of traveled way is situated beyond the striped stop line across the Vernon Avenue approach. The AASHO Green Book states that 14.5 feet represents the typical position of the minor-road driver's eye when a vehicle is stopped relatively close to the major road. It is assumed that after coming to a stop behind the stop bar as required by the vehicle code, motorists will "creep" forward in order to have an adequate view of vehicles along Sierra Madre Avenue. As illustrated in *Appendix Figure F-1*, landscaping in the form of mature trees within the raised median along Sierra Madre Avenue are located adjacent to the clear sight triangle to the east of the Vernon Avenue approach. While the presence of tree trunks is not typically considered a full obstruction of the clear sight triangle, it is recommended that the landscaping be regularly maintained, and lower branches or growth trimmed, by the City in order to minimize the intermittent visual obstruction of oncoming vehicles. As shown in *Appendix Figure F-2*, adequate lines of sight are provided to the west of the Vernon

Avenue approach. It is determined that adequate stopping sight distances east and west of the Vernon Avenue approach are provided along Sierra Madre Avenue, therefore the minimum threshold for roadway safety is provided.

As illustrated in *Appendix Figure F-3*, landscaping in the form of mature trees within the raised median along Sierra Madre Avenue are located adjacent to the clear sight triangle to the west of the existing driveway approach. In addition, landscaping within the existing surface parking is also located within the clear sight triangle. Similarly, landscaping within the existing surface parking lot is located within the clear sight triangle to the east of the existing driveway, as illustrated in *Appendix Figure F-4*. As previously stated, the presence of tree trunks is not typically considered a full obstruction of the clear sight triangle. However, it is recommended that the median landscaping be regularly maintained, and lower branches or growth trimmed, by the City in order to minimize the intermittent visual obstruction of oncoming vehicles. It is also recommended that any landscaping within the surface parking lot adjacent to the public right-of-way along Sierra Madre Avenue should be maintained at a low height (i.e., 36 inches or less) so as not to impede sight distance for motorists exiting the existing driveway. It is determined that adequate stopping sight distances east and west of the existing driveway approach are provided along Sierra Madre Avenue, therefore the minimum threshold for roadway safety is provided.

5.7.2 *Project Driveway/Sierra Madre Avenue*

As illustrated in *Appendix Figure F-5*, landscaping in the form of mature trees within the raised median along Sierra Madre Avenue are located adjacent to the clear sight triangle to the west of the project driveway approach. In addition, landscaping within the existing surface parking is also located within the clear sight triangle. Similarly, landscaping within the existing surface parking lot is located within the clear sight triangle to the east of the project driveway, as illustrated in *Appendix Figure F-6*. As previously stated, the presence of tree trunks is not typically considered a full obstruction of the clear sight triangle. However, it is recommended that the median landscaping be regularly maintained, and lower branches or growth trimmed, by the City in order to minimize the intermittent visual obstruction of oncoming vehicles. It is also recommended that any landscaping within the surface parking lot and project entryway adjacent to the public right-of-way along Sierra Madre Avenue should be maintained at a low height (i.e., 36 inches or less) so as not to impede sight distance for motorists exiting the existing driveway. It is determined that adequate stopping sight distances east and west of the project driveway approach are provided along Sierra Madre Avenue, therefore the minimum threshold for roadway safety is provided at this location.

5.8 Sierra Madre Avenue Midblock Crossing Analysis

Based on input provided by City staff, the midblock pedestrian and golf cart crossings across Sierra Madre Avenue which are to be retained in order to provide patron access throughout the Azusa Greens Golf Course were reviewed for safety and to determine if any potential safety improvements are appropriate. The existing midblock pedestrian and golf cart crossings across Sierra Madre Avenue are provided at the following two locations:

- Approximately 250 feet west of the Lori Ann Avenue-Point O Woods Drive/Sierra Madre Avenue intersection; and,

- Approximately 85 feet west of the Sunset Avenue/Sierra Madre Avenue intersection.

5.8.1 *Existing Crossings*

The crossing west of Lori Ann Avenue-Point O Woods Drive is marked with a high visibility "ladder-style" crosswalk, and signed with Pedestrian Crossing signs located in the median island facing the eastbound and westbound approaches along Sierra Madre Avenue. In addition to the Pedestrian Crossing signs, supplemental "Golf Cart Crossing" signs are also provided in the median facing both approaches. An additional Pedestrian Crossing sign is provided in the median facing the westbound direction approximately 200 feet in advance of the crossing. The median island is approximately 16 feet wide at this crossing, and thus functions as an existing refuge island for both pedestrians and golf carts. Approximately 40 feet of red curb is provided in advance of the crosswalk in the eastbound and westbound directions in order to provide visibility for pedestrians and golf carts entering the crossing.

The crossing west of Sunset Avenue is marked with a high visibility "ladder-style" crosswalk, and signed with Pedestrian Crossing signs located in the median island facing the eastbound and westbound approaches along Sierra Madre Avenue. In addition to the Pedestrian Crossing signs, supplemental "Golf Cart Crossing" signs are also provided in the median facing both approaches. In the eastbound direction, an additional Pedestrian Crossing sign is provided on the south side of Sierra Madre Avenue in the vicinity of the crossing, and a Pedestrian Crossing sign is provided approximately 260 feet in advance of the crossing. In the westbound direction, an additional Pedestrian Crossing sign is provided approximately 450 feet in advance of the crossing. Due to the presence of an eastbound left turn lane, the median island is approximately six (6) feet wide at this crossing, and thus functions as an existing refuge island for pedestrians, but is not sufficient to provide a safe refuge for golf carts. Approximately 45 feet of red curb is provided in advance of the crosswalk in the eastbound direction and approximately 150 feet of red curb is provided in the westbound direction in order to provide visibility for pedestrians and golf carts entering the crossing.

Based on a field review of the existing crossings, it is noted that the Pedestrian Crossing signs facing the eastbound direction of travel may be obstructed. At the crossing west of Lori Ann Avenue-Point O Woods Drive, the centrally-located Pedestrian Crossing sign may be obstructed by the mature trees in the median, and at the crossing west of Sunset Avenue, the Pedestrian Crossing sign may be obstructed by over grown vegetation located on golf course property. It is recommended that the landscaping located on golf course property be regularly maintained by the golf course operator in order to minimize visual obstruction of the Pedestrian Crossing signs. Based on the field review, additional enhancements to improve the visibility of the crossings may be appropriate.

Research was conducted of available collision records in order to determine the existing collision history in the vicinity of each crossing. Collision records for the existing segment of Sierra Madre Avenue in the vicinity of Lori Ann Avenue to Sunset Avenue were requested from the California Highway Patrol's (CHP) online Statewide Integrated Traffic Records System (SWITRS) for the most recent five-year period, which consists of July 1, 2018 through June 30, 2023. ***Appendix Table G-1*** provides a summary of the collision records data for the subject segment. As shown in the collision data, a total of four (4) collisions occurred over the most recent five-year period in the vicinity of this location. None of the collisions documented in the data occurred at the midblock crossing locations or involved pedestrians or golf carts crossing the roadway. However, it is understood that the Azusa Greens Golf Course has been closed since 2020 and therefore the five-year collision record may not accurately reflect conflict trends which would be expected during golf course operations. Notably, of the four collisions documented along this segment of Sierra Madre Avenue, two collisions were the result of unsafe speeding, and two collisions were the result of drivers operating vehicles under the influence of drugs or alcohol. Speeding vehicles represent a safety risk to vulnerable road users such as pedestrians and golf cart occupants utilizing the crossings. Therefore, potential safety enhancements for the midblock crossings may be appropriate.

5.8.2 *Safety Enhancements*

Guidance provided in the CA MUTCD, as well as additional safety and complete streets planning guidance provided by the Federal Highway Administration (FHWA) and Caltrans Office of Safety Programs was reviewed in order to determine if any safety enhancements would be applicable to the existing midblock crossings. According to the FHWA's "Guide for Improving Pedestrian Safety at Uncontrolled Crossing Locations,"[17] roadways with two or more lanes on each approach, a raised median island, and with a posted speed of 40 miles per hour or above may benefit from the following safety countermeasures, ranging from signing and striping improvements, roadway narrowing and/or reconfiguration, or installation of beacons:

- High-visibility crosswalk markings, parking restrictions on crosswalk approach, adequate nighttime lighting levels, and crossing warning signs;
- Advance "Yield Here to Pedestrians" signs and yield lines;
- Curb extensions;
- Road diets; and
- Pedestrian Hybrid Beacons.

[17] "Guide for Improving Pedestrian Safety at Uncontrolled Crossing Locations," Federal Highway Administration, July 2018.

A review of the potential safety countermeasures is provided in the following paragraphs. In addition, the Rectangular Rapid Flashing Beacon (RRFB) was also considered as a potential countermeasure.

- Improved Signing and Striping

  As stated previously, the existing midblock crossings are currently striped with a high-visibility "ladder-style" crosswalk, Pedestrian Crossing signs are provided at each crossing, and parking is prohibited by red curb striping in advance of each midblock crosswalk. Roadway lighting at each crossing is also provided via luminaires located in the median.

  However, as illustrated in the CA MUTCD (refer to Figure 3B-17 [CA]), best practices for enhanced midblock crossings include additional signage and striping which is not currently provided at the crossings. Features such as advanced Pedestrian Crossing signs, advance yield lines (i.e., "shark teeth" lines), Yield Here to Pedestrian signs, and Pedestrian Crossing signs with Diagonal Downward Arrow plaques on each side of the travel lanes may be provided in order to enhance visibility of the crossing. It is recommended that the project applicant install the additional signing and striping features in order to provide enhanced midblock crossings in compliance with current best practices. A conceptual plan illustrating the recommended improvements at each crossing is provided in ***Appendix Figures G-1*** and ***G-2***, respectively.

- Roadway Narrowing

  Roadway narrowing countermeasures such as curb extensions and road diets narrow the roadway width in order to shorten the pedestrian crossing distance and minimize exposure to vehicular traffic. Curb extensions (also referred to as curb bulbouts) typically extend the sidewalk through a roadway shoulder or on-street parking lane so that pedestrians are only required to cross travel lanes. Curb extensions have a traffic calming effect since drivers may slow and pay greater attention to the roadway in order to safely navigate the narrower conditions. Based on guidance provided in the Caltrans Highway Design Manual, curb extensions are most appropriate for roadways with a posted speed limit of 35 MPH or less. Since Sierra Madre Avenue is posted for a speed of 40 MPH, curb extensions are not considered an appropriate countermeasure.

  Road diets reduce the number of through travel lanes along a roadway. Road diets are intended to encourage lower vehicle speeds, and the reclaimed roadway space is typically used to provide enhanced facilities for active transportation and transit modes. Due to the extensive roadway reconfiguration required to implement a road diet, and the potential for route diversion and changes in operational Level of Service at nearby intersections, additional study would be required to determine if Sierra Madre Avenue would be a potential candidate for a road diet. Since less restrictive alternate enhancements have not been implemented, it is not recommended that a road diet be considered at this time. Should

the City determine that additional safety improvements along Sierra Madre Avenue are required, the City may study a potential road diet for the segment of Sierra Madre Avenue from Todd Avenue to Azusa Avenue.

- Pedestrian Hybrid Beacon

  Pedestrian hybrid beacons consist of yellow and red signal indications to control traffic at unsignalized locations in order to assist pedestrians in crossing a street at a marked crosswalk. The CA MUTCD provides criteria for the installation of pedestrian hybrid beacons (also referred to as a High-intensity Activated CrossWalK [HAWK]), based on major street and pedestrian volumes, widths, speeds, and other factors. Based on the provided criteria, pedestrian hybrid beacons should be considered when a minimum of 20 pedestrians cross the major street within a one-hour period. Following the reopening of the Azusa Greens Golf Course in spring of 2024, the project applicant provided operations data for the month of April 2024. The number of crossings across Sierra Madre Avenue was determined based on the number of rounds played each day, as well as crossings made by maintenance and other golf course staff. During April 2024, while a one-day peak of 177 daily midblock crossings occurred, an average of 136 crossings occurred at each of the midblock crossings each day. During the morning peak period (7:00 to 9:00 AM), an average of 12 crossings per hour occurred. During the afternoon peak period (4:00 to 6:00 PM), an average of seven (7) crossings per hour occurred. Therefore, since the number of crossings across Sierra Madre Avenue at each crossing does not equal or exceed 20 crossings per hour, the midblock crossings are not considered good candidates for installation of pedestrian hybrid beacons. Further, the CA MUTCD prohibits the signalization of midblock crosswalks within 300 feet of an existing signalized intersection, and recommends against signalizing midblock crosswalks within 100 feet of an existing stop or yield controlled intersection. Since the midblock crossings are located approximately 250 feet west of the signalized intersection of Lori Ann Avenue-Point O Woods Drive/Sierra Madre Avenue, and approximately 85 feet west of the stop-controlled intersection of Sunset Avenue/Sierra Madre Avenue, neither crossing would satisfy the design criteria for signalized control.

- Rectangular Rapid Flashing Beacon

  Rectangular rapid flashing beacons (RRFBs) consist of two pedestrian-activated rectangular yellow LED indications which flash alternatingly at a high frequency in order to enhance the conspicuity of pedestrians utilizing the crossing. RRFBs are placed on both sides of a crosswalk below a Pedestrian Crossing sign and above a Diagonal Downward Arrow plaque. According to the FHWA Proven Safety Countermeasures Fact Sheet, RRFBs are most effective at multilane crossings with speed limits less than 40 miles per hour, and can result in up to a 98% increase in motorist yielding rates. The effectiveness of RRFBs vary depending on the speed limit, number of lanes, and other factors. Due to

the low implementation costs and potential for high effectiveness, RRFBs are recommended for consideration to be installed at each of the midblock crossings. The conceptual location for the RRFB's are included in *Appendix Figures G-1* and *G-2.*

5.8.3 *Summary of Recommended Improvements*

Based on the field review of the existing signing and striping provided at each of the midblock crossings, it is recommended that landscaping located within the Azusa Greens Golf Course in the vicinity of the midblock crossings should be regularly maintained so as not to obstruct the existing and recommended Pedestrian Crossing signs. It is recommended that the project applicant install RRFBs as well as the additional midblock crosswalk enhancements identified in the CA MUTCD, as illustrated in *Appendix Figures G-1* and *G-2*, in order to further enhance the visibility and safety of the existing midblock crossings. Should the City determine that additional safety improvements along Sierra Madre Avenue are required in the future, the City may study a potential road diet for the segment of Sierra Madre Avenue from Todd Avenue to Azusa Avenue.

6.0 TRANSPORTATION MITIGATION AND IMPROVEMENT MEASURES

Various transportation mitigation and improvement measures that have been identified for the proposed project. Transportation improvement measures may consist of project-specific TDM measures aimed at reducing a project's overall demand on the transportation network and reducing VMT, or may consist of physical improvements to the existing roadway network and traffic control systems in order to accommodate the addition of project-generated traffic while meeting the City's mobility goals. The following section summarizes the various transportation improvement measures that have been identified for the proposed project, including measures that are planned as part of the proposed project, measures that are identified to address impacts determined under CEQA, and measures that are identified to address any local circulation and site access constraints determined through the operational and site access studies.

6.1 Planned Transportation Network Improvements

The proposed project is planned to provide local transportation network improvements as part of the project site design. As described in *Section 2.3.2*, the proposed project will result in the construction of new public sidewalk, curb, and gutter along the project frontage on Todd Avenue and 10th Street. As no public sidewalks are currently provided adjacent to the industrial component site, the proposed project will thus reduce existing gaps in the pedestrian network in the vicinity of the project site. The sidewalks would accommodate ADA compliant curb ramps and high-contrast tactile warning strips (i.e., yellow truncated dome pads) adjacent to the project site.

6.2 CEQA Mitigation Measures

The proposed project is determined to have a significant VMT impact based on the analysis prepared using the SGVCOG VMT Evaluation Tool. As described in *Section 4.5*, various project design features, TDM strategies, and TDM programs have been applied to the proposed project in order to reduce the impact to the greatest extent possible. The TDM strategies and programs which are applicable to the proposed project are summarized below.

- PC01 Increase Residential Density: The proposed project will result in the construction of new residential senior living dwelling units where no residential units currently exist, resulting in greater residential density in the TAZ where the project is situated. This strategy is a project design feature, and does not require any action by the project applicant or future project tenants/operators.

- PC02 Increase Residential Diversity: The proposed project will provide a mix of land use types (e.g., industrial and residential) and residential dwelling types (e.g., multi-family senior housing and duplex/triplex units offered at both affordable and market rates), resulting in greater land use diversity in the TAZ where the project is situated. This strategy is a project design feature, and does not require any action by the project applicant or future project tenants/operators.

- PC03 Affordable Housing: The project applicant must provide a minimum of 15% affordable housing in the senior housing component for the life of the project.

- PC04 Increase Employment Density: The proposed project will result in the construction of new industrial space where no commercial development currently exists, resulting in greater employment density in the TAZ where the project is situated. This strategy is a project design feature, and does not require any action by the project applicant or future project tenants/operators.

- MI05 Pedestrian Networks: As described in *Sections 2.3.2* and *6.1*, the project will construct public sidewalks where none are currently provided on Todd Avenue and 10th Street adjacent to the industrial component, thus reducing the existing gaps in the pedestrian network. It is recommended that the project provide a financial contribution to the City of Azusa in order to repair the push-button activated flashing lights at the pedestrian crossings located across Sierra Madre Avenue at the intersection of Vernon Avenue/Sierra Madre Avenue.

- PK02 Provide Bike Facilities: The proposed project should ensure that secure, well-lit, long-term bicycle parking be provided for use by employees at each of the six (6) industrial buildings proposed for the industrial component.

- TP04 Commute Trip Reduction (CTR) Marketing and Education: The future tenants of the six (6) industrial buildings should provide information on available travel options to and from the project site in a clear and easily accessible location (e.g., a bulletin board in a common employee area and/or employee welcome package with travel information), including information on where transit passes may be purchased online or in person. The project applicant should also designate an employee transportation coordinator or Human Resources representative who will be able to provide information and/or administer a guaranteed ride home service. Such services may consist of providing free or subsidized rides upon request via taxis or other transportation network companies such as Uber or Lyft for employees who utilize alternate travel modes. The CTR marketing campaign should be directed at all employees of the industrial component.

- TP13 Ride-Sharing Programs: Each of the six (6) industrial buildings should provide designated parking spaces for carpool vehicles in a convenient/preferential location, and a designated waiting area for employees participating in ridesharing which is comfortable and convenient. The project applicant should facilitate the process of arranging ridesharing or carpooling matches, either through a website/app or via an employee transportation coordinator or Human Resources representative (refer to strategy TP04 above). The ridesharing program should be offered to all employees of the industrial component. In order to provide a conservative analysis, a maximum of 2% of eligible employees are assumed to participate in the program.

The combination of project design features, TDM strategies, and TDM programs described above are not expected to reduce the project's VMT impacts to less than significant levels. As previously described, the maximum VMT reduction for projects in a Suburban location setting is capped at 20% by the SGVCOG VMT Evaluation Tool in compliance with the VMT reduction methodology provided in the CAPCOA 2010 Report. When comparing the project's VMT to the applicable thresholds of significance, the project's VMT impacts would remain significant and unavoidable even if the maximum allowable VMT reductions were to be applied. Therefore, although the project applicant has provided a good faith effort at reducing the proposed project's environmental impacts to the greatest extent possible, it is concluded that a significant and unavoidable VMT impact would remain.

6.3 Operational (Non-CEQA) Improvement Measures

As described in *Section 5.5.2*, all study intersections which were evaluated for peak hour LOS with the addition of project-generated traffic are forecast to operate at acceptable LOS (i.e., LOS D or better). Since the incremental increases in *v/c* ratio or delays do not exceed the City's criteria, no project-specific intersection improvements or project-specific transportation demand management measures are required or proposed.

However, additional measures are recommended to improve safety in the vicinity of the senior housing component project driveways. As described in *Section 2.3.1*, the westerly project driveway is restricted to right-turning inbound and outbound movements only due to the presence of a median island along Sierra Madre Avenue. It is recommended that the right-turn outbound only condition at the westerly project driveway on Sierra Madre Avenue be enforced through signs, on-site pavement markings, and/or physical measures such as bollards or channelizing islands in order to discourage exiting vehicles from attempting to access the provided left-turn pocket to conduct a U-turn maneuver at the median break located approximately 40 to 50 feet west of the project driveway.

As a result of the sight distance analysis presented in *Section 5.7*, it is also recommended that any landscaping within the surface parking lot and project entryway adjacent to the public right-of-way along Sierra Madre Avenue should be maintained at a low height (i.e., 36 inches or less) so as not to impede sight distance for motorists exiting the existing driveway. Further, it is recommended that the City regularly maintain the landscaping in the median islands along Sierra Madre Avenue, including the trimming of lower branches and growth, in order to minimize the intermittent obstructions of the lines of sight from the minor street approaches at Vernon Avenue and existing driveways along Sierra Madre Avenue.

Based on a review of the existing midblock crossings across Sierra Madre Avenue which are to be retained as part of the proposed project, it is recommended that the landscaping located within the Azusa Greens Golf Course in the vicinity of the crossings should be regularly maintained so as not to obstruct the existing and proposed signage provided for the pedestrian crossings. It is further recommended that project applicant install RRFBs as well as the additional signing and striping

enhancements identified in the CA MUTCD in order to further enhance the visibility and safety of the existing midblock crossings located west of the Lori Ann Avenue-Point O Woods Drive/Sierra Madre Avenue intersection and west of the Sunset Avenue/Sierra Madre Avenue intersection. Should the City determine that additional safety improvements along Sierra Madre Avenue are required in the future, the City may study a potential road diet for the segment of Sierra Madre Avenue from Todd Avenue to Azusa Avenue.

7.0 CALIFORNIA DEPARTMENT OF TRANSPORTATION ANALYSIS

Consistent with the previously described statutory changes to the CEQA Guidelines, the California Department of Transportation (Caltrans) has also formally adopted VMT as the metric for reviewing the transportation impacts of a land use development project. As described in *Section 1.1* herein, Caltrans has released the TISG and the Interim Safety Guidance in order to provide guidance on Caltrans' review of land use projects.

7.1 VMT Analysis

Caltrans' TISG references the December 2018 *Technical Advisory* prepared by OPR as the basis for its guidance on VMT assessment. For the purpose of this transportation assessment, it is understood that the VMT analysis prepared for the City of Azusa, which is based on the recommendations provided in the *Technical Advisory*, is consistent with Caltrans requirements as well. Therefore, no separate VMT analysis has been prepared for Caltrans' review of the proposed project.

7.2 Off-Ramp Vehicle Queuing Analysis

The Interim Safety Guidance provides direction on a simplified safety analysis approach that reduces the risk to all road users and that focuses on multi-modal conflict analysis as well as access management issues. District traffic safety staff are encouraged to consider the proposed project's potential influence on safety on state roadways, including the following factors:

- Increased presence of pedestrians and bicyclists
- Degradation of the walking and bicycling environment and experience
- New pedestrian and bicyclist connection desires
- Multimodal conflict points, especially at intersections and project access locations
- Change in traffic mix such as an increase in bicyclists or pedestrians where features such as shoulders or sidewalks may not exist or are inconsistent with facility design (sidewalks, bike and multi-user paths, multimodal roadways, etc.)
- Increased vehicular speeds
- Transition between free flow and metered flow
- Increased traffic volumes
- Queuing at off-ramps resulting in slow or stopped traffic on the mainline or speed differentials between adjacent lanes
- Queuing exceeding turn pocket length that impedes through-traffic

The proposed project does not take direct access from a State facility; therefore, the project has not been reviewed for factors pertaining to site access or local roadways. However, the proposed project is expected to generate new project trips at the I-210 Freeway ramp interchanges at Irwindale Avenue to the west of the project site and Azusa Avenue to the east of the project site. Therefore, an analysis of the project's effect on off-ramp queuing was prepared in order to determine if the project would cause, or contribute towards, slowing or stopped traffic on mainline travel lanes resulting in unsafe speed differentials between adjacent lanes. The following four (4) off-ramp locations were analyzed:

- Study Int. 11 – Irwindale Avenue/I-210 Freeway Westbound Ramps
- Study Int. 12 – Irwindale Avenue/I-210 Freeway Eastbound Ramps
- Study Int. 13 – Azusa Avenue/I-210 Freeway Eastbound Ramps
- Study Int. 14 – I-210 Freeway Westbound Ramps/1st Street

A full access interchange is also provided at Vernon Avenue, however it should be noted that Vernon Avenue is discontinuous north of the freeway between 6th Street and Foothill Boulevard due to the presence of the LA Metro A (previously L/Gold) Line tracks. Vehicles utilizing the Vernon Avenue freeway ramps would be required to travel east to San Gabriel Avenue and/or Azusa Avenue or conduct a lengthy diversion south and west to Irwindale Avenue in order to travel to and from the project site. Due to the required route diversions, it is assumed that project traffic will utilize the ramp interchanges listed above, which offer more direct access to the project site. Therefore, no project trips have been assumed to utilize the Vernon Avenue interchange. The project is not expected to cause or contribute towards slowing or stopped traffic on mainline travel lanes resulting in unsafe speed differentials between adjacent lanes in the vicinity of the I-210 Freeway Eastbound and Westbound Ramps at Vernon Avenue.

Pursuant to prior direction from Caltrans staff, the off-ramp queuing at the selected ramp intersections was analyzed using the HCM method for signalized intersections. The off-ramp queuing calculations were prepared using the *Synchro 11* software package which implements the HCM operational methodology. A *Synchro* network was created based on existing conditions field reviews at the above noted ramp intersections. In addition, specifics such as traffic volume data, lane configurations, available vehicle storage lengths, crosswalk locations, posted speed limits, , etc., were coded to complete the existing network. The current signal timing and phasing data obtained from Caltrans in August 2023 were utilized in the analysis of each off-ramp intersection. The corresponding weekday AM and PM peak hour HCM worksheets for purposes of determining the 95th percentile vehicle queues are contained in *Appendix D*.

The queuing analysis was prepared for the existing and future (opening year 2027) without and with project traffic conditions. The freeway off-ramp intersection approach was reviewed in terms of expected maximum vehicle queues (i.e., 95th percentile queues) which represent the maximum back of vehicle queues with 95th percentile traffic volumes. The corresponding maximum vehicle

queue lengths were then compared to the total ramp storage lengths (i.e., the available storage length as measured from the applicable off-ramp lane striping from the point of gore to the respective off-ramp approach limit lines). The total queuing for the off-ramp was determined based on the sum of the maximum vehicle queues for each off-ramp lane. It is noted that the HCM worksheets report vehicle queuing in number of vehicles per lane (veh/ln), therefore an average length of 25 feet per queued vehicle (including vehicle separation) was assumed for analysis purposes. The total ramp storage length was determined based on the sum of the striped storage for all lanes provided at the off-ramp location.

As presented in ***Table 7-1***, adequate storage area is provided at the I-210 Freeway eastbound and westbound off-ramps at Irwindale Avenue, Azusa Avenue, and 1st Street to accommodate the forecast 95th percentile queues under existing and future year conditions without and with project-generated traffic. The proposed project is expected to neither cause nor contribute towards vehicle queuing which extends back into the I-210 Freeway mainline travel lanes resulting in unsafe speed differentials between adjacent lanes. Therefore, the proposed project is not anticipated to negatively influence safety on the State Highway System.

Table 7-1
SUMMARY OF OFF-RAMP VEHICLE QUEUING [1]

NO.	INTERSECTION	PEAK HOUR	AVAILABLE OFF-RAMP STORAGE [2] (FEET)	EXISTING		FUTURE WITHOUT PROJECT		FUTURE WITH PROJECT	
				95th PERCENTILE QUEUE [3] (FEET)	EXCEEDS STORAGE? (YES/NO)	95th PERCENTILE QUEUE [3] (FEET)	EXCEEDS STORAGE? (YES/NO)	95th PERCENTILE QUEUE [3] (FEET)	EXCEEDS STORAGE? (YES/NO)
11	Irwindale Avenue/	AM	2,000	318	No	353	No	370	No
	I-210 Freeway Westbound Ramps	PM	2,000	415	No	428	No	430	No
12	Irwindale Avenue/	AM	3,620	1,150	No	1,225	No	1,333	No
	I-210 Freeway Eastbound Ramps	PM	3,620	828	No	845	No	863	No
13	Azusa Avenue/	AM	2,320	488	No	520	No	520	No
	I-210 Freeway Eastbound Ramps	PM	2,320	728	No	793	No	793	No
14	I-210 Freeway Westbound Ramps/	AM	1,240	130	No	165	No	220	No
	First Street	PM	1,240	525	No	553	No	563	No

[1] Queuing analysis based on the Highway Capacity Manual, 6th Edition operational analysis methodologies.
[2] Available storage represents the sum of storage space provided by all off-ramp lanes, as measured via Google Earth, 2023.
[3] The 95th percentile queue is the maximum back of queue with 95th percentile traffic volumes. An average length of 25 feet per queued vehicle (including vehicle separation) was assumed for analysis purposes. The reported queue represents the sum of queues for all off-ramp lanes.

8.0 SUMMARY AND CONCLUSIONS

- ***Project Description*** – The proposed project is located in the City of Azusa, California. The project consists of the redevelopment of several parcels which comprise the south and west portions of the existing Azusa Greens Country Club. The northerly portion of the site is generally bound by flood control spreading grounds to the north, portions of the Azusa Greens golf course to the east, existing residential development to the west, and Sierra Madre Avenue to the south. The northerly site will be developed with 230 dwelling units of low density age-restricted (55+ active adult) senior housing, via two three-story buildings and 40 single-story duplexes and triplexes. The southerly portion of the site is generally bound by Sierra Madre Avenue to the north, existing industrial and residential development to the east, Todd Avenue to the west, and 10th Street to the south. The southerly site will be developed with six (6) new tilt-up concrete industrial buildings that will provide a total of 353,075 square feet of industrial space. The remaining portions of the existing Azusa Greens County Club, including the Clubhouse, the remaining nine holes, driving range, and parking lot will be retained and lightly renovated. The reconfigured nine-hole golf course was approved by the City of Azusa in December 2023 and began operating in Spring of 2024. The proposed light renovations to the existing Clubhouse require additional approvals from the City of Azusa.

- ***Project Site Access*** – Access to the proposed project is planned to be accommodated by a variety of project driveways. Access to the senior housing component will be provided by two existing driveways on Sierra Madre Avenue, while access to the industrial component will be accommodated by four (4) new driveways on Todd Avenue and four (4) new driveways on 10th Street. It is recommended that the existing right-turn outbound only condition at the westerly project driveway on Sierra Madre Avenue be re-enforced through signs, on-site pavement markings, and/or physical measures such as bollards or channelizing islands in order to discourage unsafe maneuvers at the median island break located west of the driveway. Access to the nine-hole Azusa Greens Golf Course will continue to be provided via two (2) existing driveways at the Vernon Avenue/Sierra Madre Avenue intersection.

- ***Project Trip Generation*** – The proposed project is expected to generate 332 PCE-adjusted trips (262 inbound trips and 70 outbound trips) during the weekday AM peak hour. During the weekday PM peak hour, the proposed project is expected to generate 323 PCE-adjusted trips (85 inbound trips and 238 outbound trips). Over a 24-hour period, the proposed project is forecast to generate 2,823 non-PCE-adjusted daily trip ends (approximately 1,412 inbound trips and 1,411 outbound trips) on a typical weekday.

- ***Vehicle Miles Traveled (VMT) Analysis*** – The proposed project's daily residential VMT per capita for the senior housing component and daily VMT per employee for the industrial and golf course clubhouse components were forecast using the SGVCOG VMT Evaluation Tool. Based on the VMT analysis, the senior housing component of the proposed project is forecast to generate 18.0 VMT per capita, which exceeds the threshold of 15.3 VMT per capita. The industrial and golf course clubhouse components of the proposed project are forecast to

generate 21.7 VMT per employee, which exceeds the threshold of 16.7 VMT per employee. It is concluded that the proposed project is expected to result in a significant VMT impact.

- ***Active Transportation and Public Transit Assessment –*** The proposed project is found to be in alignment with the City of Azusa General Plan and the Azusa Walks Pedestrian Plan goal of providing pedestrian, bicycle, and transit infrastructure. Further, development of the proposed project will not prevent the City from completing any proposed transit, bicycle, or pedestrian facilities. It is therefore determined that the proposed project will have a less than significant impact on active transportation and public transit in the vicinity of the project site.

- ***Level of Service (LOS) Analysis –*** A total of 10 study intersections were reviewed for consistency with the City of Azusa's adopted LOS standards. The study intersections were evaluated using the City-approved Intersection Capacity Utilization (ICU) and Highway Capacity Manual (HCM) methodologies to determine the weekday peak hour LOS under existing and future (opening year 2027) without and with project conditions. Based on application of the City's LOS standards, the proposed project is not required to identify or construct intersection improvements at any of the study intersections.

- ***Traffic Signal Warrant Analysis –*** Traffic signal warrants were prepared for the intersections of Todd Avenue/Sierra Madre Avenue (Study Int. 1) and Vernon Avenue/Sierra Madre Avenue (Study Int. 5). Specifically, Warrant No. 3 (Peak Hour Volume) was prepared for the forecast future with project traffic conditions, and Warrant No. 7 (Crash Experience) was prepared based on a review of existing collision records. Based on strict application of the warrant criteria, none of the traffic signal warrants were met for either intersection.

- ***Sight Distance Analysis –*** Sight distance analyses were prepared for the intersections of Vernon Avenue/Sierra Madre Avenue (Study Int. 5) and the senior housing component easterly project driveway/Sierra Madre Avenue (Study Int. 4). The sight distance analysis is based on criteria set forth in the AASHTO Green Book for left- and right-turns from a stop-controlled minor approach. It is determined that adequate stopping sight distances are provided along Sierra Madre Avenue, which provides the minimum threshold for roadway safety at the subject locations. It is recommended that the landscaping in the median islands along Sierra Madre Avenue be regularly maintained by the City in order to minimize the intermittent visual obstruction of oncoming vehicles. It is also recommended that any landscaping within the surface parking lot and project entryway adjacent to the public right-of-way along Sierra Madre Avenue should be maintained at a low height (i.e., 36 inches or less).

- ***Midblock Crossing Analysis –*** The midblock pedestrian and golf cart crossings across Sierra Madre Avenue which are to be retained as part of the proposed project were reviewed for safety and to determine if any potential safety improvements are appropriate. It is recommended that the landscaping located within the Azusa Greens Golf Course in the vicinity of the crossings should be regularly maintained so as not to obstruct the existing and proposed signage provided for the pedestrian crossings. It is further recommended that project applicant install RRFBs as

well as the additional signing and striping enhancements identified in the CA MUTCD in order to further enhance the visibility and safety of the existing midblock crossings located west of the Lori Ann Avenue-Point O Woods Drive/Sierra Madre Avenue intersection and west of the Sunset Avenue/Sierra Madre Avenue intersection. Should the City determine that additional safety improvements along Sierra Madre Avenue are required in the future, the City may study a potential road diet for the segment of Sierra Madre Avenue from Todd Avenue to Azusa Avenue.

- ***CEQA Mitigation Measures –*** The proposed project is expected to result in a significant VMT impact, and thus the applicant is required to identify mitigation measures to reduce the impact to the greatest extent possible. VMT mitigation measures have been identified for the proposed project, including the provision of a minimum of 15% affordable housing, providing a financial contribution for the repair of the pedestrian crossing at Vernon Avenue/Sierra Madre Avenue, providing secure bicycle parking at each industrial building, providing a commute trip reduction (CTR) marketing and education program for employees of each industrial building, and providing a ride-sharing (i.e., carpool) program for the employees of each industrial building. The combination of measures described above are not expected to reduce the project's VMT impact to less than significant levels. When comparing the project's VMT to the applicable thresholds of significance, the project's VMT impacts would remain significant and unavoidable

- ***Caltrans Analysis –*** It is understood that the VMT analysis prepared for the City of Azusa, which is based on the recommendations provided in the *Technical Advisory*, is consistent with Caltrans requirements as well. Therefore, no separate VMT analysis has been prepared for Caltrans' review of the proposed project. Pursuant to the direction provided in the "Interim LD-IGR Safety Review Practitioners Guidance", an analysis of the project's effect on off-ramp queuing at the I-210 Freeway interchanges with Irwindale Avenue and Azusa Avenue/1st Street (i.e., Study Int. 11, 12, 13, and 14) determined that the proposed project is not expected to cause or contribute towards vehicle queuing which extends back into the I-210 Freeway mainline travel lanes in either the eastbound or westbound directions.

APPENDIX A

APPROVED TRANSPORTATION ANALYSIS SCOPE OF WORK

MEMORANDUM

To:	Robert Delgadillo, P.E. Miguel Cabanas, P.E. City of Azusa	Date:	April 2, 2024
From:	Grace Turney, P.E. Alfred C. Ying, P.E., PTP LLG Engineers	LLG Ref:	1-23-4555-1
Subject:	**Azusa Greens Redevelopment Project – Transportation Analysis Scope of Work**		

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Linscott, Law & Greenspan, Engineers (LLG) is pleased to submit the following transportation assessment Scope of Work for the proposed Azusa Greens Redevelopment Project ("proposed project") located in the City of Azusa, California.

A. Project Location

The proposed project site is located in the City of Azusa. The project site is comprised of several parcels which make up portions of the existing Azusa Greens Country Club. The project site consists of two non-contiguous development areas:

- the northerly portion of the site is generally bound by flood control spreading grounds to the north, existing residential development to the east and west, and Sierra Madre Avenue to the south; and,

- the southerly portion of the site is generally bound by Sierra Madre Avenue to the north, existing industrial and residential development to the east, Todd Avenue to the west, and 10th Street to the south.

The existing project site is currently developed as part of the Azusa Greens Country Club, and is currently zoned as Recreation. A vicinity map of the project site is provided in ***Figure 1***.

B. Project Description

The proposed project consists of two development components. The northerly redevelopment site will be developed with low density age-restricted senior housing. A total of 230 dwelling units will be provided via two (2) three-story buildings and 40 single-story duplexes and triplexes. Fifteen percent (15%) of the units will be offered at affordable rates, including a mix of unit types and sizes. A 10,932 square-foot amenity/community building will also be provided. The northerly site is planned to provide 452 parking spaces. Access to the northerly site would be accommodated by two (2) existing driveways on Sierra Madre Avenue. A conceptual site plan of the northerly site is provided in ***Figure 2***. The senior housing component is expected to begin construction in year 2025, with completion and occupancy of the project by year 2027.

The southerly redevelopment site will be developed with six (6) new tilt-up concrete industrial buildings that will provide a total of 350,320 square feet of industrial space. Based on information provided by the applicant, potential uses for this site include light manufacturing, direct to consumer marketing, warehouse/distribution, or other uses permitted within the DWL zone (it is noted that the project would require a Zone Change, among other approvals). The southerly site is planned to provide 444 parking stalls. Access to the southerly site would be accommodated by four (4) new driveways along Todd Avenue and four (4) new driveways along 10th Street. A conceptual site plan of the southerly site is provided in ***Figure 3***. The industrial component is expected to begin construction in year 2025, with completion and occupancy of the project by the end of year 2025.

The proposed project would require the demolition of all existing golf course improvements for seven (7) of the existing 16 holes in order to accommodate the development of all components of the proposed project. The nine (9) remaining holes, driving range, and 10,032 square-foot clubhouse will be retained. The clubhouse will be lightly renovated and maintained in working order. No changes to the prior use of the clubhouse are anticipated. As of the preparation of this scope of work, it is understood that the golf course has already been approved to reopen by the City of Azusa, however the minor renovations to the clubhouse require additional approvals by the City as Lead Agency.

A detailed project description narrative for both project components, including the required approvals and other design elements for each site, is attached to this memorandum.

C. CEQA Vehicle Miles Traveled (VMT) Analysis

Pursuant to current State statutes, the City of Azusa is required to utilize VMT as the metric for determining environmental impacts in compliance with the California Environmental Quality Act (CEQA). It is understood based on input from City staff that the City of Azusa has not formally adopted VMT methodology, screening criteria, or thresholds for VMT analysis of land use development projects within its jurisdiction. LLG will therefore prepare a VMT assessment which is in compliance with the methodology recommended by the Governor's Office of Planning and Research (OPR) in the *Technical Advisory on Evaluating Transportation Impacts in CEQA*[1] (*"Technical Advisory"*).

[1] *Technical Advisory on Evaluating Transportation Impacts in CEQA*, Governor's Office of Planning and Research, December 2018.

Screening

LLG will review the proposed project to determine if any of the screening criteria recommended in the *Technical Advisory* are satisfied. The project is not expected to be screened out of detailed analysis; therefore, VMT impact analyses will be prepared for the proposed project.

Methodology

As the project is comprised of multiple land use components, the potential VMT impact of each project component will be evaluated independently. Consistent with the methodology recommended in the *Technical Advisory*, the senior housing component will be evaluated using the home-based VMT per capita metric, and the industrial component will be evaluated using the work-based VMT per employee metric. It should be noted that the Azusa Greens Golf Course is already approved to resume operations, and therefore is not required to provide a CEQA-compliant VMT analysis. Therefore, the VMT expected to be generated by golf course patrons will be reviewed on a qualitative basis only. However, as additional approvals are required for the renovation of the clubhouse, the golf course clubhouse component will be analyzed using the work-based VMT per employee metric. LLG will utilize the San Gabriel Valley Council of Governments (SGVCOG) VMT Evaluation Tool in order to prepare forecasts of the project-generated VMT.

Impact Thresholds

Consistent with the recommendations in the *Technical Advisory*, the project's impact will be considered significant if the project generates more VMT than 15% below the existing VMT in the area. The existing VMT and associated impact threshold for each metric utilized in the analysis will be obtained from the SGVCOG VMT Evaluation Tool, which lists the San Gabriel Valley Subarea VMT averages for both VMT per capita and VMT per employee. Short-term impacts will be assessed through project-level VMT analysis, while long-term cumulative impacts will be assessed by evaluating the project's consistency with the current RTP/SCS.

Mitigation

Should the project-generated VMT result in a significant impact, LLG will review the measures included in the SGVCOG VMT Evaluation Tool for applicable transportation demand management strategies which may reduce the level of impact.

D. Active Transportation Analysis

A qualitative review will be conducted to evaluate whether the project is consistent with the City's adopted policies, plans, and programs regarding public transit, bicycle, and pedestrian facilities.

This review will focus on the Mobility Element of the City's current General Plan (April 2004) and the City of Azusa Pedestrian Plan (March 2022).

E. Project Trip Generation Forecast

Traffic volumes expected to be generated by the proposed project were forecast for the weekday AM and PM peak hours, as well as over a 24-hour period. Trip generation rates provided in the Institute of Transportation Engineers' (ITE) *Trip Generation Manual*[2] per 1,000 square feet of floor area, per dwelling unit, and per hole were utilized to forecast project traffic generation for the proposed project. The trip generation average rates for the following ITE Land Use Codes were used to forecast the traffic volumes expected to be generated by the proposed project:

110: General Light Industrial

251: Senior Adult Housing – Single-Family

252: Senior Adult Housing – Multifamily

430: Golf Course

The trip rates published in the *Trip Generation Manual* account for all vehicle trips generated by the land use. In the case of the proposed industrial land use, it is expected that a small proportion of the vehicles accessing the project site would consist of delivery trucks and/or tractor-trailer trucks, in addition to passenger vehicles. Truck trips associated with the industrial component of the project were also forecast utilizing truck trip generation average rates for ITE Land Use Code 110: General Light Industrial. The truck mix ratios by number of axles identified in the City of Fontana's *Truck Trip Generation Study*[3] for light industrial land uses, along with a passenger car equivalent (PCE) factor based on the number of axles, was applied to the truck trip forecast to account for the effect of the larger vehicles on intersection traffic operations.

The proposed project will result in the demolition of seven (7) existing golf holes. As the golf course has been closed for a number of years, it is not currently generating vehicle trips which would be removed from the roadway network due to the development of the proposed project. Therefore, no existing use trip credits have been applied to the proposed project's trip generation forecast for the holes which are to be removed. The proposed project also includes light renovations to the existing clubhouse and surface parking areas, however these minor improvements will not expand the floor area of the clubhouse. It should be noted that the trip rates associated with ITE Land Use 430: Golf Course includes trips generated by other typical golf

[2] Institute of Transportation Engineers *Trip Generation Manual*, 11th Edition, Washington, D.C., 2021.
[3] *Truck Trip Generation Study, City of Fontana, County of San Bernardino, State of California*, prepared by Transportation Engineering and Planning, Inc., August 2003.

course facilities such as a driving range and clubhouse with pro shop, restaurant, lounge, or banquet facility, in addition to golf holes. Therefore, no separate trip generation forecast for the driving range or clubhouse is included.

The trip generation forecast for the proposed project is summarized in ***Table 1***. As presented in *Table 1*, the proposed project is expected to result in 2,810 daily vehicle trips as well as 330 PCE-adjusted trips (260 inbound trips and 70 outbound trips) during the AM peak hour and 322 PCE-adjusted trips (85 inbound trips and 237 outbound trips) during the PM peak hour.

F. Non-CEQA Level of Service (LOS) Analysis

LLG will prepare an AM and PM peak hour LOS analysis to determine the proposed project's effects on local roadway operations. A total of 14 study intersections have been identified in consultation with City staff, including 10 intersections which will be analyzed for the project's effects on local roadways in the City of Azusa, and four (4) freeway ramp intersections which will be analyzed for potential impacts to freeway off-ramp queuing (refer to *Item J* below).

1. Todd Avenue/Sierra Madre Avenue (unsignalized)
2. Todd Avenue/10th Street (signalized)
3. Todd Avenue/Foothill Boulevard (signalized)
4. Project Driveway/Sierra Madre Avenue (unsignalized)
5. Vernon Avenue/Sierra Madre Avenue (unsignalized)
6. Vernon Avenue/Foothill Boulevard (signalized)
7. San Gabriel Avenue/Sierra Madre Avenue (signalized)
8. San Gabriel Avenue/Foothill Boulevard (signalized)
9. Azusa Avenue/Sierra Madre Avenue (signalized)
10. Azusa Avenue/Foothill Boulevard (signalized)
11. Irwindale Avenue/I-210 Freeway Westbound Ramps (signalized)
12. Irwindale Avenue/I-210 Freeway Eastbound Ramps (signalized)
13. Azusa Avenue/ I-210 Freeway Eastbound Ramps (signalized)
14. I-210 Freeway Westbound Ramps/1st Street (signalized)

Analysis Methodology

The LOS calculations will be prepared using the Intersection Capacity Utilization (ICU) methodology for signalized intersections and the Highway Capacity Manual (HCM) methodology for unsignalized intersections. The analysis will include existing year (2023), opening year (2027), and opening year with project scenarios.

Transportation Network Effects

The acceptable LOS for most intersections in the City is D or better as established in the City's General Plan. Any intersections operating at a LOS of E or F are considered deficient. Signalized intersections will require improvement if one of the following conditions is met:

- The addition of project traffic results in the intersections to change from acceptable operations (LOS D or better) to unacceptable operations (LOS E or F).

- The project-related increase in volume-to-capacity (V/C) is equal to or greater than 0.020 (2%), or the project related increase in delay is equal to or greater than 2.0 seconds, at an intersection that is projected to operate at LOS E or F with the addition of project traffic.

G. Project Trip Distribution

The trips expected to be generated by the proposed senior housing component of the project will be assigned to the study intersections based on the distribution pattern presented in ***Figure 4***. It should be noted that in order to provide a conservative assessment of operations at the project driveway along Sierra Madre Avenue, project trips have been assumed to occur at one driveway only. Actual vehicle trips at the project driveways would be lower than assumed for analysis purposes. The trips expected to be generated by the proposed industrial component of the project will be assigned to the study intersections based on the distribution pattern presented in ***Figure 5***. The trips expected to be generated by the reopening of the Azusa Greens Golf Course will be assigned to the study intersections based on the distribution pattern presented in ***Figure 6***.

H. Traffic Counts

LLG has traffic count data on file for each of the study intersections which was collected in May 2023. A count of pedestrians and bicycles was collected at each location, and a special count of school age pedestrians was collected at the Vernon Avenue/Sierra Madre Avenue intersection due to the proximity of Victor Hodge Elementary School. All counts were collected when local schools were in regular session.

I. Future Traffic Volume Forecasts

The future baseline 2027 volumes will be forecast based on the forecast traffic generated by cumulative or related projects as well as an annual compounding growth factor of 0.38% per year (based on the forecast annual growth between years 2020 and 2030 for RSA 26 in the 2010 Los Angeles County Congestion Management Program). It is assumed that City staff will assist in providing a current list of related development projects in the City of Azusa.

J. Caltrans Facilities Analysis

In compliance with State statutes, Caltrans also now requires VMT-based analysis of development projects. Caltrans' *Vehicle Miles Traveled-Focused Transportation Impact Study Guidelines* (dated May 20, 2020) states that Caltrans will review and comment on impact determinations which are consistent with OPR's Technical Advisory and State greenhouse gas (GHG) emissions goals. The VMT analysis prepared for the City of Azusa will be consistent with the Technical Advisory and State GHG goals, and therefore no separate VMT analysis will be prepared for Caltrans. However, Caltrans has also released the *Interim Land Development and Intergovernmental Review (LD-IGR) Safety Review Practitioner's Guide* (dated July 2020), which requires a detailed safety review for projects which are expected to affect the State Highway System. Therefore, based on the project site location and proximity to the I-210 Freeway, existing and future year analyses will be prepared for the Irwindale Avenue, 1st Street, and Azusa Avenue ramp intersections (Study Intersection Nos. 11-14 in *Item F* above) in order to address any potential concerns Caltrans may have in accordance with the *Interim LD-IGR Safety Review Practitioner's Guide*.

K. Other Transportation Analyses

As requested by the City, LLG will prepare additional focused analyses for the intersection of Vernon Avenue/Sierra Madre Avenue, including traffic signal warrant analyses and sight-distance analyses for each minor street approach. Additionally, LLG will prepare a safety review of the existing golf-cart crossings across Sierra Madre Avenue which are planned to remain in operation.

L. Transportation Impact Study

LLG will prepare a transportation impact study summarizing the above-mentioned items including our analysis, findings, and conclusions. The study will be suitably documented with tables, figures, and appendix materials.

Pending your review and approval of the above information, we will proceed with preparation of the transportation assessment for the proposed Azusa Greens Redevelopment Project. Please feel

free to call us at 626.796.2322 if you have any questions, comments or suggested revisions regarding the above. Thank you!

Attachments

c: Knarik Vizcarra, City of Azusa
Yara Fisher, Helix Environmental

Azusa Greens Redevelopment Timeline

Overton Moore Properties (OMP), the developer, began its due diligence on the Azusa Greens Golf Course in early 2022, and as part of this process applied to the City of Azusa for Preliminary Site Plan Review. The application was submitted in March 2022 and the first City Council hearing was held on June 6th of the same year. During the March 6th Council hearing the Council made certain recommendations for changes to the application and postponed a vote to allow OMP time to revise and re-submit the Preliminary Site Plan to be presented again to City Council in September.

After revising the redevelopment plans and conducting community outreach to get feedback from the nearby HOAs and homeowners, OMP presented the application to the City Council on September 19th, 2022. The Council members voted to allow the redevelopment plan to proceed with a formal submittal to the city to begin the entitlement process. OMP proceeded to purchase the 16 holes of the Azusa Greens Golf Course that was for sale under Azusa Owner LP, a joint venture with OMP's equity partner.

Since October 2022, OMP has been working with City of Azusa staff, Azusa Light and Water staff, architects, civil engineers, and many other consultants to create the application and required documents to submit to the Planning Department.

Industrial

Project Site and Surrounding Land Uses

The 19.33-acre project site is located within the northwestern portion of the City of Azusa and is surrounded primarily by warehousing/distribution uses. The site encompasses the existing golf holes 3, 4, 5 and 6 of the Azusa Greens Country Club. The project site is bounded by 10th Street to the South, industrial and residential uses to the East, Sierra Madre Avenue to the North and by Todd Avenue to the West. The project site is currently developed as a part of the Azusa Greens Country Club.

Proposed Project Description

Implementation of the proposed project involves the demolition of all existing golf related improvements on the property. The proposed project consists of six (6) new, tilt-up concrete industrial buildings totaling 350,320 square feet. The proposed buildings have been designed around the no-build fault area, which was defined by extensive geological testing completed to prepare a conclusive Fault Study Report. With two-story glass office entries and a minimum of 28' clear height, potential uses could include light manufacturing, direct to consumer marketing, warehouse/distribution and possibly other uses permitted within the City's West End Light Industrial District (DWL) zone.

Flexibility has become a key issue as companies transform their business operations and technology pushes change at an ever-increasing pace. The proposed industrial buildings provide large unobstructed spaces that accommodate many types of activities and that support changing operations in a changing business landscape.

Proposed Project Design and Required Approvals

The proposed project consists of six Class A industrial buildings as shown on the Site Plan. The existing parcel will require a Tentative Parcel Map approved for 6 separate parcels (one per building), a Zone Change from Recreational to West End Light Industrial, a Variance for outdoor storage (including trailer parking) and a Minor Use Permit for 24-7 operations. These discretionary action items will allow the development the maximum flexibility for future users, while staying within the City code.

Each building will be 28' – 32' clear and have an attractive front main office entrance featuring a glass entry with horizontal and vertical architectural accents to break down the scale of the buildings. Reveals, accent colors, and shorter accent panels will provide interest in addition to repetitive features that will break up the building elevations to provide a visually pleasing integrated design.

Open Space, Landscaping and Fencing

Minor setbacks with landscaping along the property lines are proposed for compliance with the development code. The new landscaping would have varied tree species and shrubs with plant species that are consistent with the surrounding area and meet drought-tolerant requirements. Per City code, all truck courts and areas designated for outdoor storage shall be attractively screened with a 6'–8' tall screen wall. Where the project has property lines adjacent to residential, additional building set backs have been incorporated to the design.

Lighting

The proposed project is required to comply with the City's requirements for outdoor lighting. The project's lighting plan would include night lighting for parking areas, walkways, and driveways. Outdoor lights would cast downward and away from the residential to the north and would be shrouded to prevent glare.

Access, Circulation, and Parking

The circulation for the proposed project has been designed to ensure the safe and efficient movement of cars and trucks throughout the project site. (4) four driveways would be provided on Todd Avenue and (4) four driveways would be provided on 10th Street. A shared driveway is proposed between Building 5 and 6 to minimize impacts to the overhead utility lines. The site provides for 444 parking stalls, greater than the city requirement of 443 stalls. The project will have designated fire lanes and emergency fire access where required. The parking is concentrated between each building to help shield the dock doors and trailer stalls from street view.

Grading and Drainage

The site earth work will be designed to balance by crushing existing cobbles and boulders present on the property to reuse as aggregate base. The topography of the area requires the entire property to drain to the South; to accommodate this, there will be shared drainage and CCRs recorded.

Demolition and Construction

The proposed project would result in the demolition of all existing golf course improvements on holes 3, 4, 6 and 7. The demolition phase of the proposed project is anticipated to take approximately two months. A preliminary demolition plan will be submitted to the city. Construction of the proposed project will take approximately 12 months.

Golf Course

52.31-acres of Golf Course, inclusive of the club house, parking lot and driving range, will remain. The Azusa Greens Club House will be lightly renovated and maintained in working order.

The Golf Course holes numbered 10 – 17 and hole 9 will be re-numbered 1 – 9 to create a nine-hole golf course. This layout results in the least impact to the design of those existing holes and to current views. To accommodate the flow of the 9-hole course, existing hole number 17 will be redesigned, relocating the green to the East. The applicant will work with a golf course management company to oversee hole 17's green relocation and maintain the course during the entitlement process.

The light Clubhouse renovation will feature an updated interior site plan that relocates the golf check-in area to the East, updating two of the entries on the North facing frontage of the building and adding one new set of doors on the East facing side of the building. The parking lot will also be redesigned to work in conjunction with the existing curb cuts and new senior housing entrance on Sierra Madre. The parking will be brought up to the standards of the current city code and fire department, featuring new landscaping, ADA paths of travel, and efficient traffic flow.

55+ Age-Restricted (Active Adult) Residential Community

Project Site and Surrounding Land Uses:

The 20.48-acre project site is located within the Northwestern portion of the City of Azusa and is surrounded by residential and recreational uses. The site encompasses the existing golf holes 1, 18, and 8 as well as a small portion of hole 17. The project site is bounded by the spreading grounds to the North, the Azusa Greens golf course to the East, residential to the West, and Sierra Madre Avenue to the South. The project site is currently developed as a part of the Azusa Greens Country Club.

Proposed Project Description

Implementation of the proposed project involves the removal of the existing golf course vegetation to grade the remaining dirt and create a level site for development. The project applicant will hire an arborist to evaluate what trees on the perimeter of the site can remain and be incorporated in the landscape plan that will provide a buffer to the residential properties. The proposed project has incorporated the City Council's request for low density age-restricted senior housing and consists of (2) two 3-story buildings totaling 188,906 gross square feet with 150 units total, a mix of (40) forty single-story duplexes and triplexes totaling 80 units and roughly 145,738 gross square feet, and an amenity/community building totaling 10,932 square feet. The

unit mix of the 3-story buildings will consist of 33.33% two-bedrooms and 66.66% one-bedrooms with the average unit size totaling 978 square feet. The duplexes and triplexes will consist of two-bedroom units with a size range of 1,337 to 1,592-square feet. The overall mix of the project units will be 36% 1-bedroom and 64% 2-bedroom.

The project will consist of a mix of units offered at affordable rates, totaling 15% affordable for the entire project. 10% of the project units will be provided for rent at 80% of AMI and 5% of the project units will be provided for rent at 100% of AMI.

Proposed Project Design and Project Approvals

The proposed project is designed to blend in with the surrounding residential uses. It will consist of single-story duplex/triplex buildings and three-story tall, type VA buildings with balconies. To achieve this, a lot line adjustment would be recorded to create a single parcel, which would be rezoned to NG3 MOD. Additionally, an Overlay called the Azusa Senior Housing Overlay ("ASH") would also be part of the entitlements to accommodate elements specific to senior housing projects that are not addressed in the City Code. The most significant deviation from the code present in the ASH Overlay will be a maximum allowable building height of 45-feet and no limitation on number of stories, an increase from the code's restriction of 35' and two-story maximum height. This is a necessary piece of the overlay due to seniors requiring elevators, which are costly and necessitate at least a three-story building for them to be economically feasible.

Each unit will feature private outdoor space, either on a balcony or patio, and access to a variety of courtyards and amenity spaces. The project will be landscaped with drought tolerant trees and shrubbery, and feature planting beds for the duplex/triplex patios and a community garden. The proposed design is a modern Spanish architectural style but comments from the staff are welcome. Amenities under consideration include: outdoor meeting areas, fitness studio, outdoor pool and spa, outdoor recreation areas, multi-purpose meeting rooms, etc.

Lighting

The proposed project is required to comply with the City's requirements for outdoor lighting. The project's lighting plan would include night lighting for parking areas, walkways, and driveways. Outdoor lights would cast downward and away from the residential from the East and West and would be shrouded to prevent glare.

Access, Circulation, and Parking

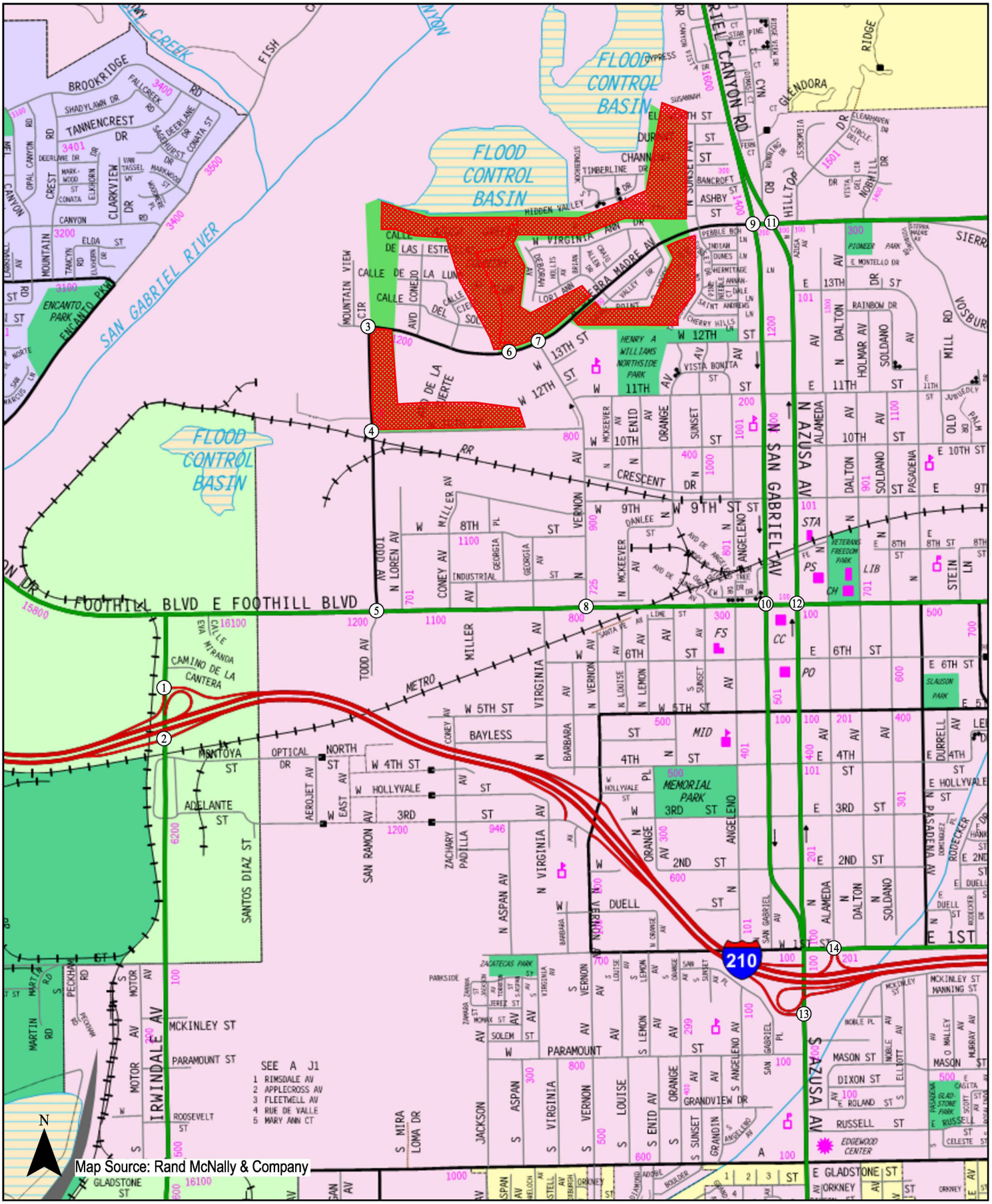
The circulation for the proposed project has been designed to ensure the safe and efficient movement of cars throughout the project site. Two driveways will be provided utilizing existing curb cuts on Sierra Madre Blvd. The site is accommodated with 452 parking spaces consisting of uncovered, covered, detached garage and garage spaces. The parking is distributed throughout the project to avoid extremely long walks to and from each end of the development and features golf cart parking by the recreational building. The main entrance/lobby is located centrally at the recreational building, which is situated between the two three-story buildings. Additional entrances will be located throughout the property.

Grading and Drainage

A conceptual grading plan and drainage plan will be developed and submitted further along in the review process.

Demolition and Construction

The proposed project would result in the demolition all surface golf-related landscaping on the site as well as grading. Demolition and Construction of the proposed project will take approximately 24 months.



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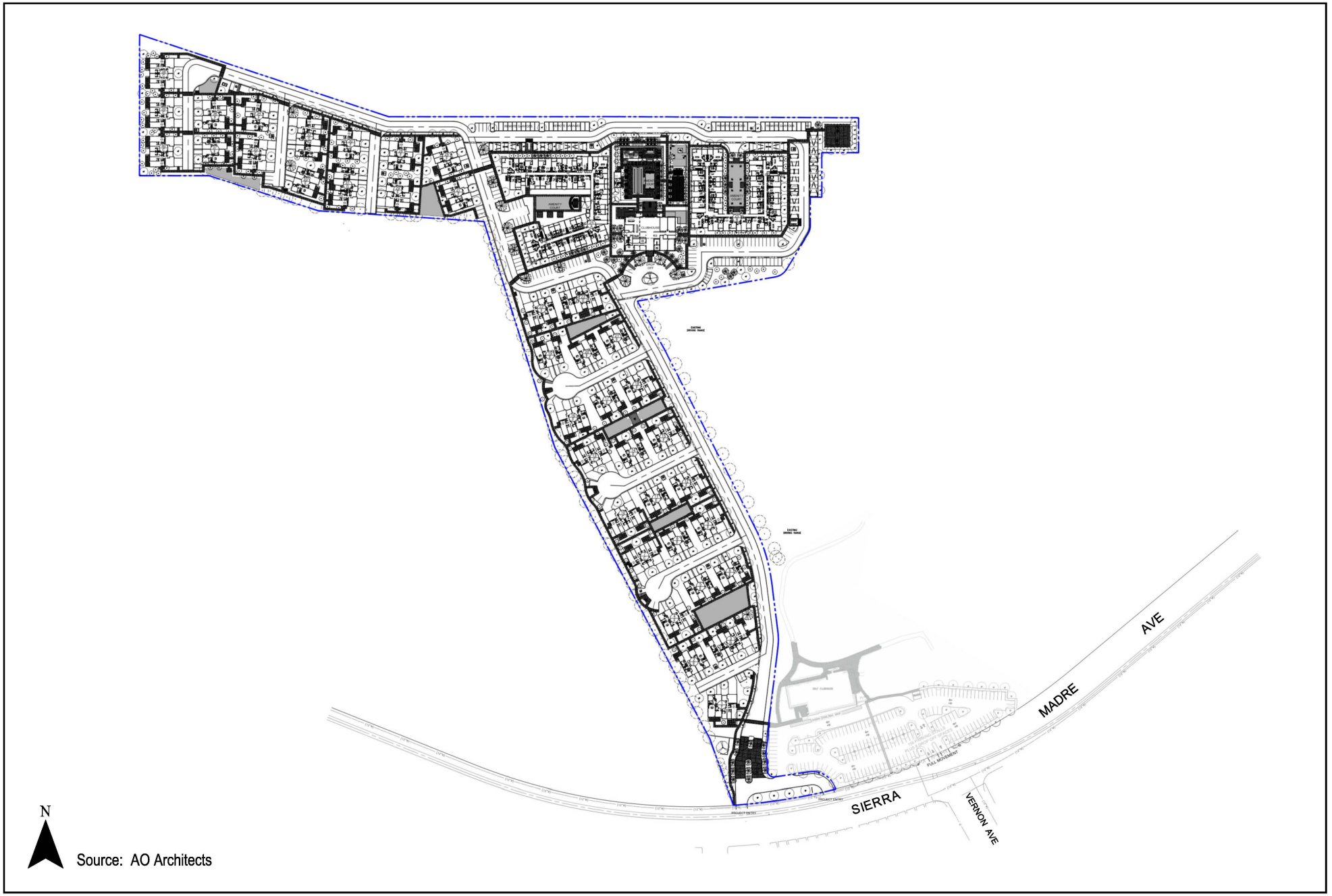
Project Site

Study Intersection

Figure 1
Vicinity Map

Azusa Greens Redevelopment Project



Source: AO Architects

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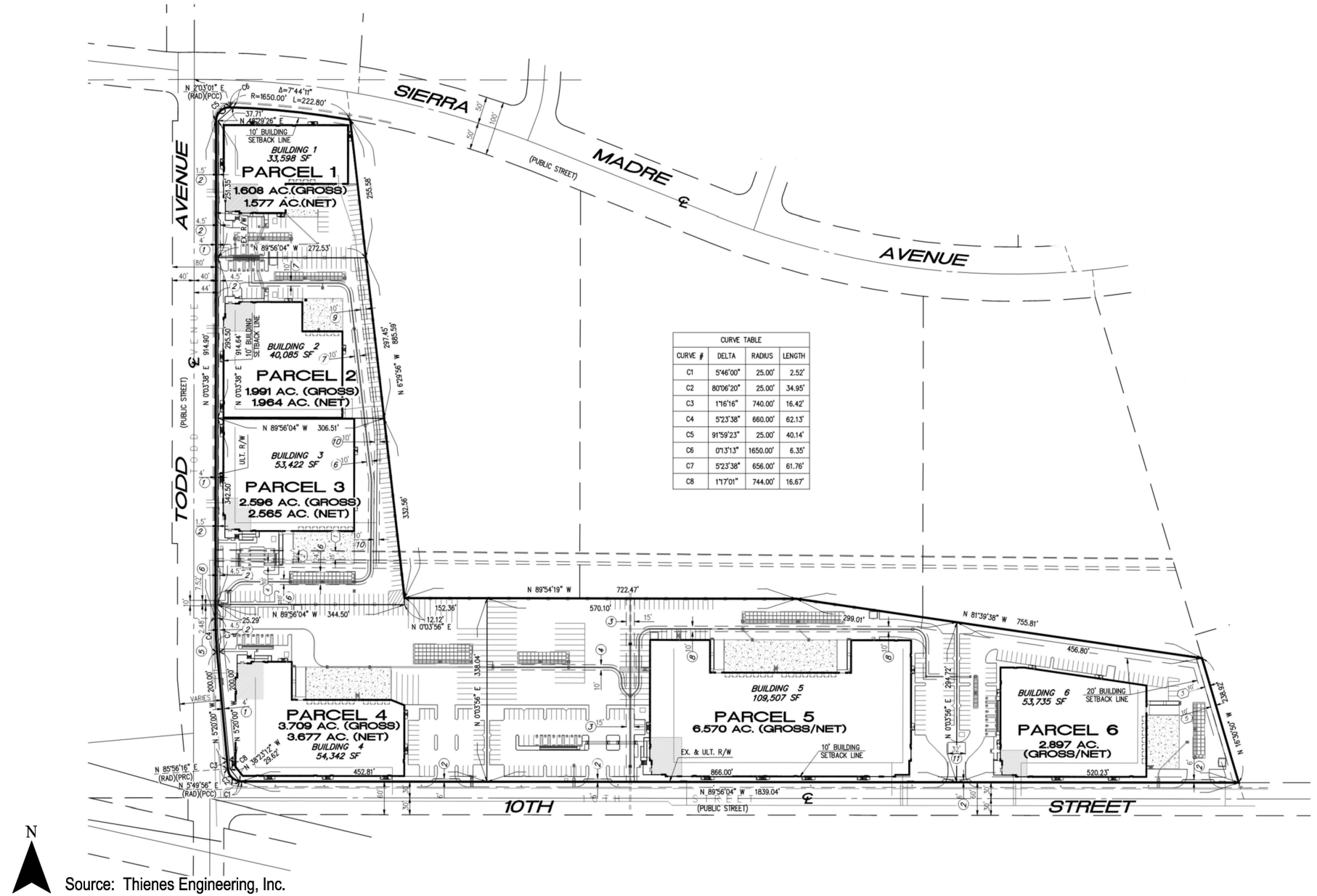
LLG

Figure 2
Conceptual Site Plan
Senior Housing Component
Azusa Greens Redevelopment Project



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Source: Thienes Engineering, Inc.

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Figure 3
Conceptual Site Plan
Industrial Component
Azusa Greens Redevelopment Project

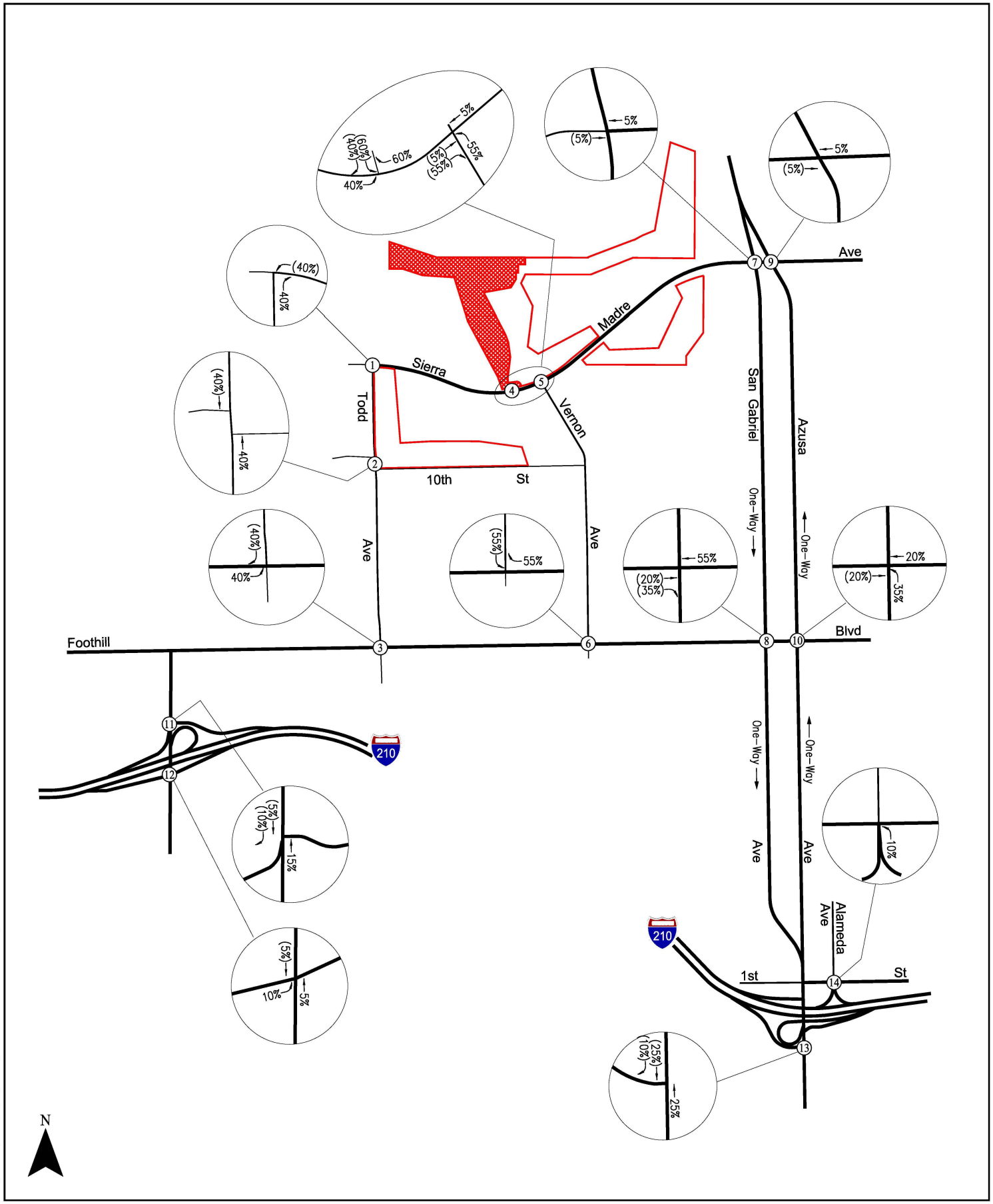

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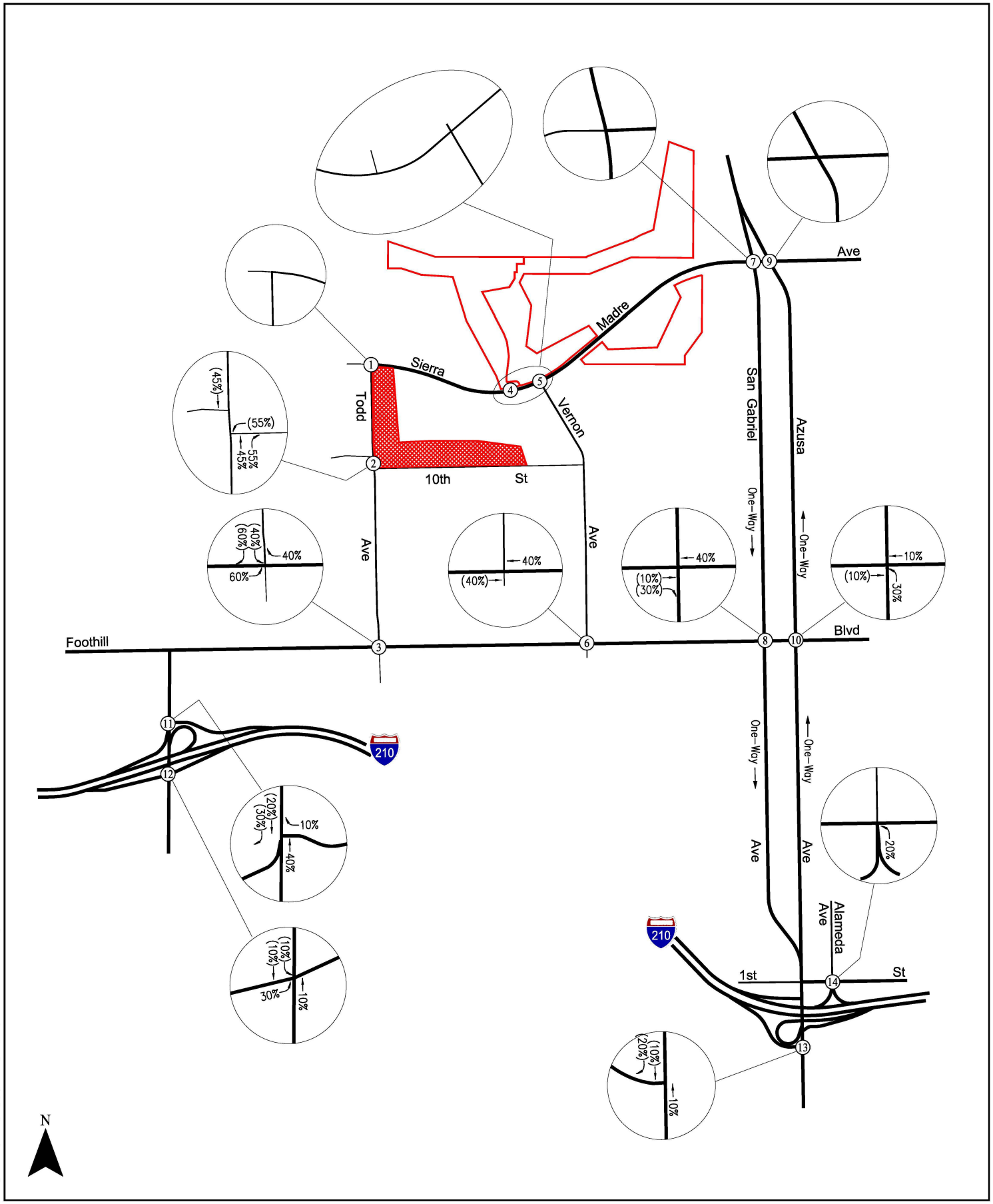
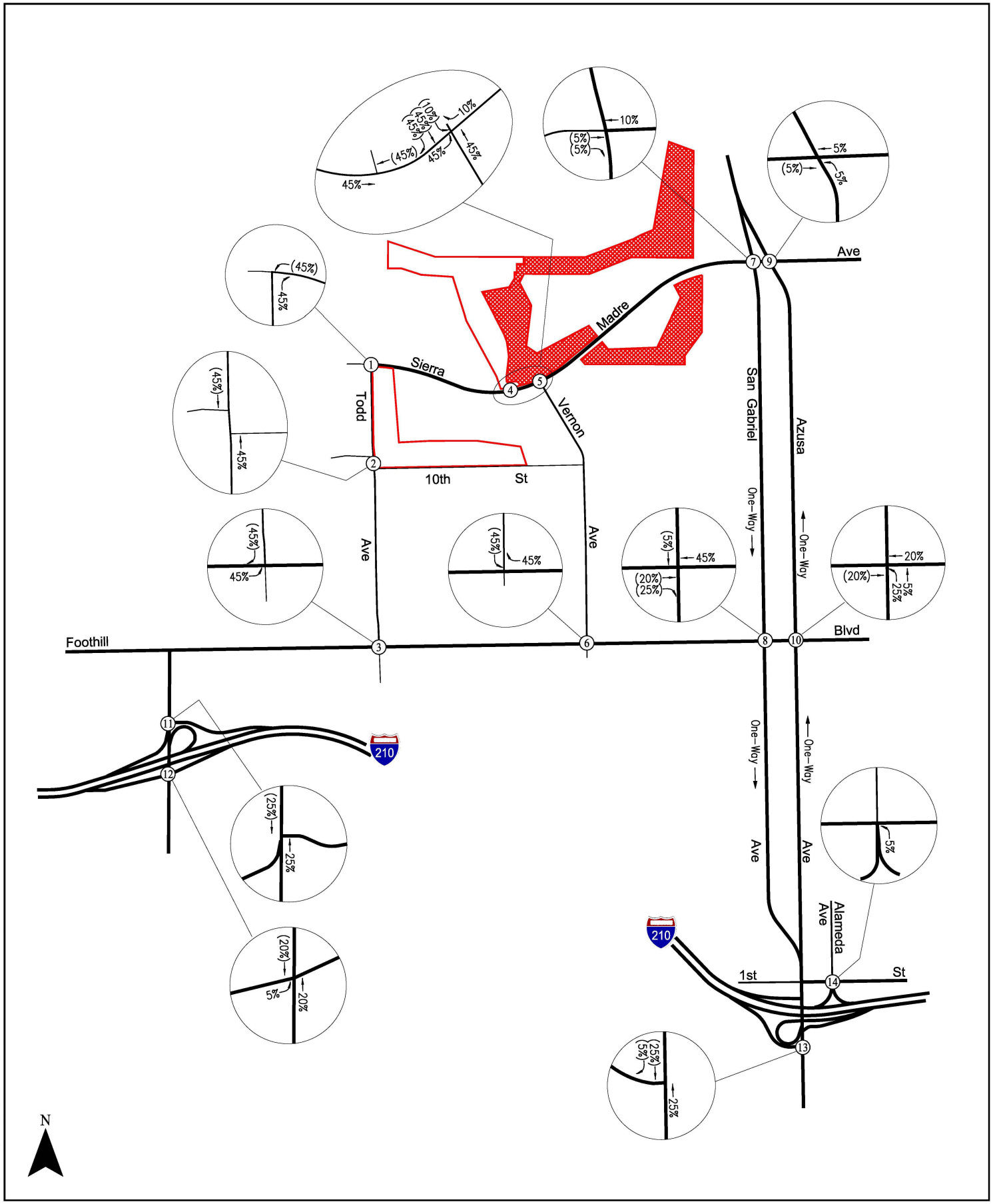
Figure 4
Project Trip Distribution
Senior Housing Component
Azusa Greens Redevelopment Project



Project Site

(#) Study Intersection

Figure 5
Project Trip Distribution
Industrial Component
Azusa Greens Redevelopment Project



Project Site

Study Intersection

Figure 6
Project Trip Distribution
Golf Course Component
Azusa Greens Redevelopment Project

Table 1
PROJECT TRIP GENERATION FORECAST

TRIP GENERATION RATES [1]									
	ITE			WEEKDAY AM PEAK HOUR			WEEKDAY PM PEAK HOUR		
ITE LAND USE CATEGORY	LAND USE CODE	VARIABLE	WEEKDAY DAILY	IN (%)	OUT (%)	TOTAL	IN (%)	OUT (%)	TOTAL
General Light Industrial	110	Per 1,000 SF	4.87	88%	12%	0.74	14%	86%	0.65
General Light Industrial (Trucks)	110-T	Per 1,000 SF	0.25	60%	40%	0.01	50%	50%	0.01
Senior Adult Housing - Single-Family	251	Per Dwelling Unit	4.31	33%	67%	0.24	61%	39%	0.30
Senior Adult Housing - Multifamily	252	Per Dwelling Unit	3.24	34%	66%	0.20	56%	44%	0.25
Golf Course	430	Per Hole	30.38	79%	21%	1.76	53%	47%	2.91

PROJECT TRIP GENERATION FORECAST									
	ITE		DAILY	AM PEAK HOUR VOLUMES [2]			PM PEAK HOUR VOLUMES [2]		
LAND USE	LAND USE CODE	SIZE	TRIP ENDS [2] VOLUMES	IN	OUT	TOTAL	IN	OUT	TOTAL
Senior Housing Component									
Senior Housing - Multifamily Units	252	150 DU	486	10	20	30	21	17	38
Senior Housing - Duplex and Triplex Units	251	80 DU	345	6	13	19	15	9	24
Subtotal Senior Housing Component			***831***	***16***	***33***	***49***	***36***	***26***	***62***
Industrial Component									
[A] Light Industrial (All Vehicle Trip Ends)	110	350,320 GSF	***1,706***	228	31	259	32	196	228
[B] - Truck Trip Ends	110-T		88	2	2	4	2	2	4
- 2-Axle (32.7% of All Trucks) [3]				1	1	2	1	1	2
- 3-Axle (17.9% of All Trucks) [3]				0	0	0	0	0	0
- 4+-Axle (49.4% of All Trucks) [3]				1	1	2	1	1	2
- 2-Axle (1.5 PCE)				2	2	4	2	2	4
- 3-Axle (2.0 PCE)				0	0	0	0	0	0
- 4-Axle (3.0 PCE)				3	3	6	3	3	6
[C] Subtotal Trucks (PCE Adjusted)				***5***	***5***	***10***	***5***	***5***	***10***
[A-B] - Passenger Car Trip Ends				***226***	***29***	***255***	***30***	***194***	***224***
Subtotal Industrial Component [4]			***1,706***	***231***	***34***	***265***	***35***	***199***	***234***
Golf Course Component									
Azusa Greens Golf Course	430	9 Holes	273	13	3	16	14	12	26
Subtotal Golf Course Component			***273***	***13***	***3***	***16***	***14***	***12***	***26***
NET NEW PROJECT TRIPS			***2,810***	***260***	***70***	***330***	***85***	***237***	***322***

[1] Source: ITE "Trip Generation Manual", 11th Edition, 2021.
[2] Trips are one-way traffic movements, entering or leaving.
[3] Based on information contained in the "Truck Trip Generation Study for City of Fontana, County of San Bernardino, State of California" prepared by Transportation Engineering and Planning, Inc., August 2003 for Light Industrial land uses. A PCE factor of 1.5 was applied to all 2-axle trucks, while a PCE factor of 2.0 was applied to all 3-axle trucks and a PCE factor of 3.0 was applied to all 4 or more axle trucks.
[4] The daily trip subtotal represents all daily vehicle trip ends ([A]), while the weekday AM and PM peak hour trip subtotals represent the sum of the passenger vehicle trip ends and the PCE-adjusted truck trip ends ([A-B] + [C]).

APPENDIX B

VEHICLE, PEDESTRIAN, AND BICYCLE COUNT DATA

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
(951) 268-6268

City of Azusa
N/S: Todd Avenue
E/W: Sierra Madre Avenue
Weather: Clear

File Name : 03_AZU_Todd_SM AM
Site Code : 05723545
Start Date : 5/24/2023
Page No : 1

Groups Printed- Total Volume

	Todd Avenue Southbound				Sierra Madre Avenue Westbound				Todd Avenue Northbound				Sierra Madre Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	0	0	0	0	289	5	0	294	12	0	30	42	0	1	4	5	341
07:15 AM	0	0	0	0	271	6	0	277	8	0	22	30	0	0	1	1	308
07:30 AM	0	0	0	0	228	2	0	230	7	0	47	54	0	1	3	4	288
07:45 AM	0	0	0	0	213	8	0	221	8	0	44	52	0	1	4	5	278
Total	0	0	0	0	1001	21	0	1022	35	0	143	178	0	3	12	15	1215
08:00 AM	0	0	0	0	207	4	0	211	9	0	57	66	0	2	7	9	286
08:15 AM	0	0	0	0	199	3	0	202	14	0	60	74	0	0	3	3	279
08:30 AM	0	0	0	0	153	4	0	157	12	0	55	67	0	1	8	9	233
08:45 AM	0	0	0	0	147	1	0	148	18	0	66	84	0	0	4	4	236
Total	0	0	0	0	706	12	0	718	53	0	238	291	0	3	22	25	1034
Grand Total	0	0	0	0	1707	33	0	1740	88	0	381	469	0	6	34	40	2249
Apprch %	0	0	0		98.1	1.9	0		18.8	0	81.2		0	15	85		
Total %	0	0	0	0	75.9	1.5	0	77.4	3.9	0	16.9	20.9	0	0.3	1.5	1.8	

	Todd Avenue Southbound				Sierra Madre Avenue Westbound				Todd Avenue Northbound				Sierra Madre Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	0	0	0	0	**289**	5	0	**294**	**12**	0	30	42	0	**1**	**4**	**5**	**341**
07:15 AM	0	0	0	0	271	6	0	277	8	0	22	30	0	0	1	1	308
07:30 AM	0	0	0	0	228	2	0	230	7	0	**47**	**54**	0	1	3	4	288
07:45 AM	0	0	0	0	213	**8**	0	221	8	0	44	52	0	1	4	5	278
Total Volume	0	0	0	0	1001	21	0	1022	35	0	143	178	0	3	12	15	1215
% App. Total	0	0	0		97.9	2.1	0		19.7	0	80.3		0	20	80		
PHF	.000	.000	.000	.000	.866	.656	.000	.869	.729	.000	.761	.824	.000	.750	.750	.750	.891

Counts Unlimited, Inc.
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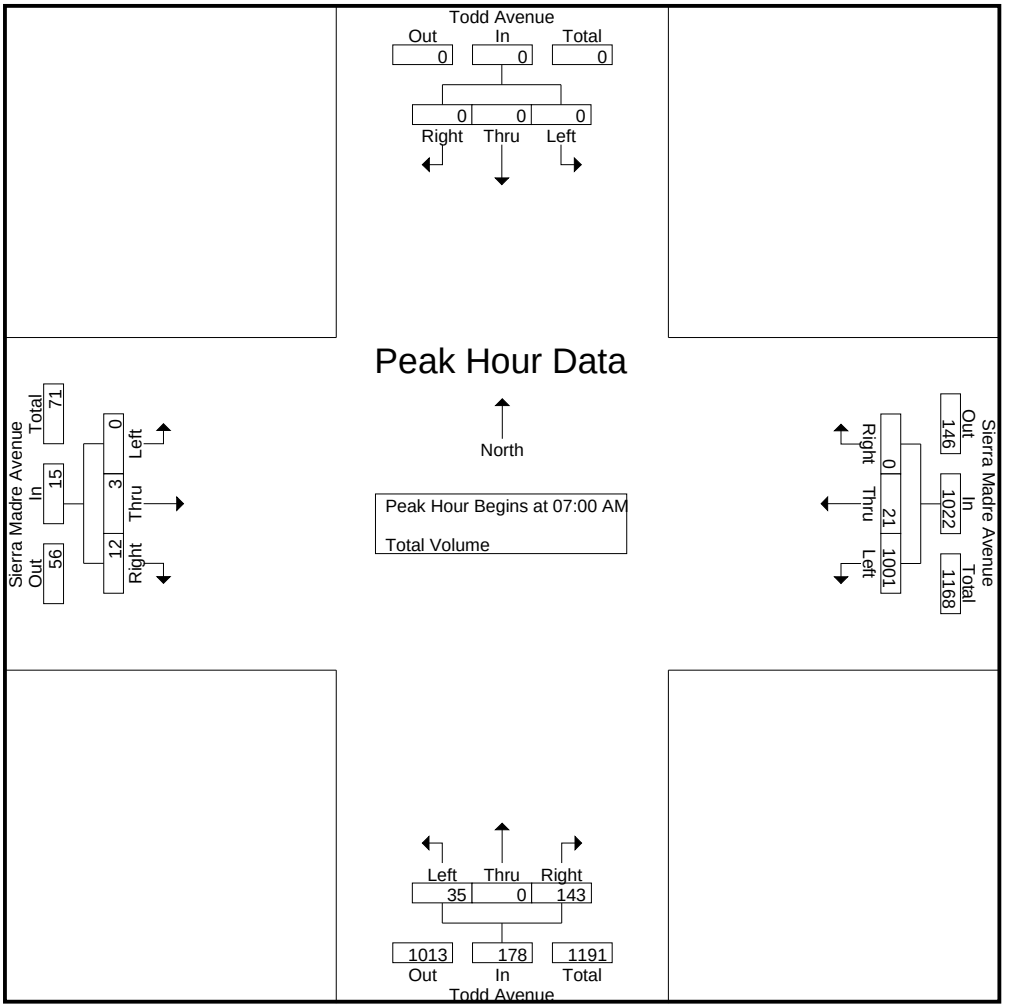
City of Azusa
N/S: Todd Avenue
E/W: Sierra Madre Avenue
Weather: Clear

File Name : 03_AZU_Todd_SM AM
Site Code : 05723545
Start Date : 5/24/2023
Page No : 2



Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:00 AM				07:00 AM				08:00 AM				07:45 AM			
+0 mins.	0	0	0	0	**289**	5	0	**294**	9	0	57	66	0	1	4	5
+15 mins.	0	0	0	0	271	6	0	277	14	0	60	74	0	**2**	7	**9**
+30 mins.	0	0	0	0	228	2	0	230	12	0	55	67	0	0	3	3
+45 mins.	0	0	0	0	213	**8**	0	221	**18**	0	**66**	**84**	0	1	**8**	9
Total Volume	0	0	0	0	1001	21	0	1022	53	0	238	291	0	4	22	26
% App. Total	0	0	0		97.9	2.1	0		18.2	0	81.8		0	15.4	84.6	
PHF	.000	.000	.000	.000	.866	.656	.000	.869	.736	.000	.902	.866	.000	.500	.688	.722

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City of Azusa
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E/W: Sierra Madre Avenue
Weather: Clear

File Name : 03_AZU_Todd_SM PM
Site Code : 05723545
Start Date : 5/24/2023
Page No : 1

Groups Printed- Total Volume

	Todd Avenue Southbound				Sierra Madre Avenue Westbound				Todd Avenue Northbound				Sierra Madre Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	0	0	0	0	52	0	0	52	4	0	146	150	0	9	12	21	223
04:15 PM	0	0	0	0	69	0	0	69	4	0	158	162	0	3	10	13	244
04:30 PM	0	0	0	0	44	0	0	44	0	0	152	152	0	8	11	19	215
04:45 PM	0	0	0	0	51	1	0	52	2	0	147	149	0	3	9	12	213
Total	0	0	0	0	216	1	0	217	10	0	603	613	0	23	42	65	895
05:00 PM	0	0	0	0	54	3	0	57	0	0	170	170	0	8	12	20	247
05:15 PM	0	0	0	0	55	0	0	55	3	0	147	150	0	3	7	10	215
05:30 PM	0	0	0	0	49	1	0	50	5	0	148	153	0	4	9	13	216
05:45 PM	0	0	0	0	59	2	0	61	3	0	142	145	0	6	5	11	217
Total	0	0	0	0	217	6	0	223	11	0	607	618	0	21	33	54	895
Grand Total	0	0	0	0	433	7	0	440	21	0	1210	1231	0	44	75	119	1790
Apprch %	0	0	0		98.4	1.6	0		1.7	0	98.3		0	37	63		
Total %	0	0	0	0	24.2	0.4	0	24.6	1.2	0	67.6	68.8	0	2.5	4.2	6.6	

	Todd Avenue Southbound				Sierra Madre Avenue Westbound				Todd Avenue Northbound				Sierra Madre Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:15 PM																	
04:15 PM	0	0	0	0	**69**	0	0	**69**	**4**	0	158	162	0	3	10	13	244
04:30 PM	0	0	0	0	44	0	0	44	0	0	152	152	0	**8**	11	19	215
04:45 PM	0	0	0	0	51	1	0	52	2	0	147	149	0	3	9	12	213
05:00 PM	0	0	0	0	54	**3**	0	57	0	0	**170**	**170**	0	8	**12**	**20**	**247**
Total Volume	0	0	0	0	218	4	0	222	6	0	627	633	0	22	42	64	919
% App. Total	0	0	0		98.2	1.8	0		0.9	0	99.1		0	34.4	65.6		
PHF	.000	.000	.000	.000	.790	.333	.000	.804	.375	.000	.922	.931	.000	.688	.875	.800	.930

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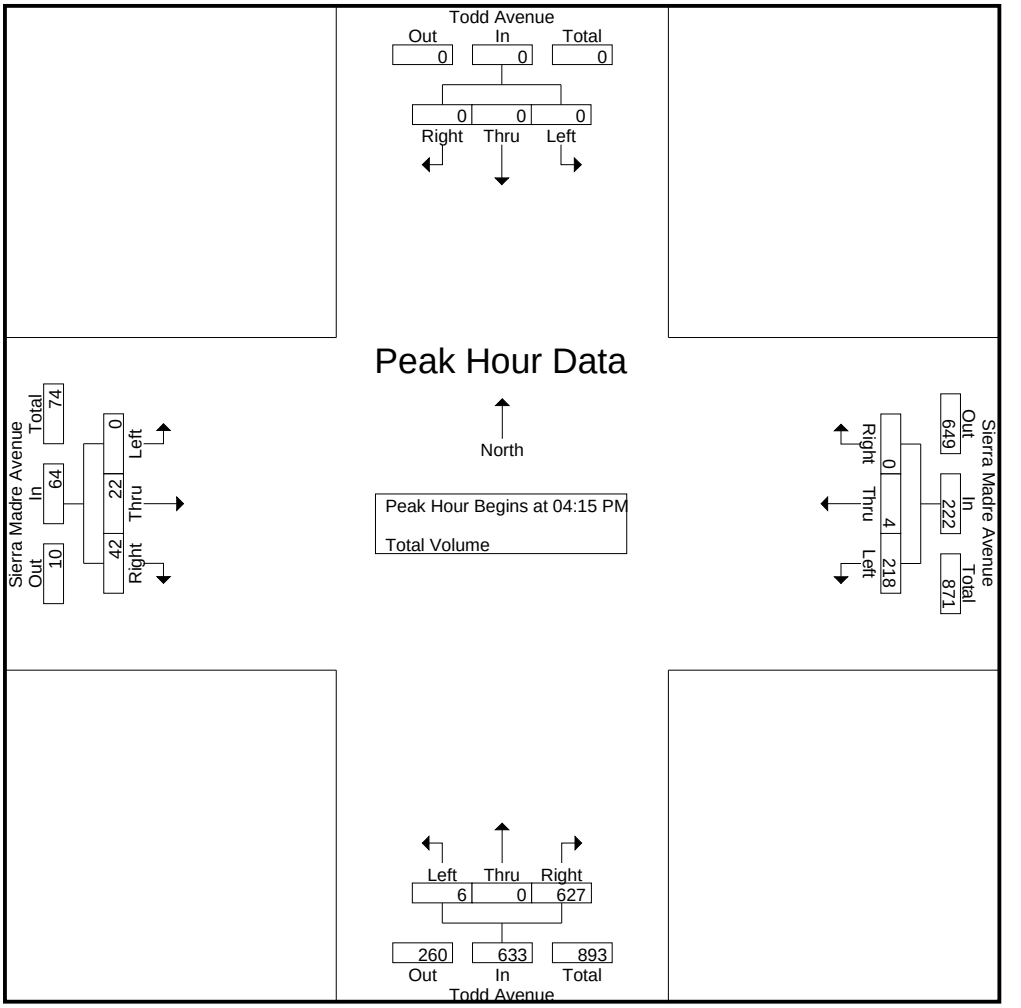

Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:00 PM				05:00 PM				04:15 PM				04:00 PM			
+0 mins.	0	0	0	0	54	**3**	0	57	**4**	0	158	162	0	**9**	**12**	**21**
+15 mins.	0	0	0	0	55	0	0	55	0	0	152	152	0	3	10	13
+30 mins.	0	0	0	0	49	1	0	50	2	0	147	149	0	8	11	19
+45 mins.	0	0	0	0	**59**	2	0	**61**	0	0	**170**	**170**	0	3	9	12
Total Volume	0	0	0	0	217	6	0	223	6	0	627	633	0	23	42	65
% App. Total	0	0	0		97.3	2.7	0		0.9	0	99.1		0	35.4	64.6	
PHF	.000	.000	.000	.000	.919	.500	.000	.914	.375	.000	.922	.931	.000	.639	.875	.774

Location: Azusa
N/S: Todd Avenue
E/W: Sierra Madre Avenue

Date: 5/24/2023
Day: Wednesday

PEDESTRIANS

	North Leg Todd Avenue	East Leg Sierra Madre Avenue	South Leg Todd Avenue	West Leg Sierra Madre Avenue	
	Pedestrians	Pedestrians	Pedestrians	Pedestrians	
7:00 AM	0	1	0	0	1
7:15 AM	0	0	0	0	0
7:30 AM	0	0	0	0	0
7:45 AM	0	0	0	0	0
8:00 AM	0	0	0	0	0
8:15 AM	0	0	0	0	0
8:30 AM	0	0	0	0	0
8:45 AM	0	0	0	0	0
TOTAL VOLUMES:	0	1	0	0	1

	North Leg Todd Avenue	East Leg Sierra Madre Avenue	South Leg Todd Avenue	West Leg Sierra Madre Avenue	
	Pedestrians	Pedestrians	Pedestrians	Pedestrians	
4:00 PM	0	0	0	0	0
4:15 PM	0	2	0	0	2
4:30 PM	0	0	0	0	0
4:45 PM	0	0	0	0	0
5:00 PM	0	0	0	0	0
5:15 PM	0	0	0	1	1
5:30 PM	0	0	0	2	2
5:45 PM	0	0	0	0	0
TOTAL VOLUMES:	0	2	0	3	5

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
951-268-6268

Location: Azusa
N/S: Todd Avenue
E/W: Sierra Madre Avenue

Date: 5/24/2023
Day: Wednesday

BICYCLES

	Southbound Todd Avenue			Westbound Sierra Madre Avenue			Northbound Todd Avenue			Eastbound Sierra Madre Avenue			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
7:00 AM	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
7:30 AM	0	0	0	0	0	0	1	0	0	0	0	0	1
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES:	0	0	0	0	0	0	1	0	0	0	0	0	1

	Southbound Todd Avenue			Westbound Sierra Madre Avenue			Northbound Todd Avenue			Eastbound Sierra Madre Avenue			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
4:00 PM	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
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES:	0	0	0	0	0	0	0	0	0	0	0	0	0

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City of Azusa
N/S: Todd Avenue
E/W: Lagunitas Way/10th Street
Weather: Clear

File Name : 04_AZU_Todd_10th AM
Site Code : 05723545
Start Date : 5/24/2023
Page No : 1

Groups Printed- Total Volume

	Todd Avenue Southbound				10th Street Westbound				Todd Avenue Northbound				Lagunitas Way Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	0	279	0	279	20	0	0	20	0	49	16	65	0	0	0	0	364
07:15 AM	0	278	0	278	24	2	2	28	2	32	11	45	1	0	0	1	352
07:30 AM	0	233	1	234	26	0	0	26	0	53	6	59	0	0	0	0	319
07:45 AM	1	216	0	217	24	0	2	26	1	55	19	75	0	0	2	2	320
Total	1	1006	1	1008	94	2	4	100	3	189	52	244	1	0	2	3	1355
08:00 AM	1	205	0	206	31	0	0	31	1	71	13	85	0	0	0	0	322
08:15 AM	0	210	1	211	29	2	3	34	12	81	24	117	0	0	1	1	363
08:30 AM	0	160	1	161	24	0	0	24	10	81	9	100	0	0	1	1	286
08:45 AM	0	151	1	152	7	0	0	7	0	99	9	108	1	0	1	2	269
Total	1	726	3	730	91	2	3	96	23	332	55	410	1	0	3	4	1240
Grand Total	2	1732	4	1738	185	4	7	196	26	521	107	654	2	0	5	7	2595
Apprch %	0.1	99.7	0.2		94.4	2	3.6		4	79.7	16.4		28.6	0	71.4		
Total %	0.1	66.7	0.2	67	7.1	0.2	0.3	7.6	1	20.1	4.1	25.2	0.1	0	0.2	0.3	

	Todd Avenue Southbound				10th Street Westbound				Todd Avenue Northbound				Lagunitas Way Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	0	**279**	0	**279**	20	0	0	20	0	49	16	65	0	0	0	0	**364**
07:15 AM	0	278	0	278	24	**2**	**2**	**28**	**2**	32	11	45	**1**	0	0	1	352
07:30 AM	0	233	**1**	234	**26**	0	0	26	0	53	6	59	0	0	0	0	319
07:45 AM	**1**	216	0	217	24	0	2	26	1	**55**	**19**	**75**	0	0	**2**	**2**	320
Total Volume	1	1006	1	1008	94	2	4	100	3	189	52	244	1	0	2	3	1355
% App. Total	0.1	99.8	0.1		94	2	4		1.2	77.5	21.3		33.3	0	66.7		
PHF	.250	.901	.250	.903	.904	.250	.500	.893	.375	.859	.684	.813	.250	.000	.250	.375	.931

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File Name : 04_AZU_Todd_10th AM
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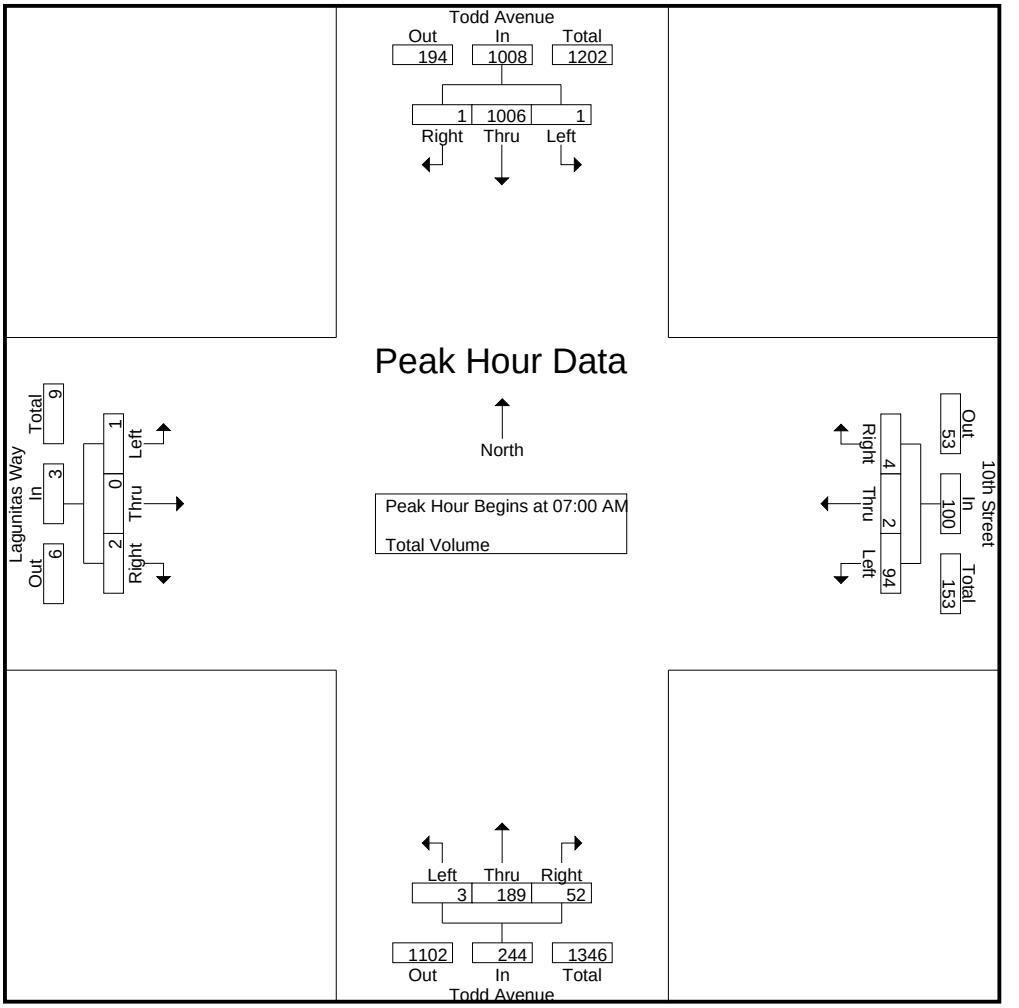

Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:00 AM				07:30 AM				08:00 AM				07:45 AM			
+0 mins.	0	**279**	0	**279**	26	0	0	26	1	71	13	85	0	0	**2**	**2**
+15 mins.	0	278	0	278	24	0	2	26	**12**	81	**24**	**117**	0	0	0	0
+30 mins.	0	233	**1**	234	**31**	0	0	31	10	81	9	100	0	0	1	1
+45 mins.	**1**	216	0	217	29	**2**	**3**	**34**	0	**99**	9	108	0	0	1	1
Total Volume	1	1006	1	1008	110	2	5	117	23	332	55	410	0	0	4	4
% App. Total	0.1	99.8	0.1		94	1.7	4.3		5.6	81	13.4		0	0	100	
PHF	.250	.901	.250	.903	.887	.250	.417	.860	.479	.838	.573	.876	.000	.000	.500	.500

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File Name : 04_AZU_Todd_10th PM
Site Code : 05723545
Start Date : 5/24/2023
Page No : 1

Groups Printed- Total Volume

	Todd Avenue Southbound				10th Street Westbound				Todd Avenue Northbound				Lagunitas Way Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	1	69	0	70	17	1	0	18	1	149	19	169	0	0	2	2	259
04:15 PM	1	80	0	81	5	0	1	6	0	158	16	174	0	0	2	2	263
04:30 PM	0	56	0	56	16	0	2	18	1	150	24	175	0	1	1	2	251
04:45 PM	0	63	0	63	20	0	1	21	2	155	19	176	0	0	1	1	261
Total	2	268	0	270	58	1	4	63	4	612	78	694	0	1	6	7	1034
05:00 PM	1	70	0	71	11	0	1	12	2	166	12	180	0	0	11	11	274
05:15 PM	0	71	0	71	6	0	1	7	1	153	20	174	0	1	1	2	254
05:30 PM	1	71	0	72	8	1	0	9	0	151	15	166	0	0	6	6	253
05:45 PM	1	71	0	72	8	0	0	8	1	146	13	160	0	0	2	2	242
Total	3	283	0	286	33	1	2	36	4	616	60	680	0	1	20	21	1023
Grand Total	5	551	0	556	91	2	6	99	8	1228	138	1374	0	2	26	28	2057
Apprch %	0.9	99.1	0		91.9	2	6.1		0.6	89.4	10		0	7.1	92.9		
Total %	0.2	26.8	0	27	4.4	0.1	0.3	4.8	0.4	59.7	6.7	66.8	0	0.1	1.3	1.4	

	Todd Avenue Southbound				10th Street Westbound				Todd Avenue Northbound				Lagunitas Way Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:15 PM																	
04:15 PM	**1**	**80**	0	**81**	5	0	1	6	0	158	16	174	0	0	2	2	263
04:30 PM	0	56	0	56	16	0	**2**	18	1	150	**24**	175	0	**1**	1	2	251
04:45 PM	0	63	0	63	**20**	0	1	**21**	**2**	155	19	176	0	0	1	1	261
05:00 PM	1	70	0	71	11	0	1	12	2	**166**	12	**180**	0	0	**11**	**11**	**274**
Total Volume	2	269	0	271	52	0	5	57	5	629	71	705	0	1	15	16	1049
% App. Total	0.7	99.3	0		91.2	0	8.8		0.7	89.2	10.1		0	6.2	93.8		
PHF	.500	.841	.000	.836	.650	.000	.625	.679	.625	.947	.740	.979	.000	.250	.341	.364	.957

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City of Azusa
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File Name : 04_AZU_Todd_10th PM
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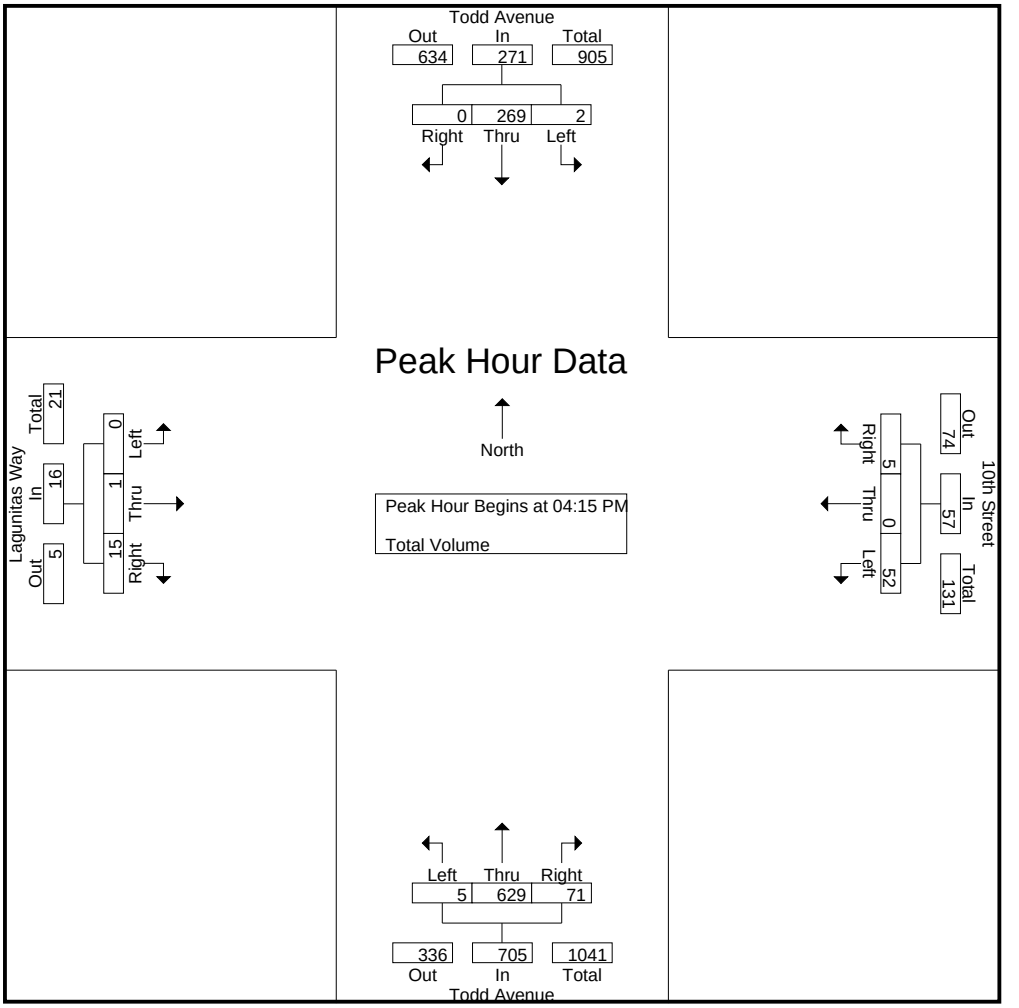

Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	05:00 PM				04:00 PM				04:15 PM				05:00 PM			
+0 mins.	**1**	70	0	71	17	**1**	0	18	0	158	16	174	0	0	**11**	**11**
+15 mins.	0	**71**	0	71	5	0	1	6	1	150	**24**	175	0	**1**	1	2
+30 mins.	1	71	0	**72**	16	0	**2**	18	**2**	155	19	176	0	0	6	6
+45 mins.	1	71	0	72	**20**	0	1	**21**	2	**166**	12	**180**	0	0	2	2
Total Volume	3	283	0	286	58	1	4	63	5	629	71	705	0	1	20	21
% App. Total	1	99	0		92.1	1.6	6.3		0.7	89.2	10.1		0	4.8	95.2	
PHF	.750	.996	.000	.993	.725	.250	.500	.750	.625	.947	.740	.979	.000	.250	.455	.477

Location: Azusa
N/S: Todd Avenue
E/W: Lagunitas Way/10th Street

Date: 5/24/2023
Day: Wednesday

PEDESTRIANS

	North Leg Todd Avenue	East Leg 10th Street	South Leg Todd Avenue	West Leg Lagunitas Way	
	Pedestrians	Pedestrians	Pedestrians	Pedestrians	
7:00 AM	0	0	0	0	0
7:15 AM	0	0	0	0	0
7:30 AM	0	0	1	1	2
7:45 AM	0	0	0	0	0
8:00 AM	0	0	1	2	3
8:15 AM	0	1	0	0	1
8:30 AM	0	0	2	1	3
8:45 AM	0	0	1	0	1
TOTAL VOLUMES:	0	1	5	4	10

	North Leg Todd Avenue	East Leg 10th Street	South Leg Todd Avenue	West Leg Lagunitas Way	
	Pedestrians	Pedestrians	Pedestrians	Pedestrians	
4:00 PM	0	0	0	0	0
4:15 PM	0	0	2	0	2
4:30 PM	1	0	0	1	2
4:45 PM	0	0	0	0	0
5:00 PM	0	0	0	0	0
5:15 PM	0	0	1	1	2
5:30 PM	2	0	0	2	4
5:45 PM	0	0	0	0	0
TOTAL VOLUMES:	3	0	3	4	10

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Location: Azusa
N/S: Todd Avenue
E/W: Lagunitas Way/10th Street

Date: 5/24/2023
Day: Wednesday

BICYCLES

	Southbound Todd Avenue			Westbound 10th Street			Northbound Todd Avenue			Eastbound Lagunitas Way			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
7:00 AM	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
7:30 AM	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
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	1	0	0	0	0	1
TOTAL VOLUMES:	0	0	0	0	0	0	0	1	0	0	0	0	1

	Southbound Todd Avenue			Westbound 10th Street			Northbound Todd Avenue			Eastbound Lagunitas Way			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
4:00 PM	0	0	0	0	0	0	0	0	1	0	0	0	1
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	1	0	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	1
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	1	0	0	0	0	0	0	0	1	2
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES:	1	1	0	1	0	0	0	0	1	0	0	1	5

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City of Azusa
N/S: Todd Avenue
E/W: Foothill Boulevard (Rt 66)
Weather: Clear

File Name : 05_AZU_Todd_Foot AM
Site Code : 05723545
Start Date : 5/24/2023
Page No : 1

Groups Printed- Total Volume

	Todd Avenue Southbound				Foothill Boulevard Westbound				Todd Avenue Northbound				Foothill Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	6	17	264	287	5	250	8	263	56	8	6	70	56	75	16	147	767
07:15 AM	7	15	281	303	8	246	9	263	36	2	8	46	38	77	11	126	738
07:30 AM	10	11	197	218	5	119	4	128	42	3	9	54	65	84	25	174	574
07:45 AM	22	39	141	202	0	104	1	105	53	4	7	64	73	105	23	201	572
Total	45	82	883	1010	18	719	22	759	187	17	30	234	232	341	75	648	2651
08:00 AM	28	42	156	226	1	102	3	106	69	3	7	79	87	113	22	222	633
08:15 AM	14	28	197	239	1	103	3	107	52	11	8	71	108	103	27	238	655
08:30 AM	8	11	229	248	6	234	7	247	64	7	14	85	95	121	32	248	828
08:45 AM	10	15	152	177	5	173	10	188	50	9	16	75	99	128	27	254	694
Total	60	96	734	890	13	612	23	648	235	30	45	310	389	465	108	962	2810
Grand Total	105	178	1617	1900	31	1331	45	1407	422	47	75	544	621	806	183	1610	5461
Apprch %	5.5	9.4	85.1		2.2	94.6	3.2		77.6	8.6	13.8		38.6	50.1	11.4		
Total %	1.9	3.3	29.6	34.8	0.6	24.4	0.8	25.8	7.7	0.9	1.4	10	11.4	14.8	3.4	29.5	

	Todd Avenue Southbound				Foothill Boulevard Westbound				Todd Avenue Northbound				Foothill Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 08:00 AM																	
08:00 AM	**28**	**42**	156	226	1	102	3	106	**69**	3	7	79	87	113	22	222	633
08:15 AM	14	28	197	239	1	103	3	107	52	**11**	8	71	**108**	103	27	238	655
08:30 AM	8	11	**229**	**248**	**6**	**234**	7	**247**	64	7	14	**85**	95	121	**32**	248	**828**
08:45 AM	10	15	152	177	5	173	**10**	188	50	9	**16**	75	99	**128**	27	**254**	694
Total Volume	60	96	734	890	13	612	23	648	235	30	45	310	389	465	108	962	2810
% App. Total	6.7	10.8	82.5		2	94.4	3.5		75.8	9.7	14.5		40.4	48.3	11.2		
PHF	.536	.571	.801	.897	.542	.654	.575	.656	.851	.682	.703	.912	.900	.908	.844	.947	.848

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City of Azusa
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File Name : 05_AZU_Todd_Foot AM
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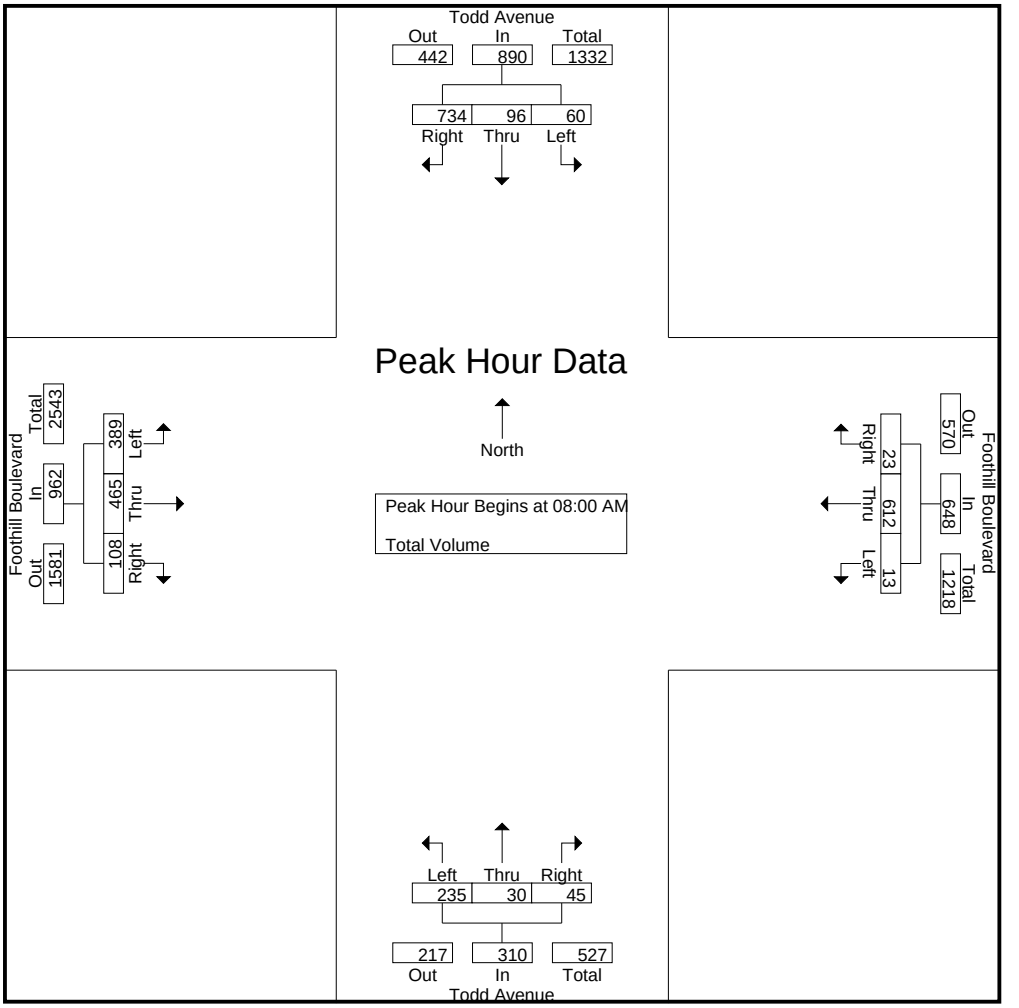

Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:00 AM				07:00 AM				08:00 AM				08:00 AM			
+0 mins.	6	17	264	287	5	**250**	8	**263**	**69**	3	7	79	87	113	22	222
+15 mins.	7	15	**281**	**303**	**8**	246	**9**	263	52	**11**	8	71	**108**	103	27	238
+30 mins.	10	11	197	218	5	119	4	128	64	7	14	**85**	95	121	**32**	248
+45 mins.	**22**	**39**	141	202	0	104	1	105	50	9	**16**	75	99	**128**	27	**254**
Total Volume	45	82	883	1010	18	719	22	759	235	30	45	310	389	465	108	962
% App. Total	4.5	8.1	87.4		2.4	94.7	2.9		75.8	9.7	14.5		40.4	48.3	11.2	
PHF	.511	.526	.786	.833	.563	.719	.611	.721	.851	.682	.703	.912	.900	.908	.844	.947

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City of Azusa
N/S: Todd Avenue
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File Name : 05_AZU_Todd_Foot PM
Site Code : 05723545
Start Date : 5/24/2023
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Groups Printed- Total Volume

	Todd Avenue Southbound				Foothill Boulevard Westbound				Todd Avenue Northbound				Foothill Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	10	4	87	101	15	115	6	136	81	13	26	120	177	276	25	478	835
04:15 PM	6	10	79	95	21	64	6	91	70	11	24	105	178	232	27	437	728
04:30 PM	4	7	125	136	15	77	6	98	87	19	23	129	144	261	30	435	798
04:45 PM	4	4	103	111	20	88	8	116	91	10	21	122	161	239	29	429	778
Total	24	25	394	443	71	344	26	441	329	53	94	476	660	1008	111	1779	3139
05:00 PM	20	6	107	133	20	86	4	110	78	14	43	135	157	248	38	443	821
05:15 PM	10	7	103	120	15	75	5	95	76	9	26	111	172	274	33	479	805
05:30 PM	15	8	104	127	21	82	5	108	89	8	36	133	153	196	18	367	735
05:45 PM	6	3	87	96	25	84	3	112	88	15	28	131	147	266	28	441	780
Total	51	24	401	476	81	327	17	425	331	46	133	510	629	984	117	1730	3141
Grand Total	75	49	795	919	152	671	43	866	660	99	227	986	1289	1992	228	3509	6280
Apprch %	8.2	5.3	86.5		17.6	77.5	5		66.9	10	23		36.7	56.8	6.5		
Total %	1.2	0.8	12.7	14.6	2.4	10.7	0.7	13.8	10.5	1.6	3.6	15.7	20.5	31.7	3.6	55.9	

	Todd Avenue Southbound				Foothill Boulevard Westbound				Todd Avenue Northbound				Foothill Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:30 PM																	
04:30 PM	4	**7**	**125**	**136**	15	77	6	98	87	**19**	23	129	144	261	30	435	798
04:45 PM	4	4	103	111	**20**	**88**	**8**	**116**	**91**	10	21	122	161	239	29	429	778
05:00 PM	**20**	6	107	133	20	86	4	110	78	14	**43**	**135**	157	248	**38**	443	**821**
05:15 PM	10	7	103	120	15	75	5	95	76	9	26	111	**172**	**274**	33	**479**	805
Total Volume	38	24	438	500	70	326	23	419	332	52	113	497	634	1022	130	1786	3202
% App. Total	7.6	4.8	87.6		16.7	77.8	5.5		66.8	10.5	22.7		35.5	57.2	7.3		
PHF	.475	.857	.876	.919	.875	.926	.719	.903	.912	.684	.657	.920	.922	.932	.855	.932	.975

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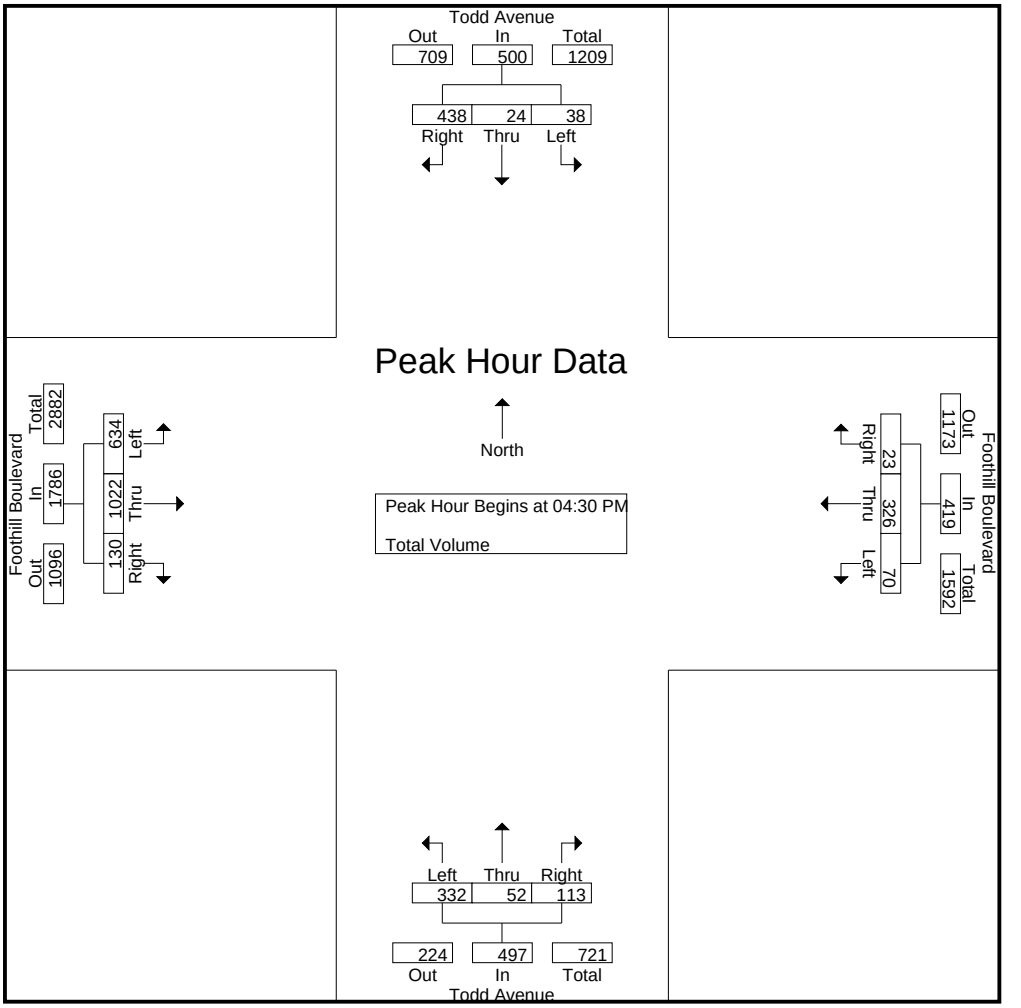
City of Azusa
N/S: Todd Avenue
E/W: Foothill Boulevard (Rt 66)
Weather: Clear

File Name : 05_AZU_Todd_Foot PM
Site Code : 05723545
Start Date : 5/24/2023
Page No : 2



Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:30 PM				04:00 PM				05:00 PM				04:30 PM			
+0 mins.	4	**7**	**125**	**136**	15	**115**	6	**136**	78	14	**43**	**135**	144	261	30	435
+15 mins.	4	4	103	111	**21**	64	6	91	76	9	26	111	161	239	29	429
+30 mins.	**20**	6	107	133	15	77	6	98	**89**	8	36	133	157	248	**38**	443
+45 mins.	10	7	103	120	20	88	**8**	116	88	**15**	28	131	**172**	**274**	33	**479**
Total Volume	38	24	438	500	71	344	26	441	331	46	133	510	634	1022	130	1786
% App. Total	7.6	4.8	87.6		16.1	78	5.9		64.9	9	26.1		35.5	57.2	7.3	
PHF	.475	.857	.876	.919	.845	.748	.813	.811	.930	.767	.773	.944	.922	.932	.855	.932

Location: Azusa
N/S: Todd Avenue
E/W: Foothill Boulevard

Date: 5/24/2023
Day: Wednesday

PEDESTRIANS

	North Leg Todd Avenue	East Leg Foothill Boulevard	South Leg Todd Avenue	West Leg Foothill Boulevard	
	Pedestrians	Pedestrians	Pedestrians	Pedestrians	
7:00 AM	0	0	0	0	0
7:15 AM	0	1	1	0	2
7:30 AM	0	2	2	0	4
7:45 AM	0	4	2	0	6
8:00 AM	1	2	4	0	7
8:15 AM	1	0	1	0	2
8:30 AM	0	0	0	0	0
8:45 AM	0	1	0	0	1
TOTAL VOLUMES:	2	10	10	0	22

	North Leg Todd Avenue	East Leg Foothill Boulevard	South Leg Todd Avenue	West Leg Foothill Boulevard	
	Pedestrians	Pedestrians	Pedestrians	Pedestrians	
4:00 PM	0	1	3	0	4
4:15 PM	0	1	2	0	3
4:30 PM	1	4	1	0	6
4:45 PM	0	0	0	0	0
5:00 PM	0	3	2	0	5
5:15 PM	0	2	3	0	5
5:30 PM	0	2	0	0	2
5:45 PM	1	1	0	0	2
TOTAL VOLUMES:	2	14	11	0	27

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Location: Azusa
N/S: Todd Avenue
E/W: Foothill Boulevard

Date: 5/24/2023
Day: Wednesday

BICYCLES

	Southbound Todd Avenue			Westbound Foothill Boulevard			Northbound Todd Avenue			Eastbound Foothill Boulevard			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
7:00 AM	0	0	0	0	0	0	0	0	0	0	1	0	1
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	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
8:00 AM	0	0	0	1	0	0	0	0	0	0	0	0	1
8:15 AM	0	0	0	0	0	0	0	0	0	0	1	0	1
8:30 AM	0	0	0	0	0	0	1	0	0	0	0	0	1
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES:	0	0	0	1	0	0	1	0	0	0	2	0	4

	Southbound Todd Avenue			Westbound Foothill Boulevard			Northbound Todd Avenue			Eastbound Foothill Boulevard			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
4:00 PM	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
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	1	0	0	0	0	0	0	0	1
5:00 PM	1	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	1	0	1
5:30 PM	0	0	0	0	0	0	0	0	0	0	1	0	1
5:45 PM	0	0	0	0	1	0	0	0	0	0	0	0	1
TOTAL VOLUMES:	1	0	0	0	2	0	0	0	0	0	2	0	5

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City of Azusa
N/S: Le Med Apts Driveway
E/W: Sierra Madre Avenue
Weather: Clear

File Name : 06_AZU_LMA DW_SM AM
Site Code : 05723545
Start Date : 5/24/2023
Page No : 1

Groups Printed- Total Volume

	Sierra Madre Avenue Westbound			Le Med Apartments Driveway Northbound			Sierra Madre Avenue Eastbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
07:00 AM	1	283	284	6	2	8	37	0	37	329
07:15 AM	0	251	251	8	2	10	37	0	37	298
07:30 AM	0	222	222	2	7	9	55	1	56	287
07:45 AM	0	214	214	5	0	5	56	1	57	276
Total	1	970	971	21	11	32	185	2	187	1190
08:00 AM	1	219	220	3	7	10	70	2	72	302
08:15 AM	2	192	194	4	0	4	71	3	74	272
08:30 AM	1	152	153	1	1	2	60	1	61	216
08:45 AM	2	140	142	3	1	4	56	1	57	203
Total	6	703	709	11	9	20	257	7	264	993
Grand Total	7	1673	1680	32	20	52	442	9	451	2183
Apprch %	0.4	99.6		61.5	38.5		98	2		
Total %	0.3	76.6	77	1.5	0.9	2.4	20.2	0.4	20.7	

	Sierra Madre Avenue Westbound			Le Med Apartments Driveway Northbound			Sierra Madre Avenue Eastbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 07:00 AM										
07:00 AM	**1**	**283**	**284**	6	2	8	37	0	37	**329**
07:15 AM	0	251	251	**8**	2	**10**	37	0	37	298
07:30 AM	0	222	222	2	**7**	9	55	**1**	56	287
07:45 AM	0	214	214	5	0	5	**56**	1	**57**	276
Total Volume	1	970	971	21	11	32	185	2	187	1190
% App. Total	0.1	99.9		65.6	34.4		98.9	1.1		
PHF	.250	.857	.855	.656	.393	.800	.826	.500	.820	.904

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City of Azusa
N/S: Le Med Apts Driveway
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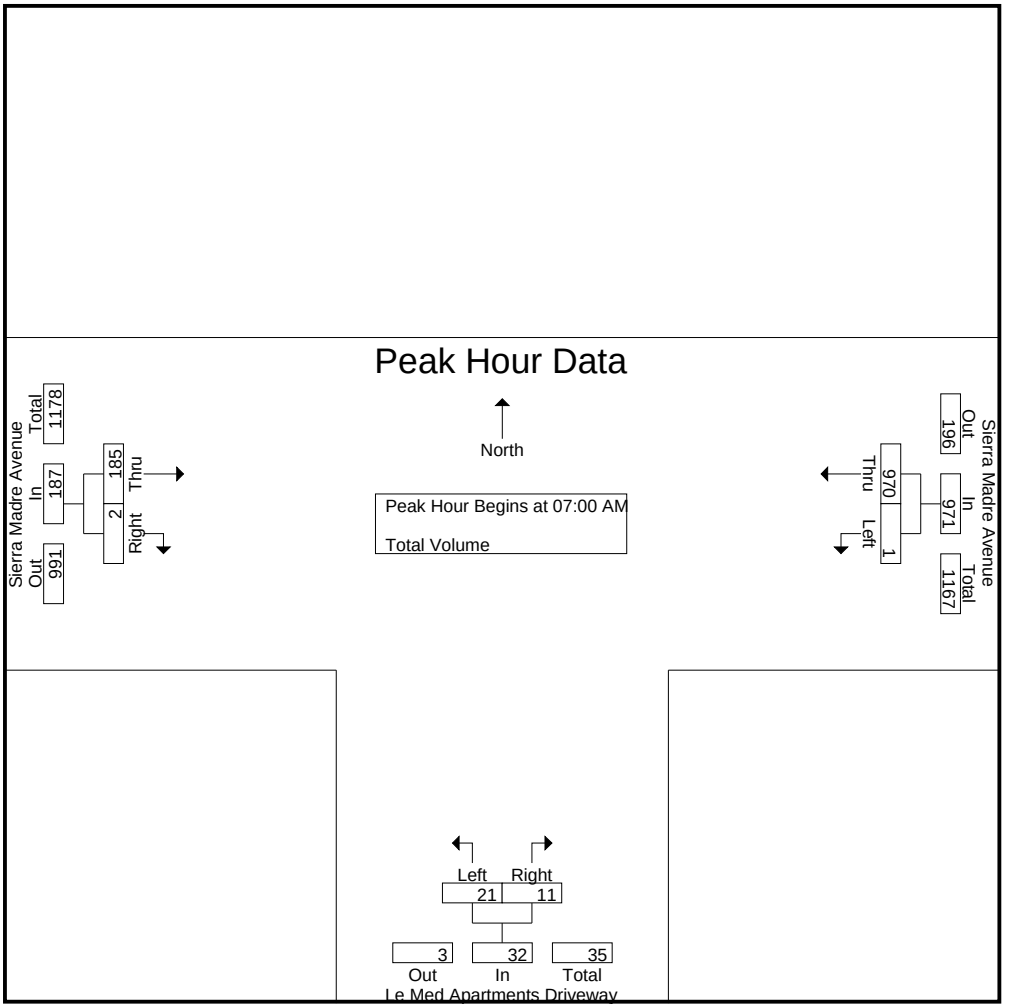
Weather: Clear

File Name : 06_AZU_LMA DW_SM AM
Site Code : 05723545
Start Date : 5/24/2023
Page No : 2



Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:00 AM			07:15 AM			07:45 AM		
+0 mins.	**1**	**283**	**284**	**8**	2	**10**	56	1	57
+15 mins.	0	251	251	2	**7**	9	70	2	72
+30 mins.	0	222	222	5	0	5	**71**	**3**	**74**
+45 mins.	0	214	214	3	7	10	60	1	61
Total Volume	1	970	971	18	16	34	257	7	264
% App. Total	0.1	99.9		52.9	47.1		97.3	2.7	
PHF	.250	.857	.855	.563	.571	.850	.905	.583	.892

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City of Azusa
N/S: Le Med Apts Driveway
E/W: Sierra Madre Avenue
Weather: Clear

File Name : 06_AZU_LMA DW_SM PM
Site Code : 05723545
Start Date : 5/24/2023
Page No : 1

Groups Printed- Total Volume

	Sierra Madre Avenue Westbound			Le Med Apartments Driveway Northbound			Sierra Madre Avenue Eastbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
04:00 PM	1	51	52	3	3	6	159	2	161	219
04:15 PM	3	65	68	3	1	4	154	6	160	232
04:30 PM	4	40	44	2	2	4	159	2	161	209
04:45 PM	2	54	56	2	1	3	150	3	153	212
Total	10	210	220	10	7	17	622	13	635	872
05:00 PM	4	58	62	2	2	4	171	3	174	240
05:15 PM	1	63	64	1	0	1	153	3	156	221
05:30 PM	1	59	60	1	0	1	153	6	159	220
05:45 PM	3	72	75	0	3	3	138	6	144	222
Total	9	252	261	4	5	9	615	18	633	903
Grand Total	19	462	481	14	12	26	1237	31	1268	1775
Apprch %	4	96		53.8	46.2		97.6	2.4		
Total %	1.1	26	27.1	0.8	0.7	1.5	69.7	1.7	71.4	

	Sierra Madre Avenue Westbound			Le Med Apartments Driveway Northbound			Sierra Madre Avenue Eastbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 05:00 PM										
05:00 PM	**4**	58	62	**2**	2	**4**	**171**	3	**174**	**240**
05:15 PM	1	63	64	1	0	1	153	3	156	221
05:30 PM	1	59	60	1	0	1	153	**6**	159	220
05:45 PM	3	**72**	**75**	0	**3**	3	138	6	144	222
Total Volume	9	252	261	4	5	9	615	18	633	903
% App. Total	3.4	96.6		44.4	55.6		97.2	2.8		
PHF	.563	.875	.870	.500	.417	.563	.899	.750	.909	.941

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City of Azusa
N/S: Le Med Apts Driveway
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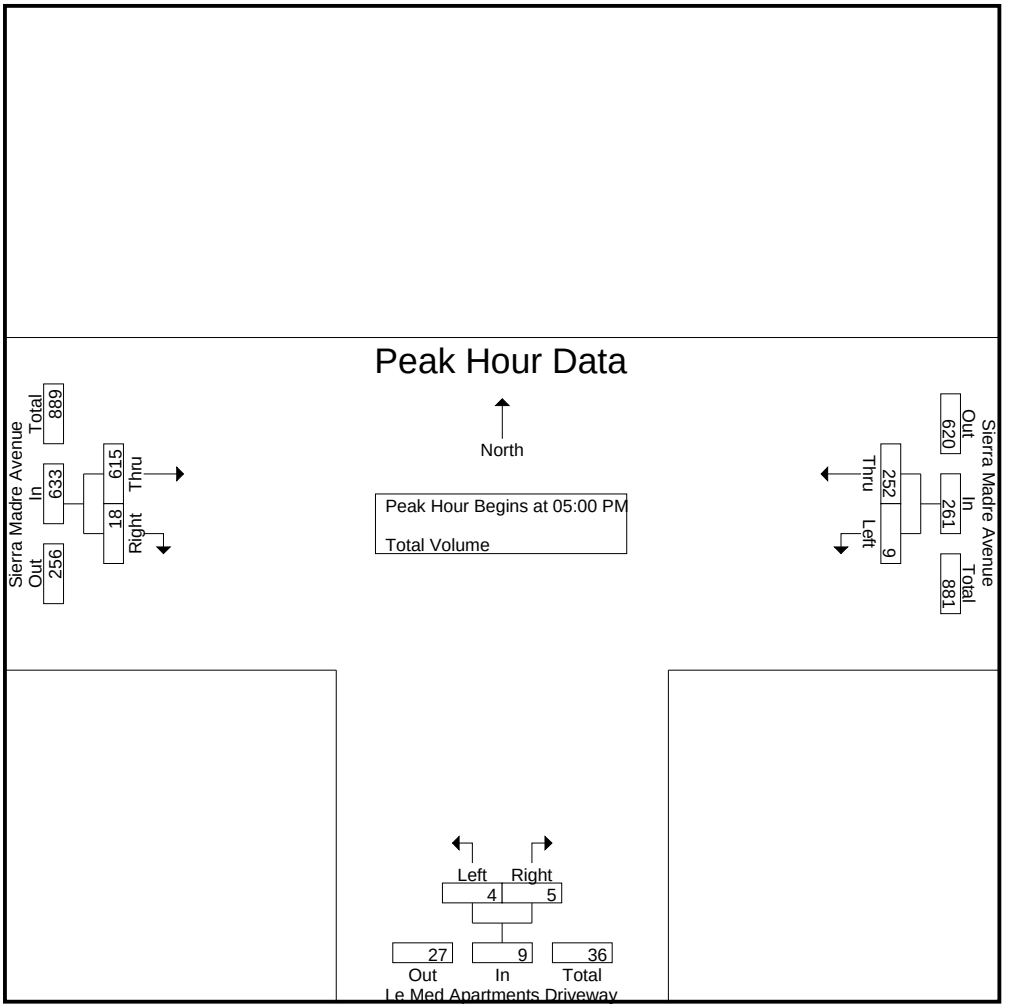
File Name : 06_AZU_LMA DW_SM PM
Site Code : 05723545
Start Date : 5/24/2023
Page No : 2



Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	05:00 PM			04:00 PM			04:15 PM		
+0 mins.	**4**	58	62	**3**	**3**	**6**	154	**6**	160
+15 mins.	1	63	64	3	1	4	159	2	161
+30 mins.	1	59	60	2	2	4	150	3	153
+45 mins.	3	**72**	**75**	2	1	3	**171**	3	**174**
Total Volume	9	252	261	10	7	17	634	14	648
% App. Total	3.4	96.6		58.8	41.2		97.8	2.2	
PHF	.563	.875	.870	.833	.583	.708	.927	.583	.931

Location: Azusa
N/S: Le Med Apts Driveway
E/W: Sierra Madre Avenue

Date: 5/24/2023
Day: Wednesday

PEDESTRIANS

	North Leg Dead End	East Leg Sierra Madre Avenue	South Leg Le Med Apts Driveway	West Leg Sierra Madre Avenue	
	Pedestrians	Pedestrians	Pedestrians	Pedestrians	
7:00 AM	0	0	1	0	1
7:15 AM	0	0	1	0	1
7:30 AM	0	0	0	0	0
7:45 AM	0	0	3	0	3
8:00 AM	0	0	1	0	1
8:15 AM	0	0	1	0	1
8:30 AM	0	0	0	0	0
8:45 AM	0	0	0	0	0
TOTAL VOLUMES:	0	0	7	0	7

	North Leg Dead End	East Leg Sierra Madre Avenue	South Leg Le Med Apts Driveway	West Leg Sierra Madre Avenue	
	Pedestrians	Pedestrians	Pedestrians	Pedestrians	
4:00 PM	0	0	0	0	0
4:15 PM	0	0	0	0	0
4:30 PM	0	1	0	1	2
4:45 PM	0	0	0	1	1
5:00 PM	0	1	0	0	1
5:15 PM	0	0	0	0	0
5:30 PM	0	0	0	0	0
5:45 PM	0	0	0	0	0
TOTAL VOLUMES:	0	2	0	2	4

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Location: Azusa
N/S: Le Med Apts Driveway
E/W: Sierra Madre Avenue

Date: 5/24/2023
Day: Wednesday

BICYCLES

	Southbound Dead End			Westbound Sierra Madre Avenue			Northbound Le Med Apts Driveway			Eastbound Sierra Madre Avenue			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	2	0	0	0	0	0	0	0	2
7:30 AM	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
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	1	0	0	0	1
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	1	0	0	0	0	0	0	0	1
TOTAL VOLUMES:	0	0	0	0	3	0	0	0	1	0	0	0	4

	Southbound Dead End			Westbound Sierra Madre Avenue			Northbound Le Med Apts Driveway			Eastbound Sierra Madre Avenue			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
4:00 PM	0	0	0	0	0	0	0	0	0	0	2	0	2
4:15 PM	0	0	0	0	1	0	0	0	0	0	0	0	1
4:30 PM	0	0	0	0	2	0	0	0	0	0	1	0	3
4:45 PM	0	0	0	1	0	0	0	0	0	0	0	0	1
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	1	0	0	0	0	0	0	0	1
5:30 PM	0	0	0	0	0	0	1	0	0	0	0	0	1
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES:	0	0	0	1	4	0	1	0	0	0	3	0	9

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City of Azusa
N/S: Golf Course DW/Vernon Avenue
E/W: Sierra Madre Avenue
Weather: Clear

File Name : 07_AZU_Ver_SM AM
Site Code : 05723545
Start Date : 5/24/2023
Page No : 1

Groups Printed- Total Volume

	San Gabriel Jr Golf Driveway Southbound				Sierra Madre Avenue Westbound				Vernon Avenue Northbound				Sierra Madre Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	0	0	0	0	7	280	0	287	3	0	8	11	0	28	11	39	337
07:15 AM	0	0	0	0	9	252	0	261	0	0	2	2	0	24	15	39	302
07:30 AM	0	0	0	0	4	213	0	217	5	0	7	12	0	50	12	62	291
07:45 AM	0	0	0	0	15	204	0	219	7	0	11	18	0	41	13	54	291
Total	0	0	0	0	35	949	0	984	15	0	28	43	0	143	51	194	1221
08:00 AM	0	0	0	0	15	209	0	224	13	0	28	41	0	62	17	79	344
08:15 AM	0	0	0	0	8	187	0	195	6	0	12	18	0	64	7	71	284
08:30 AM	0	0	0	0	7	148	0	155	4	0	7	11	0	58	2	60	226
08:45 AM	0	0	0	0	2	141	0	143	3	0	9	12	0	54	3	57	212
Total	0	0	0	0	32	685	0	717	26	0	56	82	0	238	29	267	1066
Grand Total	0	0	0	0	67	1634	0	1701	41	0	84	125	0	381	80	461	2287
Apprch %	0	0	0		3.9	96.1	0		32.8	0	67.2		0	82.6	17.4		
Total %	0	0	0	0	2.9	71.4	0	74.4	1.8	0	3.7	5.5	0	16.7	3.5	20.2	

	San Gabriel Jr Golf Driveway Southbound				Sierra Madre Avenue Westbound				Vernon Avenue Northbound				Sierra Madre Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	0	0	0	0	9	**252**	0	**261**	0	0	2	2	0	24	15	39	302
07:30 AM	0	0	0	0	4	213	0	217	5	0	7	12	0	50	12	62	291
07:45 AM	0	0	0	0	**15**	204	0	219	7	0	11	18	0	41	13	54	291
08:00 AM	0	0	0	0	15	209	0	224	**13**	0	**28**	**41**	0	**62**	**17**	**79**	**344**
Total Volume	0	0	0	0	43	878	0	921	25	0	48	73	0	177	57	234	1228
% App. Total	0	0	0		4.7	95.3	0		34.2	0	65.8		0	75.6	24.4		
PHF	.000	.000	.000	.000	.717	.871	.000	.882	.481	.000	.429	.445	.000	.714	.838	.741	.892

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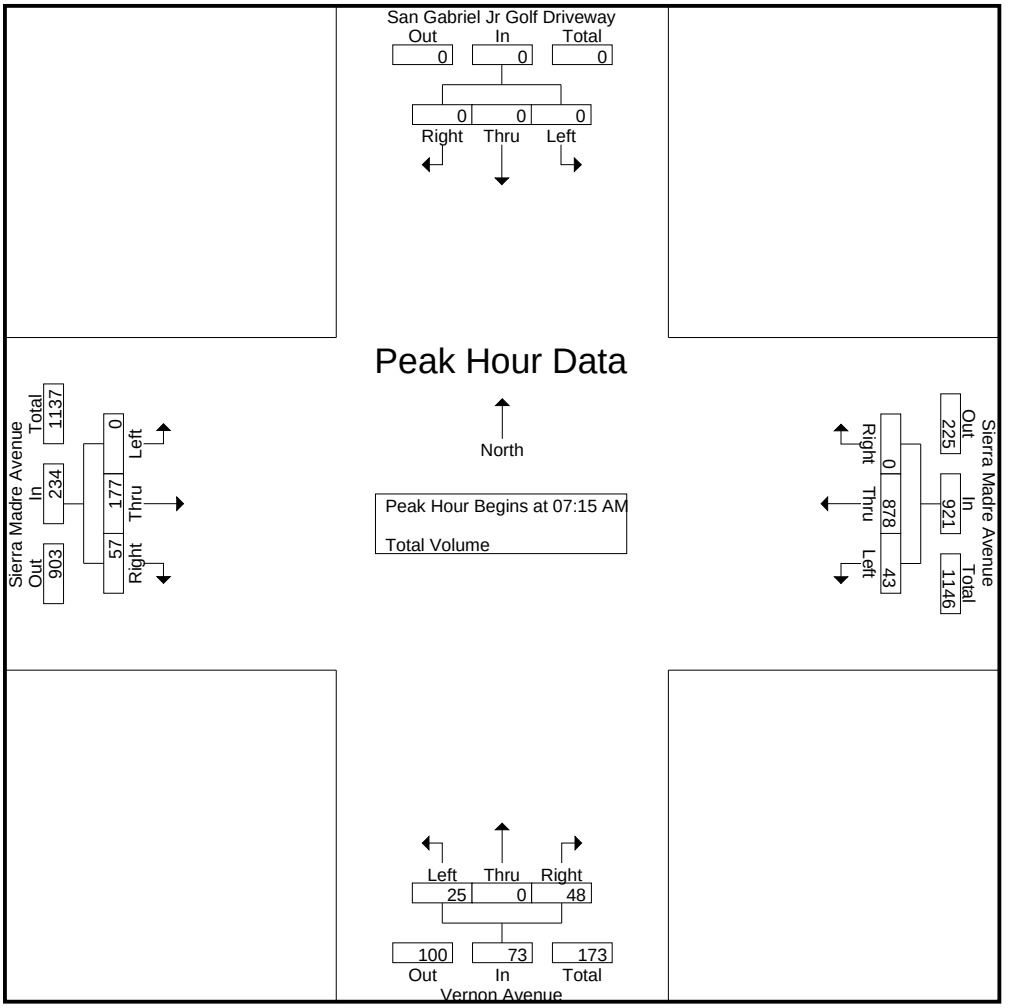
City of Azusa
N/S: Golf Course DW/Vernon Avenue
E/W: Sierra Madre Avenue
Weather: Clear

File Name : 07_AZU_Ver_SM AM
Site Code : 05723545
Start Date : 5/24/2023
Page No : 2



Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:00 AM				07:00 AM				07:30 AM				08:00 AM			
+0 mins.	0	0	0	0	7	**280**	0	**287**	5	0	7	12	0	62	**17**	**79**
+15 mins.	0	0	0	0	9	252	0	261	7	0	11	18	0	**64**	7	71
+30 mins.	0	0	0	0	4	213	0	217	**13**	0	**28**	**41**	0	58	2	60
+45 mins.	0	0	0	0	**15**	204	0	219	6	0	12	18	0	54	3	57
Total Volume	0	0	0	0	35	949	0	984	31	0	58	89	0	238	29	267
% App. Total	0	0	0		3.6	96.4	0		34.8	0	65.2		0	89.1	10.9	
PHF	.000	.000	.000	.000	.583	.847	.000	.857	.596	.000	.518	.543	.000	.930	.426	.845

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City of Azusa
N/S: Golf Course DW/Vernon Avenue
E/W: Sierra Madre Avenue
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File Name : 07_AZU_Ver_SM PM
Site Code : 05723545
Start Date : 5/24/2023
Page No : 1

Groups Printed- Total Volume

	San Gabriel Jr Golf Driveway Southbound				Sierra Madre Avenue Westbound				Vernon Avenue Northbound				Sierra Madre Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	0	0	0	0	4	41	0	45	12	0	24	36	0	149	13	162	243
04:15 PM	0	0	0	0	4	55	0	59	13	0	18	31	0	146	7	153	243
04:30 PM	0	0	0	0	7	30	0	37	11	0	18	29	0	146	15	161	227
04:45 PM	0	0	0	0	3	51	0	54	3	0	15	18	0	143	8	151	223
Total	0	0	0	0	18	177	0	195	39	0	75	114	0	584	43	627	936
05:00 PM	0	0	0	0	2	57	0	59	5	0	16	21	0	166	10	176	256
05:15 PM	0	0	0	0	12	49	0	61	12	0	20	32	0	136	10	146	239
05:30 PM	0	0	0	0	4	47	0	51	14	0	12	26	0	141	9	150	227
05:45 PM	0	0	0	0	4	65	0	69	10	0	9	19	0	129	11	140	228
Total	0	0	0	0	22	218	0	240	41	0	57	98	0	572	40	612	950
Grand Total	0	0	0	0	40	395	0	435	80	0	132	212	0	1156	83	1239	1886
Apprch %	0	0	0		9.2	90.8	0		37.7	0	62.3		0	93.3	6.7		
Total %	0	0	0	0	2.1	20.9	0	23.1	4.2	0	7	11.2	0	61.3	4.4	65.7	

	San Gabriel Jr Golf Driveway Southbound				Sierra Madre Avenue Westbound				Vernon Avenue Northbound				Sierra Madre Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 05:00 PM																	
05:00 PM	0	0	0	0	2	57	0	59	5	0	16	21	0	**166**	10	**176**	**256**
05:15 PM	0	0	0	0	**12**	49	0	61	12	0	**20**	**32**	0	136	10	146	239
05:30 PM	0	0	0	0	4	47	0	51	**14**	0	12	26	0	141	9	150	227
05:45 PM	0	0	0	0	4	**65**	0	**69**	10	0	9	19	0	129	**11**	140	228
Total Volume	0	0	0	0	22	218	0	240	41	0	57	98	0	572	40	612	950
% App. Total	0	0	0		9.2	90.8	0		41.8	0	58.2		0	93.5	6.5		
PHF	.000	.000	.000	.000	.458	.838	.000	.870	.732	.000	.713	.766	.000	.861	.909	.869	.928

Counts Unlimited, Inc.
PO Box 1178
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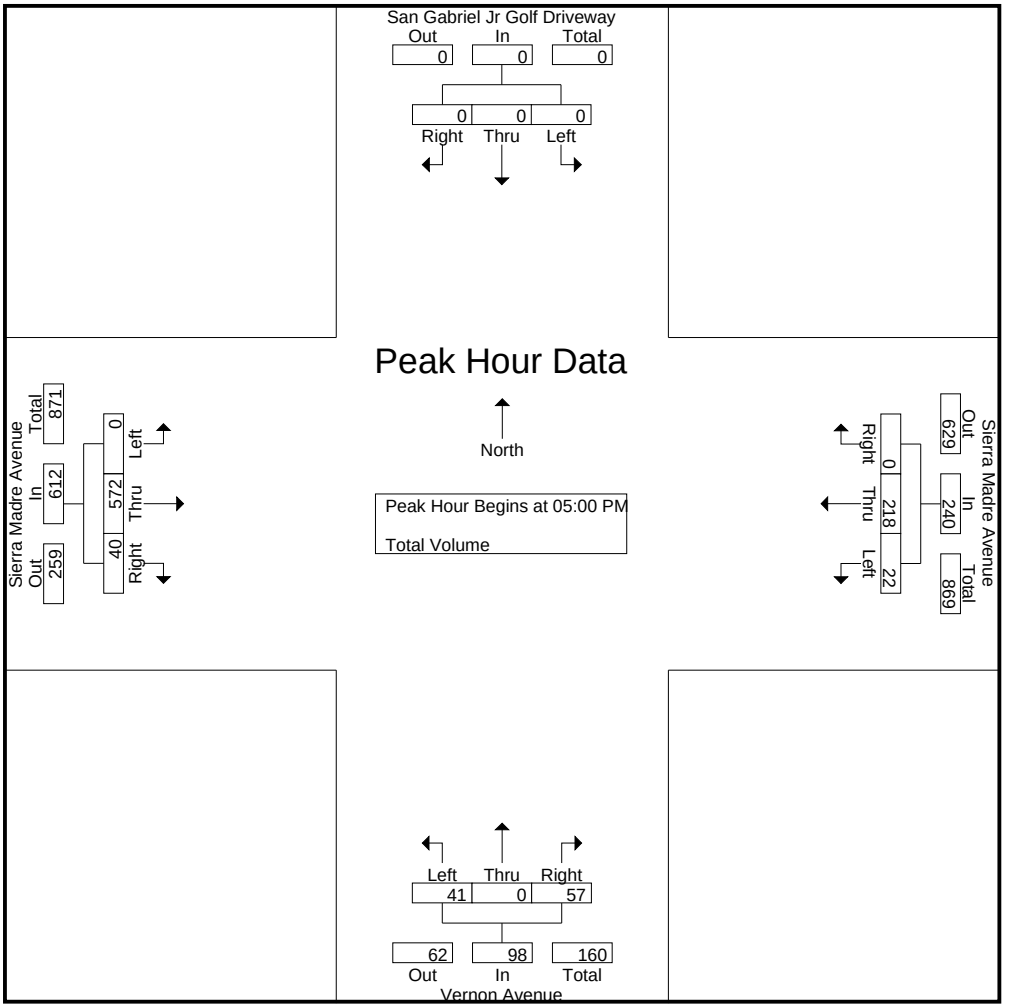
City of Azusa
N/S: Golf Course DW/Vernon Avenue
E/W: Sierra Madre Avenue
Weather: Clear

File Name : 07_AZU_Ver_SM PM
Site Code : 05723545
Start Date : 5/24/2023
Page No : 2



Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:00 PM				05:00 PM				04:00 PM				04:15 PM			
+0 mins.	0	0	0	0	2	57	0	59	12	0	**24**	**36**	0	146	7	153
+15 mins.	0	0	0	0	**12**	49	0	61	**13**	0	18	31	0	146	**15**	161
+30 mins.	0	0	0	0	4	47	0	51	11	0	18	29	0	143	8	151
+45 mins.	0	0	0	0	4	**65**	0	**69**	3	0	15	18	0	**166**	10	**176**
Total Volume	0	0	0	0	22	218	0	240	39	0	75	114	0	601	40	641
% App. Total	0	0	0		9.2	90.8	0		34.2	0	65.8		0	93.8	6.2	
PHF	.000	.000	.000	.000	.458	.838	.000	.870	.750	.000	.781	.792	.000	.905	.667	.911

Location: Azusa
N/S: Golf Course DW/Venron Ave
E/W: Sierra Madre Avenue

Date: 5/24/2023
Day: Wednesday

PEDESTRIANS

	North Leg San Gabriel Jr Golf DW	East Leg Sierra Madre Avenue	South Leg Vernon Avenue	West Leg Sierra Madre Avenue	
	Pedestrians	Pedestrians	Pedestrians	Pedestrians	
7:00 AM	0	2	0	0	2
7:15 AM	0	0	1	0	1
7:30 AM	0	0	1	0	1
7:45 AM	0	0	0	0	0
8:00 AM	0	0	0	0	0
8:15 AM	0	0	0	0	0
8:30 AM	0	0	0	1	1
8:45 AM	0	0	0	0	0
TOTAL VOLUMES:	0	2	2	1	5

	North Leg San Gabriel Jr Golf DW	East Leg Sierra Madre Avenue	South Leg Vernon Avenue	West Leg Sierra Madre Avenue	
	Pedestrians	Pedestrians	Pedestrians	Pedestrians	
4:00 PM	0	0	0	0	0
4:15 PM	0	0	0	0	0
4:30 PM	0	0	0	1	1
4:45 PM	0	0	0	1	1
5:00 PM	0	0	2	0	2
5:15 PM	0	1	1	0	2
5:30 PM	0	0	0	0	0
5:45 PM	0	0	0	1	1
TOTAL VOLUMES:	0	1	3	3	7

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Location: Azusa
N/S: Golf Course DW/Venron Ave
E/W: Sierra Madre Avenue

Date: 5/24/2023
Day: Wednesday

SCHOOL AGE PEDESTRIANS

	North Leg San Gabriel Jr Golf DW	East Leg Sierra Madre Avenue	South Leg Vernon Avenue	West Leg Sierra Madre Avenue	
	Pedestrians	Pedestrians	Pedestrians	Pedestrians	
7:00 AM	0	1	0	0	1
7:15 AM	0	0	0	0	0
7:30 AM	0	0	0	0	0
7:45 AM	0	0	0	0	0
8:00 AM	0	0	0	0	0
8:15 AM	0	0	0	0	0
8:30 AM	0	0	0	0	0
8:45 AM	0	0	0	0	0
TOTAL VOLUMES:	0	1	0	0	1

	North Leg San Gabriel Jr Golf DW	East Leg Sierra Madre Avenue	South Leg Vernon Avenue	West Leg Sierra Madre Avenue	
	Pedestrians	Pedestrians	Pedestrians	Pedestrians	
4:00 PM	0	0	0	0	0
4:15 PM	0	0	0	0	0
4:30 PM	0	0	0	0	0
4:45 PM	0	0	0	0	0
5:00 PM	0	0	0	0	0
5:15 PM	0	1	0	0	1
5:30 PM	0	0	0	0	0
5:45 PM	0	0	0	0	0
TOTAL VOLUMES:	0	1	0	0	1

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Location: Azusa
N/S: Golf Course DW/Venron Ave
E/W: Sierra Madre Avenue

Date: 5/24/2023
Day: Wednesday

BICYCLES

	Southbound San Gabriel Jr Golf DW			Westbound Sierra Madre Avenue			Northbound Vernon Avenue			Eastbound Sierra Madre Avenue			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	1	0	1	0	0	0	0	0	2
7:30 AM	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
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	1	1
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	1	0	0	0	0	0	1
TOTAL VOLUMES:	0	0	0	0	1	0	2	0	0	0	0	1	4

	Southbound San Gabriel Jr Golf DW			Westbound Sierra Madre Avenue			Northbound Vernon Avenue			Eastbound Sierra Madre Avenue			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	2	2
4:15 PM	0	0	0	0	2	0	0	0	0	0	0	0	2
4:30 PM	0	0	0	0	2	0	0	0	0	0	0	1	3
4:45 PM	0	0	0	0	0	0	1	0	0	0	0	0	1
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	1	0	0	0	0	0	1
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES:	0	0	0	0	4	0	2	0	0	0	0	3	9

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City of Azusa
N/S: Vernon Avenue
E/W: Foothill Boulevard (Rt 66)
Weather: Clear

File Name : 08_AZU_Ver_Foot AM
Site Code : 05723545
Start Date : 5/24/2023
Page No : 1

Groups Printed- Total Volume

	Vernon Avenue Southbound				Foothill Boulevard Westbound				Commercial Driveway Northbound				Foothill Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	20	0	29	49	0	250	35	285	1	0	1	2	12	35	1	48	384
07:15 AM	30	0	31	61	0	185	20	205	0	0	0	0	25	34	0	59	325
07:30 AM	33	0	29	62	0	184	25	209	0	0	0	0	29	59	0	88	359
07:45 AM	52	0	26	78	0	179	60	239	0	0	0	0	58	80	1	139	456
Total	135	0	115	250	0	798	140	938	1	0	1	2	124	208	2	334	1524
08:00 AM	60	0	36	96	0	131	86	217	0	0	1	1	55	85	1	141	455
08:15 AM	47	0	28	75	11	86	47	144	0	0	0	0	29	86	0	115	334
08:30 AM	25	0	13	38	3	165	45	213	0	0	0	0	34	79	0	113	364
08:45 AM	16	1	18	35	3	144	31	178	0	1	2	3	54	72	0	126	342
Total	148	1	95	244	17	526	209	752	0	1	3	4	172	322	1	495	1495
Grand Total	283	1	210	494	17	1324	349	1690	1	1	4	6	296	530	3	829	3019
Apprch %	57.3	0.2	42.5		1	78.3	20.7		16.7	16.7	66.7		35.7	63.9	0.4		
Total %	9.4	0	7	16.4	0.6	43.9	11.6	56	0	0	0.1	0.2	9.8	17.6	0.1	27.5	

	Vernon Avenue Southbound				Foothill Boulevard Westbound				Commercial Driveway Northbound				Foothill Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:45 AM																	
07:45 AM	52	0	26	78	0	**179**	60	**239**	0	0	0	0	**58**	80	**1**	139	**456**
08:00 AM	**60**	0	**36**	**96**	0	131	**86**	217	0	0	**1**	**1**	55	85	1	**141**	455
08:15 AM	47	0	28	75	**11**	86	47	144	0	0	0	0	29	**86**	0	115	334
08:30 AM	25	0	13	38	3	165	45	213	0	0	0	0	34	79	0	113	364
Total Volume	184	0	103	287	14	561	238	813	0	0	1	1	176	330	2	508	1609
% App. Total	64.1	0	35.9		1.7	69	29.3		0	0	100		34.6	65	0.4		
PHF	.767	.000	.715	.747	.318	.784	.692	.850	.000	.000	.250	.250	.759	.959	.500	.901	.882

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City of Azusa
N/S: Vernon Avenue
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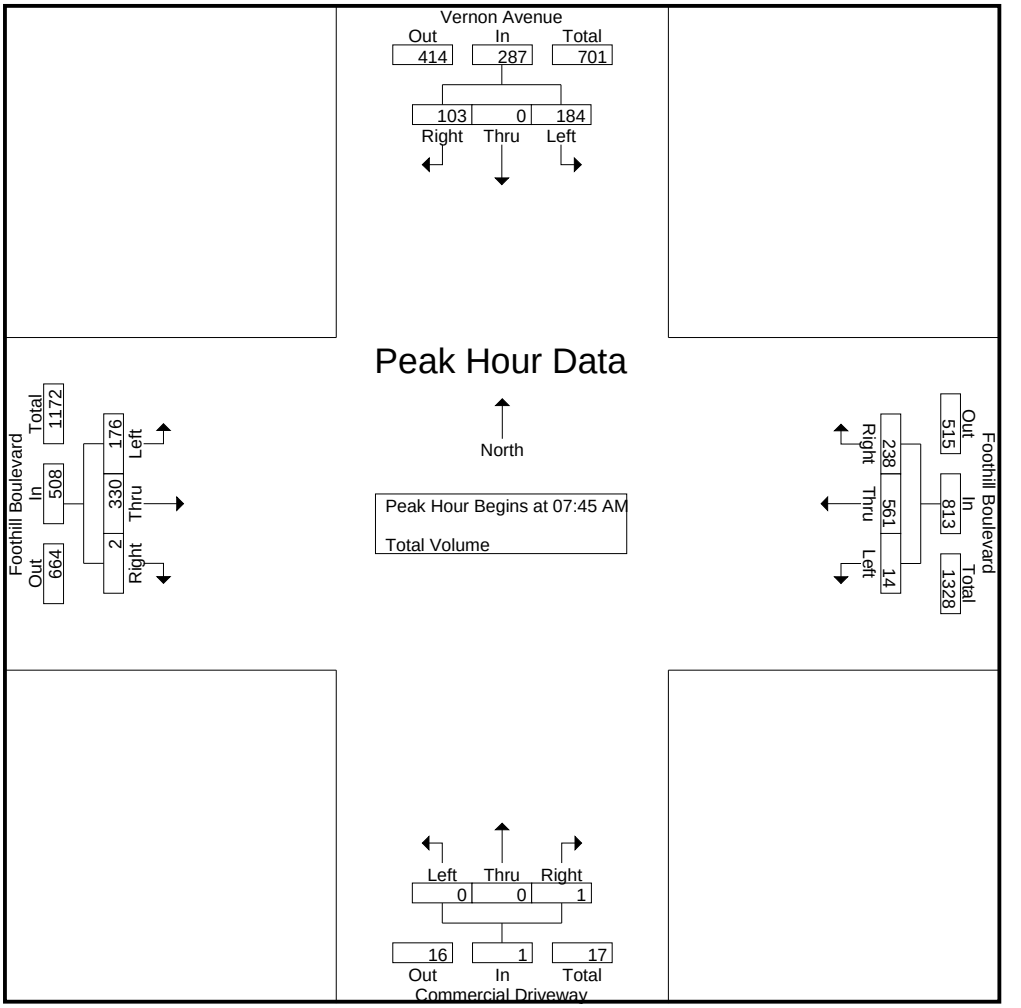
Weather: Clear

File Name : 08_AZU_Ver_Foot AM
Site Code : 05723545
Start Date : 5/24/2023



Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:30 AM				07:00 AM				08:00 AM				07:45 AM			
+0 mins.	33	0	29	62	0	**250**	35	**285**	0	0	1	1	**58**	80	**1**	139
+15 mins.	52	0	26	78	0	185	20	205	0	0	0	0	55	85	1	**141**
+30 mins.	**60**	0	**36**	**96**	0	184	25	209	0	0	0	0	29	**86**	0	115
+45 mins.	47	0	28	75	0	179	**60**	239	0	**1**	**2**	**3**	34	79	0	113
Total Volume	192	0	119	311	0	798	140	938	0	1	3	4	176	330	2	508
% App. Total	61.7	0	38.3		0	85.1	14.9		0	25	75		34.6	65	0.4	
PHF	.800	.000	.826	.810	.000	.798	.583	.823	.000	.250	.375	.333	.759	.959	.500	.901

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City of Azusa
N/S: Vernon Avenue
E/W: Foothill Boulevard (Rt 66)
Weather: Clear

File Name : 08_AZU_Ver_Foot PM
Site Code : 05723545
Start Date : 5/24/2023
Page No : 1

Groups Printed- Total Volume

	Vernon Avenue Southbound				Foothill Boulevard Westbound				Commercial Driveway Northbound				Foothill Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	46	1	32	79	1	73	25	99	1	0	5	6	55	228	1	284	468
04:15 PM	50	1	32	83	0	64	28	92	0	0	2	2	45	230	3	278	455
04:30 PM	59	1	43	103	2	87	26	115	2	0	7	9	56	203	0	259	486
04:45 PM	45	2	34	81	1	80	27	108	0	0	1	1	33	222	0	255	445
Total	200	5	141	346	4	304	106	414	3	0	15	18	189	883	4	1076	1854
05:00 PM	41	0	22	63	2	63	23	88	0	0	2	2	54	233	1	288	441
05:15 PM	34	1	27	62	2	86	30	118	1	0	4	5	41	206	0	247	432
05:30 PM	49	0	25	74	2	85	23	110	0	0	2	2	40	239	1	280	466
05:45 PM	43	0	31	74	2	51	22	75	0	0	1	1	19	222	0	241	391
Total	167	1	105	273	8	285	98	391	1	0	9	10	154	900	2	1056	1730
Grand Total	367	6	246	619	12	589	204	805	4	0	24	28	343	1783	6	2132	3584
Apprch %	59.3	1	39.7		1.5	73.2	25.3		14.3	0	85.7		16.1	83.6	0.3		
Total %	10.2	0.2	6.9	17.3	0.3	16.4	5.7	22.5	0.1	0	0.7	0.8	9.6	49.7	0.2	59.5	

	Vernon Avenue Southbound				Foothill Boulevard Westbound				Commercial Driveway Northbound				Foothill Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:00 PM																	
04:00 PM	46	1	32	79	1	73	25	99	1	0	5	6	55	228	1	**284**	468
04:15 PM	50	1	32	83	0	64	**28**	92	0	0	2	2	45	**230**	**3**	278	455
04:30 PM	**59**	1	**43**	**103**	**2**	**87**	26	**115**	**2**	0	**7**	**9**	**56**	203	0	259	**486**
04:45 PM	45	**2**	34	81	1	80	27	108	0	0	1	1	33	222	0	255	445
Total Volume	200	5	141	346	4	304	106	414	3	0	15	18	189	883	4	1076	1854
% App. Total	57.8	1.4	40.8		1	73.4	25.6		16.7	0	83.3		17.6	82.1	0.4		
PHF	.847	.625	.820	.840	.500	.874	.946	.900	.375	.000	.536	.500	.844	.960	.333	.947	.954

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City of Azusa
N/S: Vernon Avenue
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File Name : 08_AZU_Ver_Foot PM
Site Code : 05723545
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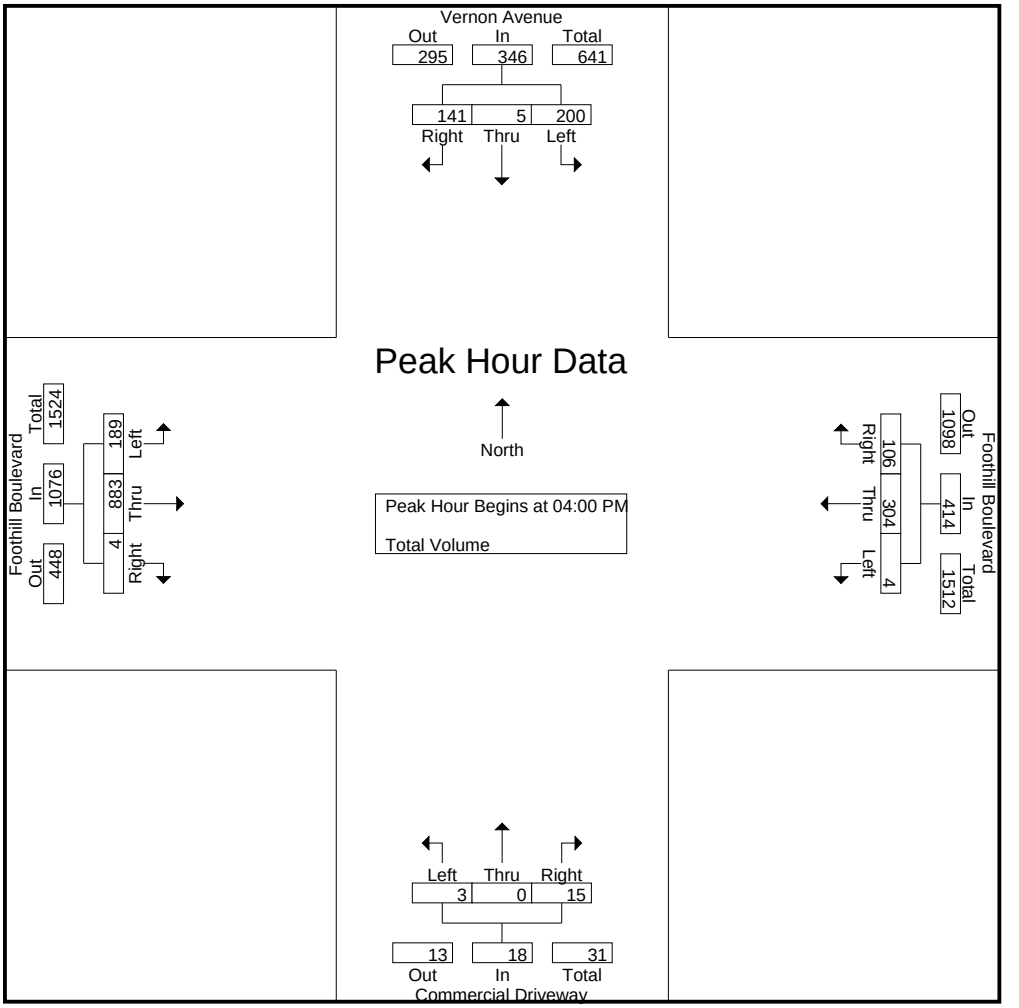

Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:00 PM				04:30 PM				04:00 PM				04:15 PM			
+0 mins.	46	1	32	79	**2**	**87**	26	115	1	0	5	6	45	230	**3**	278
+15 mins.	50	1	32	83	1	80	27	108	0	0	2	2	**56**	203	0	259
+30 mins.	**59**	1	**43**	**103**	2	63	23	88	**2**	0	**7**	**9**	33	222	0	255
+45 mins.	45	**2**	34	81	2	86	**30**	**118**	0	0	1	1	54	**233**	1	**288**
Total Volume	200	5	141	346	7	316	106	429	3	0	15	18	188	888	4	1080
% App. Total	57.8	1.4	40.8		1.6	73.7	24.7		16.7	0	83.3		17.4	82.2	0.4	
PHF	.847	.625	.820	.840	.875	.908	.883	.909	.375	.000	.536	.500	.839	.953	.333	.938

Location: Azusa
N/S: Vernon Avenue
E/W: Foothill Boulevard

Date: 5/24/2023
Day: Wednesday

PEDESTRIANS

	North Leg Vernon Avenue	East Leg Foothill Boulevard	South Leg Commercial Driveway	West Leg Foothill Boulevard	
	Pedestrians	Pedestrians	Pedestrians	Pedestrians	
7:00 AM	2	1	0	0	3
7:15 AM	0	0	2	0	2
7:30 AM	2	2	3	0	7
7:45 AM	4	1	3	0	8
8:00 AM	0	2	3	0	5
8:15 AM	1	1	0	0	2
8:30 AM	0	0	0	0	0
8:45 AM	1	1	1	0	3
TOTAL VOLUMES:	10	8	12	0	30

	North Leg Vernon Avenue	East Leg Foothill Boulevard	South Leg Commercial Driveway	West Leg Foothill Boulevard	
	Pedestrians	Pedestrians	Pedestrians	Pedestrians	
4:00 PM	2	1	1	0	4
4:15 PM	0	1	1	0	2
4:30 PM	1	1	2	0	4
4:45 PM	2	0	0	0	2
5:00 PM	0	1	3	0	4
5:15 PM	0	4	4	0	8
5:30 PM	1	2	5	0	8
5:45 PM	3	3	2	0	8
TOTAL VOLUMES:	9	13	18	0	40

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Location: Azusa
N/S: Vernon Avenue
E/W: Foothill Boulevard

Date: 5/24/2023
Day: Wednesday

BICYCLES

	Southbound Vernon Avenue			Westbound Foothill Boulevard			Northbound Commercial Driveway			Eastbound Foothill Boulevard			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
7:00 AM	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
7:30 AM	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
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0	0	1	0	1
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES:	0	0	0	0	0	0	0	0	0	0	1	0	1

	Southbound Vernon Avenue			Westbound Foothill Boulevard			Northbound Commercial Driveway			Eastbound Foothill Boulevard			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
4:00 PM	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	1	0	1
4:30 PM	0	0	0	0	1	0	0	0	0	0	0	0	1
4:45 PM	0	0	0	0	0	0	0	0	0	0	1	0	1
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	1	0	0	0	0	0	0	0	0	0	0	1	2
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	1	0	0	0	0	0	0	0	1
TOTAL VOLUMES:	1	0	0	0	2	0	0	0	0	0	2	1	6

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City of Azusa
N/S: San Gabriel Avenue
E/W: Sierra Madre Avenue
Weather: Clear

File Name : 09_AZU_San G_SM AM
Site Code : 05723545
Start Date : 5/24/2023
Page No : 1

Groups Printed- Total Volume

	San Gabriel Avenue Southbound				Sierra Madre Avenue Westbound				San Gabriel Avenue Northbound				Sierra Madre Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	3	29	39	71	16	229	0	245	0	0	0	0	0	35	16	51	367
07:15 AM	10	20	41	71	20	192	0	212	0	0	0	0	0	22	26	48	331
07:30 AM	8	40	34	82	20	168	0	188	0	0	0	0	0	40	30	70	340
07:45 AM	21	32	23	76	31	176	0	207	0	0	0	0	0	55	17	72	355
Total	42	121	137	300	87	765	0	852	0	0	0	0	0	152	89	241	1393
08:00 AM	27	32	23	82	31	183	0	214	0	0	0	0	0	66	35	101	397
08:15 AM	11	35	30	76	26	141	0	167	0	0	0	0	0	66	22	88	331
08:30 AM	8	26	29	63	37	136	0	173	0	0	0	0	0	47	23	70	306
08:45 AM	11	20	20	51	21	115	0	136	0	0	0	0	0	50	15	65	252
Total	57	113	102	272	115	575	0	690	0	0	0	0	0	229	95	324	1286
Grand Total	99	234	239	572	202	1340	0	1542	0	0	0	0	0	381	184	565	2679
Apprch %	17.3	40.9	41.8		13.1	86.9	0		0	0	0		0	67.4	32.6		
Total %	3.7	8.7	8.9	21.4	7.5	50	0	57.6	0	0	0	0	0	14.2	6.9	21.1	

	San Gabriel Avenue Southbound				Sierra Madre Avenue Westbound				San Gabriel Avenue Northbound				Sierra Madre Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	10	20	**41**	71	20	**192**	0	212	0	0	0	0	0	22	26	48	331
07:30 AM	8	**40**	34	**82**	20	168	0	188	0	0	0	0	0	40	30	70	340
07:45 AM	21	32	23	76	**31**	176	0	207	0	0	0	0	0	55	17	72	355
08:00 AM	**27**	32	23	82	31	183	0	**214**	0	0	0	0	0	**66**	**35**	**101**	**397**
Total Volume	66	124	121	311	102	719	0	821	0	0	0	0	0	183	108	291	1423
% App. Total	21.2	39.9	38.9		12.4	87.6	0		0	0	0		0	62.9	37.1		
PHF	.611	.775	.738	.948	.823	.936	.000	.959	.000	.000	.000	.000	.000	.693	.771	.720	.896

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City of Azusa
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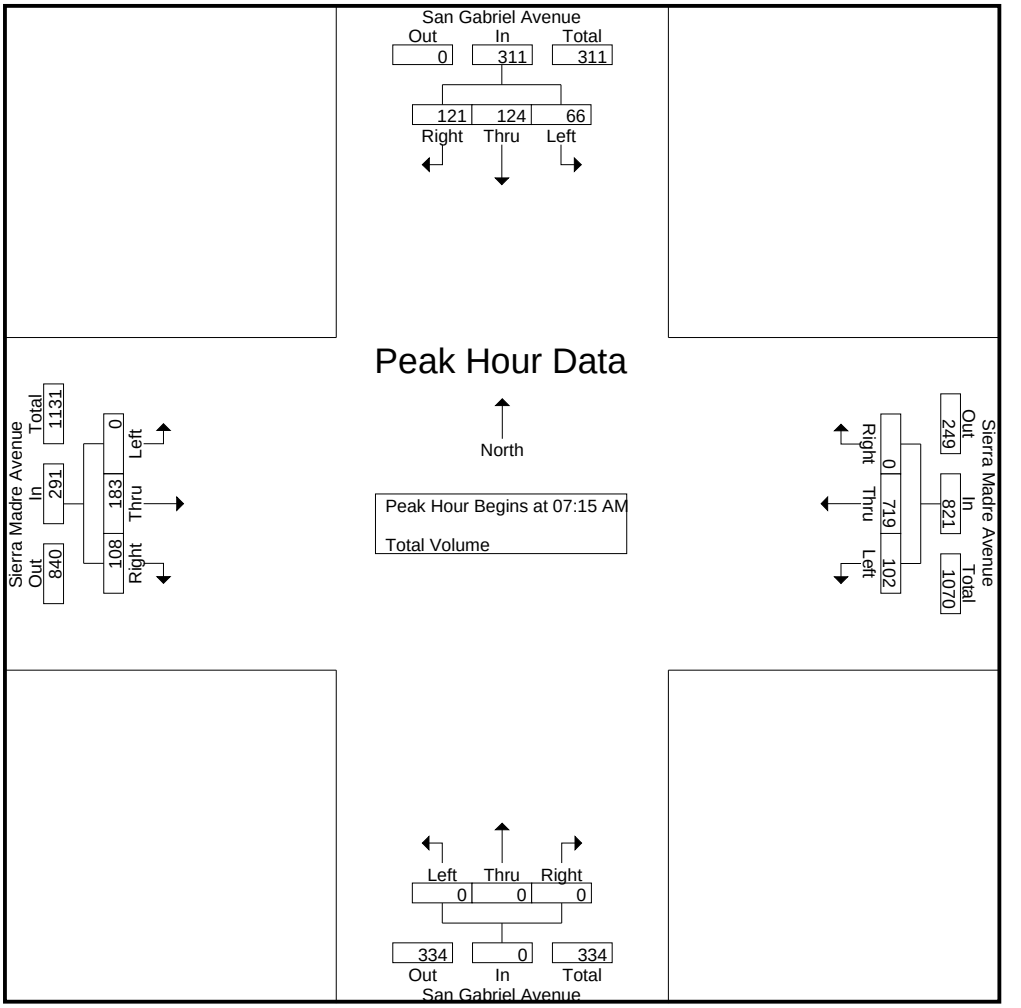
File Name : 09_AZU_San G_SM AM
Site Code : 05723545
Start Date : 5/24/2023



Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:30 AM				07:00 AM				07:00 AM				07:30 AM			
+0 mins.	8	**40**	**34**	**82**	16	**229**	0	**245**	0	0	0	0	0	40	30	70
+15 mins.	21	32	23	76	20	192	0	212	0	0	0	0	0	55	17	72
+30 mins.	**27**	32	23	82	20	168	0	188	0	0	0	0	0	**66**	**35**	**101**
+45 mins.	11	35	30	76	**31**	176	0	207	0	0	0	0	0	66	22	88
Total Volume	67	139	110	316	87	765	0	852	0	0	0	0	0	227	104	331
% App. Total	21.2	44	34.8		10.2	89.8	0		0	0	0		0	68.6	31.4	
PHF	.620	.869	.809	.963	.702	.835	.000	.869	.000	.000	.000	.000	.000	.860	.743	.819

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File Name : 09_AZU_San G_SM PM
Site Code : 05723545
Start Date : 5/24/2023
Page No : 1

Groups Printed- Total Volume

	San Gabriel Avenue Southbound				Sierra Madre Avenue Westbound				San Gabriel Avenue Northbound				Sierra Madre Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	18	36	17	71	21	31	0	52	0	0	0	0	0	136	13	149	272
04:15 PM	8	38	20	66	16	50	0	66	0	0	0	0	0	142	24	166	298
04:30 PM	10	36	8	54	17	47	0	64	0	0	0	0	0	127	24	151	269
04:45 PM	18	41	15	74	21	51	0	72	0	0	0	0	0	119	19	138	284
Total	54	151	60	265	75	179	0	254	0	0	0	0	0	524	80	604	1123
05:00 PM	3	48	16	67	21	53	0	74	0	0	0	0	0	160	30	190	331
05:15 PM	9	27	23	59	19	53	0	72	0	0	0	0	0	135	17	152	283
05:30 PM	12	40	15	67	18	47	0	65	0	0	0	0	0	127	16	143	275
05:45 PM	13	24	20	57	24	48	0	72	0	0	0	0	0	108	22	130	259
Total	37	139	74	250	82	201	0	283	0	0	0	0	0	530	85	615	1148
Grand Total	91	290	134	515	157	380	0	537	0	0	0	0	0	1054	165	1219	2271
Apprch %	17.7	56.3	26		29.2	70.8	0		0	0	0		0	86.5	13.5		
Total %	4	12.8	5.9	22.7	6.9	16.7	0	23.6	0	0	0	0	0	46.4	7.3	53.7	

	San Gabriel Avenue Southbound				Sierra Madre Avenue Westbound				San Gabriel Avenue Northbound				Sierra Madre Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:15 PM																	
04:15 PM	8	38	**20**	66	16	50	0	66	0	0	0	0	0	142	24	166	298
04:30 PM	10	36	8	54	17	47	0	64	0	0	0	0	0	127	24	151	269
04:45 PM	**18**	41	15	**74**	**21**	51	0	72	0	0	0	0	0	119	19	138	284
05:00 PM	3	**48**	16	67	21	**53**	0	**74**	0	0	0	0	0	**160**	**30**	**190**	**331**
Total Volume	39	163	59	261	75	201	0	276	0	0	0	0	0	548	97	645	1182
% App. Total	14.9	62.5	22.6		27.2	72.8	0		0	0	0		0	85	15		
PHF	.542	.849	.738	.882	.893	.948	.000	.932	.000	.000	.000	.000	.000	.856	.808	.849	.893

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File Name : 09_AZU_San G_SM PM
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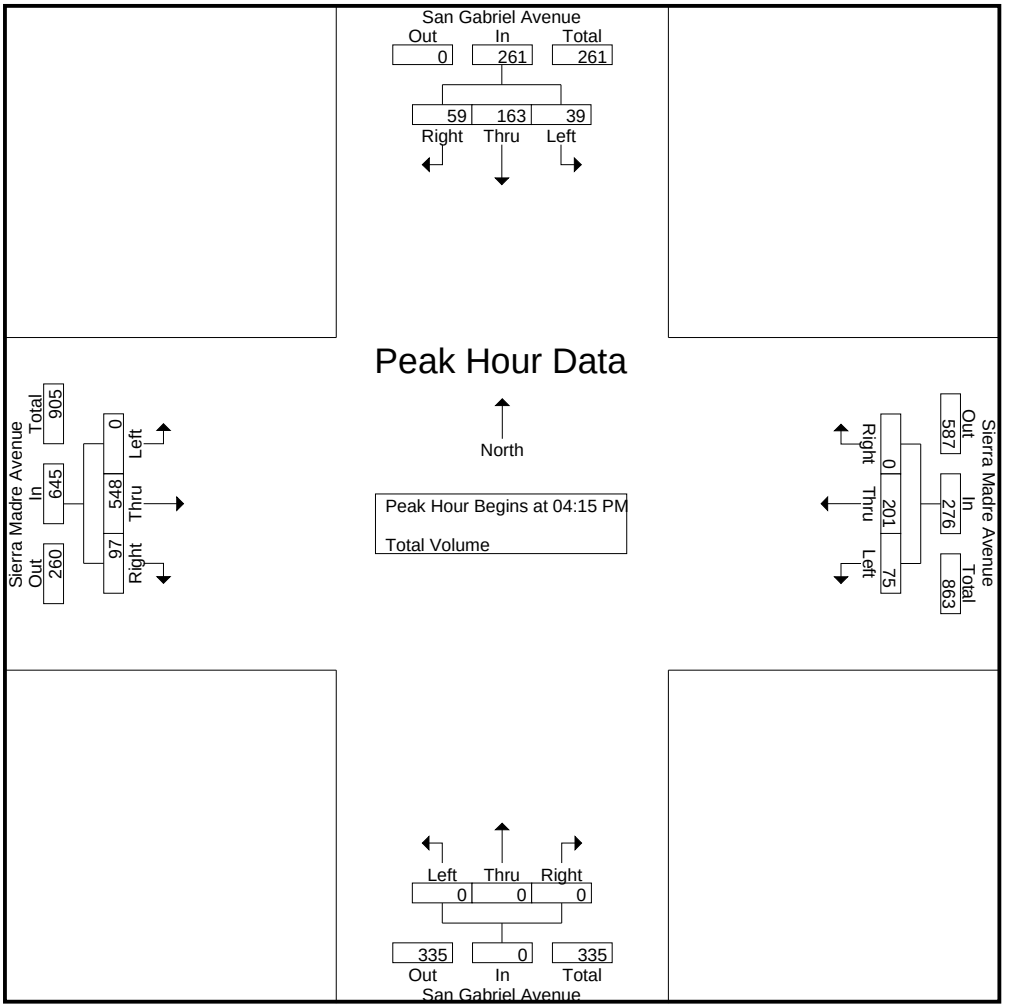

Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:45 PM				04:45 PM				04:00 PM				04:15 PM			
+0 mins.	**18**	41	15	**74**	**21**	51	0	72	0	0	0	0	0	142	24	166
+15 mins.	3	**48**	16	67	21	**53**	0	**74**	0	0	0	0	0	127	24	151
+30 mins.	9	27	**23**	59	19	53	0	72	0	0	0	0	0	119	19	138
+45 mins.	12	40	15	67	18	47	0	65	0	0	0	0	0	**160**	**30**	**190**
Total Volume	42	156	69	267	79	204	0	283	0	0	0	0	0	548	97	645
% App. Total	15.7	58.4	25.8		27.9	72.1	0		0	0	0		0	85	15	
PHF	.583	.813	.750	.902	.940	.962	.000	.956	.000	.000	.000	.000	.000	.856	.808	.849

Location: Azusa
N/S: San Gabriel Avenue
E/W: Sierra Madre Avenue

Date: 5/24/2023
Day: Wednesday

PEDESTRIANS

	North Leg San Gabriel Avenue	East Leg Sierra Madre Avenue	South Leg San Gabriel Avenue	West Leg Sierra Madre Avenue	
	Pedestrians	Pedestrians	Pedestrians	Pedestrians	
7:00 AM	0	0	0	0	0
7:15 AM	0	0	0	0	0
7:30 AM	1	0	1	1	3
7:45 AM	0	0	4	1	5
8:00 AM	0	0	0	0	0
8:15 AM	1	0	0	1	2
8:30 AM	0	0	0	0	0
8:45 AM	0	0	0	0	0
TOTAL VOLUMES:	2	0	5	3	10

	North Leg San Gabriel Avenue	East Leg Sierra Madre Avenue	South Leg San Gabriel Avenue	West Leg Sierra Madre Avenue	
	Pedestrians	Pedestrians	Pedestrians	Pedestrians	
4:00 PM	0	0	2	1	3
4:15 PM	0	0	1	0	1
4:30 PM	0	0	1	1	2
4:45 PM	3	1	3	0	7
5:00 PM	1	0	0	2	3
5:15 PM	1	0	0	0	1
5:30 PM	0	0	2	1	3
5:45 PM	0	0	0	0	0
TOTAL VOLUMES:	5	1	9	5	20

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Location: Azusa
N/S: San Gabriel Avenue
E/W: Sierra Madre Avenue

Date: 5/24/2023
Day: Wednesday

BICYCLES

	Southbound San Gabriel Avenue			Westbound Sierra Madre Avenue			Northbound San Gabriel Avenue			Eastbound Sierra Madre Avenue			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	1	0	0	0	0	0	0	0	1
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	1	0	0	0	0	0	0	0	0	0	0	1
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	1	0	0	0	0	0	0	0	0	1
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES:	0	1	0	1	1	0	0	0	0	0	0	0	3

	Southbound San Gabriel Avenue			Westbound Sierra Madre Avenue			Northbound San Gabriel Avenue			Eastbound Sierra Madre Avenue			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
4:00 PM	0	0	0	0	0	0	0	0	0	0	2	0	2
4:15 PM	0	0	2	0	0	0	0	0	0	0	0	0	2
4:30 PM	0	0	0	0	2	0	0	0	0	0	1	0	3
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	1	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
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES:	0	0	3	0	2	0	0	0	0	0	3	0	8

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City of Azusa
N/S: San Gabriel Avenue
E/W: Foothill Boulevard (Rt 66)
Weather: Clear

File Name : 10_AZU_San G_Foot AM
Site Code : 05723545
Start Date : 5/24/2023
Page No : 1

Groups Printed- Total Volume

	San Gabriel Avenue Southbound				Foothill Boulevard Westbound				San Gabriel Avenue Northbound				Foothill Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	16	103	20	139	16	248	0	264	0	0	0	0	0	30	21	51	454
07:15 AM	20	110	18	148	23	178	0	201	0	0	0	0	0	46	21	67	416
07:30 AM	17	134	16	167	18	186	0	204	0	0	0	0	0	62	21	83	454
07:45 AM	26	130	17	173	24	199	0	223	0	0	0	0	0	69	39	108	504
Total	79	477	71	627	81	811	0	892	0	0	0	0	0	207	102	309	1828
08:00 AM	48	143	15	206	37	197	0	234	0	0	0	0	0	79	50	129	569
08:15 AM	46	137	27	210	18	161	0	179	0	0	0	0	0	74	36	110	499
08:30 AM	21	115	20	156	24	141	0	165	0	0	0	0	0	65	41	106	427
08:45 AM	25	76	21	122	25	142	0	167	0	0	0	0	0	80	27	107	396
Total	140	471	83	694	104	641	0	745	0	0	0	0	0	298	154	452	1891
Grand Total	219	948	154	1321	185	1452	0	1637	0	0	0	0	0	505	256	761	3719
Apprch %	16.6	71.8	11.7		11.3	88.7	0		0	0	0		0	66.4	33.6		
Total %	5.9	25.5	4.1	35.5	5	39	0	44	0	0	0	0	0	13.6	6.9	20.5	

	San Gabriel Avenue Southbound				Foothill Boulevard Westbound				San Gabriel Avenue Northbound				Foothill Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	17	134	16	167	18	186	0	204	0	0	0	0	0	62	21	83	454
07:45 AM	26	130	17	173	24	**199**	0	223	0	0	0	0	0	69	39	108	504
08:00 AM	**48**	**143**	15	206	**37**	197	0	**234**	0	0	0	0	0	**79**	**50**	**129**	**569**
08:15 AM	46	137	**27**	**210**	18	161	0	179	0	0	0	0	0	74	36	110	499
Total Volume	137	544	75	756	97	743	0	840	0	0	0	0	0	284	146	430	2026
% App. Total	18.1	72	9.9		11.5	88.5	0		0	0	0		0	66	34		
PHF	.714	.951	.694	.900	.655	.933	.000	.897	.000	.000	.000	.000	.000	.899	.730	.833	.890

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File Name : 10_AZU_San G_Foot AM
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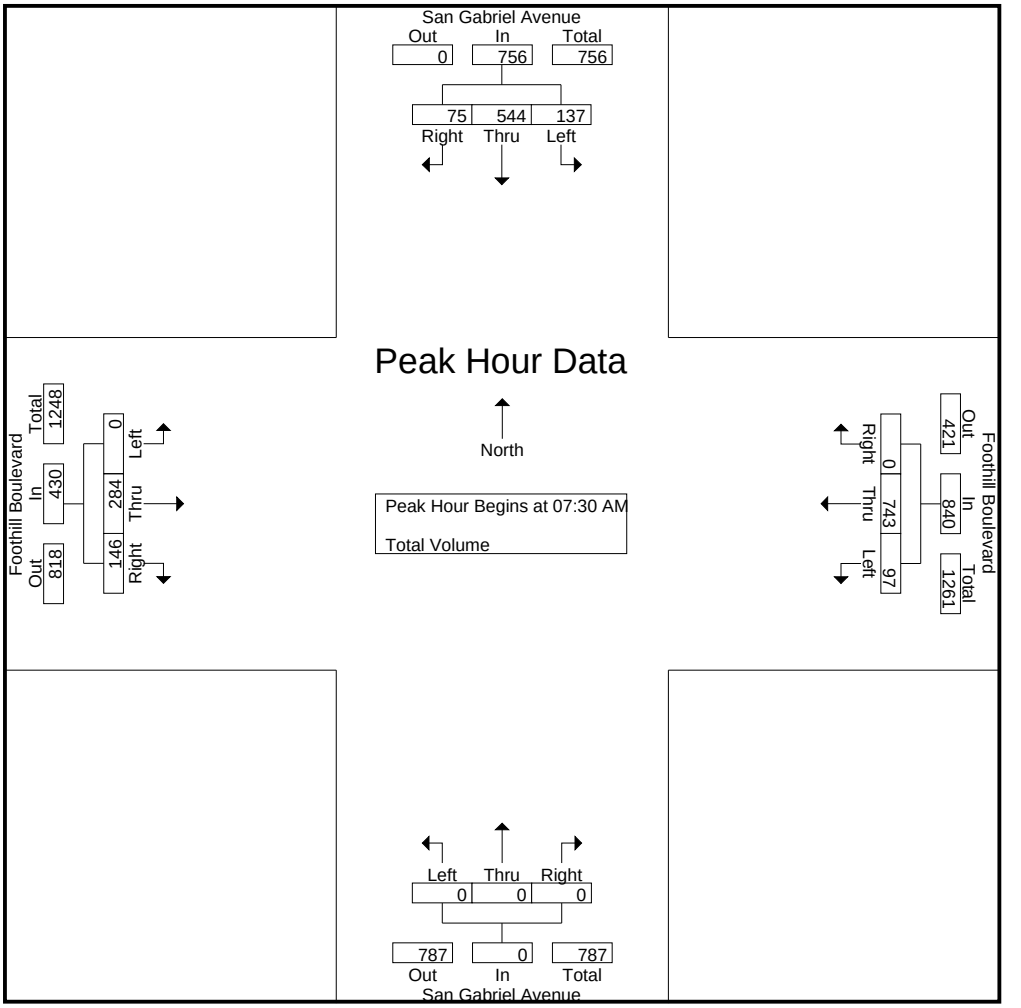

Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:30 AM				07:00 AM				07:00 AM				07:45 AM			
+0 mins.	17	134	16	167	16	**248**	0	**264**	0	0	0	0	0	69	39	108
+15 mins.	26	130	17	173	23	178	0	201	0	0	0	0	0	**79**	**50**	**129**
+30 mins.	**48**	**143**	15	206	18	186	0	204	0	0	0	0	0	74	36	110
+45 mins.	46	137	**27**	**210**	**24**	199	0	223	0	0	0	0	0	65	41	106
Total Volume	137	544	75	756	81	811	0	892	0	0	0	0	0	287	166	453
% App. Total	18.1	72	9.9		9.1	90.9	0		0	0	0		0	63.4	36.6	
PHF	.714	.951	.694	.900	.844	.818	.000	.845	.000	.000	.000	.000	.000	.908	.830	.878

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Groups Printed- Total Volume

	San Gabriel Avenue Southbound				Foothill Boulevard Westbound				San Gabriel Avenue Northbound				Foothill Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	32	110	18	160	34	88	0	122	0	0	0	0	0	206	62	268	550
04:15 PM	23	96	11	130	17	82	0	99	0	0	0	0	0	201	60	261	490
04:30 PM	39	126	10	175	38	111	0	149	0	0	0	0	0	227	52	279	603
04:45 PM	37	117	11	165	17	82	0	99	0	0	0	0	0	201	40	241	505
Total	131	449	50	630	106	363	0	469	0	0	0	0	0	835	214	1049	2148
05:00 PM	38	145	11	194	29	81	0	110	0	0	0	0	0	226	53	279	583
05:15 PM	38	107	17	162	28	110	0	138	0	0	0	0	0	194	42	236	536
05:30 PM	38	123	17	178	27	100	0	127	0	0	0	0	0	218	77	295	600
05:45 PM	33	99	11	143	31	78	0	109	0	0	0	0	0	203	57	260	512
Total	147	474	56	677	115	369	0	484	0	0	0	0	0	841	229	1070	2231
Grand Total	278	923	106	1307	221	732	0	953	0	0	0	0	0	1676	443	2119	4379
Apprch %	21.3	70.6	8.1		23.2	76.8	0		0	0	0		0	79.1	20.9		
Total %	6.3	21.1	2.4	29.8	5	16.7	0	21.8	0	0	0	0	0	38.3	10.1	48.4	

	San Gabriel Avenue Southbound				Foothill Boulevard Westbound				San Gabriel Avenue Northbound				Foothill Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 05:00 PM																	
05:00 PM	**38**	**145**	11	**194**	29	81	0	110	0	0	0	0	0	**226**	53	279	583
05:15 PM	38	107	**17**	162	28	**110**	0	**138**	0	0	0	0	0	194	42	236	536
05:30 PM	38	123	17	178	27	100	0	127	0	0	0	0	0	218	**77**	**295**	**600**
05:45 PM	33	99	11	143	**31**	78	0	109	0	0	0	0	0	203	57	260	512
Total Volume	147	474	56	677	115	369	0	484	0	0	0	0	0	841	229	1070	2231
% App. Total	21.7	70	8.3		23.8	76.2	0		0	0	0		0	78.6	21.4		
PHF	.967	.817	.824	.872	.927	.839	.000	.877	.000	.000	.000	.000	.000	.930	.744	.907	.930

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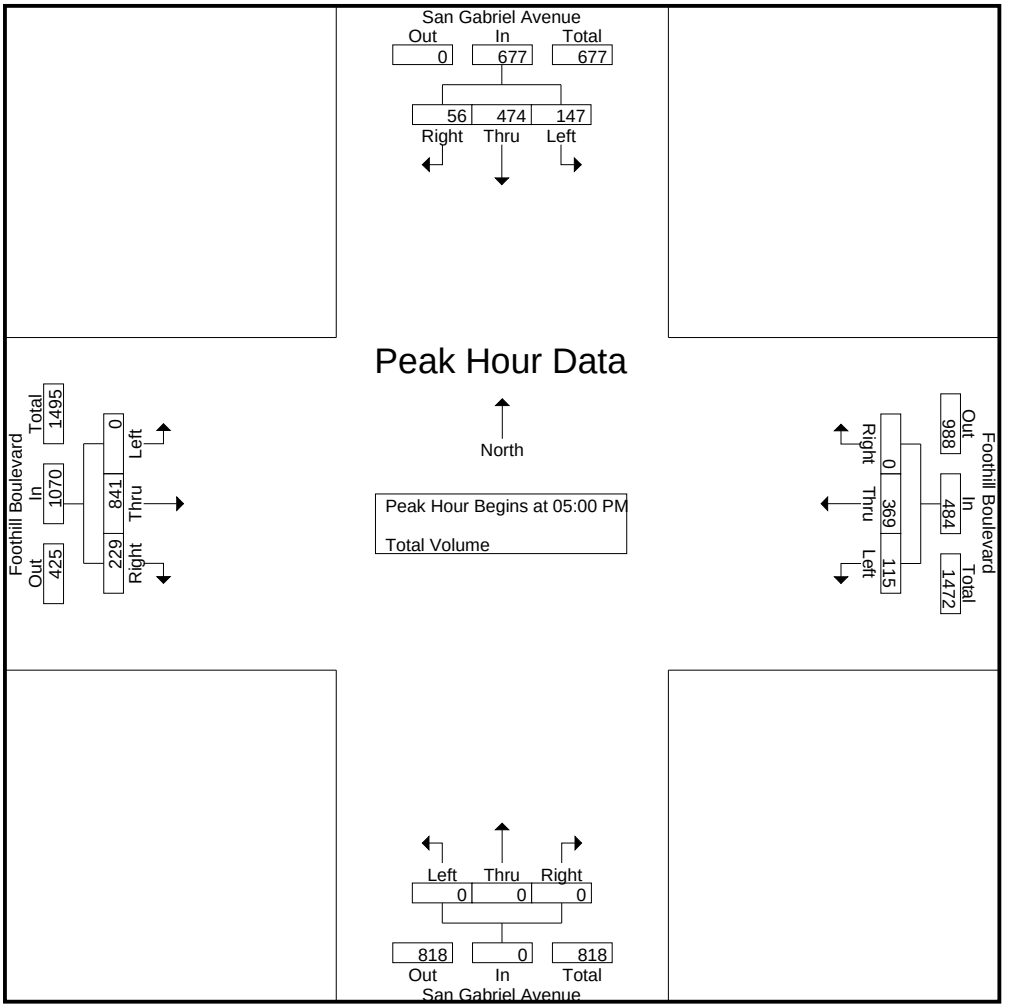
E/W: Foothill Boulevard (Rt 66)
Weather: Clear

File Name : 10_AZU_San G_Foot PM
Site Code : 05723545
Start Date : 5/24/2023
Page No : 2



Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:45 PM				04:30 PM				04:00 PM				05:00 PM			
+0 mins.	37	117	11	165	**38**	**111**	0	**149**	0	0	0	0	0	**226**	53	279
+15 mins.	**38**	**145**	11	**194**	17	82	0	99	0	0	0	0	0	194	42	236
+30 mins.	38	107	**17**	162	29	81	0	110	0	0	0	0	0	218	**77**	**295**
+45 mins.	38	123	17	178	28	110	0	138	0	0	0	0	0	203	57	260
Total Volume	151	492	56	699	112	384	0	496	0	0	0	0	0	841	229	1070
% App. Total	21.6	70.4	8		22.6	77.4	0		0	0	0		0	78.6	21.4	
PHF	.993	.848	.824	.901	.737	.865	.000	.832	.000	.000	.000	.000	.000	.930	.744	.907

Location: Azusa
N/S: San Gabriel Avenue
E/W: Foothill Boulevard

Date: 5/24/2023
Day: Wednesday

PEDESTRIANS

	North Leg San Gabriel Avenue	East Leg Foothill Boulevard	South Leg San Gabriel Avenue	West Leg Foothill Boulevard	
	Pedestrians	Pedestrians	Pedestrians	Pedestrians	
7:00 AM	2	1	2	2	7
7:15 AM	0	0	2	5	7
7:30 AM	1	0	0	4	5
7:45 AM	4	3	4	8	19
8:00 AM	1	3	1	4	9
8:15 AM	1	1	2	2	6
8:30 AM	1	0	1	0	2
8:45 AM	4	0	0	3	7
TOTAL VOLUMES:	14	8	12	28	62

	North Leg San Gabriel Avenue	East Leg Foothill Boulevard	South Leg San Gabriel Avenue	West Leg Foothill Boulevard	
	Pedestrians	Pedestrians	Pedestrians	Pedestrians	
4:00 PM	3	5	8	3	19
4:15 PM	2	2	8	2	14
4:30 PM	2	2	2	3	9
4:45 PM	11	2	2	5	20
5:00 PM	4	1	2	1	8
5:15 PM	2	4	7	5	18
5:30 PM	0	1	1	4	6
5:45 PM	2	5	7	1	15
TOTAL VOLUMES:	26	22	37	24	109

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Location: Azusa
N/S: San Gabriel Avenue
E/W: Foothill Boulevard

Date: 5/24/2023
Day: Wednesday

BICYCLES

	Southbound San Gabriel Avenue			Westbound Foothill Boulevard			Northbound San Gabriel Avenue			Eastbound Foothill Boulevard			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	1	0	0	0	0	0	0	0	0	0	0	1
7:30 AM	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
8:00 AM	0	0	1	0	0	0	0	0	0	0	0	0	1
8:15 AM	0	1	0	0	0	0	0	0	0	0	0	1	2
8:30 AM	0	1	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
TOTAL VOLUMES:	0	3	1	0	0	0	0	0	0	0	0	1	5

	Southbound San Gabriel Avenue			Westbound Foothill Boulevard			Northbound San Gabriel Avenue			Eastbound Foothill Boulevard			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
4:00 PM	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
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	1	0	0	0	0	0	0	0	1	0	2
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	1	1
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES:	0	0	1	0	0	0	0	0	0	0	1	1	3

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City of Azusa
N/S: Azusa Avenue
E/W: Sierra Madre Avenue
Weather: Clear

File Name : 11_AZU_Azu_SM AM
Site Code : 05723545
Start Date : 5/24/2023
Page No : 1

Groups Printed- Total Volume

	Azusa Avenue Southbound				Sierra Madre Avenue Westbound				Azusa Avenue Northbound				Sierra Madre Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	0	0	0	0	0	224	15	239	17	13	0	30	14	23	0	37	306
07:15 AM	0	0	0	0	0	185	7	192	22	13	0	35	1	31	0	32	259
07:30 AM	0	0	0	0	0	162	3	165	23	12	1	36	14	34	0	48	249
07:45 AM	0	0	0	0	0	175	7	182	25	16	1	42	13	64	0	77	301
Total	0	0	0	0	0	746	32	778	87	54	2	143	42	152	0	194	1115
08:00 AM	0	0	0	0	0	169	6	175	41	17	1	59	16	78	0	94	328
08:15 AM	0	0	0	0	0	140	15	155	27	14	0	41	22	56	0	78	274
08:30 AM	0	0	0	0	0	142	15	157	29	18	1	48	13	44	0	57	262
08:45 AM	0	0	0	0	0	124	14	138	14	20	0	34	11	45	0	56	228
Total	0	0	0	0	0	575	50	625	111	69	2	182	62	223	0	285	1092
Grand Total	0	0	0	0	0	1321	82	1403	198	123	4	325	104	375	0	479	2207
Apprch %	0	0	0		0	94.2	5.8		60.9	37.8	1.2		21.7	78.3	0		
Total %	0	0	0	0	0	59.9	3.7	63.6	9	5.6	0.2	14.7	4.7	17	0	21.7	

	Azusa Avenue Southbound				Sierra Madre Avenue Westbound				Azusa Avenue Northbound				Sierra Madre Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:45 AM																	
07:45 AM	0	0	0	0	0	**175**	7	**182**	25	16	**1**	42	13	64	0	77	301
08:00 AM	0	0	0	0	0	169	6	175	**41**	17	1	**59**	16	**78**	0	**94**	**328**
08:15 AM	0	0	0	0	0	140	**15**	155	27	14	0	41	**22**	56	0	78	274
08:30 AM	0	0	0	0	0	142	15	157	29	**18**	1	48	13	44	0	57	262
Total Volume	0	0	0	0	0	626	43	669	122	65	3	190	64	242	0	306	1165
% App. Total	0	0	0		0	93.6	6.4		64.2	34.2	1.6		20.9	79.1	0		
PHF	.000	.000	.000	.000	.000	.894	.717	.919	.744	.903	.750	.805	.727	.776	.000	.814	.888

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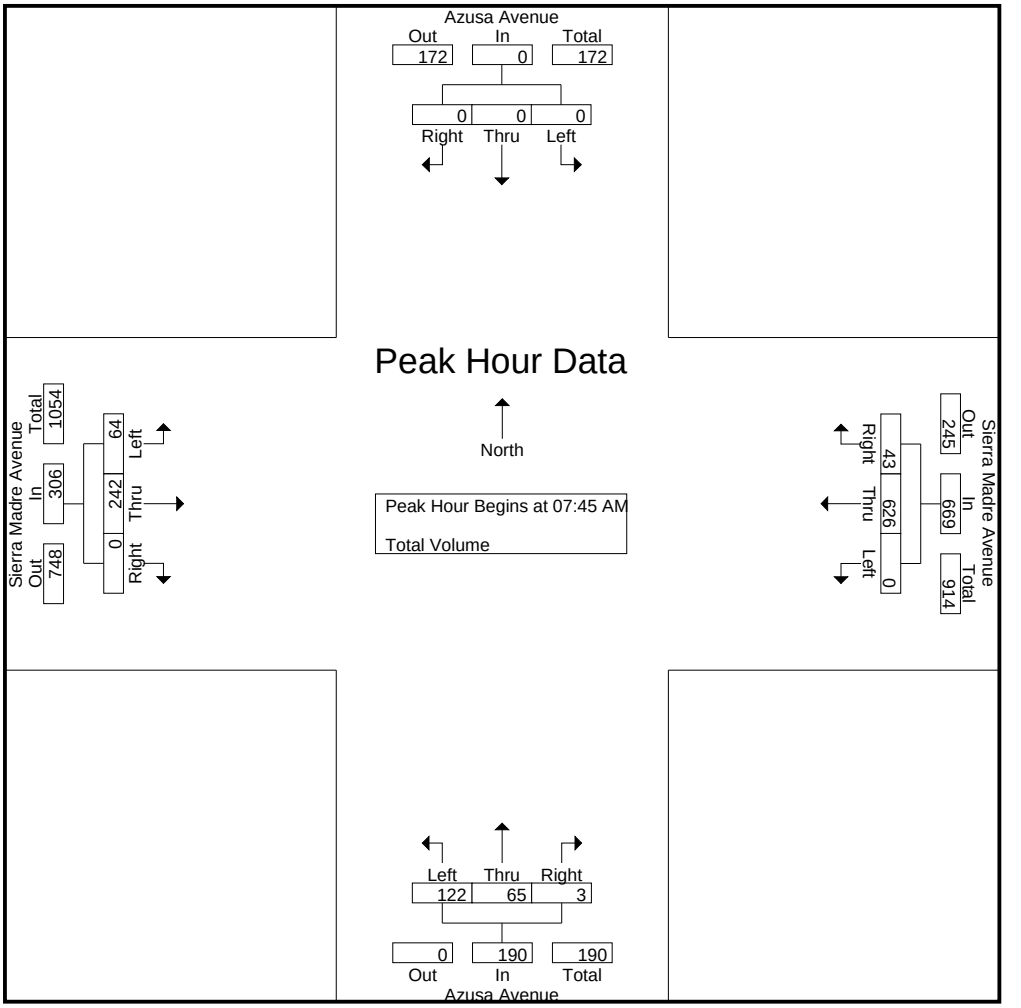
City of Azusa
N/S: Azusa Avenue
E/W: Sierra Madre Avenue
Weather: Clear

File Name : 11_AZU_Azu_SM AM
Site Code : 05723545
Start Date : 5/24/2023
Page No : 2



Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:00 AM				07:00 AM				07:45 AM				07:45 AM			
+0 mins.	0	0	0	0	0	**224**	**15**	**239**	25	16	**1**	42	13	64	0	77
+15 mins.	0	0	0	0	0	185	7	192	**41**	17	1	**59**	16	**78**	0	**94**
+30 mins.	0	0	0	0	0	162	3	165	27	14	0	41	**22**	56	0	78
+45 mins.	0	0	0	0	0	175	7	182	29	**18**	1	48	13	44	0	57
Total Volume	0	0	0	0	0	746	32	778	122	65	3	190	64	242	0	306
% App. Total	0	0	0		0	95.9	4.1		64.2	34.2	1.6		20.9	79.1	0	
PHF	.000	.000	.000	.000	.000	.833	.533	.814	.744	.903	.750	.805	.727	.776	.000	.814

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City of Azusa
N/S: Azusa Avenue
E/W: Sierra Madre Avenue
Weather: Clear

File Name : 11_AZU_Azu_SM PM
Site Code : 05723545
Start Date : 5/24/2023
Page No : 1

Groups Printed- Total Volume

	Azusa Avenue Southbound				Sierra Madre Avenue Westbound				Azusa Avenue Northbound				Sierra Madre Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	0	0	0	0	0	40	14	54	13	29	1	43	28	128	0	156	253
04:15 PM	0	0	0	0	0	53	16	69	14	29	2	45	32	121	0	153	267
04:30 PM	0	0	0	0	0	36	11	47	24	36	0	60	26	119	0	145	252
04:45 PM	0	0	0	0	0	57	12	69	20	28	2	50	20	109	0	129	248
Total	0	0	0	0	0	186	53	239	71	122	5	198	106	477	0	583	1020
05:00 PM	0	0	0	0	0	52	14	66	21	35	2	58	43	120	0	163	287
05:15 PM	0	0	0	0	0	52	11	63	23	37	1	61	20	126	0	146	270
05:30 PM	0	0	0	0	0	43	15	58	17	30	3	50	22	116	0	138	246
05:45 PM	0	0	0	0	0	56	17	73	17	24	6	47	27	100	0	127	247
Total	0	0	0	0	0	203	57	260	78	126	12	216	112	462	0	574	1050
Grand Total	0	0	0	0	0	389	110	499	149	248	17	414	218	939	0	1157	2070
Apprch %	0	0	0		0	78	22		36	59.9	4.1		18.8	81.2	0		
Total %	0	0	0	0	0	18.8	5.3	24.1	7.2	12	0.8	20	10.5	45.4	0	55.9	

	Azusa Avenue Southbound				Sierra Madre Avenue Westbound				Azusa Avenue Northbound				Sierra Madre Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:30 PM																	
04:30 PM	0	0	0	0	0	36	11	47	**24**	36	0	60	26	119	0	145	252
04:45 PM	0	0	0	0	0	**57**	12	**69**	20	28	**2**	50	20	109	0	129	248
05:00 PM	0	0	0	0	0	52	**14**	66	21	35	2	58	**43**	120	0	**163**	**287**
05:15 PM	0	0	0	0	0	52	11	63	23	**37**	1	**61**	20	**126**	0	146	270
Total Volume	0	0	0	0	0	197	48	245	88	136	5	229	109	474	0	583	1057
% App. Total	0	0	0		0	80.4	19.6		38.4	59.4	2.2		18.7	81.3	0		
PHF	.000	.000	.000	.000	.000	.864	.857	.888	.917	.919	.625	.939	.634	.940	.000	.894	.921

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City of Azusa
N/S: Azusa Avenue
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Weather: Clear

File Name : 11_AZU_Azu_SM PM
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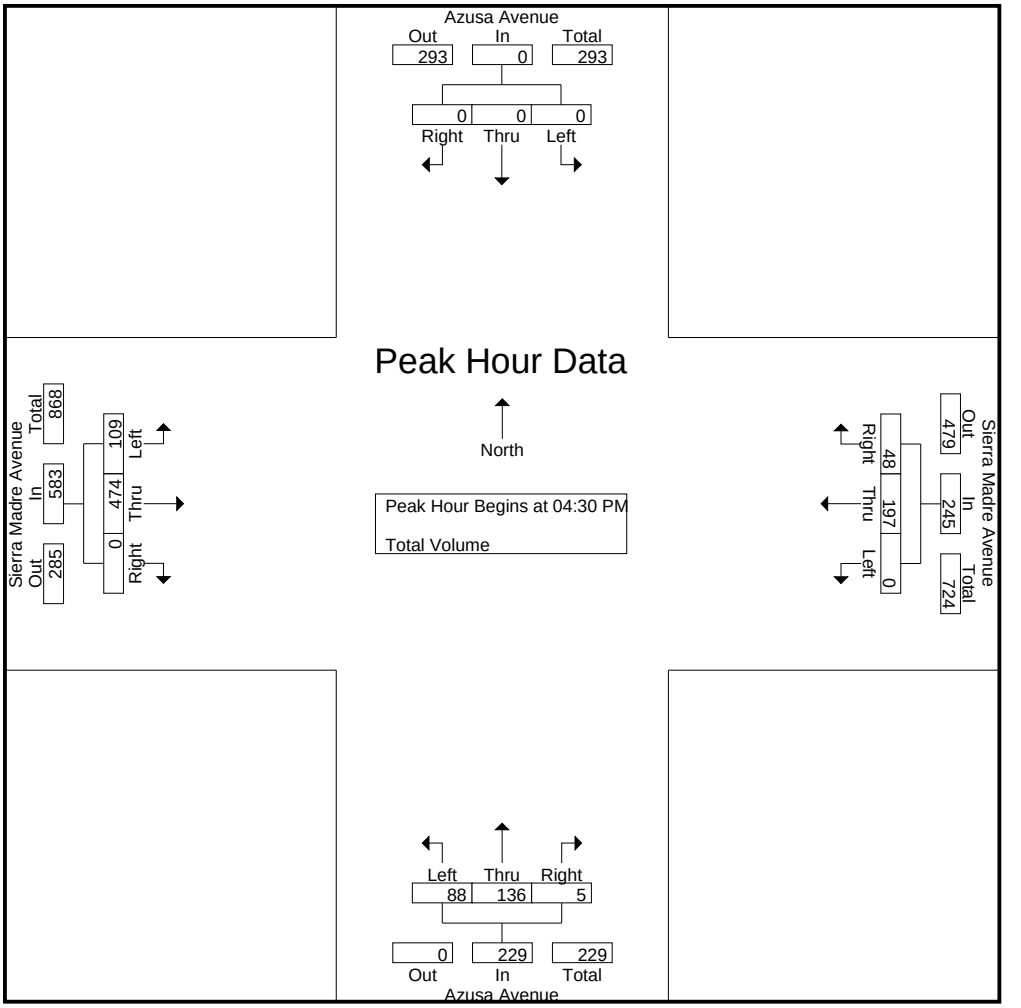
Page No : 2



Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:00 PM				05:00 PM				04:30 PM				04:15 PM			
+0 mins.	0	0	0	0	0	52	14	66	**24**	36	0	60	32	**121**	0	153
+15 mins.	0	0	0	0	0	52	11	63	20	28	**2**	50	26	119	0	145
+30 mins.	0	0	0	0	0	43	15	58	21	35	2	58	20	109	0	129
+45 mins.	0	0	0	0	0	**56**	**17**	**73**	23	**37**	1	**61**	**43**	120	0	**163**
Total Volume	0	0	0	0	0	203	57	260	88	136	5	229	121	469	0	590
% App. Total	0	0	0		0	78.1	21.9		38.4	59.4	2.2		20.5	79.5	0	
PHF	.000	.000	.000	.000	.000	.906	.838	.890	.917	.919	.625	.939	.703	.969	.000	.905

Location: Azusa
N/S: Azusa Avenue
E/W: Sierra Madre Avenue

Date: 5/24/2023
Day: Wednesday

PEDESTRIANS

	North Leg Azusa Avenue	East Leg Sierra Madre Avenue	South Leg Azusa Avenue	West Leg Sierra Madre Avenue	
	Pedestrians	Pedestrians	Pedestrians	Pedestrians	
7:00 AM	0	0	0	0	0
7:15 AM	0	0	0	0	0
7:30 AM	1	0	1	0	2
7:45 AM	0	3	0	0	3
8:00 AM	0	0	0	0	0
8:15 AM	1	2	0	0	3
8:30 AM	0	0	0	0	0
8:45 AM	0	1	0	0	1
TOTAL VOLUMES:	2	6	1	0	9

	North Leg Azusa Avenue	East Leg Sierra Madre Avenue	South Leg Azusa Avenue	West Leg Sierra Madre Avenue	
	Pedestrians	Pedestrians	Pedestrians	Pedestrians	
4:00 PM	0	0	1	0	1
4:15 PM	0	0	1	0	1
4:30 PM	0	0	1	0	1
4:45 PM	2	1	1	0	4
5:00 PM	2	1	2	0	5
5:15 PM	1	1	0	0	2
5:30 PM	0	0	2	0	2
5:45 PM	0	0	0	0	0
TOTAL VOLUMES:	5	3	8	0	16

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Location: Azusa
N/S: Azusa Avenue
E/W: Sierra Madre Avenue

Date: 5/24/2023
Day: Wednesday

BICYCLES

	Southbound Azusa Avenue			Westbound Sierra Madre Avenue			Northbound Azusa Avenue			Eastbound Sierra Madre Avenue			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	1	0	0	0	0	0	0	0	1
7:30 AM	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
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	1	0	0	0	0	0	0	0	1
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES:	0	0	0	0	2	0	0	0	0	0	0	0	2

	Southbound Azusa Avenue			Westbound Sierra Madre Avenue			Northbound Azusa Avenue			Eastbound Sierra Madre Avenue			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
4:00 PM	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
4:30 PM	0	0	0	0	2	1	0	0	0	0	1	0	4
4:45 PM	0	0	0	0	0	0	1	0	0	0	0	0	1
5:00 PM	0	0	0	0	0	0	0	1	0	0	0	0	1
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	1	0	1
TOTAL VOLUMES:	0	0	0	0	2	1	1	1	0	0	2	0	7

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City of Azusa
N/S: Azusa Avenue
E/W: Foothill Boulevard (Rt 66)
Weather: Clear

File Name : 12_AZU_Azu_Foot AM
Site Code : 05723545
Start Date : 5/24/2023
Page No : 1

Groups Printed- Total Volume

	Azusa Avenue Southbound				Foothill Boulevard Westbound				Azusa Avenue Northbound				Foothill Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	0	0	0	0	0	239	5	244	31	35	11	77	6	38	0	44	365
07:15 AM	0	0	0	0	0	169	6	175	30	20	7	57	11	59	0	70	302
07:30 AM	0	0	0	0	0	174	12	186	29	50	8	87	8	71	0	79	352
07:45 AM	0	0	0	0	0	193	13	206	34	66	15	115	9	83	0	92	413
Total	0	0	0	0	0	775	36	811	124	171	41	336	34	251	0	285	1432
08:00 AM	0	0	0	0	0	186	19	205	37	64	15	116	16	109	0	125	446
08:15 AM	0	0	0	0	0	160	19	179	24	46	12	82	13	115	0	128	389
08:30 AM	0	0	0	0	0	141	17	158	31	46	9	86	14	74	0	88	332
08:45 AM	0	0	0	0	0	146	23	169	32	34	15	81	7	95	0	102	352
Total	0	0	0	0	0	633	78	711	124	190	51	365	50	393	0	443	1519
Grand Total	0	0	0	0	0	1408	114	1522	248	361	92	701	84	644	0	728	2951
Apprch %	0	0	0		0	92.5	7.5		35.4	51.5	13.1		11.5	88.5	0		
Total %	0	0	0	0	0	47.7	3.9	51.6	8.4	12.2	3.1	23.8	2.8	21.8	0	24.7	

	Azusa Avenue Southbound				Foothill Boulevard Westbound				Azusa Avenue Northbound				Foothill Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	0	0	0	0	0	174	12	186	29	50	8	87	8	71	0	79	352
07:45 AM	0	0	0	0	0	**193**	13	**206**	34	**66**	**15**	115	9	83	0	92	413
08:00 AM	0	0	0	0	0	186	**19**	205	**37**	64	15	**116**	**16**	109	0	125	**446**
08:15 AM	0	0	0	0	0	160	19	179	24	46	12	82	13	**115**	0	**128**	389
Total Volume	0	0	0	0	0	713	63	776	124	226	50	400	46	378	0	424	1600
% App. Total	0	0	0		0	91.9	8.1		31	56.5	12.5		10.8	89.2	0		
PHF	.000	.000	.000	.000	.000	.924	.829	.942	.838	.856	.833	.862	.719	.822	.000	.828	.897

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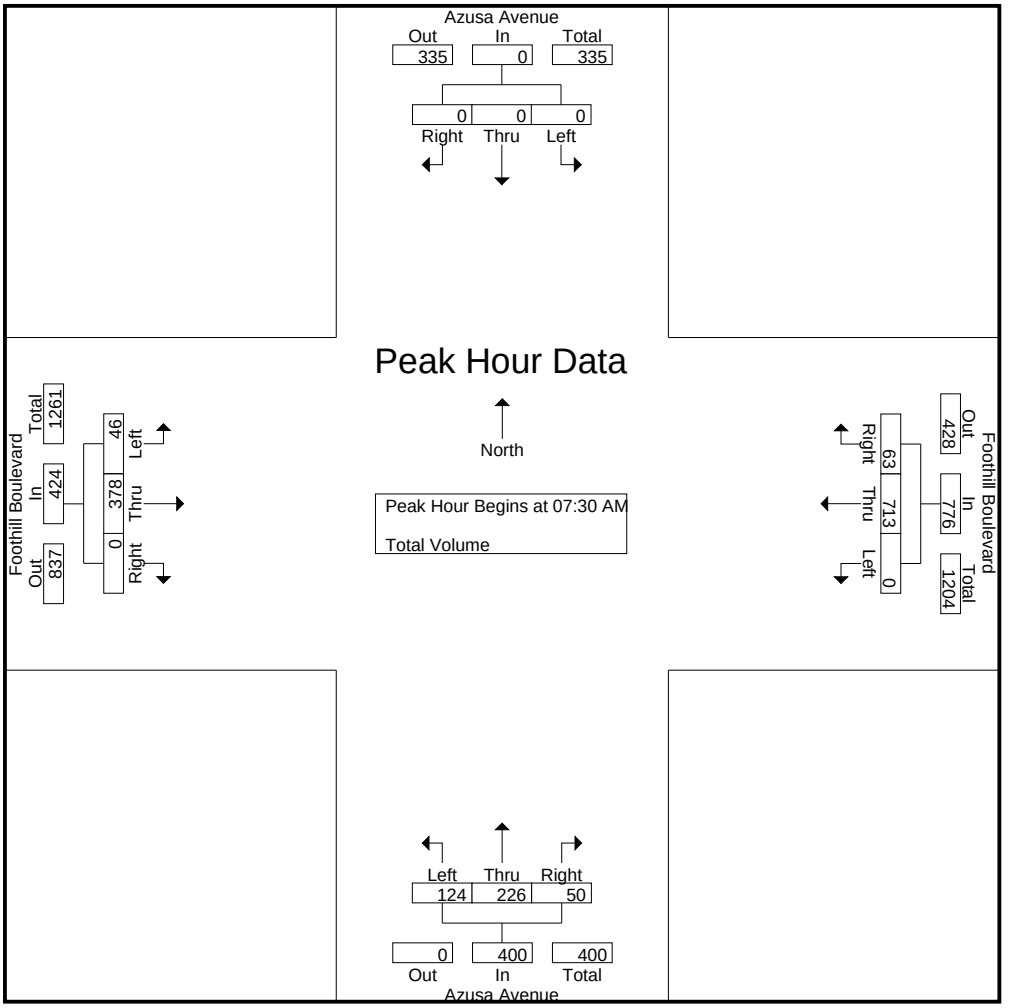
City of Azusa
N/S: Azusa Avenue
E/W: Foothill Boulevard (Rt 66)
Weather: Clear

File Name : 12_AZU_Azu_Foot AM
Site Code : 05723545
Start Date : 5/24/2023
Page No : 2



Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:00 AM				07:00 AM				07:30 AM				08:00 AM			
+0 mins.	0	0	0	0	0	**239**	5	**244**	29	50	8	87	**16**	109	0	125
+15 mins.	0	0	0	0	0	169	6	175	34	**66**	**15**	115	13	**115**	0	**128**
+30 mins.	0	0	0	0	0	174	12	186	**37**	64	15	**116**	14	74	0	88
+45 mins.	0	0	0	0	0	193	**13**	206	24	46	12	82	7	95	0	102
Total Volume	0	0	0	0	0	775	36	811	124	226	50	400	50	393	0	443
% App. Total	0	0	0		0	95.6	4.4		31	56.5	12.5		11.3	88.7	0	
PHF	.000	.000	.000	.000	.000	.811	.692	.831	.838	.856	.833	.862	.781	.854	.000	.865

Counts Unlimited, Inc.
PO Box 1178
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(951) 268-6268

City of Azusa
N/S: Azusa Avenue
E/W: Foothill Boulevard (Rt 66)
Weather: Clear

File Name : 12_AZU_Azu_Foot PM
Site Code : 05723545
Start Date : 5/24/2023
Page No : 1

Groups Printed- Total Volume

	Azusa Avenue Southbound				Foothill Boulevard Westbound				Azusa Avenue Northbound				Foothill Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	0	0	0	0	0	94	27	121	21	73	24	118	23	220	0	243	482
04:15 PM	0	0	0	0	0	88	24	112	21	69	25	115	18	210	0	228	455
04:30 PM	0	0	0	0	0	123	23	146	22	103	22	147	26	231	0	257	550
04:45 PM	0	0	0	0	0	72	24	96	25	81	24	130	17	229	0	246	472
Total	0	0	0	0	0	377	98	475	89	326	95	510	84	890	0	974	1959
05:00 PM	0	0	0	0	0	90	21	111	20	87	13	120	20	252	0	272	503
05:15 PM	0	0	0	0	0	124	22	146	25	65	26	116	18	226	0	244	506
05:30 PM	0	0	0	0	0	105	18	123	28	87	20	135	25	236	0	261	519
05:45 PM	0	0	0	0	0	77	29	106	26	65	26	117	16	222	0	238	461
Total	0	0	0	0	0	396	90	486	99	304	85	488	79	936	0	1015	1989
Grand Total	0	0	0	0	0	773	188	961	188	630	180	998	163	1826	0	1989	3948
Apprch %	0	0	0		0	80.4	19.6		18.8	63.1	18		8.2	91.8	0		
Total %	0	0	0	0	0	19.6	4.8	24.3	4.8	16	4.6	25.3	4.1	46.3	0	50.4	

	Azusa Avenue Southbound				Foothill Boulevard Westbound				Azusa Avenue Northbound				Foothill Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:30 PM																	
04:30 PM	0	0	0	0	0	123	23	**146**	22	**103**	22	**147**	**26**	231	0	257	**550**
04:45 PM	0	0	0	0	0	72	**24**	96	**25**	81	24	130	17	229	0	246	472
05:00 PM	0	0	0	0	0	90	21	111	20	87	13	120	20	**252**	0	**272**	503
05:15 PM	0	0	0	0	0	**124**	22	146	25	65	**26**	116	18	226	0	244	506
Total Volume	0	0	0	0	0	409	90	499	92	336	85	513	81	938	0	1019	2031
% App. Total	0	0	0		0	82	18		17.9	65.5	16.6		7.9	92.1	0		
PHF	.000	.000	.000	.000	.000	.825	.938	.854	.920	.816	.817	.872	.779	.931	.000	.937	.923

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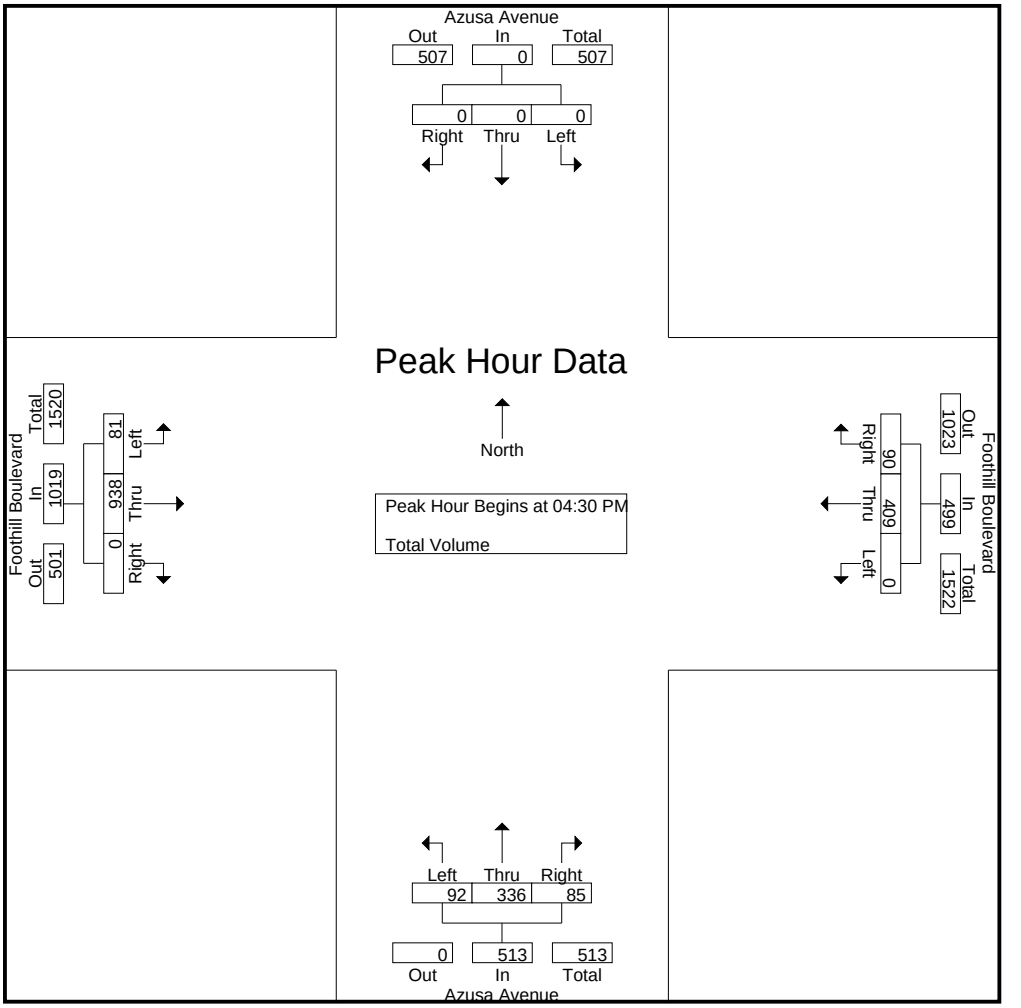
City of Azusa
N/S: Azusa Avenue
E/W: Foothill Boulevard (Rt 66)
Weather: Clear

File Name : 12_AZU_Azu_Foot PM
Site Code : 05723545
Start Date : 5/24/2023
Page No : 2



Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:00 PM				04:30 PM				04:30 PM				04:45 PM			
+0 mins.	0	0	0	0	0	123	23	**146**	22	**103**	22	**147**	17	229	0	246
+15 mins.	0	0	0	0	0	72	**24**	96	**25**	81	24	130	20	**252**	0	**272**
+30 mins.	0	0	0	0	0	90	21	111	20	87	13	120	18	226	0	244
+45 mins.	0	0	0	0	0	**124**	22	146	25	65	**26**	116	**25**	236	0	261
Total Volume	0	0	0	0	0	409	90	499	92	336	85	513	80	943	0	1023
% App. Total	0	0	0		0	82	18		17.9	65.5	16.6		7.8	92.2	0	
PHF	.000	.000	.000	.000	.000	.825	.938	.854	.920	.816	.817	.872	.800	.936	.000	.940

Location: Azusa
N/S: Azusa Avenue
E/W: Foothill Boulevard

Date: 5/24/2023
Day: Wednesday

PEDESTRIANS

	North Leg Azusa Avenue	East Leg Foothill Boulevard	South Leg Azusa Avenue	West Leg Foothill Boulevard	
	Pedestrians	Pedestrians	Pedestrians	Pedestrians	
7:00 AM	2	0	0	1	3
7:15 AM	0	0	1	1	2
7:30 AM	0	0	0	0	0
7:45 AM	3	0	2	0	5
8:00 AM	0	5	2	1	8
8:15 AM	2	1	1	1	5
8:30 AM	3	0	0	2	5
8:45 AM	0	0	1	0	1
TOTAL VOLUMES:	10	6	7	6	29

	North Leg Azusa Avenue	East Leg Foothill Boulevard	South Leg Azusa Avenue	West Leg Foothill Boulevard	
	Pedestrians	Pedestrians	Pedestrians	Pedestrians	
4:00 PM	4	0	1	6	11
4:15 PM	4	5	7	3	19
4:30 PM	3	1	8	6	18
4:45 PM	12	8	3	4	27
5:00 PM	2	4	2	2	10
5:15 PM	3	4	8	3	18
5:30 PM	2	1	3	1	7
5:45 PM	1	4	1	3	9
TOTAL VOLUMES:	31	27	33	28	119

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Location: Azusa
N/S: Azusa Avenue
E/W: Foothill Boulevard

Date: 5/24/2023
Day: Wednesday

BICYCLES

	Southbound Azusa Avenue			Westbound Foothill Boulevard			Northbound Azusa Avenue			Eastbound Foothill Boulevard			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	1	0	0	0	0	1
7:30 AM	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
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	1	0	0	0	0	1
8:30 AM	0	0	0	0	0	0	0	1	1	0	0	0	2
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES:	0	0	0	0	0	0	0	3	1	0	0	0	4

	Southbound Azusa Avenue			Westbound Foothill Boulevard			Northbound Azusa Avenue			Eastbound Foothill Boulevard			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
4:00 PM	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	1	0	1
4:30 PM	0	0	0	0	0	1	0	0	0	0	0	0	1
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	1	0	1
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES:	0	0	0	0	0	1	0	0	0	0	2	0	3

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City of Azusa
N/S: Irwindale Avenue
E/W: SR-210 Westbound Ramps
Weather: Clear

File Name : 01_AZU_Irw_210W AM
Site Code : 05723545
Start Date : 5/24/2023
Page No : 1

Groups Printed- Total Volume

	Irwindale Avenue Southbound			SR-210 Westbound Ramps Westbound			Irwindale Avenue Northbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
07:00 AM	0	256	256	13	39	52	205	113	318	626
07:15 AM	0	279	279	17	20	37	221	104	325	641
07:30 AM	0	246	246	14	22	36	249	123	372	654
07:45 AM	0	214	214	12	32	44	292	151	443	701
Total	0	995	995	56	113	169	967	491	1458	2622
08:00 AM	0	218	218	31	57	88	259	128	387	693
08:15 AM	0	181	181	19	63	82	265	108	373	636
08:30 AM	0	277	277	31	38	69	233	100	333	679
08:45 AM	0	217	217	27	40	67	244	96	340	624
Total	0	893	893	108	198	306	1001	432	1433	2632
Grand Total	0	1888	1888	164	311	475	1968	923	2891	5254
Apprch %	0	100		34.5	65.5		68.1	31.9		
Total %	0	35.9	35.9	3.1	5.9	9	37.5	17.6	55	

	Irwindale Avenue Southbound			SR-210 Westbound Ramps Westbound			Irwindale Avenue Northbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 07:45 AM										
07:45 AM	0	214	214	12	32	44	**292**	**151**	**443**	**701**
08:00 AM	0	218	218	**31**	57	**88**	259	128	387	693
08:15 AM	0	181	181	19	**63**	82	265	108	373	636
08:30 AM	0	**277**	**277**	31	38	69	233	100	333	679
Total Volume	0	890	890	93	190	283	1049	487	1536	2709
% App. Total	0	100		32.9	67.1		68.3	31.7		
PHF	.000	.803	.803	.750	.754	.804	.898	.806	.867	.966

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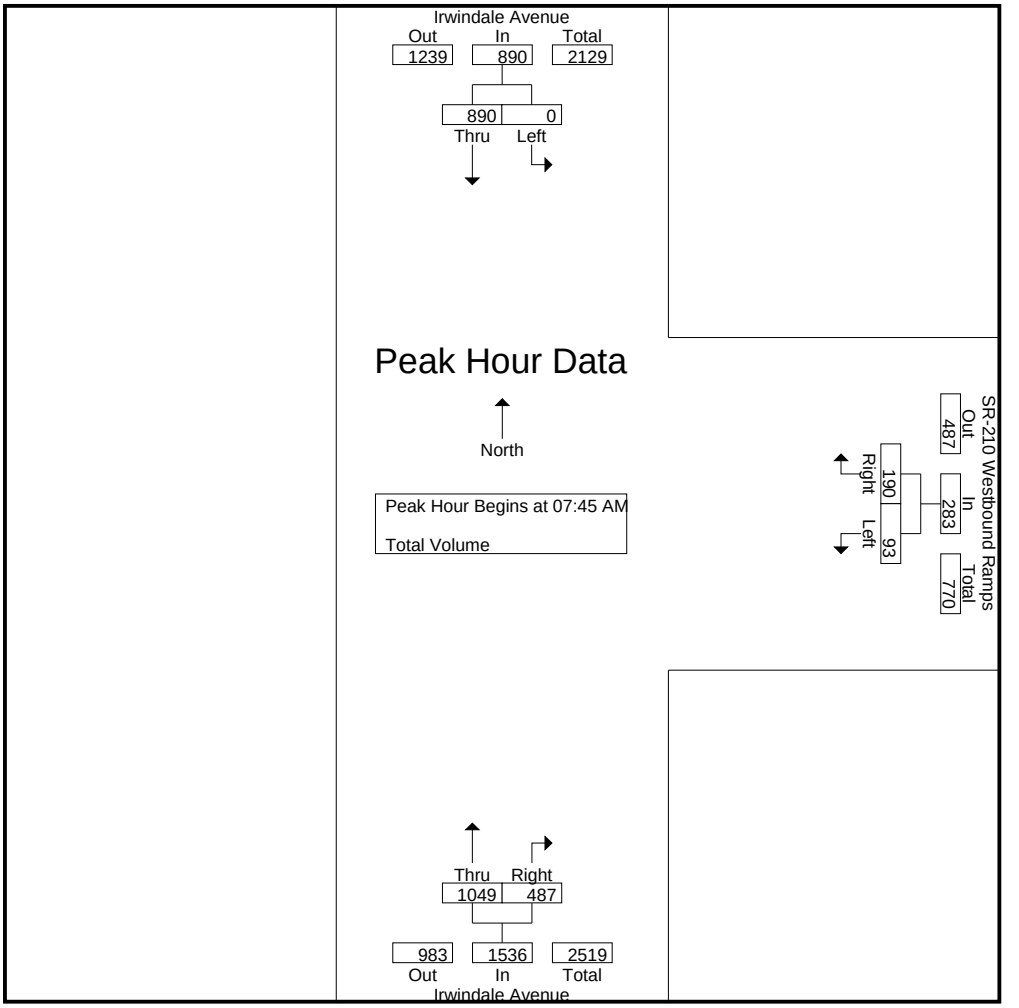
City of Azusa
N/S: Irwindale Avenue
E/W: SR-210 Westbound Ramps
Weather: Clear

File Name : 01_AZU_Irw_210W AM
Site Code : 05723545
Start Date : 5/24/2023
Page No : 2



Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:00 AM			08:00 AM			07:30 AM		
+0 mins.	0	256	256	**31**	57	**88**	249	123	372
+15 mins.	0	**279**	**279**	19	**63**	82	**292**	**151**	**443**
+30 mins.	0	246	246	31	38	69	259	128	387
+45 mins.	0	214	214	27	40	67	265	108	373
Total Volume	0	995	995	108	198	306	1065	510	1575
% App. Total	0	100		35.3	64.7		67.6	32.4	
PHF	.000	.892	.892	.871	.786	.869	.912	.844	.889

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City of Azusa
N/S: Irwindale Avenue
E/W: SR-210 Westbound Ramps
Weather: Clear

File Name : 01_AZU_Irw_210W PM
Site Code : 05723545
Start Date : 5/24/2023
Page No : 1

Groups Printed- Total Volume

	Irwindale Avenue Southbound			SR-210 Westbound Ramps Westbound			Irwindale Avenue Northbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
04:00 PM	0	284	284	42	39	81	203	124	327	692
04:15 PM	0	287	287	27	46	73	180	84	264	624
04:30 PM	0	299	299	38	55	93	177	125	302	694
04:45 PM	0	322	322	39	41	80	181	96	277	679
Total	0	1192	1192	146	181	327	741	429	1170	2689
05:00 PM	0	323	323	26	38	64	188	130	318	705
05:15 PM	0	300	300	45	52	97	180	118	298	695
05:30 PM	0	308	308	34	40	74	178	112	290	672
05:45 PM	0	313	313	43	65	108	187	92	279	700
Total	0	1244	1244	148	195	343	733	452	1185	2772
Grand Total	0	2436	2436	294	376	670	1474	881	2355	5461
Apprch %	0	100		43.9	56.1		62.6	37.4		
Total %	0	44.6	44.6	5.4	6.9	12.3	27	16.1	43.1	

	Irwindale Avenue Southbound			SR-210 Westbound Ramps Westbound			Irwindale Avenue Northbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 04:30 PM										
04:30 PM	0	299	299	38	**55**	93	177	125	302	694
04:45 PM	0	322	322	39	41	80	181	96	277	679
05:00 PM	0	**323**	**323**	26	38	64	**188**	**130**	**318**	**705**
05:15 PM	0	300	300	**45**	52	**97**	180	118	298	695
Total Volume	0	1244	1244	148	186	334	726	469	1195	2773
% App. Total	0	100		44.3	55.7		60.8	39.2		
PHF	.000	.963	.963	.822	.845	.861	.965	.902	.939	.983

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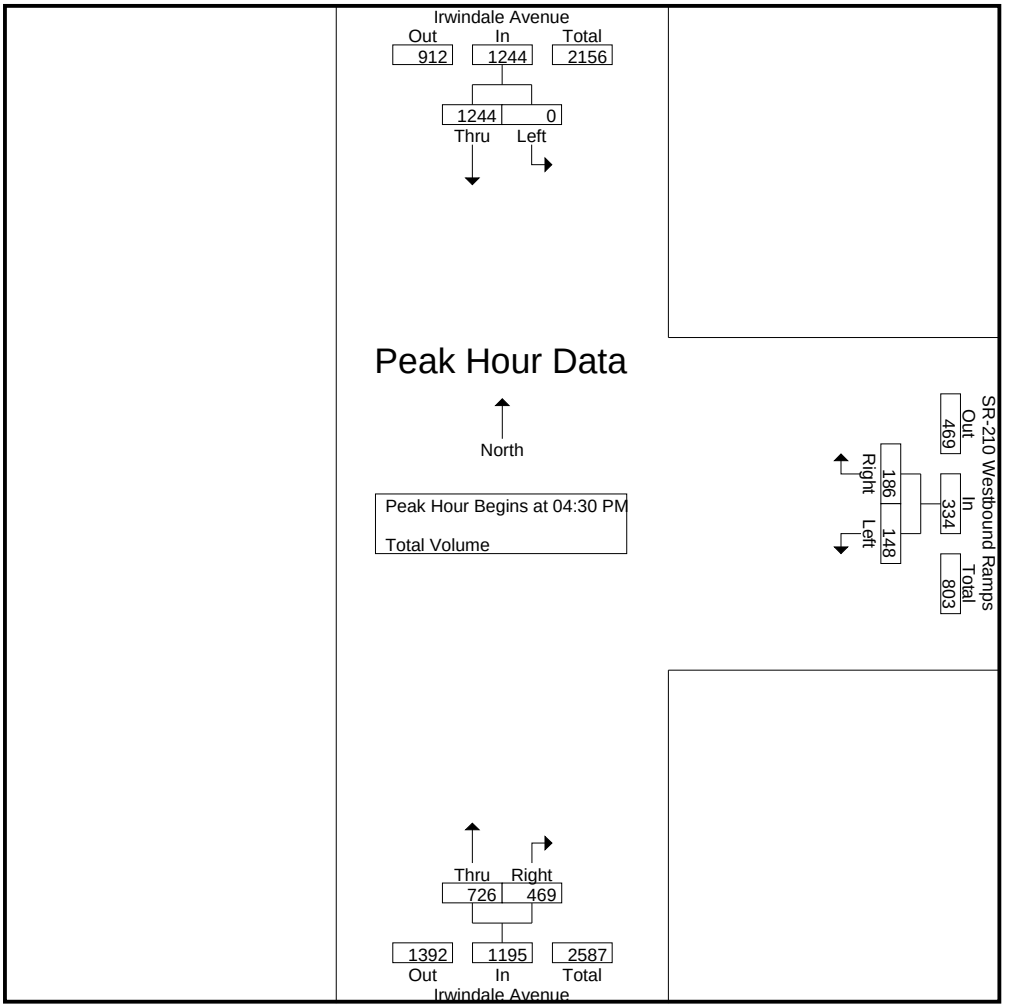
City of Azusa
N/S: Irwindale Avenue
E/W: SR-210 Westbound Ramps
Weather: Clear

File Name : 01_AZU_Irw_210W PM
Site Code : 05723545
Start Date : 5/24/2023
Page No : 2



Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:45 PM			05:00 PM			04:30 PM		
+0 mins.	0	322	322	26	38	64	177	125	302
+15 mins.	0	**323**	**323**	**45**	52	97	181	96	277
+30 mins.	0	300	300	34	40	74	**188**	**130**	**318**
+45 mins.	0	308	308	43	**65**	**108**	180	118	298
Total Volume	0	1253	1253	148	195	343	726	469	1195
% App. Total	0	100		43.1	56.9		60.8	39.2	
PHF	.000	.970	.970	.822	.750	.794	.965	.902	.939

Location: Azusa
N/S: Irwindale Avenue
E/W: SR-210 WB Ramps

Date: 5/24/2023
Day: Wednesday

PEDESTRIANS

	North Leg Irwindale Avenue	East Leg SR-210 WB Ramps	South Leg Irwindale Avenue	West Leg SR-210 WB Ramps	
	Pedestrians	Pedestrians	Pedestrians	Pedestrians	
7:00 AM	0	1	0	0	1
7:15 AM	0	1	0	0	1
7:30 AM	0	1	0	0	1
7:45 AM	0	0	0	0	0
8:00 AM	0	0	0	0	0
8:15 AM	0	0	0	0	0
8:30 AM	0	1	0	0	1
8:45 AM	0	0	0	0	0
TOTAL VOLUMES:	0	4	0	0	4

	North Leg Irwindale Avenue	East Leg SR-210 WB Ramps	South Leg Irwindale Avenue	West Leg SR-210 WB Ramps	
	Pedestrians	Pedestrians	Pedestrians	Pedestrians	
4:00 PM	0	1	0	0	1
4:15 PM	0	0	0	0	0
4:30 PM	0	1	0	0	1
4:45 PM	0	0	0	0	0
5:00 PM	0	3	0	0	3
5:15 PM	0	1	0	0	1
5:30 PM	0	0	0	0	0
5:45 PM	0	1	0	0	1
TOTAL VOLUMES:	0	7	0	0	7

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951-268-6268

Location: Azusa
N/S: Irwindale Avenue
E/W: SR-210 WB Ramps

Date: 5/24/2023
Day: Wednesday

BICYCLES

	Southbound Irwindale Avenue			Westbound SR-210 WB Ramps			Northbound Irwindale Avenue			Eastbound SR-210 WB Ramps			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
7:00 AM	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
7:30 AM	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
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES:	0	0	0	0	0	0	0	0	0	0	0	0	0

	Southbound Irwindale Avenue			Westbound SR-210 WB Ramps			Northbound Irwindale Avenue			Eastbound SR-210 WB Ramps			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
4:00 PM	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
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES:	0	0	0	0	0	0	0	0	0	0	0	0	0

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City of Azusa
N/S: Irwindale Avenue
E/W: SR-210 Eastbound Ramps
Weather: Clear

File Name : 02_AZU_Irw_210E AM
Site Code : 05723545
Start Date : 5/24/2023
Page No : 1

Groups Printed- Total Volume

	Irwindale Avenue Southbound				SR-210 Eastbound On Ramp Westbound				Irwindale Avenue Northbound				SR-210 Eastbound Off Ramp Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	48	57	0	105	0	0	0	0	0	223	36	259	89	0	96	185	549
07:15 AM	34	88	0	122	0	0	0	0	0	232	40	272	91	0	103	194	588
07:30 AM	58	76	0	134	0	0	0	0	0	274	47	321	101	0	113	214	669
07:45 AM	28	58	0	86	0	0	0	0	0	305	56	361	144	0	171	315	762
Total	168	279	0	447	0	0	0	0	0	1034	179	1213	425	0	483	908	2568
08:00 AM	33	85	0	118	0	0	0	0	0	252	50	302	140	0	164	304	724
08:15 AM	38	62	0	100	0	0	0	0	0	219	46	265	147	0	156	303	668
08:30 AM	45	110	0	155	0	0	0	0	0	195	50	245	127	1	131	259	659
08:45 AM	34	74	0	108	0	0	0	0	0	202	33	235	142	0	143	285	628
Total	150	331	0	481	0	0	0	0	0	868	179	1047	556	1	594	1151	2679
Grand Total	318	610	0	928	0	0	0	0	0	1902	358	2260	981	1	1077	2059	5247
Apprch %	34.3	65.7	0		0	0	0		0	84.2	15.8		47.6	0	52.3		
Total %	6.1	11.6	0	17.7	0	0	0	0	0	36.2	6.8	43.1	18.7	0	20.5	39.2	

	Irwindale Avenue Southbound				SR-210 Eastbound On Ramp Westbound				Irwindale Avenue Northbound				SR-210 Eastbound Off Ramp Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	**58**	76	0	**134**	0	0	0	0	0	274	47	321	101	0	113	214	669
07:45 AM	28	58	0	86	0	0	0	0	0	**305**	**56**	**361**	144	0	**171**	**315**	**762**
08:00 AM	33	**85**	0	118	0	0	0	0	0	252	50	302	140	0	164	304	724
08:15 AM	38	62	0	100	0	0	0	0	0	219	46	265	**147**	0	156	303	668
Total Volume	157	281	0	438	0	0	0	0	0	1050	199	1249	532	0	604	1136	2823
% App. Total	35.8	64.2	0		0	0	0		0	84.1	15.9		46.8	0	53.2		
PHF	.677	.826	.000	.817	.000	.000	.000	.000	.000	.861	.888	.865	.905	.000	.883	.902	.926

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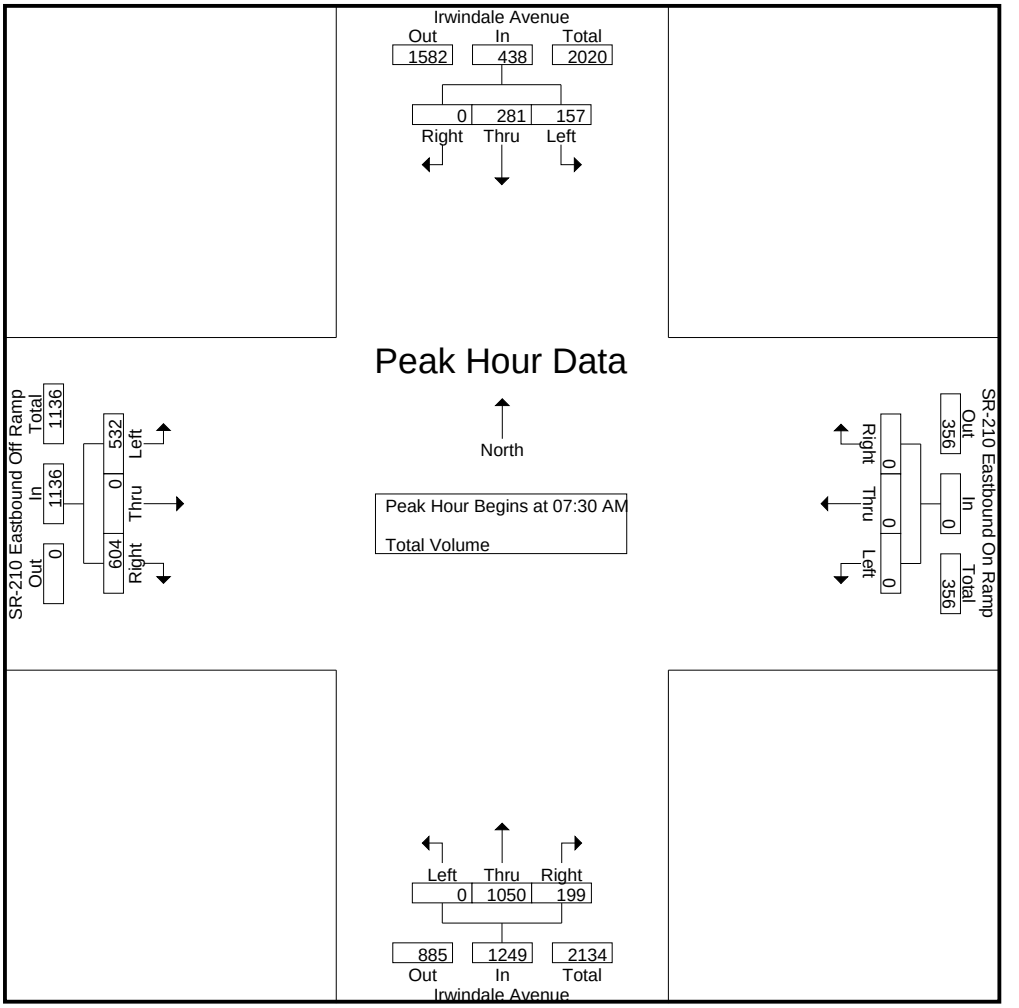
City of Azusa
N/S: Irwindale Avenue
E/W: SR-210 Eastbound Ramps
Weather: Clear

File Name : 02_AZU_Irw_210E AM
Site Code : 05723545
Start Date : 5/24/2023
Page No : 2



Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	08:00 AM				07:00 AM				07:15 AM				07:45 AM			
+0 mins.	33	85	0	118	0	0	0	0	0	232	40	272	144	0	**171**	**315**
+15 mins.	38	62	0	100	0	0	0	0	0	274	47	321	140	0	164	304
+30 mins.	**45**	**110**	0	**155**	0	0	0	0	0	**305**	**56**	**361**	**147**	0	156	303
+45 mins.	34	74	0	108	0	0	0	0	0	252	50	302	127	**1**	131	259
Total Volume	150	331	0	481	0	0	0	0	0	1063	193	1256	558	1	622	1181
% App. Total	31.2	68.8	0		0	0	0		0	84.6	15.4		47.2	0.1	52.7	
PHF	.833	.752	.000	.776	.000	.000	.000	.000	.000	.871	.862	.870	.949	.250	.909	.937

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City of Azusa
N/S: Irwindale Avenue
E/W: SR-210 Eastbound Ramps
Weather: Clear

File Name : 02_AZU_Irw_210E PM
Site Code : 05723545
Start Date : 5/24/2023
Page No : 1

Groups Printed- Total Volume

	Irwindale Avenue Southbound				SR-210 Eastbound On Ramp Westbound				Irwindale Avenue Northbound				SR-210 Eastbound Off Ramp Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	67	130	0	197	0	0	0	0	0	214	77	291	122	2	122	246	734
04:15 PM	64	134	0	198	0	0	0	0	0	174	58	232	86	1	112	199	629
04:30 PM	74	149	0	223	0	0	0	0	0	232	83	315	67	1	85	153	691
04:45 PM	88	166	0	254	0	0	0	0	0	188	52	240	84	0	104	188	682
Total	293	579	0	872	0	0	0	0	0	808	270	1078	359	4	423	786	2736
05:00 PM	114	138	0	252	0	0	0	0	0	236	85	321	81	0	101	182	755
05:15 PM	75	154	0	229	0	0	0	0	0	235	62	297	70	0	108	178	704
05:30 PM	89	144	0	233	0	0	0	0	0	211	75	286	81	1	116	198	717
05:45 PM	89	150	0	239	0	0	0	0	0	191	55	246	83	1	100	184	669
Total	367	586	0	953	0	0	0	0	0	873	277	1150	315	2	425	742	2845
Grand Total	660	1165	0	1825	0	0	0	0	0	1681	547	2228	674	6	848	1528	5581
Apprch %	36.2	63.8	0		0	0	0		0	75.4	24.6		44.1	0.4	55.5		
Total %	11.8	20.9	0	32.7	0	0	0	0	0	30.1	9.8	39.9	12.1	0.1	15.2	27.4	

	Irwindale Avenue Southbound				SR-210 Eastbound On Ramp Westbound				Irwindale Avenue Northbound				SR-210 Eastbound Off Ramp Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	88	**166**	0	**254**	0	0	0	0	0	188	52	240	**84**	0	104	188	682
05:00 PM	**114**	138	0	252	0	0	0	0	0	**236**	**85**	**321**	81	0	101	182	**755**
05:15 PM	75	154	0	229	0	0	0	0	0	235	62	297	70	0	108	178	704
05:30 PM	89	144	0	233	0	0	0	0	0	211	75	286	81	**1**	**116**	**198**	717
Total Volume	366	602	0	968	0	0	0	0	0	870	274	1144	316	1	429	746	2858
% App. Total	37.8	62.2	0		0	0	0		0	76	24		42.4	0.1	57.5		
PHF	.803	.907	.000	.953	.000	.000	.000	.000	.000	.922	.806	.891	.940	.250	.925	.942	.946

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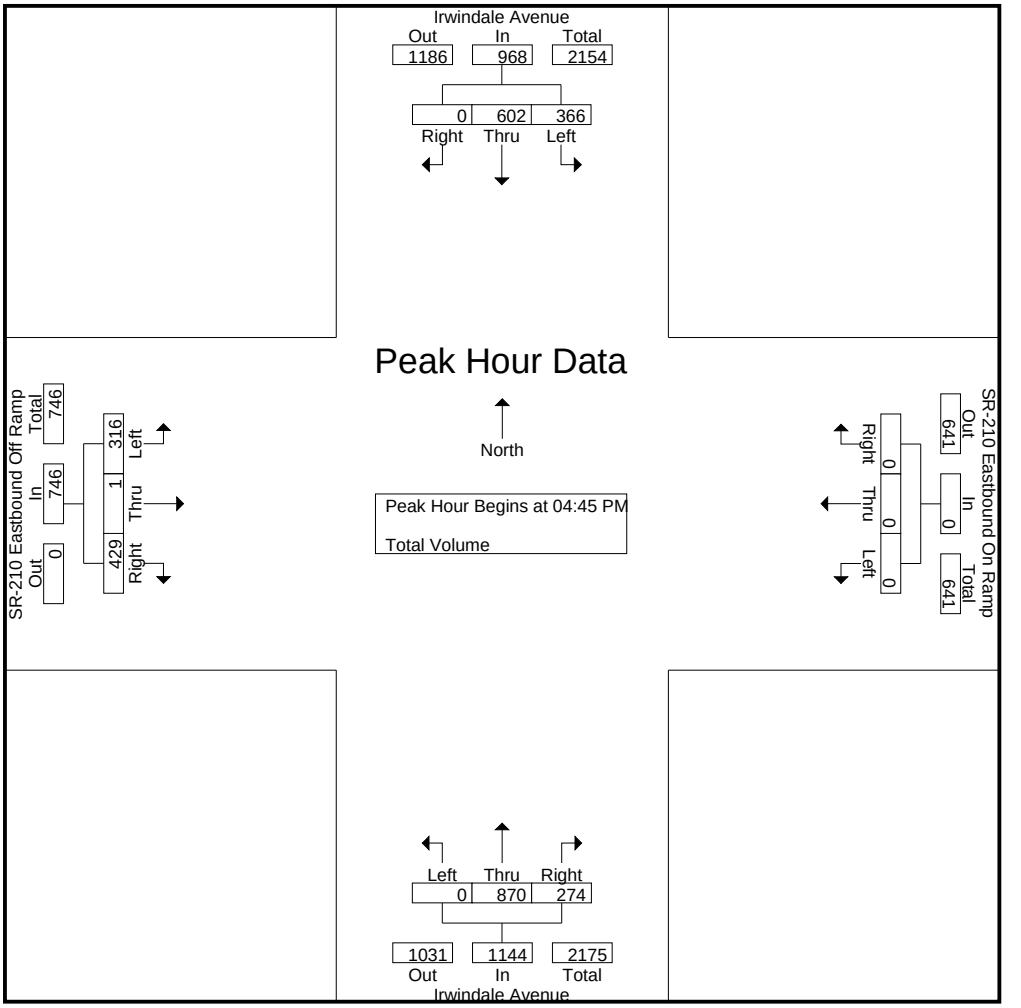
City of Azusa
N/S: Irwindale Avenue
E/W: SR-210 Eastbound Ramps
Weather: Clear

File Name : 02_AZU_Irw_210E PM
Site Code : 05723545
Start Date : 5/24/2023
Page No : 2



Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:45 PM				04:00 PM				04:30 PM				04:00 PM			
+0 mins.	88	**166**	0	**254**	0	0	0	0	0	232	83	315	**122**	**2**	**122**	**246**
+15 mins.	**114**	138	0	252	0	0	0	0	0	188	52	240	86	1	112	199
+30 mins.	75	154	0	229	0	0	0	0	0	**236**	**85**	**321**	67	1	85	153
+45 mins.	89	144	0	233	0	0	0	0	0	235	62	297	84	0	104	188
Total Volume	366	602	0	968	0	0	0	0	0	891	282	1173	359	4	423	786
% App. Total	37.8	62.2	0		0	0	0		0	76	24		45.7	0.5	53.8	
PHF	.803	.907	.000	.953	.000	.000	.000	.000	.000	.944	.829	.914	.736	.500	.867	.799

Location: Azusa
N/S: Irwindale Avenue
E/W: SR-210 EB Ramps

Date: 5/24/2023
Day: Wednesday

PEDESTRIANS

	North Leg Irwindale Avenue	East Leg SR-210 EB Ramps	South Leg Irwindale Avenue	West Leg SR-210 EB Ramps	
	Pedestrians	Pedestrians	Pedestrians	Pedestrians	
7:00 AM	0	1	0	0	1
7:15 AM	0	1	0	0	1
7:30 AM	0	1	0	0	1
7:45 AM	0	0	0	0	0
8:00 AM	0	0	0	0	0
8:15 AM	0	0	0	0	0
8:30 AM	0	1	0	0	1
8:45 AM	0	0	0	0	0
TOTAL VOLUMES:	0	4	0	0	4

	North Leg Irwindale Avenue	East Leg SR-210 EB Ramps	South Leg Irwindale Avenue	West Leg SR-210 EB Ramps	
	Pedestrians	Pedestrians	Pedestrians	Pedestrians	
4:00 PM	0	1	0	0	1
4:15 PM	0	0	0	0	0
4:30 PM	0	1	0	0	1
4:45 PM	0	0	0	0	0
5:00 PM	0	1	0	0	1
5:15 PM	0	2	0	0	2
5:30 PM	0	0	0	0	0
5:45 PM	0	0	0	0	0
TOTAL VOLUMES:	0	5	0	0	5

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Location: Azusa
N/S: Irwindale Avenue
E/W: SR-210 EB Ramps

Date: 5/24/2023
Day: Wednesday

BICYCLES

	Southbound Irwindale Avenue			Westbound SR-210 EB Ramps			Northbound Irwindale Avenue			Eastbound SR-210 EB Ramps			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
7:00 AM	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
7:30 AM	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
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	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	1
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES:	0	1	0	0	0	0	0	0	0	0	0	0	1

	Southbound Irwindale Avenue			Westbound SR-210 EB Ramps			Northbound Irwindale Avenue			Eastbound SR-210 EB Ramps			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
4:00 PM	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
4:30 PM	0	1	0	0	0	0	0	0	0	0	0	0	1
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES:	0	1	0	0	0	0	0	0	0	0	0	0	1

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City of Azusa
N/S: Azusa Avenue
E/W: SR-210 Eastbound Off Ramp
Weather: Clear

File Name : 13_AZU_Azu_210EO AM
Site Code : 05723545
Start Date : 5/24/2023
Page No : 1

Groups Printed- Total Volume

	Azusa Avenue Southbound				Shell Driveway Westbound				Azusa Avenue Northbound				SR-210 Eastbound Off Ramp Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	0	83	64	147	0	0	0	0	0	228	0	228	27	0	45	72	447
07:15 AM	0	96	77	173	0	0	0	0	0	229	0	229	37	0	54	91	493
07:30 AM	0	106	95	201	0	0	0	0	0	268	0	268	29	0	74	103	572
07:45 AM	0	150	89	239	0	0	0	0	0	307	0	307	29	0	80	109	655
Total	0	435	325	760	0	0	0	0	0	1032	0	1032	122	0	253	375	2167
08:00 AM	0	183	55	238	0	0	0	0	0	297	0	297	39	0	74	113	648
08:15 AM	0	130	86	216	0	0	0	0	0	275	0	275	41	0	59	100	591
08:30 AM	0	122	63	185	0	0	0	0	0	234	0	234	44	0	86	130	549
08:45 AM	0	102	55	157	0	0	0	0	0	220	0	220	49	0	77	126	503
Total	0	537	259	796	0	0	0	0	0	1026	0	1026	173	0	296	469	2291
Grand Total	0	972	584	1556	0	0	0	0	0	2058	0	2058	295	0	549	844	4458
Apprch %	0	62.5	37.5		0	0	0		0	100	0		35	0	65		
Total %	0	21.8	13.1	34.9	0	0	0	0	0	46.2	0	46.2	6.6	0	12.3	18.9	

	Azusa Avenue Southbound				Shell Driveway Westbound				Azusa Avenue Northbound				SR-210 Eastbound Off Ramp Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	0	106	**95**	201	0	0	0	0	0	268	0	268	29	0	74	103	572
07:45 AM	0	150	89	**239**	0	0	0	0	0	**307**	0	**307**	29	0	**80**	109	**655**
08:00 AM	0	**183**	55	238	0	0	0	0	0	297	0	297	39	0	74	**113**	648
08:15 AM	0	130	86	216	0	0	0	0	0	275	0	275	**41**	0	59	100	591
Total Volume	0	569	325	894	0	0	0	0	0	1147	0	1147	138	0	287	425	2466
% App. Total	0	63.6	36.4		0	0	0		0	100	0		32.5	0	67.5		
PHF	.000	.777	.855	.935	.000	.000	.000	.000	.000	.934	.000	.934	.841	.000	.897	.940	.941

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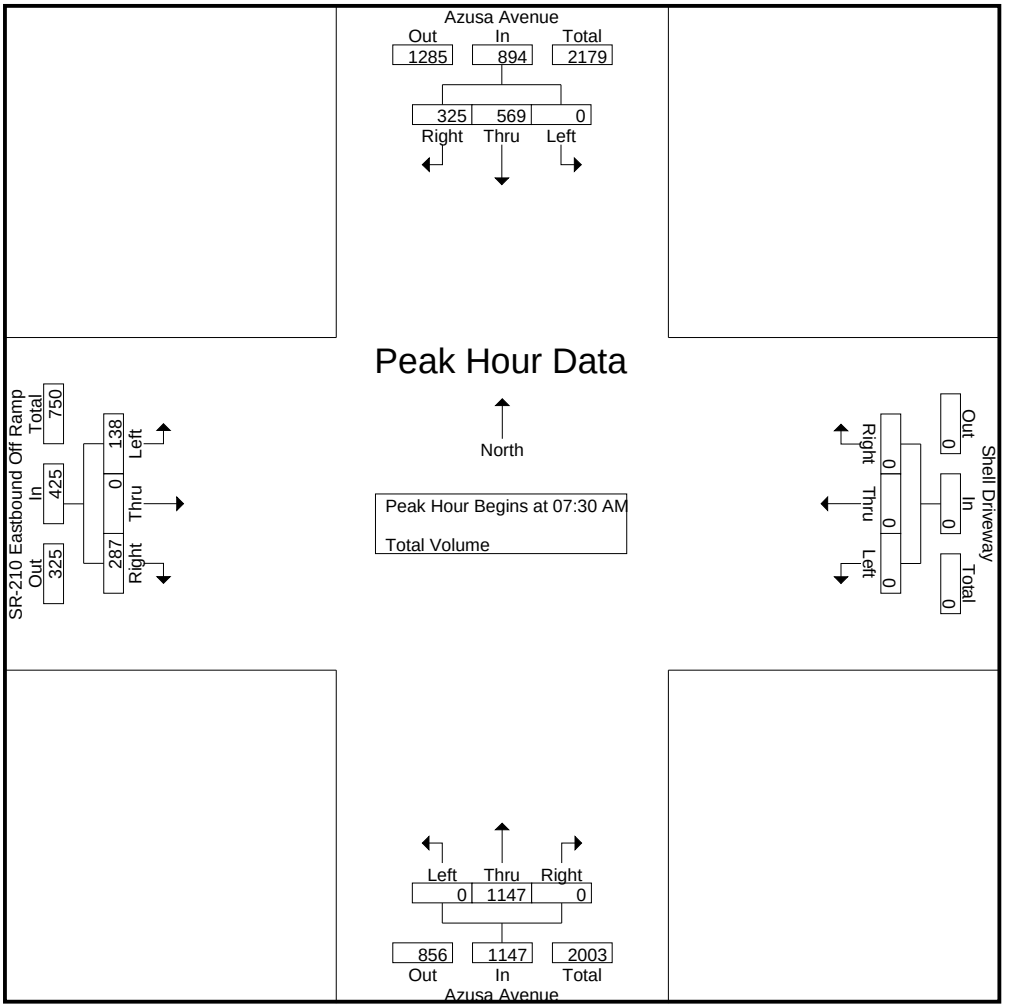
City of Azusa
N/S: Azusa Avenue
E/W: SR-210 Eastbound Off Ramp
Weather: Clear

File Name : 13_AZU_Azu_210EO AM
Site Code : 05723545
Start Date : 5/24/2023
Page No : 2



Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:30 AM				07:00 AM				07:30 AM				08:00 AM			
+0 mins.	0	106	**95**	201	0	0	0	0	0	268	0	268	39	0	74	113
+15 mins.	0	150	89	**239**	0	0	0	0	0	**307**	0	**307**	41	0	59	100
+30 mins.	0	**183**	55	238	0	0	0	0	0	297	0	297	44	0	**86**	**130**
+45 mins.	0	130	86	216	0	0	0	0	0	275	0	275	**49**	0	77	126
Total Volume	0	569	325	894	0	0	0	0	0	1147	0	1147	173	0	296	469
% App. Total	0	63.6	36.4		0	0	0		0	100	0		36.9	0	63.1	
PHF	.000	.777	.855	.935	.000	.000	.000	.000	.000	.934	.000	.934	.883	.000	.860	.902

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City of Azusa
N/S: Azusa Avenue
E/W: SR-210 Eastbound Off Ramp
Weather: Clear

File Name : 13_AZU_Azu_210EO PM
Site Code : 05723545
Start Date : 5/24/2023
Page No : 1

Groups Printed- Total Volume

	Azusa Avenue Southbound				Shell Driveway Westbound				Azusa Avenue Northbound				SR-210 Eastbound Off Ramp Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	0	169	51	220	0	0	0	0	0	250	0	250	55	0	80	135	605
04:15 PM	0	163	43	206	0	0	0	0	0	230	0	230	43	0	90	133	569
04:30 PM	0	189	78	267	0	0	0	0	0	274	0	274	34	0	91	125	666
04:45 PM	0	157	71	228	0	0	0	0	0	228	0	228	54	0	110	164	620
Total	0	678	243	921	0	0	0	0	0	982	0	982	186	0	371	557	2460
05:00 PM	0	178	62	240	0	0	0	0	0	227	0	227	57	0	105	162	629
05:15 PM	0	176	57	233	0	0	0	0	0	258	0	258	73	0	114	187	678
05:30 PM	0	178	73	251	0	0	0	0	0	248	0	248	60	0	110	170	669
05:45 PM	0	185	42	227	0	0	0	0	0	264	0	264	44	0	87	131	622
Total	0	717	234	951	0	0	0	0	0	997	0	997	234	0	416	650	2598
Grand Total	0	1395	477	1872	0	0	0	0	0	1979	0	1979	420	0	787	1207	5058
Apprch %	0	74.5	25.5		0	0	0		0	100	0		34.8	0	65.2		
Total %	0	27.6	9.4	37	0	0	0	0	0	39.1	0	39.1	8.3	0	15.6	23.9	

	Azusa Avenue Southbound				Shell Driveway Westbound				Azusa Avenue Northbound				SR-210 Eastbound Off Ramp Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 05:00 PM																	
05:00 PM	0	178	62	240	0	0	0	0	0	227	0	227	57	0	105	162	629
05:15 PM	0	176	57	233	0	0	0	0	0	258	0	258	**73**	0	**114**	**187**	**678**
05:30 PM	0	178	**73**	**251**	0	0	0	0	0	248	0	248	60	0	110	170	669
05:45 PM	0	**185**	42	227	0	0	0	0	0	**264**	0	**264**	44	0	87	131	622
Total Volume	0	717	234	951	0	0	0	0	0	997	0	997	234	0	416	650	2598
% App. Total	0	75.4	24.6		0	0	0		0	100	0		36	0	64		
PHF	.000	.969	.801	.947	.000	.000	.000	.000	.000	.944	.000	.944	.801	.000	.912	.869	.958

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City of Azusa
N/S: Azusa Avenue
E/W: SR-210 Eastbound Off Ramp
Weather: Clear

File Name : 13_AZU_Azu_210EO PM
Site Code : 05723545
Start Date : 5/24/2023
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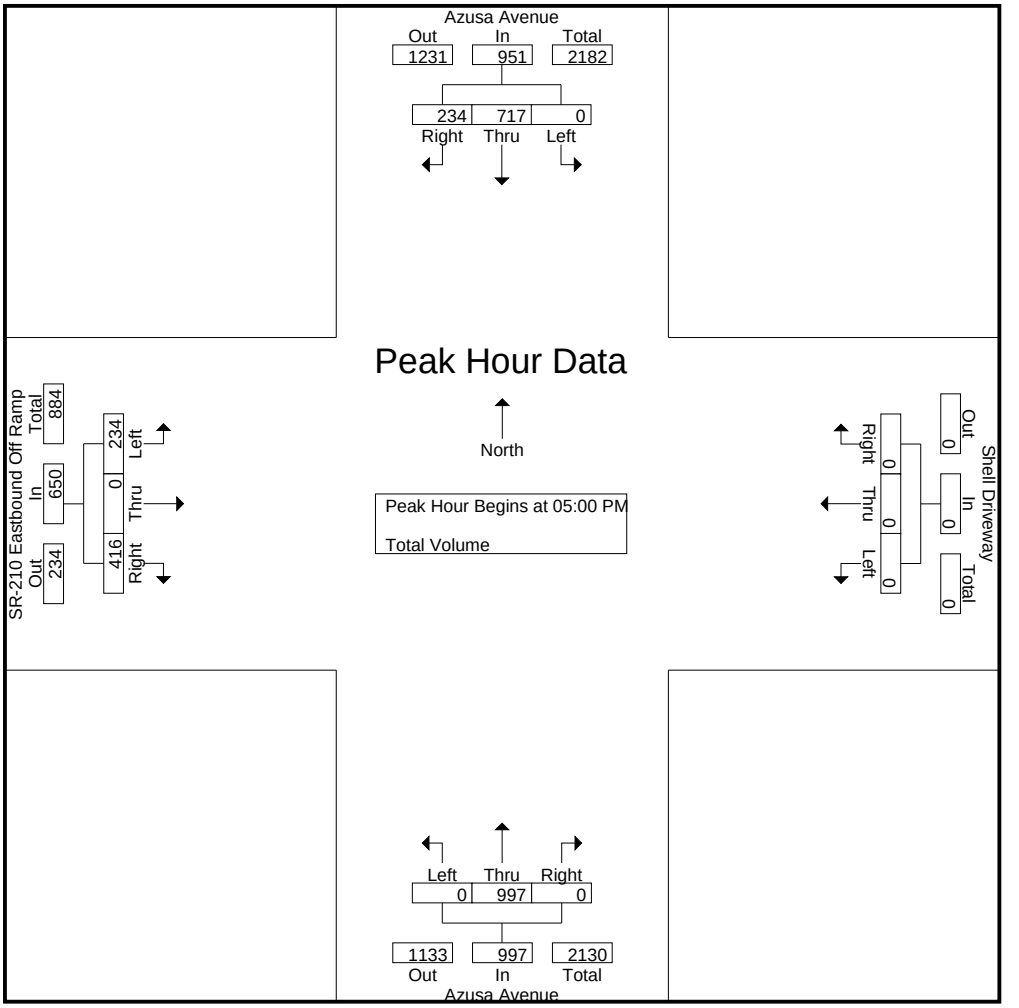

Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:30 PM				04:00 PM				05:00 PM				04:45 PM			
+0 mins.	0	**189**	**78**	**267**	0	0	0	0	0	227	0	227	54	0	110	164
+15 mins.	0	157	71	228	0	0	0	0	0	258	0	258	57	0	105	162
+30 mins.	0	178	62	240	0	0	0	0	0	248	0	248	**73**	0	**114**	**187**
+45 mins.	0	176	57	233	0	0	0	0	0	**264**	0	**264**	60	0	110	170
Total Volume	0	700	268	968	0	0	0	0	0	997	0	997	244	0	439	683
% App. Total	0	72.3	27.7		0	0	0		0	100	0		35.7	0	64.3	
PHF	.000	.926	.859	.906	.000	.000	.000	.000	.000	.944	.000	.944	.836	.000	.963	.913

Location: Azusa
N/S: Azusa Avenue
E/W: SR-210 EB Off Ramp

Date: 5/24/2023
Day: Wednesday

PEDESTRIANS

	North Leg Azusa Avenue	East Leg Shell Driveway	South Leg Azusa Avenue	West Leg SR-210 EB Off Ramp	
	Pedestrians	Pedestrians	Pedestrians	Pedestrians	
7:00 AM	0	0	0	1	1
7:15 AM	0	0	0	0	0
7:30 AM	0	0	0	1	1
7:45 AM	0	0	0	0	0
8:00 AM	0	0	0	1	1
8:15 AM	0	0	0	1	1
8:30 AM	0	0	0	3	3
8:45 AM	0	0	0	0	0
TOTAL VOLUMES:	0	0	0	7	7

	North Leg Azusa Avenue	East Leg Shell Driveway	South Leg Azusa Avenue	West Leg SR-210 EB Off Ramp	
	Pedestrians	Pedestrians	Pedestrians	Pedestrians	
4:00 PM	0	0	0	2	2
4:15 PM	0	0	0	1	1
4:30 PM	0	0	0	2	2
4:45 PM	0	0	0	0	0
5:00 PM	0	0	0	0	0
5:15 PM	0	0	0	2	2
5:30 PM	0	0	0	1	1
5:45 PM	0	0	0	3	3
TOTAL VOLUMES:	0	0	0	11	11

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Location: Azusa
N/S: Azusa Avenue
E/W: SR-210 EB Off Ramp

Date: 5/24/2023
Day: Wednesday

BICYCLES

	Southbound Azusa Avenue			Westbound Shell Driveway			Northbound Azusa Avenue			Eastbound SR-210 EB Off Ramp			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
7:00 AM	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
7:30 AM	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
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	1	0	0	0	0	0	0	0	0	0	0	1
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES:	0	1	0	0	0	0	0	0	0	0	0	0	1

	Southbound Azusa Avenue			Westbound Shell Driveway			Northbound Azusa Avenue			Eastbound SR-210 EB Off Ramp			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
4:00 PM	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
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	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	1
TOTAL VOLUMES:	0	2	0	0	0	0	0	0	0	0	0	0	2

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City of Azusa
N/S: Alameda Avenue/SR-210 WB Ramps
E/W: 1st Street
Weather: Clear

File Name : 14_AZU_210W_1st AM
Site Code : 05723545
Start Date : 5/24/2023
Page No : 1

Groups Printed- Total Volume

	Alameda Avenue Southbound				1st Street Westbound				SR-210 Westbound Ramps Northbound				1st Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	3	21	10	34	169	96	3	268	22	2	0	24	3	19	84	106	432
07:15 AM	4	18	20	42	154	81	7	242	31	1	1	33	5	32	72	109	426
07:30 AM	6	23	20	49	158	106	4	268	19	4	1	24	4	30	60	94	435
07:45 AM	4	16	23	43	126	130	7	263	21	3	1	25	4	82	74	160	491
Total	17	78	73	168	607	413	21	1041	93	10	3	106	16	163	290	469	1784
08:00 AM	11	17	27	55	104	133	11	248	21	5	3	29	6	92	55	153	485
08:15 AM	8	14	19	41	113	125	11	249	22	2	1	25	3	80	73	156	471
08:30 AM	5	7	7	19	133	80	7	220	21	5	1	27	3	49	63	115	381
08:45 AM	2	6	10	18	126	88	3	217	25	3	1	29	1	45	59	105	369
Total	26	44	63	133	476	426	32	934	89	15	6	110	13	266	250	529	1706
Grand Total	43	122	136	301	1083	839	53	1975	182	25	9	216	29	429	540	998	3490
Apprch %	14.3	40.5	45.2		54.8	42.5	2.7		84.3	11.6	4.2		2.9	43	54.1		
Total %	1.2	3.5	3.9	8.6	31	24	1.5	56.6	5.2	0.7	0.3	6.2	0.8	12.3	15.5	28.6	

	Alameda Avenue Southbound				1st Street Westbound				SR-210 Westbound Ramps Northbound				1st Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	6	**23**	20	49	**158**	106	4	**268**	19	4	1	24	4	30	60	94	435
07:45 AM	4	16	23	43	126	130	7	263	21	3	1	25	4	82	**74**	**160**	**491**
08:00 AM	**11**	17	**27**	**55**	104	**133**	**11**	248	21	**5**	**3**	**29**	**6**	**92**	55	153	485
08:15 AM	8	14	19	41	113	125	11	249	**22**	2	1	25	3	80	73	156	471
Total Volume	29	70	89	188	501	494	33	1028	83	14	6	103	17	284	262	563	1882
% App. Total	15.4	37.2	47.3		48.7	48.1	3.2		80.6	13.6	5.8		3	50.4	46.5		
PHF	.659	.761	.824	.855	.793	.929	.750	.959	.943	.700	.500	.888	.708	.772	.885	.880	.958

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City of Azusa
N/S: Alameda Avenue/SR-210 WB Ramps
E/W: 1st Street
Weather: Clear

File Name : 14_AZU_210W_1st AM
Site Code : 05723545
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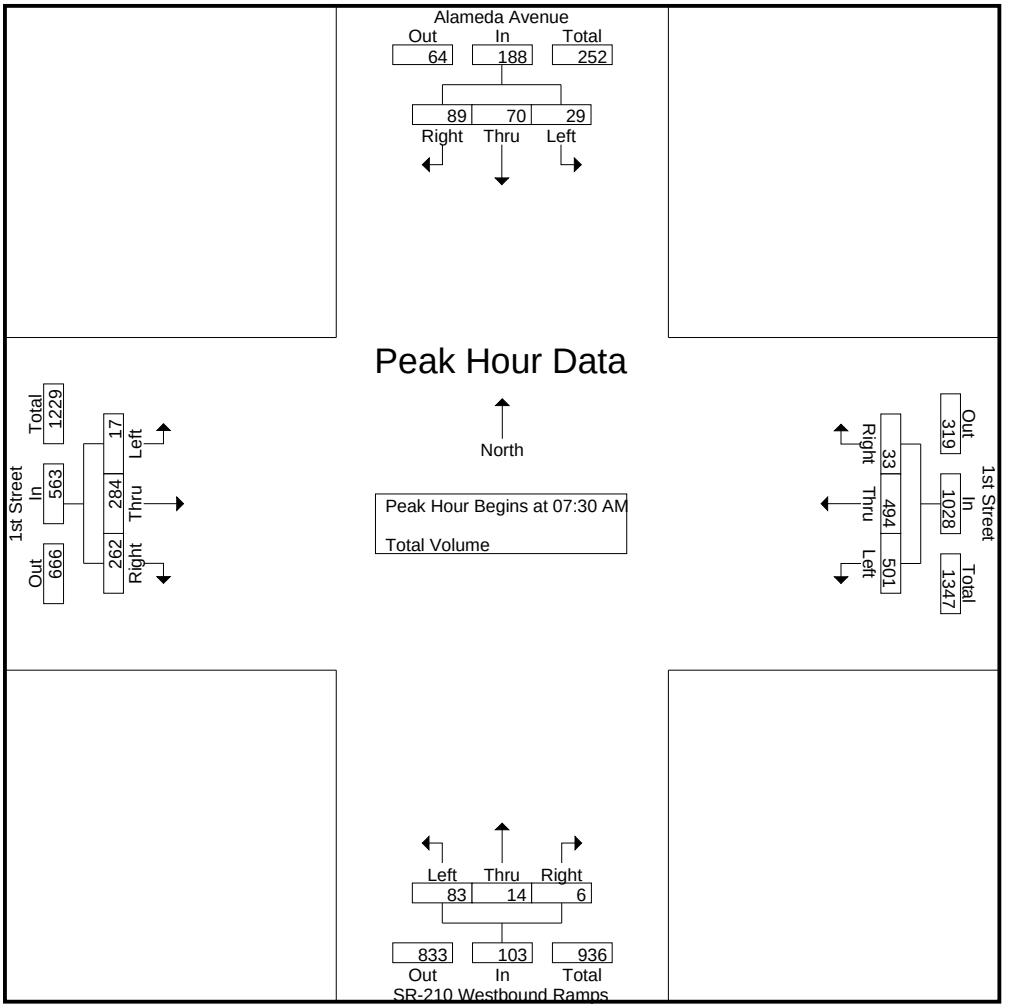

Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:15 AM				07:00 AM				07:15 AM				07:45 AM			
+0 mins.	4	18	20	42	**169**	96	3	**268**	**31**	1	1	**33**	4	82	**74**	**160**
+15 mins.	6	**23**	20	49	154	81	**7**	242	19	4	1	24	**6**	**92**	55	153
+30 mins.	4	16	23	43	158	106	4	268	21	3	1	25	3	80	73	156
+45 mins.	**11**	17	**27**	**55**	126	**130**	7	263	21	**5**	**3**	29	3	49	63	115
Total Volume	25	74	90	189	607	413	21	1041	92	13	6	111	16	303	265	584
% App. Total	13.2	39.2	47.6		58.3	39.7	2		82.9	11.7	5.4		2.7	51.9	45.4	
PHF	.568	.804	.833	.859	.898	.794	.750	.971	.742	.650	.500	.841	.667	.823	.895	.913

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City of Azusa
N/S: Alameda Avenue/SR-210 WB Ramps
E/W: 1st Street
Weather: Clear

File Name : 14_AZU_210W_1st PM
Site Code : 05723545
Start Date : 5/24/2023
Page No : 1

Groups Printed- Total Volume

	Alameda Avenue Southbound				1st Street Westbound				SR-210 Westbound Ramps Northbound				1st Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	6	5	5	16	30	51	5	86	88	19	15	122	8	78	44	130	354
04:15 PM	10	5	8	23	37	49	7	93	83	22	28	133	6	97	49	152	401
04:30 PM	10	10	12	32	31	38	9	78	83	12	22	117	5	76	41	122	349
04:45 PM	11	7	16	34	49	68	7	124	87	19	22	128	4	70	49	123	409
Total	37	27	41	105	147	206	28	381	341	72	87	500	23	321	183	527	1513
05:00 PM	3	12	10	25	44	54	9	107	77	19	18	114	6	81	44	131	377
05:15 PM	8	10	18	36	59	65	8	132	88	26	23	137	3	84	43	130	435
05:30 PM	10	5	14	29	39	51	8	98	86	24	13	123	4	89	42	135	385
05:45 PM	10	8	14	32	40	55	4	99	95	24	21	140	4	78	42	124	395
Total	31	35	56	122	182	225	29	436	346	93	75	514	17	332	171	520	1592
Grand Total	68	62	97	227	329	431	57	817	687	165	162	1014	40	653	354	1047	3105
Apprch %	30	27.3	42.7		40.3	52.8	7		67.8	16.3	16		3.8	62.4	33.8		
Total %	2.2	2	3.1	7.3	10.6	13.9	1.8	26.3	22.1	5.3	5.2	32.7	1.3	21	11.4	33.7	

	Alameda Avenue Southbound				1st Street Westbound				SR-210 Westbound Ramps Northbound				1st Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	**11**	7	16	34	49	**68**	7	124	87	19	22	128	4	70	**49**	123	409
05:00 PM	3	**12**	10	25	44	54	**9**	107	77	19	18	114	**6**	81	44	131	377
05:15 PM	8	10	**18**	**36**	**59**	65	8	**132**	**88**	**26**	**23**	**137**	3	84	43	130	**435**
05:30 PM	10	5	14	29	39	51	8	98	86	24	13	123	4	**89**	42	**135**	385
Total Volume	32	34	58	124	191	238	32	461	338	88	76	502	17	324	178	519	1606
% App. Total	25.8	27.4	46.8		41.4	51.6	6.9		67.3	17.5	15.1		3.3	62.4	34.3		
PHF	.727	.708	.806	.861	.809	.875	.889	.873	.960	.846	.826	.916	.708	.910	.908	.961	.923

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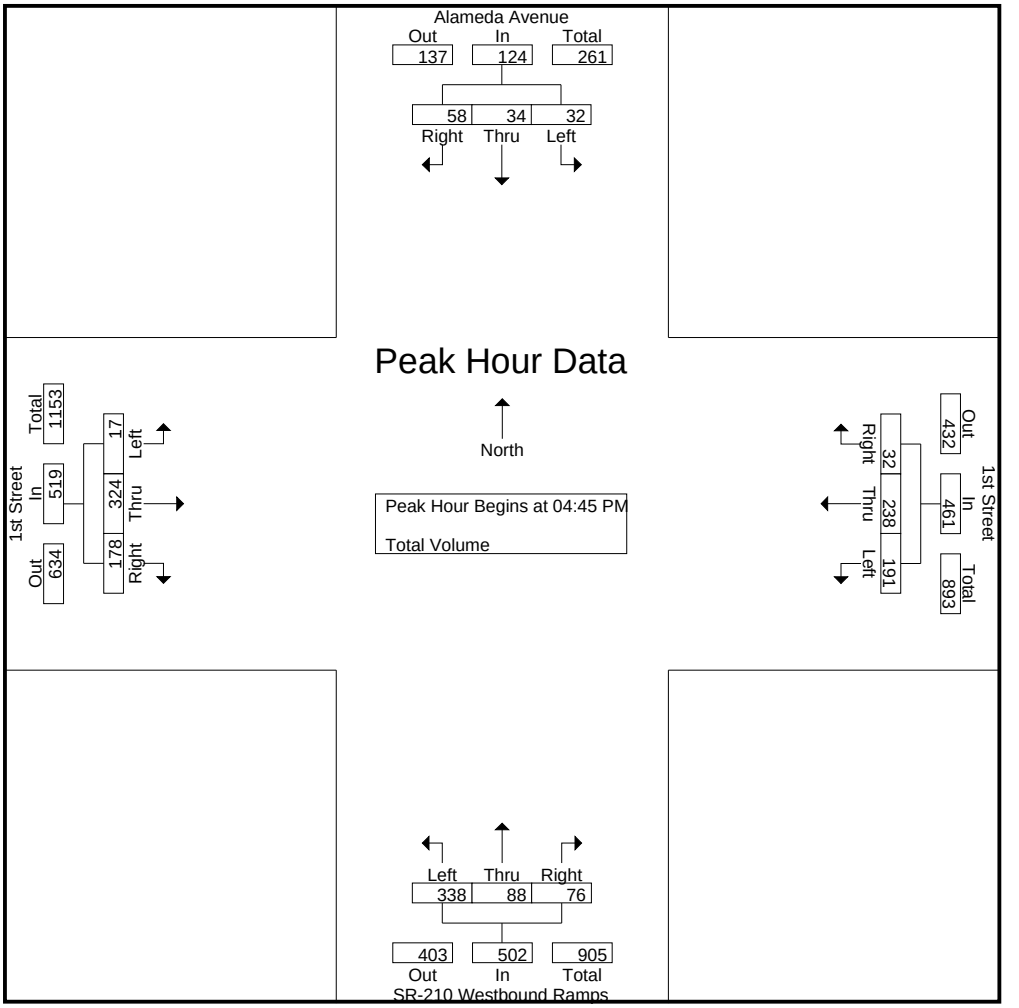
City of Azusa
N/S: Alameda Avenue/SR-210 WB Ramps
E/W: 1st Street
Weather: Clear

File Name : 14_AZU_210W_1st PM
Site Code : 05723545
Start Date : 5/24/2023
Page No : 2



Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:30 PM				04:45 PM				05:00 PM				04:15 PM			
+0 mins.	10	10	12	32	49	**68**	7	124	77	19	18	114	**6**	**97**	**49**	**152**
+15 mins.	**11**	7	16	34	44	54	**9**	107	88	**26**	**23**	137	5	76	41	122
+30 mins.	3	**12**	10	25	**59**	65	8	**132**	86	24	13	123	4	70	49	123
+45 mins.	8	10	**18**	**36**	39	51	8	98	**95**	24	21	**140**	6	81	44	131
Total Volume	32	39	56	127	191	238	32	461	346	93	75	514	21	324	183	528
% App. Total	25.2	30.7	44.1		41.4	51.6	6.9		67.3	18.1	14.6		4	61.4	34.7	
PHF	.727	.813	.778	.882	.809	.875	.889	.873	.911	.894	.815	.918	.875	.835	.934	.868

Location: Azusa
N/S: Alameda Ave/SR-210 W Ramps
E/W: 1st Street

Date: 5/24/2023
Day: Wednesday

PEDESTRIANS

	North Leg Alameda Avenue	East Leg 1st Street	South Leg SR-210 WB Ramps	West Leg 1st Street	
	Pedestrians	Pedestrians	Pedestrians	Pedestrians	
7:00 AM	3	0	0	0	3
7:15 AM	1	0	0	0	1
7:30 AM	4	0	0	0	4
7:45 AM	2	0	1	0	3
8:00 AM	3	0	0	0	3
8:15 AM	0	0	0	0	0
8:30 AM	1	0	0	0	1
8:45 AM	1	0	0	0	1
TOTAL VOLUMES:	15	0	1	0	16

	North Leg Alameda Avenue	East Leg 1st Street	South Leg SR-210 WB Ramps	West Leg 1st Street	
	Pedestrians	Pedestrians	Pedestrians	Pedestrians	
4:00 PM	0	0	0	0	0
4:15 PM	0	0	0	0	0
4:30 PM	0	0	0	0	0
4:45 PM	1	0	0	0	1
5:00 PM	0	0	0	1	1
5:15 PM	0	0	0	0	0
5:30 PM	1	0	0	0	1
5:45 PM	0	0	0	0	0
TOTAL VOLUMES:	2	0	0	1	3

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Location: Azusa
N/S: Alameda Ave/SR-210 W Ramps
E/W: 1st Street

Date: 5/24/2023
Day: Wednesday

BICYCLES

	Southbound Alameda Avenue			Westbound 1st Street			Northbound SR-210 WB Ramps			Eastbound 1st Street			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
7:00 AM	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
7:30 AM	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	1	0	1
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES:	0	0	0	0	0	0	0	0	0	0	1	0	1

	Southbound Alameda Avenue			Westbound 1st Street			Northbound SR-210 WB Ramps			Eastbound 1st Street			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
4:00 PM	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
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES:	0	0	0	0	0	0	0	0	0	0	0	0	0

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APPENDIX C

SGVCOG VMT EVALUATION TOOL WORKSHEETS

SGVCOG VMT Evaluation Tool Report

Project Details

Timestamp of Analysis: May 23, 2024, 06:47:30 PM

Project Name: Azusa Greens Redevelopment Project

Project Description: LLG Ref. 1-23-4555-1

Project Location

jurisdiction: Azusa

apn	TAZ	8617-001-005	22324100	8617-001-013	22324100
8684-013-014	22324100	8684-013-030	22324100	8617-013-001	22324100
8684-043-002	22324100				

Inside a TPA?

No (Fail)

Analysis Details

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

Analysis Methodology: TAZ

Baseline Year: 2023

Project Land Use

Residential:

Single Family DU:	80
Multifamily DU:	150
Total DUs:	230

Non-Residential:

Office KSF:	
Local Serving Retail KSF:	10
Industrial KSF:	353

Residential Affordability (percent of all units):

Extremely Low Income:	0 %
Very Low Income:	0 %
Low Income:	15 %

Parking:

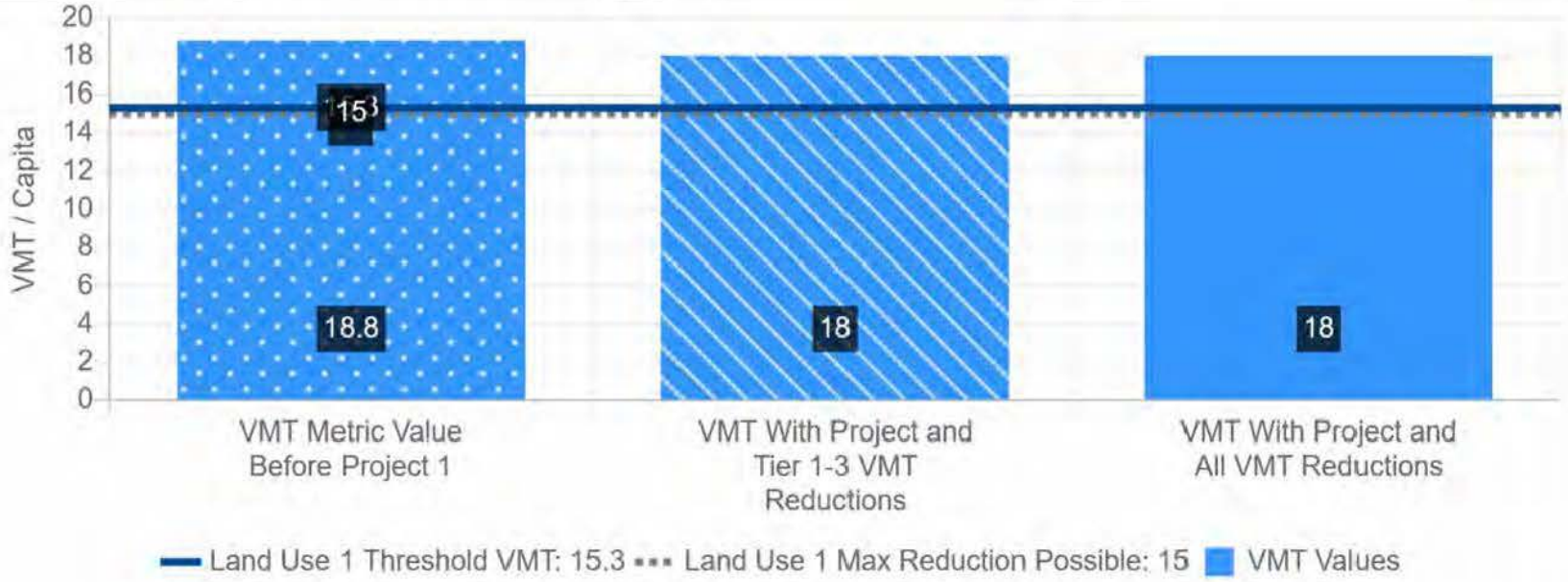
Motor Vehicle Parking:

Bicycle Parking:

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 Average
VMT Baseline Value 1:	18
VMT Threshold Description 1:	-15%
Land Use 1 has been Pre-Screened by the Local Jurisdiction:	N/A

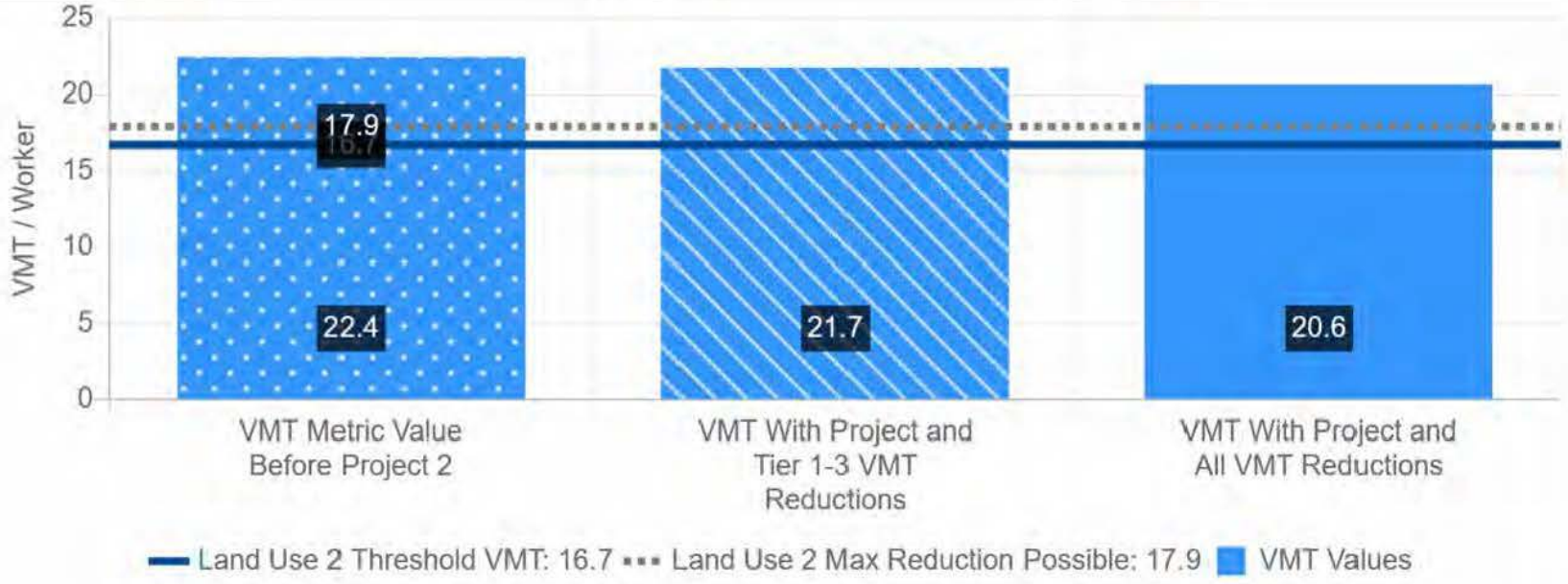
	Without Project	With Project & Tier 1-3 VMT Reductions	With Project & All VMT Reductions
Project Generated Vehicle Miles Traveled (VMT) Rate	18.8	18	18
Low VMT Screening Analysis	No (Fail)	No (Fail)	No (Fail)



Industrial Vehicle Miles Traveled (VMT) Screening Results

Land Use Type 2:	Industrial
VMT Without Project 2:	Home-based Work VMT per Worker
VMT Baseline Description 2:	Subarea Average
VMT Baseline Value 2:	19.64
VMT Threshold Description 2:	-15%
Land Use 2 has been Pre-Screened by the Local Jurisdiction:	N/A

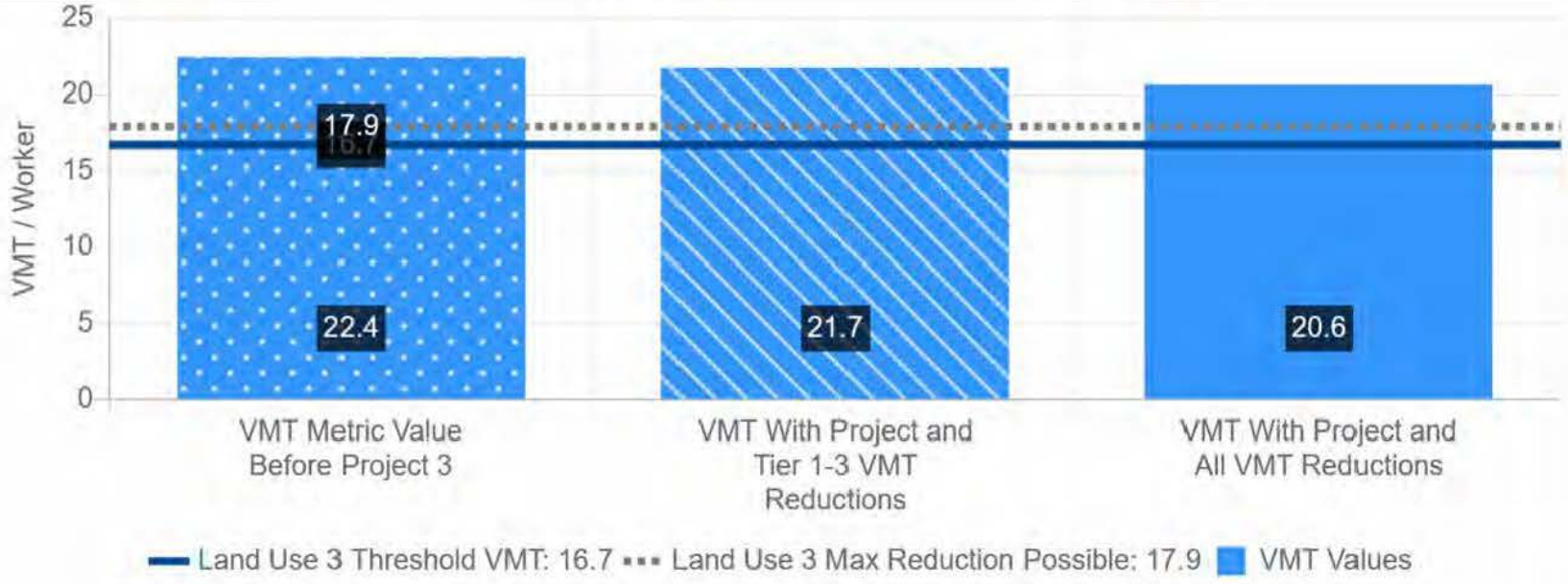
	Without Project	With Project & Tier 1-3 VMT Reductions	With Project & All VMT Reductions
Project Generated Vehicle Miles Traveled (VMT) Rate	22.4	21.7	20.6
Low VMT Screening Analysis	No (Fail)	No (Fail)	No (Fail)



Commercial Vehicle Miles Traveled (VMT) Screening Results

Land Use Type 3:	Commercial
VMT Without Project 3:	Home-based Work VMT per Worker
VMT Baseline Description 3:	Subarea Average
VMT Baseline Value 3:	19.64
VMT Threshold Description 3:	-15%
Land Use 3 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	22.4	21.7	20.6
Low VMT Screening Analysis	No (Fail)	No (Fail)	No (Fail)



Tier 1 Project Characteristics

PC01 Increase Residential Density

Existing Residential Density:	0.6
With Project Residential Density:	0.68

PC02 Increase Residential Diversity

Existing Residential Diversity Index:	0.42
With Project Residential Diversity Index:	0.44

PC03 Affordable Housing

Low Income:	15 %

PC04 Increase Employment Density

Existing Employment Density:	3807.56
With Project Employment Density:	4830.89

Tier 2 Multimodal Infrastructure

MI05 Pedestrian Networks

Pedestrian Improvements Beyond Development Frontage:	Yes

Tier 3 Parking

PK02 Provide Bike Facilities

Tier 4 TDM Programs

TP04 CTR Marketing and Education

CTR Marketing/Education Percent Expected Participants:	100 %

TP13 Ride-Sharing Programs

Expected Percent of Ride-Sharing Participants:	2 %

APPENDIX D

ICU AND HCM LEVELS OF SERVICE EXPLANATION
LOS CALCULATION WORKSHEETS – WEEKDAY AM AND PM PEAK HOURS

INTERSECTION CAPACITY UTILIZATION (ICU) DESCRIPTION

Level of Service is a term used to describe prevailing conditions and their effect on traffic. Broadly interpreted, the Levels of Service concept denotes any one of a number of differing combinations of operating conditions which may occur as a roadway is accommodating various traffic volumes. Level of Service is a qualitative measure of the effect of such factors as travel speed, travel time, traffic interruptions, freedom to maneuver, safety, driving comfort and convenience.

Six Levels of Service, A through F, have been defined in the 1965 *Highway Capacity Manual*, published by the Transportation Research Board. Level of Service A describes a condition of free flow, with low traffic volumes and relatively high speeds, while Level of Service F describes forced traffic flow at low speeds with jammed conditions and queues which cannot clear during the green phases.

The Intersection Capacity Utilization (ICU) method of intersection capacity analysis has been used in our studies. It directly relates traffic demand and available capacity for key intersection movements, regardless of present signal timing, The capacity per hour of green time for each approach is calculated based on the methods of the *Highway Capacity Manual*. The proportion of total signal time needed by each key movement is determined and compared to the total time available (100 percent of the hour). The result of summing the requirements of the conflicting key movements plus an allowance for clearance times is expressed as a decimal fraction. Conflicting key traffic movements are those opposing movements whose combined green time requirements are greatest.

The resulting ICU represents the proportion of the total hour required to accommodate intersection demand volumes if the key conflicting traffic movements are operating at capacity. Other movements may be operating near capacity, or may be operating at significantly better levels. The ICU may be translated to a Level of Service as tabulated below.

The Levels of Service (abbreviated from the *Highway Capacity Manual*) are listed here with their corresponding ICU and Load Factor equivalents. Load Factor is that proportion of the signal cycles during the peak hour which are fully loaded; i.e. when all of the vehicles waiting at the beginning of green are not able to clear on that green phase.

Intersection Capacity Utilization Characteristics

Level of Service	Load Factor	Equivalent ICU
A	0.0	0.00 - 0.60
B	0.0 - 0.1	0.61 - 0.70
C	0.1 - 0.3	0.71 - 0.80
D	0.3 - 0.7	0.81 - 0.90
E	0.7 - 1.0	0.91 - 1.00
F	Not Applicable	Not Applicable

SERVICE LEVEL A
There are no loaded cycles and few are even close to loaded at this service level. No approach phase is fully utilized by traffic and no vehicle waits longer than one red indication.

SERVICE LEVEL B
This level represents stable operation where an occasional approach phase is fully utilized and a substantial number are approaching full use. Many drivers begin to feel restricted within platoons of vehicles.

SERVICE LEVEL C
At this level stable operation continues. Loading is still intermittent but more frequent than at Level B. Occasionally drivers may have to wait through more than one red signal indication and backups may develop behind turning vehicles. Most drivers feel somewhat restricted, but not objectionably so.

SERVICE LEVEL D
This level encompasses a zone of increasing restriction approaching instability at the intersection. Delays to approaching vehicles may be substantial during short peaks within the peak hour, but enough cycles with lower demand occur to permit periodic clearance of queues, thus preventing excessive backups. Drivers frequently have to wait through more than one red signal. This level is the lower limit of acceptable operation to most drivers.

SERVICE LEVEL E
This represents near capacity and capacity operation. At capacity (ICU = 1.0) it represents the most vehicles that the particular intersection can accommodate. However, full utilization of every signal cycle is seldom attained no matter how great the demand. At this level all drivers wait through more than one red signal, and frequently through several.

SERVICE LEVEL F
Jammed conditions. Traffic backed up from a downstream location on one of the street restricts or prevents movement of traffic through the intersection under consideration.

LEVEL OF SERVICE FOR UNSIGNALIZED INTERSECTIONS

In the *Highway Capacity Manual (HCM)*, published by the Transportation Research Board, level of service for unsignalized intersections is defined in terms of delay, which is a measure of driver discomfort, frustration, fuel consumption, and lost travel time. The delay experienced by a motorist is made up of a number of factors that relate to control, geometrics, traffic, and incidents. Total delay is the difference between the travel time actually experienced and the reference travel time that would result during base conditions, in the absence of incidents, control, traffic, or geometric delay. Only the portion of total delay attributed to the traffic control measures, either traffic signals or stop signs, is quantified. This delay is called *control delay*. Control delay includes initial deceleration delay, queue move-up time, stopped delay, and final acceleration delay.

Level of Service criteria for unsignalized intersections are stated in terms of the average control delay per vehicle. The level of service is determined by the computed or measured control delay and is defined for each minor movement. Average control delay for any particular minor movement is a function of the service time for the approach and the degree of utilization. (Level of service is not defined for the intersection as a whole for two-way stop controlled intersections.)

Level of Service Criteria for TWSC/AWSC Intersections

Level of Service	Average Control Delay (Sec/Veh)
A	≤ 10
B	> 10 and ≤ 15
C	> 15 and ≤ 25
D	> 25 and ≤ 35
E	> 35 and ≤ 50
F	> 50

Level of Service (LOS) values are used to describe intersection operations with service levels varying from LOS A (free flow) to LOS F (jammed condition). The following descriptions summarize *HCM* criteria for each level of service:

LOS A describes operations with very low control delay, up to 10 seconds per vehicle.

LOS B describes operations with control delay greater than 10 and up to 15 seconds per vehicle.

LOS C describes operations with control delay greater than 15 and up to 25 seconds per vehicle.

LOS D describes operations with control delay greater than 25 and up to 35 seconds per vehicle.

LOS E describes operations with control delay greater than 35 and up to 50 seconds per vehicle.

LOS F describes operations with control delay in excess of 50 seconds per vehicle. For two-way stop controlled intersections, LOS F exists when there are insufficient gaps of suitable size to allow side-street demand to safely cross through a major-street traffic stream. This level of service is generally evident from extremely long control delays experienced by side-street traffic and by queuing on the minor-street approaches.

LEVEL OF SERVICE FOR SIGNALIZED INTERSECTIONS

In the *Highway Capacity Manual (HCM)*, published by the Transportation Research Board, 2000, level of service for signalized intersections is defined in terms of delay, which is a measure of driver discomfort, frustration, fuel consumption, and increased travel time. The delay experienced by a motorist is made up of a number of factors that relate to control, geometrics, traffic, and incidents. Total delay is the difference between the travel time actually experienced and the reference travel time that would result during base conditions: in the absence of traffic control, in the absence of geometric delay, in the absence of incidents, and when there are no other vehicles on the road. Only the portion of total delay attributed to the control facility is quantified. This delay is called *control delay*. Control delay includes initial deceleration delay, queue move-up time, stopped delay, and final acceleration delay.

Level of Service criteria for traffic signals are stated in terms of the average control delay per vehicle. Delay is a complex measure and is dependent on a number of variables, including the quality of progression, the cycle length, the green ratio, and the *v/c* ratio for the lane group in question.

Level of Service Criteria for Signalized Intersections

Level of Service	Control Delay (Sec/Veh)
A	≤ 10
B	> 10 and ≤ 20
C	> 20 and ≤ 35
D	> 35 and ≤ 55
E	> 55 and ≤ 80
F	> 80

Level of Service (LOS) values are used to describe intersection operations with service levels varying from LOS A (free flow) to LOS F (jammed condition). The following descriptions summarize *HCM* criteria for each level of service:

LOS A describes operations with very low control delay, up to 10 seconds per vehicle. This level of service occurs when progression is extremely favorable and most vehicles arrive during the green phase. Most vehicles do not stop at all. Short cycle lengths may also contribute to low delay values.

LOS B describes operations with control delay greater than 10 and up to 20 seconds per vehicle. This level generally occurs with good progression, short cycle lengths, or both. More vehicles stop than with LOS A, causing higher levels of delay.

LOS C describes operations with control delay greater than 20 and up to 35 seconds per vehicle. These higher delays may result from fair progression, longer cycle lengths, or both. Individual cycle failures may begin to appear at this level. The number of vehicles stopping is significant at this level, though many still pass through the intersection without stopping.

LOS D describes operations with control delay greater than 35 and up to 55 seconds per vehicle. At LOS D, the influence of congestion becomes more noticeable. Longer delays may result from some combination of unfavorable progression, long cycle lengths, or high *v/c* ratios. Many vehicles stop, and the proportion of vehicles not stopping declines. Individual cycle failures are noticeable.

LOS E describes operations with control delay greater than 55 and up to 80 seconds per vehicle. This level is considered by many agencies to be the limit of acceptable delay. These high delay values generally indicate poor progression, long cycle lengths, and high *v/c* ratios. Individual cycle failures are frequent occurrences.

LOS F describes operations with control delay in excess of 80 seconds per vehicle. This level, considered to be unacceptable to most drivers, often occurs with oversaturation, that is, when arrival flow rates exceed the capacity of the lane groups. It may also occur at high *v/c* ratios with many individual cycle failures. Poor progression and long cycle lengths may also be major contributing factors to such delay levels.

Intersection	
Intersection Delay, s/veh	30.5
Intersection LOS	D

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	3	12	1001	21	35	143
Future Vol, veh/h	3	12	1001	21	35	143
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	3	13	1125	24	39	161
Number of Lanes	1	0	1	2	1	2

Approach	EB	WB	NB
Opposing Approach	WB	EB	
Opposing Lanes	3	1	0
Conflicting Approach Left		NB	EB
Conflicting Lanes Left	0	3	1
Conflicting Approach Right	NB		WB
Conflicting Lanes Right	3	0	3
HCM Control Delay	9.6	34.5	9.3
HCM LOS	A	D	A

Lane	NBLn1	NBLn2	NBLn3	EBLn1	WBLn1	WBLn2	WBLn3
Vol Left, %	100%	0%	0%	0%	100%	99%	0%
Vol Thru, %	0%	0%	0%	20%	0%	1%	100%
Vol Right, %	0%	100%	100%	80%	0%	0%	0%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	35	72	72	15	501	508	14
LT Vol	35	0	0	0	501	501	0
Through Vol	0	0	0	3	0	7	14
RT Vol	0	72	72	12	0	0	0
Lane Flow Rate	39	80	80	17	562	570	16
Geometry Grp	5	5	5	6	5	5	5
Degree of Util (X)	0.082	0.14	0.101	0.031	0.868	0.879	0.014
Departure Headway (Hd)	7.463	6.259	4.519	6.678	5.554	5.547	3.316
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	479	571	788	539	647	650	1061
Service Time	5.222	4.017	2.277	4.378	3.334	3.327	1.095
HCM Lane V/C Ratio	0.081	0.14	0.102	0.032	0.869	0.877	0.015
HCM Control Delay	10.9	10	7.8	9.6	34.2	35.6	6.1
HCM Lane LOS	B	A	A	A	D	E	A
HCM 95th-tile Q	0.3	0.5	0.3	0.1	10.1	10.5	0

Intersection	
Intersection Delay, s/veh	9.5
Intersection LOS	A

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	22	42	218	4	6	627
Future Vol, veh/h	22	42	218	4	6	627
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	24	45	234	4	6	674
Number of Lanes	1	0	1	2	1	2

Approach	EB	WB	NB
Opposing Approach	WB	EB	
Opposing Lanes	3	1	0
Conflicting Approach Left		NB	EB
Conflicting Lanes Left	0	3	1
Conflicting Approach Right	NB		WB
Conflicting Lanes Right	3	0	3
HCM Control Delay	9.6	10.8	9
HCM LOS	A	B	A

Lane	NBLn1	NBLn2	NBLn3	EBLn1	WBLn1	WBLn2	WBLn3
Vol Left, %	100%	0%	0%	0%	100%	99%	0%
Vol Thru, %	0%	0%	0%	34%	0%	1%	100%
Vol Right, %	0%	100%	100%	66%	0%	0%	0%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	6	314	314	64	109	110	3
LT Vol	6	0	0	0	109	109	0
Through Vol	0	0	0	22	0	1	3
RT Vol	0	314	314	42	0	0	0
Lane Flow Rate	6	337	337	69	117	119	3
Geometry Grp	5	5	5	6	5	5	5
Degree of Util (X)	0.011	0.442	0.28	0.116	0.208	0.21	0.003
Departure Headway (Hd)	5.926	4.723	2.985	6.048	6.391	6.385	4.143
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	603	762	1193	595	565	566	868
Service Time	3.669	2.465	0.727	3.759	4.094	4.088	1.846
HCM Lane V/C Ratio	0.01	0.442	0.282	0.116	0.207	0.21	0.003
HCM Control Delay	8.7	11.2	6.9	9.6	10.8	10.8	6.9
HCM Lane LOS	A	B	A	A	B	B	A
HCM 95th-tile Q	0	2.3	1.2	0.4	0.8	0.8	0

Intersection	
Intersection Delay, s/veh	32.1
Intersection LOS	D

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	3	12	1016	21	36	145
Future Vol, veh/h	3	12	1016	21	36	145
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	3	13	1142	24	40	163
Number of Lanes	1	0	1	2	1	2

Approach	EB	WB	NB
Opposing Approach	WB	EB	
Opposing Lanes	3	1	0
Conflicting Approach Left		NB	EB
Conflicting Lanes Left	0	3	1
Conflicting Approach Right	NB		WB
Conflicting Lanes Right	3	0	3
HCM Control Delay	9.6	36.4	9.3
HCM LOS	A	E	A

Lane	NBLn1	NBLn2	NBLn3	EBLn1	WBLn1	WBLn2	WBLn3
Vol Left, %	100%	0%	0%	0%	100%	99%	0%
Vol Thru, %	0%	0%	0%	20%	0%	1%	100%
Vol Right, %	0%	100%	100%	80%	0%	0%	0%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	36	73	73	15	508	515	14
LT Vol	36	0	0	0	508	508	0
Through Vol	0	0	0	3	0	7	14
RT Vol	0	73	73	12	0	0	0
Lane Flow Rate	40	81	81	17	571	579	16
Geometry Grp	5	5	5	6	5	5	5
Degree of Util (X)	0.084	0.142	0.103	0.031	0.882	0.893	0.015
Departure Headway (Hd)	7.489	6.284	4.544	6.714	5.565	5.558	3.326
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	478	569	784	536	645	648	1058
Service Time	5.247	4.043	2.302	4.414	3.344	3.337	1.105
HCM Lane V/C Ratio	0.084	0.142	0.103	0.032	0.885	0.894	0.015
HCM Control Delay	10.9	10.1	7.8	9.6	36.1	37.6	6.2
HCM Lane LOS	B	B	A	A	E	E	A
HCM 95th-tile Q	0.3	0.5	0.3	0.1	10.6	11	0

Intersection	
Intersection Delay, s/veh	9.5
Intersection LOS	A

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	22	43	221	4	6	637
Future Vol, veh/h	22	43	221	4	6	637
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	24	46	238	4	6	685
Number of Lanes	1	0	1	2	1	2

Approach	EB	WB	NB
Opposing Approach	WB	EB	
Opposing Lanes	3	1	0
Conflicting Approach Left		NB	EB
Conflicting Lanes Left	0	3	1
Conflicting Approach Right	NB		WB
Conflicting Lanes Right	3	0	3
HCM Control Delay	9.6	10.8	9.1
HCM LOS	A	B	A

Lane	NBLn1	NBLn2	NBLn3	EBLn1	WBLn1	WBLn2	WBLn3
Vol Left, %	100%	0%	0%	0%	100%	99%	0%
Vol Thru, %	0%	0%	0%	34%	0%	1%	100%
Vol Right, %	0%	100%	100%	66%	0%	0%	0%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	6	319	319	65	111	112	3
LT Vol	6	0	0	0	111	111	0
Through Vol	0	0	0	22	0	1	3
RT Vol	0	319	319	43	0	0	0
Lane Flow Rate	6	342	342	70	119	120	3
Geometry Grp	5	5	5	6	5	5	5
Degree of Util (X)	0.011	0.451	0.285	0.118	0.212	0.214	0.003
Departure Headway (Hd)	5.939	4.736	2.998	6.078	6.414	6.408	4.166
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	602	757	1188	592	563	563	864
Service Time	3.685	2.481	0.743	3.789	4.117	4.111	1.869
HCM Lane V/C Ratio	0.01	0.452	0.288	0.118	0.211	0.213	0.003
HCM Control Delay	8.8	11.3	7	9.6	10.8	10.8	6.9
HCM Lane LOS	A	B	A	A	B	B	A
HCM 95th-tile Q	0	2.4	1.2	0.4	0.8	0.8	0

Intersection	
Intersection Delay, s/veh	34.4
Intersection LOS	D

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	3	12	1030	21	36	157
Future Vol, veh/h	3	12	1030	21	36	157
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	3	13	1157	24	40	176
Number of Lanes	1	0	1	2	1	2

Approach	EB	WB	NB
Opposing Approach	WB	EB	
Opposing Lanes	3	1	0
Conflicting Approach Left		NB	EB
Conflicting Lanes Left	0	3	1
Conflicting Approach Right	NB		WB
Conflicting Lanes Right	3	0	3
HCM Control Delay	9.7	39.3	9.4
HCM LOS	A	E	A

Lane	NBLn1	NBLn2	NBLn3	EBLn1	WBLn1	WBLn2	WBLn3
Vol Left, %	100%	0%	0%	0%	100%	99%	0%
Vol Thru, %	0%	0%	0%	20%	0%	1%	100%
Vol Right, %	0%	100%	100%	80%	0%	0%	0%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	36	79	79	15	515	522	14
LT Vol	36	0	0	0	515	515	0
Through Vol	0	0	0	3	0	7	14
RT Vol	0	79	79	12	0	0	0
Lane Flow Rate	40	88	88	17	579	587	16
Geometry Grp	5	5	5	6	5	5	5
Degree of Util (X)	0.084	0.155	0.112	0.032	0.9	0.911	0.015
Departure Headway (Hd)	7.516	6.312	4.572	6.784	5.597	5.59	3.358
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	476	566	778	531	642	645	1046
Service Time	5.28	4.075	2.335	4.484	3.382	3.375	1.142
HCM Lane V/C Ratio	0.084	0.155	0.113	0.032	0.902	0.91	0.015
HCM Control Delay	11	10.2	7.9	9.7	38.9	40.6	6.2
HCM Lane LOS	B	B	A	A	E	E	A
HCM 95th-tile Q	0.3	0.5	0.4	0.1	11.2	11.6	0

Intersection	
Intersection Delay, s/veh	9.8
Intersection LOS	A

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	22	43	236	4	6	657
Future Vol, veh/h	22	43	236	4	6	657
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	24	46	254	4	6	706
Number of Lanes	1	0	1	2	1	2

Approach	EB	WB	NB
Opposing Approach	WB	EB	
Opposing Lanes	3	1	0
Conflicting Approach Left		NB	EB
Conflicting Lanes Left	0	3	1
Conflicting Approach Right	NB		WB
Conflicting Lanes Right	3	0	3
HCM Control Delay	9.7	11.1	9.4
HCM LOS	A	B	A

Lane	NBLn1	NBLn2	NBLn3	EBLn1	WBLn1	WBLn2	WBLn3
Vol Left, %	100%	0%	0%	0%	100%	99%	0%
Vol Thru, %	0%	0%	0%	34%	0%	1%	100%
Vol Right, %	0%	100%	100%	66%	0%	0%	0%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	6	329	329	65	118	119	3
LT Vol	6	0	0	0	118	118	0
Through Vol	0	0	0	22	0	1	3
RT Vol	0	329	329	43	0	0	0
Lane Flow Rate	6	353	353	70	127	128	3
Geometry Grp	5	5	5	6	5	5	5
Degree of Util (X)	0.011	0.469	0.299	0.12	0.228	0.23	0.003
Departure Headway (Hd)	5.989	4.785	3.047	6.17	6.465	6.459	4.216
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	596	749	1169	584	558	559	853
Service Time	3.738	2.535	0.796	3.883	4.168	4.162	1.919
HCM Lane V/C Ratio	0.01	0.471	0.302	0.12	0.228	0.229	0.004
HCM Control Delay	8.8	11.7	7.1	9.7	11.1	11.1	6.9
HCM Lane LOS	A	B	A	A	B	B	A
HCM 95th-tile Q	0	2.5	1.3	0.4	0.9	0.9	0

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INTERSECTION CAPACITY UTILIZATION

Todd Avenue @ Lagunitas Way-10th Street
Peak hr: AM
Annual Growth: 0.38%
Applied Growth: 1.53%

Date: 5/20/2024
Existing Year: 2023
Projection Year: 2027

N-S St: Todd Avenue
E-W St: Lagunitas Way-10th Street
Project: Azusa Greens Redevelopment Project/1-23-4555-1
File: ICU2

	2023 EXISTING TRAFFIC			2027 FUTURE PRE-PROJECT					2027 FUTURE WITH PROJECT				2027 FUTURE W/ PROJECT + IMPROVEMENTS			
Movement	1 Volume	2 Capacity	V/C Ratio	Added Amb. Grow. Volume	Added Rel. Proj. Volume	Total Volume	2 Capacity	V/C Ratio	Added Volume	Total Volume	2 Capacity	V/C Ratio	Added Volume	Total Volume	2 Capacity	V/C Ratio
NB Left	3	0	0.001 *	0	0	3	0	0.001 *	0	3	0	0.001 *	0	3	0	0.001 *
NB Thru	189	3200	0.076	3	0	192	3200	0.078	117	309	3200	0.154	0	309	3200	0.154
NB Right	52	0	0.000	1	0	53	0	0.000	128	181	0	0.000	0	181	0	0.000
SB Left	1	0	0.000	0	0	1	0	0.000	0	1	0	0.000	0	1	0	0.000
SB Thru	1006	3200	0.315 *	15	0	1021	3200	0.320 *	29	1050	3200	0.329 *	0	1050	3200	0.329 *
SB Right	1	0	0.000	0	0	1	0	0.000	0	1	0	0.000	0	1	0	0.000
EB Left	1	1600	0.001 *	0	0	1	1600	0.001 *	0	1	1600	0.001 *	0	1	1600	0.001 *
EB Thru	0	0	0.000	0	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000
EB Right	2	1600	0.001	0	0	2	1600	0.001	0	2	1600	0.001	0	2	1600	0.001
WB Left	94	0	0.059	1	0	95	0	0.059	19	114	0	0.071	0	114	0	0.071
WB Thru	2	1600	0.063 *	0	0	2	1600	0.063 *	0	2	1600	0.075 *	0	2	1600	0.075 *
WB Right	4	0	0.000	0	0	4	0	0.000	0	4	0	0.000	0	4	0	0.000
Yellow Allowance			0.100 *					0.100 *				0.100 *				0.100 *
ICU			0.479					0.484				0.505				0.505
LOS			A					A				A				A

** Key conflicting movement as a part of ICU*
1 Counts conducted by: Counts Unlimited, Inc.
2 Capacity expressed in veh/hour of green

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INTERSECTION CAPACITY UTILIZATION

Todd Avenue @ Lagunitas Way-10th Street
Peak hr: PM
Annual Growth: 0.38%
Applied Growth: 1.53%

Date: 5/20/2024
Existing Year: 2023
Projection Year: 2027

N-S St: Todd Avenue
E-W St: Lagunitas Way-10th Street
Project: Azusa Greens Redevelopment Project/1-23-4555-1
File: ICU2

	2023 EXISTING TRAFFIC			2027 FUTURE PRE-PROJECT					2027 FUTURE WITH PROJECT				2027 FUTURE W/ PROJECT + IMPROVEMENTS			
Movement	1 Volume	2 Capacity	V/C Ratio	Added Amb. Grow. Volume	Added Rel. Proj. Volume	Total Volume	2 Capacity	V/C Ratio	Added Volume	Total Volume	2 Capacity	V/C Ratio	Added Volume	Total Volume	2 Capacity	V/C Ratio
NB Left	5	0	0.002	0	0	5	0	0.002	0	5	0	0.002	0	5	0	0.002
NB Thru	629	3200	0.220 *	10	0	639	3200	0.224 *	36	675	3200	0.241 *	0	675	3200	0.241 *
NB Right	71	0	0.000	1	0	72	0	0.000	19	91	0	0.000	0	91	0	0.000
SB Left	2	0	0.001 *	0	0	2	0	0.001 *	0	2	0	0.001 *	0	2	0	0.001 *
SB Thru	269	3200	0.085	4	0	273	3200	0.086	105	378	3200	0.119	0	378	3200	0.119
SB Right	0	0	0.000	0	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000
EB Left	0	1600	0.000	0	0	0	1600	0.000	0	0	1600	0.000	0	0	1600	0.000
EB Thru	0	0	0.000	0	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000
EB Right	16	1600	0.010 *	0	0	16	1600	0.010 *	0	16	1600	0.010 *	0	16	1600	0.010 *
WB Left	52	0	0.033 *	1	0	53	0	0.033 *	110	163	0	0.102 *	0	163	0	0.102 *
WB Thru	0	1600	0.036	0	0	0	1600	0.036	0	0	1600	0.105	0	0	1600	0.105
WB Right	5	0	0.000	0	0	5	0	0.000	0	5	0	0.000	0	5	0	0.000
Yellow Allowance			0.100 *					0.100 *				0.100 *				0.100 *
ICU			0.363					0.368				0.453				0.453
LOS			A					A				A				A

** Key conflicting movement as a part of ICU*
1 Counts conducted by: Counts Unlimited, Inc.
2 Capacity expressed in veh/hour of green

LINSCOTT, LAW & GREENSPAN, ENGINEERS
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INTERSECTION CAPACITY UTILIZATION

Todd Avenue @ Foothill Boulevard
Peak hr: AM
Annual Growth: 0.38%
Applied Growth: 1.53%

Date: 5/20/2024
Existing Year: 2023
Projection Year: 2027

N-S St: Todd Avenue
E-W St: Foothill Boulevard
Project: Azusa Greens Redevelopment Project/1-23-4555-1
File: ICU3

	2023 EXISTING TRAFFIC			2027 FUTURE PRE-PROJECT					2027 FUTURE WITH PROJECT				2027 FUTURE W/ PROJECT + IMPROVEMENTS			
Movement	1 Volume	2 Capacity	V/C Ratio	Added Amb. Grow. Volume	Added Rel. Proj. Volume	Total Volume	2 Capacity	V/C Ratio	Added Volume	Total Volume	2 Capacity	V/C Ratio	Added Volume	Total Volume	2 Capacity	V/C Ratio
NB Left	235	2880	0.082 *	4	0	239	2880	0.083 *	0	239	2880	0.083 *	0	239	2880	0.083 *
NB Thru	30	1600	0.047	0	0	30	1600	0.048	0	30	1600	0.048	0	30	1600	0.048
NB Right	45	0	0.000	1	0	46	0	0.000	0	46	0	0.000	0	46	0	0.000
SB Left	60	1600	0.038	1	1	62	1600	0.039	14	76	1600	0.048	0	76	1600	0.048
SB Thru	96	1600	0.060	1	0	97	1600	0.061	0	97	1600	0.061	0	97	1600	0.061
SB Right [3]	734	2880	0.120 *	11	1	746	2880	0.122 *	34	780	2880	0.081 *	0	780	2880	0.081 *
EB Left	389	2880	0.135 *	6	1	396	2880	0.138 *	152	548	2880	0.190 *	0	548	2880	0.190 *
EB Thru	465	3200	0.145	7	29	501	3200	0.157	0	501	3200	0.157	0	501	3200	0.157
EB Right [4]	108	1600	0.000	2	0	110	1600	0.000	0	110	1600	0.000	0	110	1600	0.000
WB Left	13	1600	0.008	0	0	13	1600	0.008	0	13	1600	0.008	0	13	1600	0.008
WB Thru	612	3200	0.198 *	9	81	702	3200	0.227 *	0	702	3200	0.256 *	0	702	3200	0.256 *
WB Right	23	0	0.000	0	1	24	0	0.000	93	117	0	0.000	0	117	0	0.000
Yellow Allowance			0.100 *					0.100 *				0.100 *				0.100 *
ICU			0.635					0.669				0.710				0.710
LOS			B					B				C				C

** Key conflicting movement as a part of ICU*
1 Counts conducted by: Counts Unlimited, Inc.
2 Capacity expressed in veh/hour of green
3 The southbound right-turn lane has an overlapping phase with the eastbound left-turn phase.
4 The eastbound right-turn lane has an overlapping phase with the northbound left-turn phase.

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	2023 EXISTING TRAFFIC			2027 FUTURE PRE-PROJECT					2027 FUTURE WITH PROJECT				2027 FUTURE W/ PROJECT + IMPROVEMENTS			
Movement	1 Volume	2 Capacity	V/C Ratio	Added Amb. Grow. Volume	Added Rel. Proj. Volume	Total Volume	2 Capacity	V/C Ratio	Added Volume	Total Volume	2 Capacity	V/C Ratio	Added Volume	Total Volume	2 Capacity	V/C Ratio
NB Left	332	2880	0.115 *	5	0	337	2880	0.117 *	0	337	2880	0.117	0	337	2880	0.117
NB Thru	52	1600	0.103	1	0	53	1600	0.105	0	53	1600	0.105 *	0	53	1600	0.105 *
NB Right	113	0	0.000	2	0	115	0	0.000	0	115	0	0.000	0	115	0	0.000
SB Left	38	1600	0.024	1	1	40	1600	0.025	80	120	1600	0.075 *	0	120	1600	0.075 *
SB Thru	24	1600	0.015 *	0	0	24	1600	0.015 *	0	24	1600	0.015	0	24	1600	0.015
SB Right [3]	438	2880	0.000	7	1	446	2880	0.000	135	581	2880	0.000	0	581	2880	0.000
EB Left	634	2880	0.220	10	1	645	2880	0.224	41	686	2880	0.238	0	686	2880	0.238
EB Thru	1022	3200	0.319 *	16	90	1128	3200	0.353 *	0	1128	3200	0.353 *	0	1128	3200	0.353 *
EB Right [4]	130	1600	0.000	2	0	132	1600	0.000	0	132	1600	0.000	0	132	1600	0.000
WB Left	70	1600	0.044 *	1	0	71	1600	0.044 *	0	71	1600	0.044 *	0	71	1600	0.044 *
WB Thru	326	3200	0.109	5	47	378	3200	0.126	0	378	3200	0.130	0	378	3200	0.130
WB Right	23	0	0.000	0	1	24	0	0.000	14	38	0	0.000	0	38	0	0.000
Yellow Allowance			0.100 *					0.100 *				0.100 *				0.100 *
ICU			0.593					0.629				0.677				0.677
LOS			A					B				B				B

** Key conflicting movement as a part of ICU*
1 Counts conducted by: Counts Unlimited, Inc.
2 Capacity expressed in veh/hour of green
3 The southbound right-turn lane has an overlapping phase with the eastbound left-turn phase.
4 The eastbound right-turn lane has an overlapping phase with the northbound left-turn phase.

Intersection	
Int Delay, s/veh	0

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	0	196	971	0	0	0
Future Vol, veh/h	0	196	971	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	60	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	218	1079	0	0	0

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	1079	0	-	0	1188	540
Stage 1	-	-	-	-	1079	-
Stage 2	-	-	-	-	109	-
Critical Hdwy	4.14	-	-	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	2.22	-	-	-	3.52	3.32
Pot Cap-1 Maneuver	642	-	-	-	181	486
Stage 1	-	-	-	-	288	-
Stage 2	-	-	-	-	903	-
Platoon blocked, %			-	-		
Mov Cap-1 Maneuver	642	-	-	-	181	486
Mov Cap-2 Maneuver	-	-	-	-	181	-
Stage 1	-	-	-	-	288	-
Stage 2	-	-	-	-	903	-

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

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	642	-	-	-	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Control Delay (s)	0	-	-	-	0
HCM Lane LOS	A	-	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	-

Intersection	
Int Delay, s/veh	0

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	0	620	261	0	0	0
Future Vol, veh/h	0	620	261	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	60	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	94	94	94	94	94	94
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	660	278	0	0	0

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	278	0	-	0	608	139
Stage 1	-	-	-	-	278	-
Stage 2	-	-	-	-	330	-
Critical Hdwy	4.14	-	-	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	2.22	-	-	-	3.52	3.32
Pot Cap-1 Maneuver	1282	-	-	-	427	884
Stage 1	-	-	-	-	744	-
Stage 2	-	-	-	-	701	-
Platoon blocked, %			-	-		
Mov Cap-1 Maneuver	1282	-	-	-	427	884
Mov Cap-2 Maneuver	-	-	-	-	427	-
Stage 1	-	-	-	-	744	-
Stage 2	-	-	-	-	701	-

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

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1282	-	-	-	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Control Delay (s)	0	-	-	-	0
HCM Lane LOS	A	-	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	-

Intersection	
Int Delay, s/veh	0

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	0	199	986	0	0	0
Future Vol, veh/h	0	199	986	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	60	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	221	1096	0	0	0

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	1096	0	-	0	1207	548
Stage 1	-	-	-	-	1096	-
Stage 2	-	-	-	-	111	-
Critical Hdwy	4.14	-	-	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	2.22	-	-	-	3.52	3.32
Pot Cap-1 Maneuver	633	-	-	-	176	480
Stage 1	-	-	-	-	282	-
Stage 2	-	-	-	-	901	-
Platoon blocked, %			-	-		
Mov Cap-1 Maneuver	633	-	-	-	176	480
Mov Cap-2 Maneuver	-	-	-	-	176	-
Stage 1	-	-	-	-	282	-
Stage 2	-	-	-	-	901	-

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

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	633	-	-	-	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Control Delay (s)	0	-	-	-	0
HCM Lane LOS	A	-	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	-

Intersection	
Int Delay, s/veh	0

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	0	629	265	0	0	0
Future Vol, veh/h	0	629	265	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	60	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	94	94	94	94	94	94
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	669	282	0	0	0

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	282	0	-	0	617	141
Stage 1	-	-	-	-	282	-
Stage 2	-	-	-	-	335	-
Critical Hdwy	4.14	-	-	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	2.22	-	-	-	3.52	3.32
Pot Cap-1 Maneuver	1277	-	-	-	422	881
Stage 1	-	-	-	-	741	-
Stage 2	-	-	-	-	697	-
Platoon blocked, %			-	-		
Mov Cap-1 Maneuver	1277	-	-	-	422	881
Mov Cap-2 Maneuver	-	-	-	-	422	-
Stage 1	-	-	-	-	741	-
Stage 2	-	-	-	-	697	-

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

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1277	-	-	-	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Control Delay (s)	0	-	-	-	0
HCM Lane LOS	A	-	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	-

Intersection	
Int Delay, s/veh	0.7

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	6	205	987	10	20	13
Future Vol, veh/h	6	205	987	10	20	13
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	60	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	7	228	1097	11	22	14

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	1108	0	-	0	1231	554
Stage 1	-	-	-	-	1103	-
Stage 2	-	-	-	-	128	-
Critical Hdwy	4.14	-	-	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	2.22	-	-	-	3.52	3.32
Pot Cap-1 Maneuver	626	-	-	-	170	476
Stage 1	-	-	-	-	279	-
Stage 2	-	-	-	-	884	-
Platoon blocked, %			-	-		
Mov Cap-1 Maneuver	626	-	-	-	168	476
Mov Cap-2 Maneuver	-	-	-	-	168	-
Stage 1	-	-	-	-	276	-
Stage 2	-	-	-	-	884	-

Approach	EB	WB	SB
HCM Control Delay, s	0.3	0	24.1
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	626	-	-	-	225
HCM Lane V/C Ratio	0.011	-	-	-	0.163
HCM Control Delay (s)	10.8	-	-	-	24.1
HCM Lane LOS	B	-	-	-	C
HCM 95th %tile Q(veh)	0	-	-	-	0.6

Intersection	
Int Delay, s/veh	0.5

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	14	635	270	22	16	10
Future Vol, veh/h	14	635	270	22	16	10
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	60	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	94	94	94	94	94	94
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	15	676	287	23	17	11

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	310	0	-	0	667	155
Stage 1	-	-	-	-	299	-
Stage 2	-	-	-	-	368	-
Critical Hdwy	4.14	-	-	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	2.22	-	-	-	3.52	3.32
Pot Cap-1 Maneuver	1247	-	-	-	392	863
Stage 1	-	-	-	-	726	-
Stage 2	-	-	-	-	670	-
Platoon blocked, %			-	-		
Mov Cap-1 Maneuver	1247	-	-	-	387	863
Mov Cap-2 Maneuver	-	-	-	-	387	-
Stage 1	-	-	-	-	717	-
Stage 2	-	-	-	-	670	-

Approach	EB	WB	SB
HCM Control Delay, s	0.2	0	12.8
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1247	-	-	-	491
HCM Lane V/C Ratio	0.012	-	-	-	0.056
HCM Control Delay (s)	7.9	-	-	-	12.8
HCM Lane LOS	A	-	-	-	B
HCM 95th %tile Q(veh)	0	-	-	-	0.2

Intersection	
Int Delay, s/veh	1.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	177	57	43	878	0	25	0	48	0	0	0
Future Vol, veh/h	0	177	57	43	878	0	25	0	48	0	0	0
Conflicting Peds, #/hr	0	0	2	0	0	0	0	0	3	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	110	-	-	90	-	0	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	89	89	89	89	89	89	89	89	89	89	89	89
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	199	64	48	987	0	28	0	54	0	0	0

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	987	0	0	265	0	0	823	1316	137	1186	1348	494
Stage 1	-	-	-	-	-	-	233	233	-	1083	1083	-
Stage 2	-	-	-	-	-	-	590	1083	-	103	265	-
Critical Hdwy	4.14	-	-	4.14	-	-	7.54	6.54	6.94	7.54	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Follow-up Hdwy	2.22	-	-	2.22	-	-	3.52	4.02	3.32	3.52	4.02	3.32
Pot Cap-1 Maneuver	696	-	-	1296	-	-	266	156	886	144	150	521
Stage 1	-	-	-	-	-	-	749	711	-	232	292	-
Stage 2	-	-	-	-	-	-	461	292	-	892	688	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	696	-	-	1294	-	-	258	150	882	131	144	521
Mov Cap-2 Maneuver	-	-	-	-	-	-	258	150	-	131	144	-
Stage 1	-	-	-	-	-	-	748	710	-	232	281	-
Stage 2	-	-	-	-	-	-	444	281	-	835	687	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	0.4	13.2	0
HCM LOS			B	A

Minor Lane/Major Mvmt	NBLn1	NBLn2	NBLn3	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	258	-	882	696	-	-	1294	-	-	-
HCM Lane V/C Ratio	0.109	-	0.061	-	-	-	0.037	-	-	-
HCM Control Delay (s)	20.7	0	9.3	0	-	-	7.9	-	-	0
HCM Lane LOS	C	A	A	A	-	-	A	-	-	A
HCM 95th %tile Q(veh)	0.4	-	0.2	0	-	-	0.1	-	-	-

Intersection	
Int Delay, s/veh	1.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	572	40	22	218	0	41	0	57	0	0	0
Future Vol, veh/h	0	572	40	22	218	0	41	0	57	0	0	0
Conflicting Peds, #/hr	0	0	3	0	0	0	0	0	2	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	110	-	-	90	-	0	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	93	93	93	93	93	93	93	93	93	93	93	93
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	615	43	24	234	0	44	0	61	0	0	0

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	234	0	0	661	0	0	805	922	334	592	943	117
Stage 1	-	-	-	-	-	-	640	640	-	282	282	-
Stage 2	-	-	-	-	-	-	165	282	-	310	661	-
Critical Hdwy	4.14	-	-	4.14	-	-	7.54	6.54	6.94	7.54	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Follow-up Hdwy	2.22	-	-	2.22	-	-	3.52	4.02	3.32	3.52	4.02	3.32
Pot Cap-1 Maneuver	1331	-	-	923	-	-	274	269	662	390	261	913
Stage 1	-	-	-	-	-	-	430	468	-	701	676	-
Stage 2	-	-	-	-	-	-	821	676	-	675	458	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1331	-	-	920	-	-	268	261	659	346	253	913
Mov Cap-2 Maneuver	-	-	-	-	-	-	268	261	-	346	253	-
Stage 1	-	-	-	-	-	-	429	467	-	701	658	-
Stage 2	-	-	-	-	-	-	800	658	-	611	457	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	0.8	15.2	0
HCM LOS			C	A

Minor Lane/Major Mvmt	NBLn1	NBLn2	NBLn3	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	268	-	659	1331	-	-	920	-	-	-
HCM Lane V/C Ratio	0.165	-	0.093	-	-	-	0.026	-	-	-
HCM Control Delay (s)	21.1	0	11	0	-	-	9	-	-	0
HCM Lane LOS	C	A	B	A	-	-	A	-	-	A
HCM 95th %tile Q(veh)	0.6	-	0.3	0	-	-	0.1	-	-	-

Intersection	
Int Delay, s/veh	1.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	180	58	44	891	0	25	0	49	0	0	0
Future Vol, veh/h	0	180	58	44	891	0	25	0	49	0	0	0
Conflicting Peds, #/hr	0	0	2	0	0	0	0	0	3	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	110	-	-	90	-	0	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	89	89	89	89	89	89	89	89	89	89	89	89
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	202	65	49	1001	0	28	0	55	0	0	0

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1001	0	0	269	0	0	836	1336	139	1203	1368	501
Stage 1	-	-	-	-	-	-	237	237	-	1099	1099	-
Stage 2	-	-	-	-	-	-	599	1099	-	104	269	-
Critical Hdwy	4.14	-	-	4.14	-	-	7.54	6.54	6.94	7.54	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Follow-up Hdwy	2.22	-	-	2.22	-	-	3.52	4.02	3.32	3.52	4.02	3.32
Pot Cap-1 Maneuver	687	-	-	1292	-	-	260	152	884	140	146	515
Stage 1	-	-	-	-	-	-	745	708	-	227	287	-
Stage 2	-	-	-	-	-	-	455	287	-	890	685	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	687	-	-	1290	-	-	252	146	880	127	140	515
Mov Cap-2 Maneuver	-	-	-	-	-	-	252	146	-	127	140	-
Stage 1	-	-	-	-	-	-	744	707	-	227	276	-
Stage 2	-	-	-	-	-	-	438	276	-	832	684	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	0.4	13.4	0
HCM LOS			B	A

Minor Lane/Major Mvmt	NBLn1	NBLn2	NBLn3	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	252	-	880	687	-	-	1290	-	-	-
HCM Lane V/C Ratio	0.111	-	0.063	-	-	-	0.038	-	-	-
HCM Control Delay (s)	21.1	0	9.4	0	-	-	7.9	-	-	0
HCM Lane LOS	C	A	A	A	-	-	A	-	-	A
HCM 95th %tile Q(veh)	0.4	-	0.2	0	-	-	0.1	-	-	-

Intersection	
Int Delay, s/veh	1.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	581	41	23	221	0	42	0	59	0	0	0
Future Vol, veh/h	0	581	41	23	221	0	42	0	59	0	0	0
Conflicting Peds, #/hr	0	0	3	0	0	0	0	0	2	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	110	-	-	90	-	0	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	93	93	93	93	93	93	93	93	93	93	93	93
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	625	44	25	238	0	45	0	63	0	0	0

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	238	0	0	672	0	0	819	938	340	603	960	119
Stage 1	-	-	-	-	-	-	650	650	-	288	288	-
Stage 2	-	-	-	-	-	-	169	288	-	315	672	-
Critical Hdwy	4.14	-	-	4.14	-	-	7.54	6.54	6.94	7.54	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Follow-up Hdwy	2.22	-	-	2.22	-	-	3.52	4.02	3.32	3.52	4.02	3.32
Pot Cap-1 Maneuver	1326	-	-	915	-	-	267	263	656	383	255	910
Stage 1	-	-	-	-	-	-	424	463	-	695	672	-
Stage 2	-	-	-	-	-	-	816	672	-	671	453	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1326	-	-	912	-	-	261	255	653	338	247	910
Mov Cap-2 Maneuver	-	-	-	-	-	-	261	255	-	338	247	-
Stage 1	-	-	-	-	-	-	423	462	-	695	654	-
Stage 2	-	-	-	-	-	-	794	654	-	605	452	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	0.9	15.5	0
HCM LOS			C	A

Minor Lane/Major Mvmt	NBLn1	NBLn2	NBLn3	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	261	-	653	1326	-	-	912	-	-	-
HCM Lane V/C Ratio	0.173	-	0.097	-	-	-	0.027	-	-	-
HCM Control Delay (s)	21.7	0	11.1	0	-	-	9.1	-	-	0
HCM Lane LOS	C	A	B	A	-	-	A	-	-	A
HCM 95th %tile Q(veh)	0.6	-	0.3	0	-	-	0.1	-	-	-

Intersection	
Int Delay, s/veh	1.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	6	182	76	44	892	1	34	6	49	0	1	1
Future Vol, veh/h	6	182	76	44	892	1	34	6	49	0	1	1
Conflicting Peds, #/hr	0	0	2	0	0	0	0	0	3	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	110	-	-	90	-	0	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	89	89	89	89	89	89	89	89	89	89	89	89
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	7	204	85	49	1002	1	38	7	55	0	1	1

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1003	0	0	291	0	0	863	1364	150	1224	1406	502
Stage 1	-	-	-	-	-	-	263	263	-	1101	1101	-
Stage 2	-	-	-	-	-	-	600	1101	-	123	305	-
Critical Hdwy	4.14	-	-	4.14	-	-	7.54	6.54	6.94	7.54	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Follow-up Hdwy	2.22	-	-	2.22	-	-	3.52	4.02	3.32	3.52	4.02	3.32
Pot Cap-1 Maneuver	686	-	-	1268	-	-	248	146	870	135	138	515
Stage 1	-	-	-	-	-	-	719	689	-	226	286	-
Stage 2	-	-	-	-	-	-	455	286	-	868	661	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	686	-	-	1266	-	-	236	138	866	117	131	515
Mov Cap-2 Maneuver	-	-	-	-	-	-	236	138	-	117	131	-
Stage 1	-	-	-	-	-	-	709	679	-	223	275	-
Stage 2	-	-	-	-	-	-	435	275	-	793	652	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.3	0.4	16.2	22.4
HCM LOS			C	C

Minor Lane/Major Mvmt	NBLn1	NBLn2	NBLn3	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	236	138	866	686	-	-	1266	-	-	209
HCM Lane V/C Ratio	0.162	0.049	0.064	0.01	-	-	0.039	-	-	0.011
HCM Control Delay (s)	23.2	32.4	9.4	10.3	0.1	-	8	-	-	22.4
HCM Lane LOS	C	D	A	B	A	-	A	-	-	C
HCM 95th %tile Q(veh)	0.6	0.2	0.2	0	-	-	0.1	-	-	0

Intersection	
Int Delay, s/veh	2.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	6	582	55	23	223	1	62	6	59	1	5	5
Future Vol, veh/h	6	582	55	23	223	1	62	6	59	1	5	5
Conflicting Peds, #/hr	0	0	3	0	0	0	0	0	2	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	110	-	-	90	-	0	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	93	93	93	93	93	93	93	93	93	93	93	93
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	6	626	59	25	240	1	67	6	63	1	5	5

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	241	0	0	688	0	0	844	962	348	621	991	121
Stage 1	-	-	-	-	-	-	671	671	-	291	291	-
Stage 2	-	-	-	-	-	-	173	291	-	330	700	-
Critical Hdwy	4.14	-	-	4.14	-	-	7.54	6.54	6.94	7.54	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Follow-up Hdwy	2.22	-	-	2.22	-	-	3.52	4.02	3.32	3.52	4.02	3.32
Pot Cap-1 Maneuver	1323	-	-	902	-	-	256	254	648	372	245	908
Stage 1	-	-	-	-	-	-	412	453	-	693	670	-
Stage 2	-	-	-	-	-	-	812	670	-	657	440	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1323	-	-	899	-	-	243	244	645	320	236	908
Mov Cap-2 Maneuver	-	-	-	-	-	-	243	244	-	320	236	-
Stage 1	-	-	-	-	-	-	408	448	-	688	651	-
Stage 2	-	-	-	-	-	-	778	651	-	579	436	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.1	0.8	18.5	15.1
HCM LOS			C	C

Minor Lane/Major Mvmt	NBLn1	NBLn2	NBLn3	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	243	244	645	1323	-	-	899	-	-	369
HCM Lane V/C Ratio	0.274	0.026	0.098	0.005	-	-	0.028	-	-	0.032
HCM Control Delay (s)	25.3	20.2	11.2	7.7	0	-	9.1	-	-	15.1
HCM Lane LOS	D	C	B	A	A	-	A	-	-	C
HCM 95th %tile Q(veh)	1.1	0.1	0.3	0	-	-	0.1	-	-	0.1

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INTERSECTION CAPACITY UTILIZATION

Vernon Avenue @ Foothill Boulevard
Peak hr: AM
Annual Growth: 0.38%
Applied Growth: 1.53%

Date: 5/20/2024
Existing Year: 2023
Projection Year: 2027

N-S St: Vernon Avenue
E-W St: Foothill Boulevard
Project: Azusa Greens Redevelopment Project/1-23-4555-1
File: ICU6

	2023 EXISTING TRAFFIC			2027 FUTURE PRE-PROJECT					2027 FUTURE WITH PROJECT				2027 FUTURE W/ PROJECT + IMPROVEMENTS			
Movement	1 Volume	2 Capacity	V/C Ratio	Added Amb. Grow. Volume	Added Rel. Proj. Volume	Total Volume	2 Capacity	V/C Ratio	Added Volume	Total Volume	2 Capacity	V/C Ratio	Added Volume	Total Volume	2 Capacity	V/C Ratio
NB Left	0	0	0.000	0	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000
NB Thru	0	1600	0.001 *	0	0	0	1600	0.001 *	0	0	1600	0.001 *	0	0	1600	0.001 *
NB Right	1	0	0.000	0	0	1	0	0.000	0	1	0	0.000	0	1	0	0.000
SB Left	184	0	0.115 *	3	0	187	0	0.117 *	19	206	0	0.129 *	0	206	0	0.129 *
SB Thru	0	1600	0.115	0	0	0	1600	0.117	0	0	1600	0.129	0	0	1600	0.129
SB Right	103	1600	0.064	2	0	105	1600	0.066	0	105	1600	0.066	0	105	1600	0.066
EB Left	176	1600	0.110 *	3	0	179	1600	0.112 *	0	179	1600	0.112 *	0	179	1600	0.112 *
EB Thru	330	3200	0.104	5	30	365	3200	0.115	14	379	3200	0.119	0	379	3200	0.119
EB Right	2	0	0.000	0	0	2	0	0.000	0	2	0	0.000	0	2	0	0.000
WB Left	14	1600	0.009	0	0	14	1600	0.009	0	14	1600	0.009	0	14	1600	0.009
WB Thru	561	3200	0.250 *	9	82	652	3200	0.279 *	93	745	3200	0.313 *	0	745	3200	0.313 *
WB Right [3]	238	0	0.000	4	0	242	0	0.000	15	257	0	0.000	0	257	0	0.000
Yellow Allowance			0.100 *					0.100 *				0.100 *				0.100 *
ICU			0.575					0.609				0.654				0.654
LOS			A					B				B				B

** Key conflicting movement as a part of ICU*
1 Counts conducted by: Counts Unlimited, Inc.
2 Capacity expressed in veh/hour of green
3 No Right-Turn on Red

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INTERSECTION CAPACITY UTILIZATION

Vernon Avenue @ Foothill Boulevard
Peak hr: PM
Annual Growth: 0.38%
Applied Growth: 1.53%

Date: 5/20/2024
Existing Year: 2023
Projection Year: 2027

N-S St: Vernon Avenue
E-W St: Foothill Boulevard
Project: Azusa Greens Redevelopment Project/1-23-4555-1
File: ICU6

	2023 EXISTING TRAFFIC			2027 FUTURE PRE-PROJECT					2027 FUTURE WITH PROJECT				2027 FUTURE W/ PROJECT + IMPROVEMENTS			
Movement	1 Volume	2 Capacity	V/C Ratio	Added Amb. Grow. Volume	Added Rel. Proj. Volume	Total Volume	2 Capacity	V/C Ratio	Added Volume	Total Volume	2 Capacity	V/C Ratio	Added Volume	Total Volume	2 Capacity	V/C Ratio
NB Left	3	0	0.002	0	0	3	0	0.002	0	3	0	0.002	0	3	0	0.002
NB Thru	0	1600	0.011 *	0	0	0	1600	0.011 *	0	0	1600	0.011 *	0	0	1600	0.011 *
NB Right	15	0	0.000	0	0	15	0	0.000	0	15	0	0.000	0	15	0	0.000
SB Left	200	0	0.125 *	3	0	203	0	0.127 *	19	222	0	0.139 *	0	222	0	0.139 *
SB Thru	5	1600	0.128	0	0	5	1600	0.130	0	5	1600	0.142	0	5	1600	0.142
SB Right	141	1600	0.088	2	1	144	1600	0.090	0	144	1600	0.090	0	144	1600	0.090
EB Left	189	1600	0.118	3	1	193	1600	0.121	0	193	1600	0.121	0	193	1600	0.121
EB Thru	883	3200	0.277 *	13	92	988	3200	0.310 *	80	1068	3200	0.335 *	0	1068	3200	0.335 *
EB Right	4	0	0.000	0	0	4	0	0.000	0	4	0	0.000	0	4	0	0.000
WB Left	4	1600	0.003 *	0	0	4	1600	0.003 *	0	4	1600	0.003 *	0	4	1600	0.003 *
WB Thru	304	3200	0.128	5	46	355	3200	0.145	14	369	3200	0.157	0	369	3200	0.157
WB Right [3]	106	0	0.000	2	0	108	0	0.000	26	134	0	0.000	0	134	0	0.000
Yellow Allowance			0.100 *					0.100 *				0.100 *				0.100 *
ICU			0.516					0.551				0.588				0.588
LOS			A					A				A				A

** Key conflicting movement as a part of ICU*
1 Counts conducted by: Counts Unlimited, Inc.
2 Capacity expressed in veh/hour of green
3 No Right-Turn on Red

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INTERSECTION CAPACITY UTILIZATION

San Gabriel Avenue @ Sierra Madre Avenue
Peak hr: AM
Annual Growth: 0.38%
Applied Growth: 1.53%

N-S St: San Gabriel Avenue
E-W St: Sierra Madre Avenue
Project: Azusa Greens Redevelopment Project/1-23-4555-1
File: ICU7

Date: 5/20/2024
Existing Year: 2023
Projection Year: 2027

	2023 EXISTING TRAFFIC			2027 FUTURE PRE-PROJECT					2027 FUTURE WITH PROJECT				2027 FUTURE W/ PROJECT + IMPROVEMENTS			
Movement	1 Volume	2 Capacity	V/C Ratio	Added Amb. Grow. Volume	Added Rel. Proj. Volume	Total Volume	2 Capacity	V/C Ratio	Added Volume	Total Volume	2 Capacity	V/C Ratio	Added Volume	Total Volume	2 Capacity	V/C Ratio
NB Left	0	0	0.000 *	0	0	0	0	0.000 *	0	0	0	0.000 *	0	0	0	0.000 *
NB Thru	0	0	0.000	0	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000
NB Right	0	0	0.000	0	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000
SB Left	66	0	0.010	1	0	67	0	0.010	0	67	0	0.010	0	67	0	0.010
SB Thru	124	6400	0.049 *	2	0	126	6400	0.049 *	0	126	6400	0.049 *	0	126	6400	0.049 *
SB Right	121	0	0.000	2	0	123	0	0.000	0	123	0	0.000	0	123	0	0.000
EB Left	0	0	0.000 *	0	0	0	0	0.000 *	0	0	0	0.000 *	0	0	0	0.000 *
EB Thru	183	3200	0.091	3	0	186	3200	0.093	2	188	3200	0.093	0	188	3200	0.093
EB Right	108	0	0.000	2	0	110	0	0.000	0	110	0	0.000	0	110	0	0.000
WB Left	102	1600	0.064	2	0	104	1600	0.065	0	104	1600	0.065	0	104	1600	0.065
WB Thru	719	3200	0.225 *	11	0	730	3200	0.228 *	2	732	3200	0.229 *	0	732	3200	0.229 *
WB Right	0	0	0.000	0	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000
Yellow Allowance			0.100 *					0.100 *				0.100 *				0.100 *
ICU			0.373					0.378				0.378				0.378
LOS			A					A				A				A

** Key conflicting movement as a part of ICU*
1 Counts conducted by: Counts Unlimited, Inc.
2 Capacity expressed in veh/hour of green

LINSCOTT, LAW & GREENSPAN, ENGINEERS
600 S. Lake Avenue, Ste 500, Pasadena 91106
(626) 796.2322

INTERSECTION CAPACITY UTILIZATION

San Gabriel Avenue @ Sierra Madre Avenue
Peak hr: PM
Annual Growth: 0.38%
Applied Growth: 1.53%

Date: 5/20/2024
Existing Year: 2023
Projection Year: 2027

N-S St: San Gabriel Avenue
E-W St: Sierra Madre Avenue
Project: Azusa Greens Redevelopment Project/1-23-4555-1
File: ICU7

	2023 EXISTING TRAFFIC			2027 FUTURE PRE-PROJECT					2027 FUTURE WITH PROJECT				2027 FUTURE W/ PROJECT + IMPROVEMENTS			
Movement	1 Volume	2 Capacity	V/C Ratio	Added Amb. Grow. Volume	Added Rel. Proj. Volume	Total Volume	2 Capacity	V/C Ratio	Added Volume	Total Volume	2 Capacity	V/C Ratio	Added Volume	Total Volume	2 Capacity	V/C Ratio
NB Left	0	0	0.000 *	0	0	0	0	0.000 *	0	0	0	0.000 *	0	0	0	0.000 *
NB Thru	0	0	0.000	0	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000
NB Right	0	0	0.000	0	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000
SB Left	39	0	0.006	1	0	40	0	0.006	0	40	0	0.006	0	40	0	0.006
SB Thru	163	6400	0.041 *	2	0	165	6400	0.041 *	0	165	6400	0.041 *	0	165	6400	0.041 *
SB Right	59	0	0.000	1	0	60	0	0.000	0	60	0	0.000	0	60	0	0.000
EB Left	0	0	0.000	0	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000
EB Thru	548	3200	0.202 *	8	1	557	3200	0.205 *	2	559	3200	0.206 *	0	559	3200	0.206 *
EB Right	97	0	0.000	1	0	98	0	0.000	1	99	0	0.000	0	99	0	0.000
WB Left	75	1600	0.047 *	1	0	76	1600	0.048 *	0	76	1600	0.048 *	0	76	1600	0.048 *
WB Thru	201	3200	0.063	3	1	205	3200	0.064	3	208	3200	0.065	0	208	3200	0.065
WB Right	0	0	0.000	0	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000
Yellow Allowance			0.100 *					0.100 *				0.100 *				0.100 *
ICU			0.389					0.394				0.395				0.395
LOS			A					A				A				A

** Key conflicting movement as a part of ICU*
1 Counts conducted by: Counts Unlimited, Inc.
2 Capacity expressed in veh/hour of green

LINSCOTT, LAW & GREENSPAN, ENGINEERS
600 S. Lake Avenue, Ste 500, Pasadena 91106
(626) 796.2322

INTERSECTION CAPACITY UTILIZATION

San Gabriel Avenue @ Foothill Boulevard
Peak hr: AM
Annual Growth: 0.38%
Applied Growth: 1.53%

Date: 5/20/2024
Existing Year: 2023
Projection Year: 2027

N-S St: San Gabriel Avenue
E-W St: Foothill Boulevard
Project: Azusa Greens Redevelopment Project/1-23-4555-1
File: ICU8

	2023 EXISTING TRAFFIC			2027 FUTURE PRE-PROJECT					2027 FUTURE WITH PROJECT				2027 FUTURE W/ PROJECT + IMPROVEMENTS			
Movement	1 Volume	2 Capacity	V/C Ratio	Added Amb. Grow. Volume	Added Rel. Proj. Volume	Total Volume	2 Capacity	V/C Ratio	Added Volume	Total Volume	2 Capacity	V/C Ratio	Added Volume	Total Volume	2 Capacity	V/C Ratio
NB Left	0	0	0.000 *	0	0	0	0	0.000 *	0	0	0	0.000 *	0	0	0	0.000 *
NB Thru	0	0	0.000	0	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000
NB Right	0	0	0.000	0	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000
SB Left	137	0	0.021	2	7	146	0	0.023	0	146	0	0.023	0	146	0	0.023
SB Thru	544	6400	0.118 *	8	22	574	6400	0.126 *	0	574	6400	0.126 *	0	574	6400	0.126 *
SB Right	75	0	0.000	1	10	86	0	0.000	0	86	0	0.000	0	86	0	0.000
EB Left	0	0	0.000 *	0	0	0	0	0.000 *	0	0	0	0.000 *	0	0	0	0.000 *
EB Thru	284	3200	0.089	4	28	316	3200	0.099	11	327	3200	0.102	0	327	3200	0.102
EB Right	146	1600	0.091	2	2	150	1600	0.094	23	173	1600	0.108	0	173	1600	0.108
WB Left	97	2880	0.034	1	3	101	2880	0.035	0	101	2880	0.035	0	101	2880	0.035
WB Thru	743	3200	0.232 *	11	74	828	3200	0.259 *	108	936	3200	0.293 *	0	936	3200	0.293 *
WB Right	0	0	0.000	0	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000
Yellow Allowance			0.100 *					0.100 *				0.100 *				0.100 *
ICU			0.450					0.485				0.518				0.518
LOS			A					A				A				A

** Key conflicting movement as a part of ICU*
1 Counts conducted by: Counts Unlimited, Inc.
2 Capacity expressed in veh/hour of green

LINSCOTT, LAW & GREENSPAN, ENGINEERS
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INTERSECTION CAPACITY UTILIZATION

San Gabriel Avenue @ Foothill Boulevard
Peak hr: PM
Annual Growth: 0.38%
Applied Growth: 1.53%

Date: 5/20/2024
Existing Year: 2023
Projection Year: 2027

N-S St: San Gabriel Avenue
E-W St: Foothill Boulevard
Project: Azusa Greens Redevelopment Project/1-23-4555-1
File: ICU8

	2023 EXISTING TRAFFIC			2027 FUTURE PRE-PROJECT					2027 FUTURE WITH PROJECT				2027 FUTURE W/ PROJECT + IMPROVEMENTS			
Movement	1 Volume	2 Capacity	V/C Ratio	Added Amb. Grow. Volume	Added Rel. Proj. Volume	Total Volume	2 Capacity	V/C Ratio	Added Volume	Total Volume	2 Capacity	V/C Ratio	Added Volume	Total Volume	2 Capacity	V/C Ratio
NB Left	0	0	0.000 *	0	0	0	0	0.000 *	0	0	0	0.000 *	0	0	0	0.000 *
NB Thru	0	0	0.000	0	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000
NB Right	0	0	0.000	0	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000
SB Left	147	0	0.023	2	10	159	0	0.025	0	159	0	0.025	0	159	0	0.025
SB Thru	474	6400	0.106 *	7	30	511	6400	0.116 *	1	512	6400	0.116 *	0	512	6400	0.116 *
SB Right	56	0	0.000	1	14	71	0	0.000	0	71	0	0.000	0	71	0	0.000
EB Left	0	0	0.000	0	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000
EB Thru	841	3200	0.263 *	13	87	941	3200	0.294 *	27	968	3200	0.303 *	0	968	3200	0.303 *
EB Right	229	1600	0.143	4	6	239	1600	0.149	72	311	1600	0.194	0	311	1600	0.194
WB Left	115	2880	0.040 *	2	3	120	2880	0.042 *	0	120	2880	0.042 *	0	120	2880	0.042 *
WB Thru	369	3200	0.115	6	36	411	3200	0.128	40	451	3200	0.141	0	451	3200	0.141
WB Right	0	0	0.000	0	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000
Yellow Allowance			0.100 *					0.100 *				0.100 *				0.100 *
ICU			0.509					0.552				0.560				0.560
LOS			A					A				A				A

** Key conflicting movement as a part of ICU*
1 Counts conducted by: Counts Unlimited, Inc.
2 Capacity expressed in veh/hour of green

LINSCOTT, LAW & GREENSPAN, ENGINEERS
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(626) 796.2322

INTERSECTION CAPACITY UTILIZATION

San Gabriel Canyon Road-Azusa Avenue @ Sierra Madre Avenue
Peak hr: AM
Annual Growth: 0.38%
Applied Growth: 1.53%

Date: 5/20/2024
Existing Year: 2023
Projection Year: 2027

N-S St: San Gabriel Canyon Road-Azusa Avenue
E-W St: Sierra Madre Avenue
Project: Azusa Greens Redevelopment Project/1-23-4555-1
File: ICU9

	2023 EXISTING TRAFFIC			2027 FUTURE PRE-PROJECT					2027 FUTURE WITH PROJECT				2027 FUTURE W/ PROJECT + IMPROVEMENTS			
Movement	1 Volume	2 Capacity	V/C Ratio	Added Amb. Grow. Volume	Added Rel. Proj. Volume	Total Volume	2 Capacity	V/C Ratio	Added Volume	Total Volume	2 Capacity	V/C Ratio	Added Volume	Total Volume	2 Capacity	V/C Ratio
NB Left	122	1600	0.076	2	0	124	1600	0.078	1	125	1600	0.078	0	125	1600	0.078
NB Thru	65	3200	0.020	1	0	66	3200	0.021	0	66	3200	0.021	0	66	3200	0.021
NB Right	3	1600	0.002	0	0	3	1600	0.002	0	3	1600	0.002	0	3	1600	0.002
SB Left	0	0	0.000	0	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000
SB Thru	0	0	0.000	0	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000
SB Right	0	0	0.000	0	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000
EB Left	64	1600	0.040 *	1	0	65	1600	0.041 *	0	65	1600	0.041 *	0	65	1600	0.041 *
EB Thru	242	3200	0.076	4	0	246	3200	0.077	2	248	3200	0.078	0	248	3200	0.078
EB Right	0	0	0.000	0	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000
WB Left	0	0	0.000	0	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000
WB Thru	626	3200	0.209 *	10	0	636	3200	0.213 *	2	638	3200	0.213 *	0	638	3200	0.213 *
WB Right	43	0	0.000	1	0	44	0	0.000	0	44	0	0.000	0	44	0	0.000
Yellow Allowance			0.100 *					0.100 *				0.100 *				0.100 *
ICU			0.425					0.431				0.432				0.432
LOS			A					A				A				A

** Key conflicting movement as a part of ICU*
1 Counts conducted by: Counts Unlimited, Inc.
2 Capacity expressed in veh/hour of green

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INTERSECTION CAPACITY UTILIZATION

San Gabriel Canyon Road-Azusa Avenue @ Sierra Madre Avenue
Peak hr: PM
Annual Growth: 0.38%
Applied Growth: 1.53%

Date: 5/20/2024
Existing Year: 2023
Projection Year: 2027

N-S St: San Gabriel Canyon Road-Azusa Avenue
E-W St: Sierra Madre Avenue
Project: Azusa Greens Redevelopment Project/1-23-4555-1
File: ICU9

	2023 EXISTING TRAFFIC			2027 FUTURE PRE-PROJECT					2027 FUTURE WITH PROJECT				2027 FUTURE W/ PROJECT + IMPROVEMENTS			
Movement	1 Volume	2 Capacity	V/C Ratio	Added Amb. Grow. Volume	Added Rel. Proj. Volume	Total Volume	2 Capacity	V/C Ratio	Added Volume	Total Volume	2 Capacity	V/C Ratio	Added Volume	Total Volume	2 Capacity	V/C Ratio
NB Left	88	1600	0.055	1	0	89	1600	0.056	1	90	1600	0.056	0	90	1600	0.056
NB Thru	136	3200	0.043	2	0	138	3200	0.043	0	138	3200	0.043	0	138	3200	0.043
NB Right	5	1600	0.003	0	0	5	1600	0.003	0	5	1600	0.003	0	5	1600	0.003
SB Left	0	0	0.000	0	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000
SB Thru	0	0	0.000	0	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000
SB Right	0	0	0.000	0	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000
EB Left	109	1600	0.068	2	0	111	1600	0.069	0	111	1600	0.069	0	111	1600	0.069
EB Thru	474	3200	0.148 *	7	1	482	3200	0.151 *	2	484	3200	0.151 *	0	484	3200	0.151 *
EB Right	0	0	0.000	0	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000
WB Left	0	0	0.000 *	0	0	0	0	0.000 *	0	0	0	0.000 *	0	0	0	0.000 *
WB Thru	197	3200	0.077	3	1	201	3200	0.078	3	204	3200	0.079	0	204	3200	0.079
WB Right	48	0	0.000	1	0	49	0	0.000	0	49	0	0.000	0	49	0	0.000
Yellow Allowance			0.100 *					0.100 *				0.100 *				0.100 *
ICU			0.303					0.306				0.308				0.308
LOS			A					A				A				A

** Key conflicting movement as a part of ICU*
1 Counts conducted by: Counts Unlimited, Inc.
2 Capacity expressed in veh/hour of green

LINSCOTT, LAW & GREENSPAN, ENGINEERS
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(626) 796.2322

INTERSECTION CAPACITY UTILIZATION

Azusa Avenue @ Foothill Boulevard
Peak hr: AM
Annual Growth: 0.38%
Applied Growth: 1.53%

N-S St: Azusa Avenue
E-W St: Foothill Boulevard
Project: Azusa Greens Redevelopment Project/1-23-4555-1
File: ICU10

Date: 5/20/2024
Existing Year: 2023
Projection Year: 2027

	2023 EXISTING TRAFFIC			2027 FUTURE PRE-PROJECT					2027 FUTURE WITH PROJECT				2027 FUTURE W/ PROJECT + IMPROVEMENTS			
Movement	1 Volume	2 Capacity	V/C Ratio	Added Amb. Grow. Volume	Added Rel. Proj. Volume	Total Volume	2 Capacity	V/C Ratio	Added Volume	Total Volume	2 Capacity	V/C Ratio	Added Volume	Total Volume	2 Capacity	V/C Ratio
NB Left	124	0	0.039	2	3	129	0	0.040	79	208	0	0.065	0	208	0	0.065
NB Thru	226	3200	0.125 *	3	16	245	3200	0.134 *	1	246	3200	0.159 *	0	246	3200	0.159 *
NB Right	50	0	0.000	1	4	55	0	0.000	0	55	0	0.000	0	55	0	0.000
SB Left	0	0	0.000 *	0	0	0	0	0.000 *	0	0	0	0.000 *	0	0	0	0.000 *
SB Thru	0	0	0.000	0	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000
SB Right	0	0	0.000	0	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000
EB Left	46	2880	0.016 *	1	7	54	2880	0.019 *	0	54	2880	0.019 *	0	54	2880	0.019 *
EB Thru	378	3200	0.118	6	28	412	3200	0.129	11	423	3200	0.132	0	423	3200	0.132
EB Right	0	0	0.000	0	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000
WB Left	0	0	0.000	0	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000
WB Thru	713	3200	0.243 *	11	73	797	3200	0.271 *	29	826	3200	0.280 *	0	826	3200	0.280 *
WB Right	63	0	0.000	1	5	69	0	0.000	0	69	0	0.000	0	69	0	0.000
Yellow Allowance			0.100 *					0.100 *				0.100 *				0.100 *
ICU			0.483					0.523				0.558				0.558
LOS			A					A				A				A

** Key conflicting movement as a part of ICU*
1 Counts conducted by: Counts Unlimited, Inc.
2 Capacity expressed in veh/hour of green

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INTERSECTION CAPACITY UTILIZATION

Azusa Avenue @ Foothill Boulevard
Peak hr: PM
Annual Growth: 0.38%
Applied Growth: 1.53%

Date: 5/20/2024
Existing Year: 2023
Projection Year: 2027

N-S St: Azusa Avenue
E-W St: Foothill Boulevard
Project: Azusa Greens Redevelopment Project/1-23-4555-1
File: ICU10

	2023 EXISTING TRAFFIC			2027 FUTURE PRE-PROJECT					2027 FUTURE WITH PROJECT				2027 FUTURE W/ PROJECT + IMPROVEMENTS			
Movement	1 Volume	2 Capacity	V/C Ratio	Added Amb. Grow. Volume	Added Rel. Proj. Volume	Total Volume	2 Capacity	V/C Ratio	Added Volume	Total Volume	2 Capacity	V/C Ratio	Added Volume	Total Volume	2 Capacity	V/C Ratio
NB Left	92	0	0.029	1	8	101	0	0.032	28	129	0	0.040	0	129	0	0.040
NB Thru	336	3200	0.160 *	5	34	375	3200	0.177 *	1	376	3200	0.186 *	0	376	3200	0.186 *
NB Right	85	0	0.000	1	3	89	0	0.000	0	89	0	0.000	0	89	0	0.000
SB Left	0	0	0.000 *	0	0	0	0	0.000 *	0	0	0	0.000 *	0	0	0	0.000 *
SB Thru	0	0	0.000	0	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000
SB Right	0	0	0.000	0	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000
EB Left	81	2880	0.028	1	16	98	2880	0.034	0	98	2880	0.034	0	98	2880	0.034
EB Thru	938	3200	0.293 *	14	81	1033	3200	0.323 *	27	1060	3200	0.331 *	0	1060	3200	0.331 *
EB Right	0	0	0.000	0	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000
WB Left	0	0	0.000 *	0	0	0	0	0.000 *	0	0	0	0.000 *	0	0	0	0.000 *
WB Thru	409	3200	0.156	6	32	447	3200	0.172	14	461	3200	0.176	0	461	3200	0.176
WB Right	90	0	0.000	1	12	103	0	0.000	0	103	0	0.000	0	103	0	0.000
Yellow Allowance			0.100 *					0.100 *				0.100 *				0.100 *
ICU			0.553					0.599				0.617				0.617
LOS			A					A				B				B

** Key conflicting movement as a part of ICU*
1 Counts conducted by: Counts Unlimited, Inc.
2 Capacity expressed in veh/hour of green

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	93	190	1049	487	0	890
Future Volume (veh/h)	93	190	1049	487	0	890
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1945	1945	1870	1870	0	1870
Adj Flow Rate, veh/h	96	196	1081	0	0	918
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	2	0	2
Cap, veh/h	278	247	3804		0	3804
Arrive On Green	0.15	0.15	0.25	0.00	0.00	0.75
Sat Flow, veh/h	1853	1648	5443	0	0	5443
Grp Volume(v), veh/h	96	196	1081	0	0	918
Grp Sat Flow(s),veh/h/ln	1853	1648	1702	0	0	1702
Q Serve(g_s), s	4.6	11.5	17.2	0.0	0.0	5.6
Cycle Q Clear(g_c), s	4.6	11.5	17.2	0.0	0.0	5.6
Prop In Lane	1.00	1.00		0.00	0.00	
Lane Grp Cap(c), veh/h	278	247	3804		0	3804
V/C Ratio(X)	0.35	0.79	0.28		0.00	0.24
Avail Cap(c_a), veh/h	574	511	3804		0	3804
HCM Platoon Ratio	1.00	1.00	0.33	0.33	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.58	0.00	0.00	1.00
Uniform Delay (d), s/veh	38.1	41.0	16.1	0.0	0.0	4.0
Incr Delay (d2), s/veh	1.0	7.9	0.1	0.0	0.0	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	3.9	8.8	11.2	0.0	0.0	2.6
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	39.2	48.9	16.2	0.0	0.0	4.1
LnGrp LOS	D	D	B		A	A
Approach Vol, veh/h	292		1081			918
Approach Delay, s/veh	45.7		16.2			4.1
Approach LOS	D		B			A

Timer - Assigned Phs		2		4		6
Phs Duration (G+Y+Rc), s		80.0		20.0		80.0
Change Period (Y+Rc), s		5.5		5.0		5.5
Max Green Setting (Gmax), s		58.5		31.0		58.5
Max Q Clear Time (g_c+I1), s		19.2		13.5		7.6
Green Ext Time (p_c), s		13.0		1.3		11.0

Intersection Summary	
HCM 6th Ctrl Delay	15.1
HCM 6th LOS	B

Notes

User approved volume balancing among the lanes for turning movement.
Unsignalized Delay for [NBR] is excluded from calculations of the approach delay and intersection delay.

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	148	186	726	469	0	1244
Future Volume (veh/h)	148	186	726	469	0	1244
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1945	1945	1870	1870	0	1870
Adj Flow Rate, veh/h	151	190	741	0	0	1269
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	0	2
Cap, veh/h	267	238	3883		0	3883
Arrive On Green	0.14	0.14	0.25	0.00	0.00	0.76
Sat Flow, veh/h	1853	1648	5443	0	0	5443
Grp Volume(v), veh/h	151	190	741	0	0	1269
Grp Sat Flow(s),veh/h/ln	1853	1648	1702	0	0	1702
Q Serve(g_s), s	8.4	12.3	12.6	0.0	0.0	8.7
Cycle Q Clear(g_c), s	8.4	12.3	12.6	0.0	0.0	8.7
Prop In Lane	1.00	1.00		0.00	0.00	
Lane Grp Cap(c), veh/h	267	238	3883		0	3883
V/C Ratio(X)	0.57	0.80	0.19		0.00	0.33
Avail Cap(c_a), veh/h	556	495	3883		0	3883
HCM Platoon Ratio	1.00	1.00	0.33	0.33	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.78	0.00	0.00	1.00
Uniform Delay (d), s/veh	43.9	45.5	14.6	0.0	0.0	4.2
Incr Delay (d2), s/veh	2.7	8.5	0.1	0.0	0.0	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	7.2	9.4	9.1	0.0	0.0	4.2
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	46.5	54.0	14.7	0.0	0.0	4.4
LnGrp LOS	D	D	B		A	A
Approach Vol, veh/h	341		741			1269
Approach Delay, s/veh	50.7		14.7			4.4
Approach LOS	D		B			A

Timer - Assigned Phs		2		4		6
Phs Duration (G+Y+Rc), s		89.1		20.9		89.1
Change Period (Y+Rc), s		5.5		5.0		5.5
Max Green Setting (Gmax), s		66.5		33.0		66.5
Max Q Clear Time (g_c+I1), s		14.6		14.3		10.7
Green Ext Time (p_c), s		8.3		1.6		18.0

Intersection Summary	
HCM 6th Ctrl Delay	14.4
HCM 6th LOS	B

Notes

User approved volume balancing among the lanes for turning movement.
Unsignalized Delay for [NBR] is excluded from calculations of the approach delay and intersection delay.

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	102	220	1094	496	0	924
Future Volume (veh/h)	102	220	1094	496	0	924
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1945	1945	1870	1870	0	1870
Adj Flow Rate, veh/h	105	227	1128	0	0	953
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	2	0	2
Cap, veh/h	311	276	3714		0	3714
Arrive On Green	0.17	0.17	0.24	0.00	0.00	0.73
Sat Flow, veh/h	1853	1648	5443	0	0	5443
Grp Volume(v), veh/h	105	227	1128	0	0	953
Grp Sat Flow(s),veh/h/ln	1853	1648	1702	0	0	1702
Q Serve(g_s), s	5.0	13.3	18.1	0.0	0.0	6.3
Cycle Q Clear(g_c), s	5.0	13.3	18.1	0.0	0.0	6.3
Prop In Lane	1.00	1.00		0.00	0.00	
Lane Grp Cap(c), veh/h	311	276	3714		0	3714
V/C Ratio(X)	0.34	0.82	0.30		0.00	0.26
Avail Cap(c_a), veh/h	574	511	3714		0	3714
HCM Platoon Ratio	1.00	1.00	0.33	0.33	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.53	0.00	0.00	1.00
Uniform Delay (d), s/veh	36.7	40.2	17.2	0.0	0.0	4.6
Incr Delay (d2), s/veh	0.9	8.4	0.1	0.0	0.0	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	4.2	9.9	11.6	0.0	0.0	3.1
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	37.6	48.5	17.4	0.0	0.0	4.7
LnGrp LOS	D	D	B		A	A
Approach Vol, veh/h	332		1128			953
Approach Delay, s/veh	45.1		17.4			4.7
Approach LOS	D		B			A

Timer - Assigned Phs		2		4		6
Phs Duration (G+Y+Rc), s		78.2		21.8		78.2
Change Period (Y+Rc), s		5.5		5.0		5.5
Max Green Setting (Gmax), s		58.5		31.0		58.5
Max Q Clear Time (g_c+I1), s		20.1		15.3		8.3
Green Ext Time (p_c), s		13.6		1.5		11.6

Intersection Summary	
HCM 6th Ctrl Delay	16.2
HCM 6th LOS	B

Notes

User approved volume balancing among the lanes for turning movement.
Unsignalized Delay for [NBR] is excluded from calculations of the approach delay and intersection delay.

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	152	199	759	488	0	1293
Future Volume (veh/h)	152	199	759	488	0	1293
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1945	1945	1870	1870	0	1870
Adj Flow Rate, veh/h	155	203	774	0	0	1319
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	0	2
Cap, veh/h	282	251	3841		0	3841
Arrive On Green	0.15	0.15	0.50	0.00	0.00	0.75
Sat Flow, veh/h	1853	1648	5443	0	0	5443
Grp Volume(v), veh/h	155	203	774	0	0	1319
Grp Sat Flow(s),veh/h/ln	1853	1648	1702	0	0	1702
Q Serve(g_s), s	8.5	13.1	9.2	0.0	0.0	9.5
Cycle Q Clear(g_c), s	8.5	13.1	9.2	0.0	0.0	9.5
Prop In Lane	1.00	1.00		0.00	0.00	
Lane Grp Cap(c), veh/h	282	251	3841		0	3841
V/C Ratio(X)	0.55	0.81	0.20		0.00	0.34
Avail Cap(c_a), veh/h	556	495	3841		0	3841
HCM Platoon Ratio	1.00	1.00	0.67	0.67	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.75	0.00	0.00	1.00
Uniform Delay (d), s/veh	43.1	45.1	9.0	0.0	0.0	4.6
Incr Delay (d2), s/veh	2.4	8.5	0.1	0.0	0.0	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	7.3	9.8	5.7	0.0	0.0	4.7
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	45.5	53.5	9.1	0.0	0.0	4.8
LnGrp LOS	D	D	A		A	A
Approach Vol, veh/h	358		774			1319
Approach Delay, s/veh	50.1		9.1			4.8
Approach LOS	D		A			A

Timer - Assigned Phs		2		4		6
Phs Duration (G+Y+Rc), s		88.2		21.8		88.2
Change Period (Y+Rc), s		5.5		5.0		5.5
Max Green Setting (Gmax), s		66.5		33.0		66.5
Max Q Clear Time (g_c+I1), s		11.2		15.1		11.5
Green Ext Time (p_c), s		8.9		1.7		19.0

Intersection Summary	
HCM 6th Ctrl Delay	12.8
HCM 6th LOS	B

Notes

User approved volume balancing among the lanes for turning movement.
Unsignalized Delay for [NBR] is excluded from calculations of the approach delay and intersection delay.

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	102	243	1192	496	0	947
Future Volume (veh/h)	102	243	1192	496	0	947
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1945	1945	1870	1870	0	1870
Adj Flow Rate, veh/h	105	251	1229	0	0	976
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	2	0	2
Cap, veh/h	338	301	3639		0	3639
Arrive On Green	0.18	0.18	0.24	0.00	0.00	0.71
Sat Flow, veh/h	1853	1648	5443	0	0	5443
Grp Volume(v), veh/h	105	251	1229	0	0	976
Grp Sat Flow(s),veh/h/ln	1853	1648	1702	0	0	1702
Q Serve(g_s), s	4.9	14.7	20.0	0.0	0.0	6.8
Cycle Q Clear(g_c), s	4.9	14.7	20.0	0.0	0.0	6.8
Prop In Lane	1.00	1.00		0.00	0.00	
Lane Grp Cap(c), veh/h	338	301	3639		0	3639
V/C Ratio(X)	0.31	0.84	0.34		0.00	0.27
Avail Cap(c_a), veh/h	574	511	3639		0	3639
HCM Platoon Ratio	1.00	1.00	0.33	0.33	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.48	0.00	0.00	1.00
Uniform Delay (d), s/veh	35.4	39.4	18.6	0.0	0.0	5.1
Incr Delay (d2), s/veh	0.7	8.4	0.1	0.0	0.0	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	4.1	10.7	12.4	0.0	0.0	3.5
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	36.2	47.8	18.8	0.0	0.0	5.3
LnGrp LOS	D	D	B		A	A
Approach Vol, veh/h	356		1229			976
Approach Delay, s/veh	44.4		18.8			5.3
Approach LOS	D		B			A

Timer - Assigned Phs		2		4		6
Phs Duration (G+Y+Rc), s		76.8		23.2		76.8
Change Period (Y+Rc), s		5.5		5.0		5.5
Max Green Setting (Gmax), s		58.5		31.0		58.5
Max Q Clear Time (g_c+I1), s		22.0		16.7		8.8
Green Ext Time (p_c), s		15.0		1.5		11.9

Intersection Summary	
HCM 6th Ctrl Delay	17.2
HCM 6th LOS	B

Notes

User approved volume balancing among the lanes for turning movement.
Unsignalized Delay for [NBR] is excluded from calculations of the approach delay and intersection delay.

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	152	203	782	488	0	1400
Future Volume (veh/h)	152	203	782	488	0	1400
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1945	1945	1870	1870	0	1870
Adj Flow Rate, veh/h	155	207	798	0	0	1429
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	0	2
Cap, veh/h	287	255	3828		0	3828
Arrive On Green	0.15	0.15	0.50	0.00	0.00	0.75
Sat Flow, veh/h	1853	1648	5443	0	0	5443
Grp Volume(v), veh/h	155	207	798	0	0	1429
Grp Sat Flow(s),veh/h/ln	1853	1648	1702	0	0	1702
Q Serve(g_s), s	8.5	13.4	9.6	0.0	0.0	10.7
Cycle Q Clear(g_c), s	8.5	13.4	9.6	0.0	0.0	10.7
Prop In Lane	1.00	1.00		0.00	0.00	
Lane Grp Cap(c), veh/h	287	255	3828		0	3828
V/C Ratio(X)	0.54	0.81	0.21		0.00	0.37
Avail Cap(c_a), veh/h	556	495	3828		0	3828
HCM Platoon Ratio	1.00	1.00	0.67	0.67	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.73	0.00	0.00	1.00
Uniform Delay (d), s/veh	42.9	44.9	9.2	0.0	0.0	4.8
Incr Delay (d2), s/veh	2.2	8.5	0.1	0.0	0.0	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	7.2	10.0	5.9	0.0	0.0	5.3
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	45.1	53.4	9.3	0.0	0.0	5.1
LnGrp LOS	D	D	A		A	A
Approach Vol, veh/h	362		798			1429
Approach Delay, s/veh	49.9		9.3			5.1
Approach LOS	D		A			A

Timer - Assigned Phs		2		4		6
Phs Duration (G+Y+Rc), s		88.0		22.0		88.0
Change Period (Y+Rc), s		5.5		5.0		5.5
Max Green Setting (Gmax), s		66.5		33.0		66.5
Max Q Clear Time (g_c+I1), s		11.6		15.4		12.7
Green Ext Time (p_c), s		9.2		1.7		21.4

Intersection Summary	
HCM 6th Ctrl Delay	12.6
HCM 6th LOS	B

Notes

User approved volume balancing among the lanes for turning movement.
Unsignalized Delay for [NBR] is excluded from calculations of the approach delay and intersection delay.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	532	0	604	0	0	0	0	1050	199	157	281	0
Future Volume (veh/h)	532	0	604	0	0	0	0	1050	199	157	281	0
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No						No			No	
Adj Sat Flow, veh/h/ln	1945	1945	1945				0	1870	1945	1945	1870	0
Adj Flow Rate, veh/h	786	0	420				0	1129	214	169	302	0
Peak Hour Factor	0.93	0.93	0.93				0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	2	2	2				0	2	2	2	2	0
Cap, veh/h	1033	0	460				0	1660	770	356	2172	0
Arrive On Green	0.28	0.00	0.28				0.00	0.47	0.47	0.20	1.00	0.00
Sat Flow, veh/h	3705	0	1648				0	3647	1647	3594	3647	0
Grp Volume(v), veh/h	786	0	420				0	1129	214	169	302	0
Grp Sat Flow(s),veh/h/ln	1853	0	1648				0	1777	1647	1797	1777	0
Q Serve(g_s), s	19.4	0.0	24.7				0.0	24.8	8.0	4.2	0.0	0.0
Cycle Q Clear(g_c), s	19.4	0.0	24.7				0.0	24.8	8.0	4.2	0.0	0.0
Prop In Lane	1.00		1.00				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	1033	0	460				0	1660	770	356	2172	0
V/C Ratio(X)	0.76	0.00	0.91				0.00	0.68	0.28	0.47	0.14	0.00
Avail Cap(c_a), veh/h	1056	0	470				0	1660	770	881	2172	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	2.00	2.00	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	1.00	1.00	0.96	0.96	0.00
Uniform Delay (d), s/veh	33.0	0.0	34.9				0.0	20.8	16.3	37.8	0.0	0.0
Incr Delay (d2), s/veh	3.5	0.0	22.5				0.0	2.3	0.9	1.3	0.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	13.9	0.0	18.2				0.0	15.2	5.4	3.2	0.1	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	36.5	0.0	57.3				0.0	23.1	17.2	39.1	0.1	0.0
LnGrp LOS	D	A	E				A	C	B	D	A	A
Approach Vol, veh/h		1206						1343			471	
Approach Delay, s/veh		43.7						22.1			14.1	
Approach LOS		D						C			B	

Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	14.4	52.2		33.4		66.6
Change Period (Y+Rc), s	4.5	5.5		5.5		5.5
Max Green Setting (Gmax), s	24.5	31.5		28.5		60.5
Max Q Clear Time (g_c+I1), s	6.2	26.8		26.7		2.0
Green Ext Time (p_c), s	0.7	3.6		1.2		2.9

Intersection Summary	
HCM 6th Ctrl Delay	29.5
HCM 6th LOS	C

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	316	1	429	0	0	0	0	870	274	366	602	0
Future Volume (veh/h)	316	1	429	0	0	0	0	870	274	366	602	0
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No						No			No	
Adj Sat Flow, veh/h/ln	1945	1945	1945				0	1870	1945	1945	1870	0
Adj Flow Rate, veh/h	493	0	282				0	916	288	385	634	0
Peak Hour Factor	0.95	0.95	0.95				0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2				0	2	2	2	2	0
Cap, veh/h	781	0	348				0	1828	847	481	2449	0
Arrive On Green	0.21	0.00	0.21				0.00	0.51	0.51	0.27	1.00	0.00
Sat Flow, veh/h	3705	0	1648				0	3647	1646	3594	3647	0
Grp Volume(v), veh/h	493	0	282				0	916	288	385	634	0
Grp Sat Flow(s),veh/h/ln	1853	0	1648				0	1777	1646	1797	1777	0
Q Serve(g_s), s	13.3	0.0	17.9				0.0	18.5	11.3	11.0	0.0	0.0
Cycle Q Clear(g_c), s	13.3	0.0	17.9				0.0	18.5	11.3	11.0	0.0	0.0
Prop In Lane	1.00		1.00				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	781	0	348				0	1828	847	481	2449	0
V/C Ratio(X)	0.63	0.00	0.81				0.00	0.50	0.34	0.80	0.26	0.00
Avail Cap(c_a), veh/h	1027	0	457				0	1828	847	866	2449	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	2.00	2.00	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	1.00	1.00	0.94	0.94	0.00
Uniform Delay (d), s/veh	39.5	0.0	41.3				0.0	17.5	15.7	38.9	0.0	0.0
Incr Delay (d2), s/veh	1.2	0.0	9.4				0.0	1.0	1.1	4.2	0.2	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	10.2	0.0	12.7				0.0	11.8	7.7	7.8	0.1	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	40.7	0.0	50.7				0.0	18.4	16.8	43.1	0.2	0.0
LnGrp LOS	D	A	D				A	B	B	D	A	A
Approach Vol, veh/h		775						1204			1019	
Approach Delay, s/veh		44.4						18.1			16.4	
Approach LOS		D						B			B	

Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	19.2	62.1		28.7		81.3
Change Period (Y+Rc), s	4.5	5.5		5.5		5.5
Max Green Setting (Gmax), s	26.5	37.5		30.5		68.5
Max Q Clear Time (g_c+I1), s	13.0	20.5		19.9		2.0
Green Ext Time (p_c), s	1.7	8.9		3.3		7.0

Intersection Summary			
HCM 6th Ctrl Delay			24.3
HCM 6th LOS			C

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	567	0	627	0	0	0	0	1070	203	167	295	0
Future Volume (veh/h)	567	0	627	0	0	0	0	1070	203	167	295	0
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No						No			No	
Adj Sat Flow, veh/h/ln	1945	1945	1945				0	1870	1945	1945	1870	0
Adj Flow Rate, veh/h	830	0	439				0	1151	218	180	317	0
Peak Hour Factor	0.93	0.93	0.93				0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	2	2	2				0	2	2	2	2	0
Cap, veh/h	1051	0	468				0	1642	761	357	2155	0
Arrive On Green	0.28	0.00	0.28				0.00	0.46	0.46	0.20	1.00	0.00
Sat Flow, veh/h	3705	0	1648				0	3647	1647	3594	3647	0
Grp Volume(v), veh/h	830	0	439				0	1151	218	180	317	0
Grp Sat Flow(s),veh/h/ln	1853	0	1648				0	1777	1647	1797	1777	0
Q Serve(g_s), s	20.7	0.0	26.0				0.0	25.8	8.2	4.5	0.0	0.0
Cycle Q Clear(g_c), s	20.7	0.0	26.0				0.0	25.8	8.2	4.5	0.0	0.0
Prop In Lane	1.00		1.00				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	1051	0	468				0	1642	761	357	2155	0
V/C Ratio(X)	0.79	0.00	0.94				0.00	0.70	0.29	0.50	0.15	0.00
Avail Cap(c_a), veh/h	1056	0	470				0	1642	761	881	2155	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	2.00	2.00	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	1.00	1.00	0.95	0.95	0.00
Uniform Delay (d), s/veh	33.1	0.0	35.0				0.0	21.4	16.7	37.9	0.0	0.0
Incr Delay (d2), s/veh	4.3	0.0	27.1				0.0	2.5	0.9	1.5	0.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	14.7	0.0	19.6				0.0	15.8	5.6	3.4	0.1	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	37.4	0.0	62.1				0.0	23.9	17.6	39.4	0.1	0.0
LnGrp LOS	D	A	E				A	C	B	D	A	A
Approach Vol, veh/h		1269						1369			497	
Approach Delay, s/veh		45.9						22.9			14.3	
Approach LOS		D						C			B	

Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	14.4	51.7		33.9		66.1
Change Period (Y+Rc), s	4.5	5.5		5.5		5.5
Max Green Setting (Gmax), s	24.5	31.5		28.5		60.5
Max Q Clear Time (g_c+I1), s	6.5	27.8		28.0		2.0
Green Ext Time (p_c), s	0.8	2.9		0.4		3.1

Intersection Summary			
HCM 6th Ctrl Delay			30.9
HCM 6th LOS			C

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	331	1	439	0	0	0	0	907	284	399	639	0
Future Volume (veh/h)	331	1	439	0	0	0	0	907	284	399	639	0
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No						No			No	
Adj Sat Flow, veh/h/ln	1945	1945	1945				0	1870	1945	1945	1870	0
Adj Flow Rate, veh/h	510	0	289				0	955	299	420	673	0
Peak Hour Factor	0.95	0.95	0.95				0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2				0	2	2	2	2	0
Cap, veh/h	797	0	355				0	1778	823	516	2434	0
Arrive On Green	0.22	0.00	0.22				0.00	0.50	0.50	0.29	1.00	0.00
Sat Flow, veh/h	3705	0	1648				0	3647	1645	3594	3647	0
Grp Volume(v), veh/h	510	0	289				0	955	299	420	673	0
Grp Sat Flow(s),veh/h/ln	1853	0	1648				0	1777	1645	1797	1777	0
Q Serve(g_s), s	13.8	0.0	18.4				0.0	20.2	12.2	12.0	0.0	0.0
Cycle Q Clear(g_c), s	13.8	0.0	18.4				0.0	20.2	12.2	12.0	0.0	0.0
Prop In Lane	1.00		1.00				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	797	0	355				0	1778	823	516	2434	0
V/C Ratio(X)	0.64	0.00	0.82				0.00	0.54	0.36	0.81	0.28	0.00
Avail Cap(c_a), veh/h	1027	0	457				0	1778	823	866	2434	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	2.00	2.00	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	1.00	1.00	0.93	0.93	0.00
Uniform Delay (d), s/veh	39.3	0.0	41.1				0.0	18.8	16.8	37.8	0.0	0.0
Incr Delay (d2), s/veh	1.2	0.0	9.8				0.0	1.2	1.2	4.2	0.3	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	10.4	0.0	13.0				0.0	12.7	8.2	8.2	0.2	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	40.5	0.0	50.9				0.0	19.9	18.0	42.0	0.3	0.0
LnGrp LOS	D	A	D				A	B	B	D	A	A
Approach Vol, veh/h		799						1254			1093	
Approach Delay, s/veh		44.3						19.5			16.3	
Approach LOS		D						B			B	

Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	20.3	60.5		29.2		80.8
Change Period (Y+Rc), s	4.5	5.5		5.5		5.5
Max Green Setting (Gmax), s	16.5	37.5		30.5		68.5
Max Q Clear Time (g_c+I1), s	14.0	22.2		20.4		2.0
Green Ext Time (p_c), s	1.8	8.7		3.3		7.5

Intersection Summary			
HCM 6th Ctrl Delay			24.7
HCM 6th LOS			C

Notes

User approved volume balancing among the lanes for turning movement.

Lane Configurations												
Traffic Volume (veh/h)	640	0	627	0	0	0	0	1097	203	170	301	0
Future Volume (veh/h)	640	0	627	0	0	0	0	1097	203	170	301	0
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No						No			No	
Adj Sat Flow, veh/h/ln	1945	1945	1945				0	1870	1945	1945	1870	0
Adj Flow Rate, veh/h	898	0	449				0	1180	218	183	324	0
Peak Hour Factor	0.93	0.93	0.93				0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	2	2	2				0	2	2	2	2	0
Cap, veh/h	1056	0	470				0	1637	759	357	2150	0
Arrive On Green	0.28	0.00	0.28				0.00	0.46	0.46	0.20	1.00	0.00
Sat Flow, veh/h	3705	0	1648				0	3647	1647	3594	3647	0
Grp Volume(v), veh/h	898	0	449				0	1180	218	183	324	0
Grp Sat Flow(s),veh/h/ln	1853	0	1648				0	1777	1647	1797	1777	0
Q Serve(g_s), s	22.9	0.0	26.8				0.0	26.8	8.2	4.5	0.0	0.0
Cycle Q Clear(g_c), s	22.9	0.0	26.8				0.0	26.8	8.2	4.5	0.0	0.0
Prop In Lane	1.00		1.00				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	1056	0	470				0	1637	759	357	2150	0
V/C Ratio(X)	0.85	0.00	0.96				0.00	0.72	0.29	0.51	0.15	0.00
Avail Cap(c_a), veh/h	1056	0	470				0	1637	759	881	2150	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	2.00	2.00	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	1.00	1.00	0.94	0.94	0.00
Uniform Delay (d), s/veh	33.7	0.0	35.1				0.0	21.8	16.8	37.9	0.0	0.0
Incr Delay (d2), s/veh	7.0	0.0	30.6				0.0	2.8	1.0	1.5	0.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	16.4	0.0	20.5				0.0	16.3	5.6	3.5	0.1	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	40.7	0.0	65.7				0.0	24.6	17.7	39.4	0.1	0.0
LnGrp LOS	D	A	E				A	C	B	D	A	A
Approach Vol, veh/h		1347						1398			507	
Approach Delay, s/veh		49.0						23.5			14.3	
Approach LOS		D						C			B	

Timer - Assigned Phs	1	2	4	6
Phs Duration (G+Y+Rc), s	14.4	51.6	34.0	66.0
Change Period (Y+Rc), s	4.5	5.5	5.5	5.5
Max Green Setting (Gmax), s	9.5	31.5	28.5	60.5
Max Q Clear Time (g_c+I1), s	6.5	28.8	28.8	2.0
Green Ext Time (p_c), s	0.8	2.2	0.0	3.2

Intersection Summary	
HCM 6th Ctrl Delay	32.6
HCM 6th LOS	C

Notes

User approved volume balancing among the lanes for turning movement.

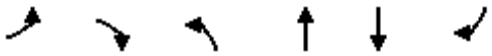
Lane Configurations												
Traffic Volume (veh/h)	347	1	439	0	0	0	0	916	284	419	662	0
Future Volume (veh/h)	347	1	439	0	0	0	0	916	284	419	662	0
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No						No			No	
Adj Sat Flow, veh/h/ln	1945	1945	1945				0	1870	1945	1945	1870	0
Adj Flow Rate, veh/h	524	0	292				0	964	299	441	697	0
Peak Hour Factor	0.95	0.95	0.95				0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2				0	2	2	2	2	0
Cap, veh/h	804	0	358				0	1750	810	537	2427	0
Arrive On Green	0.22	0.00	0.22				0.00	0.49	0.49	0.30	1.00	0.00
Sat Flow, veh/h	3705	0	1648				0	3647	1645	3594	3647	0
Grp Volume(v), veh/h	524	0	292				0	964	299	441	697	0
Grp Sat Flow(s),veh/h/ln	1853	0	1648				0	1777	1645	1797	1777	0
Q Serve(g_s), s	14.2	0.0	18.5				0.0	20.8	12.4	12.5	0.0	0.0
Cycle Q Clear(g_c), s	14.2	0.0	18.5				0.0	20.8	12.4	12.5	0.0	0.0
Prop In Lane	1.00		1.00				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	804	0	358				0	1750	810	537	2427	0
V/C Ratio(X)	0.65	0.00	0.82				0.00	0.55	0.37	0.82	0.29	0.00
Avail Cap(c_a), veh/h	1027	0	457				0	1750	810	866	2427	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	2.00	2.00	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	1.00	1.00	0.92	0.92	0.00
Uniform Delay (d), s/veh	39.3	0.0	41.0				0.0	19.4	17.3	37.2	0.0	0.0
Incr Delay (d2), s/veh	1.3	0.0	9.9				0.0	1.3	1.3	4.3	0.3	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	10.7	0.0	13.1				0.0	13.1	8.3	8.4	0.2	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	40.6	0.0	50.9				0.0	20.7	18.6	41.5	0.3	0.0
LnGrp LOS	D	A	D				A	C	B	D	A	A
Approach Vol, veh/h		816						1263			1138	
Approach Delay, s/veh		44.3						20.2			16.2	
Approach LOS		D						C			B	

Timer - Assigned Phs	1	2	4	6
Phs Duration (G+Y+Rc), s	20.9	59.7	29.4	80.6
Change Period (Y+Rc), s	4.5	5.5	5.5	5.5
Max Green Setting (Gmax), s	16.5	37.5	30.5	68.5
Max Q Clear Time (g_c+I1), s	14.5	22.8	20.5	2.0
Green Ext Time (p_c), s	1.9	8.5	3.3	7.9

Intersection Summary	
HCM 6th Ctrl Delay	24.9
HCM 6th LOS	C

Notes

User approved volume balancing among the lanes for turning movement.



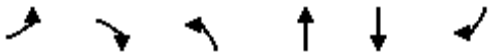
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	138	287	0	1147	569	325
Future Volume (veh/h)	138	287	0	1147	569	325
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	1870	0	1870	1870	1870
Adj Flow Rate, veh/h	147	305	0	1220	605	0
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	2	2	0	2	2	2
Cap, veh/h	736	338	0	2441	2441	
Arrive On Green	0.21	0.21	0.00	0.69	0.69	0.00
Sat Flow, veh/h	3456	1585	0	3741	3741	0
Grp Volume(v), veh/h	147	305	0	1220	605	0
Grp Sat Flow(s),veh/h/ln	1728	1585	0	1777	1777	0
Q Serve(g_s), s	3.5	18.7	0.0	16.4	6.4	0.0
Cycle Q Clear(g_c), s	3.5	18.7	0.0	16.4	6.4	0.0
Prop In Lane	1.00	1.00	0.00			0.00
Lane Grp Cap(c), veh/h	736	338	0	2441	2441	
V/C Ratio(X)	0.20	0.90	0.00	0.50	0.25	
Avail Cap(c_a), veh/h	829	380	0	2441	2441	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	32.3	38.3	0.0	7.5	5.9	0.0
Incr Delay (d2), s/veh	0.1	22.5	0.0	0.7	0.2	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	2.6	14.3	0.0	9.3	3.8	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	32.5	60.9	0.0	8.2	6.2	0.0
LnGrp LOS	C	E	A	A	A	
Approach Vol, veh/h	452			1220	605	
Approach Delay, s/veh	51.6			8.2	6.2	
Approach LOS	D			A	A	

Timer - Assigned Phs		2		4		6
Phs Duration (G+Y+Rc), s		73.7		26.3		73.7
Change Period (Y+Rc), s		5.0		5.0		5.0
Max Green Setting (Gmax), s		66.0		24.0		66.0
Max Q Clear Time (g_c+I1), s		18.4		20.7		8.4
Green Ext Time (p_c), s		14.8		0.6		5.6

Intersection Summary		
HCM 6th Ctrl Delay		16.3
HCM 6th LOS		B

Notes

Unsignalized Delay for [SBR] is excluded from calculations of the approach delay and intersection delay.



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	234	416	0	997	717	234
Future Volume (veh/h)	234	416	0	997	717	234
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	1870	0	1870	1870	1870
Adj Flow Rate, veh/h	244	433	0	1039	747	0
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	0	2	2	2
Cap, veh/h	968	444	0	2203	2203	
Arrive On Green	0.28	0.28	0.00	0.62	0.62	0.00
Sat Flow, veh/h	3456	1585	0	3741	3741	0
Grp Volume(v), veh/h	244	433	0	1039	747	0
Grp Sat Flow(s),veh/h/ln	1728	1585	0	1777	1777	0
Q Serve(g_s), s	5.5	27.1	0.0	15.7	10.1	0.0
Cycle Q Clear(g_c), s	5.5	27.1	0.0	15.7	10.1	0.0
Prop In Lane	1.00	1.00	0.00			0.00
Lane Grp Cap(c), veh/h	968	444	0	2203	2203	
V/C Ratio(X)	0.25	0.98	0.00	0.47	0.34	
Avail Cap(c_a), veh/h	968	444	0	2203	2203	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	27.9	35.7	0.0	10.2	9.1	0.0
Incr Delay (d2), s/veh	0.1	36.3	0.0	0.7	0.4	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	4.1	20.9	0.0	9.6	6.6	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	28.0	71.9	0.0	10.9	9.6	0.0
LnGrp LOS	C	E	A	B	A	
Approach Vol, veh/h	677			1039	747	
Approach Delay, s/veh	56.1			10.9	9.6	
Approach LOS	E			B	A	

Timer - Assigned Phs		2		4		6
Phs Duration (G+Y+Rc), s		67.0		33.0		67.0
Change Period (Y+Rc), s		5.0		5.0		5.0
Max Green Setting (Gmax), s		62.0		28.0		62.0
Max Q Clear Time (g_c+I1), s		17.7		29.1		12.1
Green Ext Time (p_c), s		11.4		0.0		7.3

Intersection Summary		
HCM 6th Ctrl Delay	22.9	
HCM 6th LOS	C	

Notes

Unsignalized Delay for [SBR] is excluded from calculations of the approach delay and intersection delay.

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	147	304	0	1204	609	344
Future Volume (veh/h)	147	304	0	1204	609	344
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	1870	0	1870	1870	1870
Adj Flow Rate, veh/h	156	323	0	1281	648	366
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	2	2	0	2	2	2
Cap, veh/h	771	354	0	2406	1468	829
Arrive On Green	0.22	0.22	0.00	0.68	0.68	0.68
Sat Flow, veh/h	3456	1585	0	3741	2262	1225
Grp Volume(v), veh/h	156	323	0	1281	531	483
Grp Sat Flow(s),veh/h/ln	1728	1585	0	1777	1777	1616
Q Serve(g_s), s	3.7	19.9	0.0	18.2	13.8	13.8
Cycle Q Clear(g_c), s	3.7	19.9	0.0	18.2	13.8	13.8
Prop In Lane	1.00	1.00	0.00			0.76
Lane Grp Cap(c), veh/h	771	354	0	2406	1203	1094
V/C Ratio(X)	0.20	0.91	0.00	0.53	0.44	0.44
Avail Cap(c_a), veh/h	829	380	0	2406	1203	1094
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	31.6	37.9	0.0	8.2	7.4	7.4
Incr Delay (d2), s/veh	0.1	25.0	0.0	0.8	1.2	1.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	2.8	15.2	0.0	10.2	8.5	7.9
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	31.7	62.9	0.0	9.0	8.6	8.7
LnGrp LOS	C	E	A	A	A	A
Approach Vol, veh/h	479			1281	1014	
Approach Delay, s/veh	52.8			9.0	8.7	
Approach LOS	D			A	A	

Timer - Assigned Phs		2		4		6
Phs Duration (G+Y+Rc), s		72.7		27.3		72.7
Change Period (Y+Rc), s		5.0		5.0		5.0
Max Green Setting (Gmax), s		66.0		24.0		66.0
Max Q Clear Time (g_c+I1), s		20.2		21.9		15.8
Green Ext Time (p_c), s		15.8		0.4		10.6

Intersection Summary		
HCM 6th Ctrl Delay		16.4
HCM 6th LOS		B

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	254	429	0	1043	752	256
Future Volume (veh/h)	254	429	0	1043	752	256
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	1870	0	1870	1870	1870
Adj Flow Rate, veh/h	265	447	0	1086	783	267
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	0	2	2	2
Cap, veh/h	968	444	0	2203	1600	546
Arrive On Green	0.28	0.28	0.00	0.62	0.62	0.62
Sat Flow, veh/h	3456	1585	0	3741	2675	880
Grp Volume(v), veh/h	265	447	0	1086	539	511
Grp Sat Flow(s),veh/h/ln	1728	1585	0	1777	1777	1684
Q Serve(g_s), s	6.0	28.0	0.0	16.7	16.5	16.6
Cycle Q Clear(g_c), s	6.0	28.0	0.0	16.7	16.5	16.6
Prop In Lane	1.00	1.00	0.00			0.52
Lane Grp Cap(c), veh/h	968	444	0	2203	1102	1044
V/C Ratio(X)	0.27	1.01	0.00	0.49	0.49	0.49
Avail Cap(c_a), veh/h	968	444	0	2203	1102	1044
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	28.1	36.0	0.0	10.4	10.4	10.4
Incr Delay (d2), s/veh	0.2	44.5	0.0	0.8	1.6	1.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	4.5	22.7	0.0	10.1	10.3	9.9
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	28.2	80.5	0.0	11.2	11.9	12.0
LnGrp LOS	C	F	A	B	B	B
Approach Vol, veh/h	712			1086	1050	
Approach Delay, s/veh	61.1			11.2	12.0	
Approach LOS	E			B	B	

Timer - Assigned Phs		2		4		6
Phs Duration (G+Y+Rc), s		67.0		33.0		67.0
Change Period (Y+Rc), s		5.0		5.0		5.0
Max Green Setting (Gmax), s		62.0		28.0		62.0
Max Q Clear Time (g_c+I1), s		18.7		30.0		18.6
Green Ext Time (p_c), s		12.1		0.0		10.8

Intersection Summary		
HCM 6th Ctrl Delay		23.9
HCM 6th LOS		C

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	147	304	0	1234	621	354
Future Volume (veh/h)	147	304	0	1234	621	354
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	1870	0	1870	1870	1870
Adj Flow Rate, veh/h	156	323	0	1313	661	0
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	2	2	0	2	2	2
Cap, veh/h	771	354	0	2406	2406	
Arrive On Green	0.22	0.22	0.00	0.68	0.68	0.00
Sat Flow, veh/h	3456	1585	0	3741	3741	0
Grp Volume(v), veh/h	156	323	0	1313	661	0
Grp Sat Flow(s),veh/h/ln	1728	1585	0	1777	1777	0
Q Serve(g_s), s	3.7	19.9	0.0	18.9	7.4	0.0
Cycle Q Clear(g_c), s	3.7	19.9	0.0	18.9	7.4	0.0
Prop In Lane	1.00	1.00	0.00			0.00
Lane Grp Cap(c), veh/h	771	354	0	2406	2406	
V/C Ratio(X)	0.20	0.91	0.00	0.55	0.27	
Avail Cap(c_a), veh/h	829	380	0	2406	2406	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	31.6	37.9	0.0	8.3	6.4	0.0
Incr Delay (d2), s/veh	0.1	25.0	0.0	0.9	0.3	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	2.8	15.2	0.0	10.6	4.5	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	31.7	62.9	0.0	9.2	6.7	0.0
LnGrp LOS	C	E	A	A	A	
Approach Vol, veh/h	479			1313	661	
Approach Delay, s/veh	52.8			9.2	6.7	
Approach LOS	D			A	A	

Timer - Assigned Phs		2		4		6
Phs Duration (G+Y+Rc), s		72.7		27.3		72.7
Change Period (Y+Rc), s		5.0		5.0		5.0
Max Green Setting (Gmax), s		66.0		24.0		66.0
Max Q Clear Time (g_c+I1), s		20.9		21.9		9.4
Green Ext Time (p_c), s		16.3		0.4		6.3

Intersection Summary		
HCM 6th Ctrl Delay		17.0
HCM 6th LOS		B

Notes

Unsignalized Delay for [SBR] is excluded from calculations of the approach delay and intersection delay.

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	254	429	0	1060	782	300
Future Volume (veh/h)	254	429	0	1060	782	300
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	1870	0	1870	1870	1870
Adj Flow Rate, veh/h	265	447	0	1104	815	0
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	0	2	2	2
Cap, veh/h	968	444	0	2203	2203	
Arrive On Green	0.28	0.28	0.00	0.62	0.62	0.00
Sat Flow, veh/h	3456	1585	0	3741	3741	0
Grp Volume(v), veh/h	265	447	0	1104	815	0
Grp Sat Flow(s),veh/h/ln	1728	1585	0	1777	1777	0
Q Serve(g_s), s	6.0	28.0	0.0	17.1	11.3	0.0
Cycle Q Clear(g_c), s	6.0	28.0	0.0	17.1	11.3	0.0
Prop In Lane	1.00	1.00	0.00			0.00
Lane Grp Cap(c), veh/h	968	444	0	2203	2203	
V/C Ratio(X)	0.27	1.01	0.00	0.50	0.37	
Avail Cap(c_a), veh/h	968	444	0	2203	2203	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	28.1	36.0	0.0	10.5	9.4	0.0
Incr Delay (d2), s/veh	0.2	44.5	0.0	0.8	0.5	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	4.5	22.7	0.0	10.3	7.3	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	28.2	80.5	0.0	11.3	9.8	0.0
LnGrp LOS	C	F	A	B	A	
Approach Vol, veh/h	712			1104	815	
Approach Delay, s/veh	61.1			11.3	9.8	
Approach LOS	E			B	A	

Timer - Assigned Phs		2		4		6
Phs Duration (G+Y+Rc), s		67.0		33.0		67.0
Change Period (Y+Rc), s		5.0		5.0		5.0
Max Green Setting (Gmax), s		62.0		28.0		62.0
Max Q Clear Time (g_c+I1), s		19.1		30.0		13.3
Green Ext Time (p_c), s		12.4		0.0		8.2

Intersection Summary		
HCM 6th Ctrl Delay		24.3
HCM 6th LOS		C

Notes

Unsignalized Delay for [SBR] is excluded from calculations of the approach delay and intersection delay.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	17	284	262	501	494	33	83	14	6	29	70	89
Future Volume (veh/h)	17	284	262	501	494	33	83	14	6	29	70	89
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.99	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1945	1870	1870	1945	1945	1945	1870	1945	1870	1945
Adj Flow Rate, veh/h	18	296	273	522	515	34	86	15	6	30	73	93
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	566	1231	1075	600	1296	1135	141	100	40	150	152	134
Arrive On Green	0.69	0.69	0.69	0.69	0.69	0.69	0.08	0.08	0.08	0.08	0.08	0.08
Sat Flow, veh/h	857	1777	1551	842	1870	1638	1853	1321	529	1853	1870	1648
Grp Volume(v), veh/h	18	296	273	522	515	34	86	0	21	30	73	93
Grp Sat Flow(s),veh/h/ln	857	1777	1551	842	1870	1638	1853	0	1850	1853	1870	1648
Q Serve(g_s), s	0.9	6.1	6.6	60.7	11.7	0.7	4.5	0.0	1.1	1.5	3.7	5.5
Cycle Q Clear(g_c), s	12.6	6.1	6.6	67.3	11.7	0.7	4.5	0.0	1.1	1.5	3.7	5.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.29	1.00		1.00
Lane Grp Cap(c), veh/h	566	1231	1075	600	1296	1135	141	0	140	150	152	134
V/C Ratio(X)	0.03	0.24	0.25	0.87	0.40	0.03	0.61	0.00	0.15	0.20	0.48	0.69
Avail Cap(c_a), veh/h	566	1231	1075	600	1296	1135	630	0	629	296	299	264
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	9.2	5.7	5.7	18.3	6.5	4.8	44.8	0.0	43.2	42.9	43.9	44.7
Incr Delay (d2), s/veh	0.1	0.5	0.6	13.9	0.4	0.0	8.9	0.0	1.0	0.9	3.3	8.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.3	3.8	3.5	18.0	7.2	0.4	4.3	0.0	0.9	1.3	3.4	4.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	9.3	6.1	6.3	32.1	6.9	4.8	53.6	0.0	44.2	43.8	47.3	53.6
LnGrp LOS	A	A	A	C	A	A	D	A	D	D	D	D
Approach Vol, veh/h		587			1071			107			196	
Approach Delay, s/veh		6.3			19.2			51.8			49.7	
Approach LOS		A			B			D			D	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		74.3		13.1		74.3		12.6				
Change Period (Y+Rc), s		5.0		5.0		5.0		5.0				
Max Green Setting (Gmax), s		35.0		16.0		35.0		34.0				
Max Q Clear Time (g_c+I1), s		14.6		7.5		69.3		6.5				
Green Ext Time (p_c), s		6.5		0.7		0.0		0.7				

Intersection Summary												
HCM 6th Ctrl Delay			20.1									
HCM 6th LOS			C									

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	17	324	178	191	238	32	338	88	76	32	34	58
Future Volume (veh/h)	17	324	178	191	238	32	338	88	76	32	34	58
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1945	1870	1870	1945	1945	1945	1870	1945	1870	1945
Adj Flow Rate, veh/h	18	352	193	208	259	35	367	96	83	35	37	63
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	562	1177	634	449	987	868	452	235	203	145	146	128
Arrive On Green	0.53	0.53	0.53	0.53	0.53	0.53	0.24	0.24	0.24	0.08	0.08	0.08
Sat Flow, veh/h	1084	2230	1201	862	1870	1645	1853	963	832	1853	1870	1638
Grp Volume(v), veh/h	18	279	266	208	259	35	367	0	179	35	37	63
Grp Sat Flow(s),veh/h/ln	1084	1777	1654	862	1870	1645	1853	0	1795	1853	1870	1638
Q Serve(g_s), s	0.9	8.8	9.0	17.9	7.6	1.0	18.7	0.0	8.4	1.8	1.9	3.7
Cycle Q Clear(g_c), s	8.5	8.8	9.0	26.9	7.6	1.0	18.7	0.0	8.4	1.8	1.9	3.7
Prop In Lane	1.00		0.73	1.00		1.00	1.00		0.46	1.00		1.00
Lane Grp Cap(c), veh/h	562	938	873	449	987	868	452	0	438	145	146	128
V/C Ratio(X)	0.03	0.30	0.30	0.46	0.26	0.04	0.81	0.00	0.41	0.24	0.25	0.49
Avail Cap(c_a), veh/h	562	938	873	449	987	868	630	0	610	296	299	262
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	15.3	13.2	13.3	20.9	12.9	11.4	35.6	0.0	31.7	43.3	43.4	44.2
Incr Delay (d2), s/veh	0.1	0.8	0.9	1.6	0.3	0.0	8.6	0.0	1.3	1.2	1.3	4.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.4	6.4	6.1	6.5	5.6	0.7	14.3	0.0	6.7	1.6	1.7	3.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	15.4	14.0	14.2	22.5	13.2	11.4	44.2	0.0	33.0	44.5	44.6	48.3
LnGrp LOS	B	B	B	C	B	B	D	A	C	D	D	D
Approach Vol, veh/h		563			502			546			135	
Approach Delay, s/veh		14.1			16.9			40.6			46.3	
Approach LOS		B			B			D			D	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		57.8		12.8		57.8		29.4				
Change Period (Y+Rc), s		5.0		5.0		5.0		5.0				
Max Green Setting (Gmax), s		35.0		16.0		35.0		34.0				
Max Q Clear Time (g_c+I1), s		11.0		5.7		28.9		20.7				
Green Ext Time (p_c), s		6.5		0.4		2.3		3.7				

Intersection Summary												
HCM 6th Ctrl Delay			25.7									
HCM 6th LOS			C									

Notes

User approved changes to right turn type.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	17	294	279	509	507	34	106	15	6	29	72	90
Future Volume (veh/h)	17	294	279	509	507	34	106	15	6	29	72	90
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.99	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1945	1870	1870	1945	1945	1945	1870	1945	1870	1945
Adj Flow Rate, veh/h	18	306	291	530	528	35	110	16	6	30	75	94
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	545	1215	1060	573	1279	1119	157	114	43	152	153	135
Arrive On Green	0.68	0.68	0.68	0.68	0.68	0.68	0.08	0.08	0.08	0.08	0.08	0.08
Sat Flow, veh/h	846	1777	1551	821	1870	1638	1853	1348	506	1853	1870	1648
Grp Volume(v), veh/h	18	306	291	530	528	35	110	0	22	30	75	94
Grp Sat Flow(s),veh/h/ln	846	1777	1551	821	1870	1638	1853	0	1854	1853	1870	1648
Q Serve(g_s), s	1.0	6.6	7.3	61.1	12.4	0.7	5.8	0.0	1.1	1.5	3.8	5.6
Cycle Q Clear(g_c), s	13.4	6.6	7.3	68.4	12.4	0.7	5.8	0.0	1.1	1.5	3.8	5.6
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.27	1.00		1.00
Lane Grp Cap(c), veh/h	545	1215	1060	573	1279	1119	157	0	157	152	153	135
V/C Ratio(X)	0.03	0.25	0.27	0.92	0.41	0.03	0.70	0.00	0.14	0.20	0.49	0.70
Avail Cap(c_a), veh/h	545	1215	1060	573	1279	1119	630	0	630	296	299	264
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	9.9	6.0	6.2	21.1	7.0	5.1	44.6	0.0	42.4	42.8	43.9	44.7
Incr Delay (d2), s/veh	0.1	0.5	0.6	21.6	0.5	0.0	11.6	0.0	0.9	0.9	3.4	8.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.3	4.1	4.0	21.3	7.8	0.4	5.6	0.0	1.0	1.3	3.5	4.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	10.0	6.5	6.8	42.8	7.4	5.1	56.1	0.0	43.3	43.7	47.3	53.5
LnGrp LOS	B	A	A	D	A	A	E	A	D	D	D	D
Approach Vol, veh/h		615			1093			132			199	
Approach Delay, s/veh		6.8			24.5			54.0			49.7	
Approach LOS		A			C			D			D	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		73.4		13.2		73.4		13.4				
Change Period (Y+Rc), s		5.0		5.0		5.0		5.0				
Max Green Setting (Gmax), s		35.0		16.0		35.0		34.0				
Max Q Clear Time (g_c+I1), s		15.4		7.6		70.4		7.8				
Green Ext Time (p_c), s		6.7		0.7		0.0		0.9				

Intersection Summary												
HCM 6th Ctrl Delay			23.5									
HCM 6th LOS			C									

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	17	333	188	194	245	33	370	90	77	33	36	59
Future Volume (veh/h)	17	333	188	194	245	33	370	90	77	33	36	59
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1945	1870	1870	1945	1945	1945	1870	1945	1870	1945
Adj Flow Rate, veh/h	18	362	204	211	266	36	402	98	84	36	39	64
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	534	1125	624	420	954	839	484	253	217	145	146	128
Arrive On Green	0.51	0.51	0.51	0.51	0.51	0.51	0.26	0.26	0.26	0.08	0.08	0.08
Sat Flow, veh/h	1076	2205	1222	845	1870	1645	1853	967	829	1853	1870	1638
Grp Volume(v), veh/h	18	291	275	211	266	36	402	0	182	36	39	64
Grp Sat Flow(s),veh/h/ln	1076	1777	1650	845	1870	1645	1853	0	1796	1853	1870	1638
Q Serve(g_s), s	1.0	9.6	9.8	19.6	8.1	1.1	20.5	0.0	8.3	1.8	2.0	3.7
Cycle Q Clear(g_c), s	9.1	9.6	9.8	29.4	8.1	1.1	20.5	0.0	8.3	1.8	2.0	3.7
Prop In Lane	1.00		0.74	1.00		1.00	1.00		0.46	1.00		1.00
Lane Grp Cap(c), veh/h	534	907	842	420	954	839	484	0	470	145	146	128
V/C Ratio(X)	0.03	0.32	0.33	0.50	0.28	0.04	0.83	0.00	0.39	0.25	0.27	0.50
Avail Cap(c_a), veh/h	534	907	842	420	954	839	630	0	611	296	299	262
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	16.6	14.3	14.4	23.0	14.0	12.3	34.8	0.0	30.3	43.3	43.4	44.2
Incr Delay (d2), s/veh	0.1	0.9	1.0	2.0	0.3	0.0	9.8	0.0	1.1	1.3	1.4	4.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.5	7.0	6.7	7.1	6.0	0.7	15.5	0.0	6.6	1.6	1.7	3.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	16.7	15.3	15.4	25.0	14.3	12.3	44.7	0.0	31.5	44.6	44.7	48.4
LnGrp LOS	B	B	B	C	B	B	D	A	C	D	D	D
Approach Vol, veh/h		584			513			584			139	
Approach Delay, s/veh		15.4			18.6			40.5			46.4	
Approach LOS		B			B			D			D	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		56.0		12.8		56.0		31.1				
Change Period (Y+Rc), s		5.0		5.0		5.0		5.0				
Max Green Setting (Gmax), s		35.0		16.0		35.0		34.0				
Max Q Clear Time (g_c+I1), s		11.8		5.7		31.4		22.5				
Green Ext Time (p_c), s		6.7		0.5		1.6		3.7				

Intersection Summary												
HCM 6th Ctrl Delay			26.7									
HCM 6th LOS			C									

Notes

User approved changes to right turn type.

Lane Configurations												
Traffic Volume (veh/h)	17	294	279	509	507	34	156	15	6	29	72	90
Future Volume (veh/h)	17	294	279	509	507	34	156	15	6	29	72	90
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.99	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1945	1870	1870	1945	1945	1945	1870	1945	1870	1945
Adj Flow Rate, veh/h	18	306	291	530	528	35	162	16	6	30	75	94
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	507	1158	1011	541	1219	1067	216	157	59	152	153	135
Arrive On Green	0.65	0.65	0.65	0.65	0.65	0.65	0.12	0.12	0.12	0.08	0.08	0.08
Sat Flow, veh/h	846	1777	1551	821	1870	1637	1853	1348	506	1853	1870	1648
Grp Volume(v), veh/h	18	306	291	530	528	35	162	0	22	30	75	94
Grp Sat Flow(s),veh/h/ln	846	1777	1551	821	1870	1637	1853	0	1854	1853	1870	1648
Q Serve(g_s), s	1.1	7.2	8.0	57.1	13.7	0.8	8.5	0.0	1.1	1.5	3.8	5.6
Cycle Q Clear(g_c), s	14.8	7.2	8.0	65.2	13.7	0.8	8.5	0.0	1.1	1.5	3.8	5.6
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.27	1.00		1.00
Lane Grp Cap(c), veh/h	507	1158	1011	541	1219	1067	216	0	216	152	153	135
V/C Ratio(X)	0.04	0.26	0.29	0.98	0.43	0.03	0.75	0.00	0.10	0.20	0.49	0.70
Avail Cap(c_a), veh/h	507	1158	1011	541	1219	1067	630	0	630	296	299	264
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	12.0	7.3	7.5	24.7	8.5	6.2	42.8	0.0	39.5	42.8	43.9	44.7
Incr Delay (d2), s/veh	0.1	0.6	0.7	33.7	0.5	0.0	10.6	0.0	0.4	0.9	3.4	8.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.4	4.7	4.6	25.1	8.7	0.4	7.9	0.0	0.9	1.3	3.5	4.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	12.2	7.9	8.2	58.4	9.0	6.2	53.4	0.0	39.9	43.7	47.3	53.5
LnGrp LOS	B	A	A	E	A	A	D	A	D	D	D	D
Approach Vol, veh/h		615			1093			184			199	
Approach Delay, s/veh		8.2			32.9			51.8			49.7	
Approach LOS		A			C			D			D	

Timer - Assigned Phs	2	4	6	8
Phs Duration (G+Y+Rc), s	70.2	13.2	70.2	16.6
Change Period (Y+Rc), s	5.0	5.0	5.0	5.0
Max Green Setting (Gmax), s	35.0	16.0	35.0	34.0
Max Q Clear Time (g_c+I1), s	16.8	7.6	67.2	10.5
Green Ext Time (p_c), s	6.4	0.7	0.0	1.3

Intersection Summary	
HCM 6th Ctrl Delay	28.9
HCM 6th LOS	C

Lane Configurations												
Traffic Volume (veh/h)	17	333	188	194	245	33	382	90	77	33	36	59
Future Volume (veh/h)	17	333	188	194	245	33	382	90	77	33	36	59
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1945	1870	1870	1945	1945	1945	1870	1945	1870	1945
Adj Flow Rate, veh/h	18	362	204	211	266	36	415	98	84	36	39	64
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	526	1112	616	414	943	829	496	259	222	145	146	128
Arrive On Green	0.50	0.50	0.50	0.50	0.50	0.50	0.27	0.27	0.27	0.08	0.08	0.08
Sat Flow, veh/h	1076	2205	1222	845	1870	1645	1853	967	829	1853	1870	1638
Grp Volume(v), veh/h	18	291	275	211	266	36	415	0	182	36	39	64
Grp Sat Flow(s),veh/h/ln	1076	1777	1650	845	1870	1645	1853	0	1796	1853	1870	1638
Q Serve(g_s), s	1.0	9.7	9.9	19.8	8.2	1.1	21.1	0.0	8.3	1.8	2.0	3.7
Cycle Q Clear(g_c), s	9.2	9.7	9.9	29.8	8.2	1.1	21.1	0.0	8.3	1.8	2.0	3.7
Prop In Lane	1.00		0.74	1.00		1.00	1.00		0.46	1.00		1.00
Lane Grp Cap(c), veh/h	526	896	832	414	943	829	496	0	481	145	146	128
V/C Ratio(X)	0.03	0.32	0.33	0.51	0.28	0.04	0.84	0.00	0.38	0.25	0.27	0.50
Avail Cap(c_a), veh/h	526	896	832	414	943	829	630	0	611	296	299	262
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	17.0	14.7	14.8	23.6	14.3	12.6	34.6	0.0	29.8	43.3	43.4	44.2
Incr Delay (d2), s/veh	0.1	1.0	1.1	2.1	0.3	0.0	10.4	0.0	1.1	1.3	1.4	4.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.5	7.1	6.8	7.2	6.1	0.7	16.0	0.0	6.5	1.6	1.7	3.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	17.1	15.7	15.8	25.7	14.7	12.6	44.9	0.0	30.9	44.6	44.7	48.4
LnGrp LOS	B	B	B	C	B	B	D	A	C	D	D	D
Approach Vol, veh/h		584			513			597			139	
Approach Delay, s/veh		15.8			19.1			40.6			46.4	
Approach LOS		B			B			D			D	

Timer - Assigned Phs	2	4	6	8
Phs Duration (G+Y+Rc), s	55.4	12.8	55.4	31.8
Change Period (Y+Rc), s	5.0	5.0	5.0	5.0
Max Green Setting (Gmax), s	35.0	16.0	35.0	34.0
Max Q Clear Time (g_c+I1), s	11.9	5.7	31.8	23.1
Green Ext Time (p_c), s	6.7	0.5	1.4	3.6

Intersection Summary	
HCM 6th Ctrl Delay	27.1
HCM 6th LOS	C

Notes

User approved changes to right turn type.

APPENDIX E

TRAFFIC SIGNAL WARRANT WORKSHEETS

Future With Project - Weekday AM Peak Hour

Figure 4C-101 (CA). Traffic Signal Warrants Worksheet (Sheet 2 of 5)

WARRANT 2 - Four Hour Vehicular Volume **SATISFIED* YES ☐ NO ☐**

Record hourly vehicular volumes for any four hours of an average day.

APPROACH LANES	One	2 or More					Hour
Both Approaches - Major Street							
Higher Approach - Minor Street							

*All plotted points fall above the applicable curve in Figure 4C-1. (URBAN AREAS)	Yes ☐	No ☐
OR, All plotted points fall above the applicable curve in Figure 4C-2. (RURAL AREAS)	Yes ☐	No ☐

WARRANT 3 - Peak Hour **SATISFIED YES ☐ NO ☑**
(Part A or Part B must be satisfied)

PART A **SATISFIED YES ☐ NO ☑**

(All parts 1, 2, and 3 below must be satisfied for the same one hour, for any four consecutive 15-minute periods)

1. The total delay experienced by traffic on one minor street approach (one direction only) controlled by a STOP sign equals or exceeds four vehicle-hours for a one-lane approach, or five vehicle-hours for a two-lane approach; AND 193 veh * 9.4 s/veh / 3600 s/hr = 0.50 veh-hrs	Yes ☐	No ☑
2. The volume on the same minor street approach (one direction only) equals or exceeds 100 vph for one moving lane of traffic or 150 vph for two moving lanes; AND	Yes ☑	No ☐
3. The total entering volume serviced during the hour equals or exceeds 800 vph for intersections with four or more approaches or 650 vph for intersections with three approaches.	Yes ☑	No ☐

PART B **SATISFIED YES ☐ NO ☑**

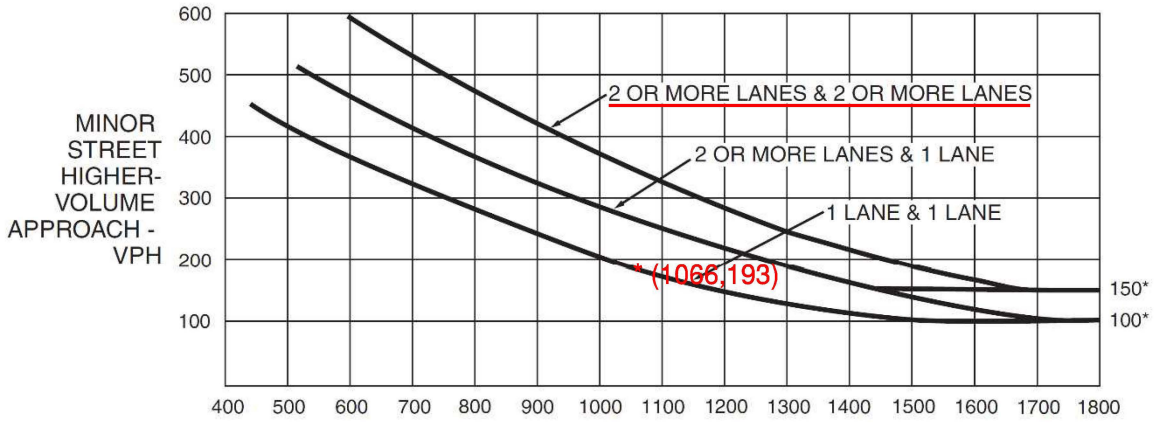
APPROACH LANES	One	2 or More	7:00 AM	Hour
Both Approaches - Major Street		✔	1066	
Higher Approach - Minor Street		✔	193	

The plotted point falls above the applicable curve in Figure 4C-3. (URBAN AREAS)	Yes ☐	No ☑
OR, The plotted point falls above the applicable curve in Figure 4C-4. (RURAL AREAS)	Yes ☐	No ☐

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.

Future With Project - Weekday AM Peak Hour

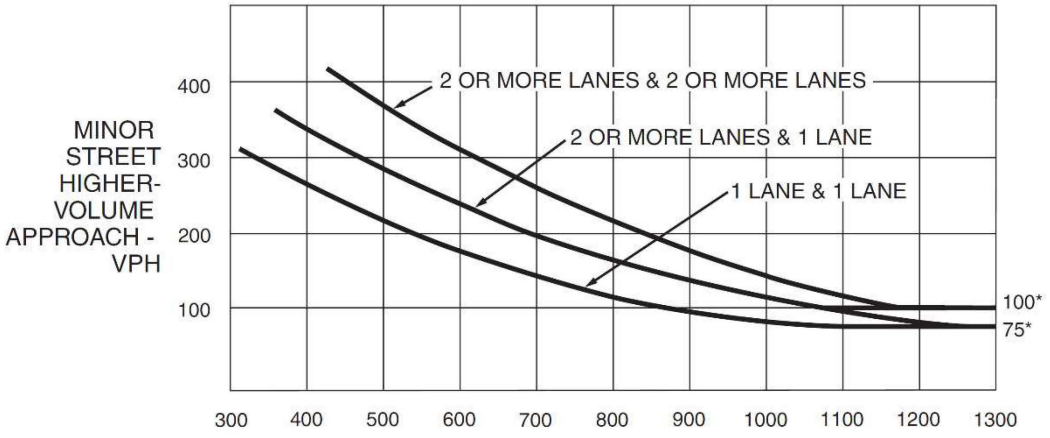
Figure 4C-3. Warrant 3, Peak Hour



*Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

Figure 4C-4. Warrant 3, Peak Hour (70% Factor)

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 40 MPH ON MAJOR STREET)



*Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor-street approach with one lane.

Future With Project - Weekday PM Peak Hour

Figure 4C-101 (CA). Traffic Signal Warrants Worksheet (Sheet 2 of 5)

WARRANT 2 - Four Hour Vehicular Volume **SATISFIED* YES ☐ NO ☐**

Record hourly vehicular volumes for any four hours of an average day.

APPROACH LANES	One	2 or More				Hour
Both Approaches - Major Street						
Higher Approach - Minor Street						

*All plotted points fall above the applicable curve in Figure 4C-1. (URBAN AREAS)	Yes ☐	No ☐
OR, All plotted points fall above the applicable curve in Figure 4C-2. (RURAL AREAS)	Yes ☐	No ☐

WARRANT 3 - Peak Hour **SATISFIED YES ☐ NO ☑**
(Part A or Part B must be satisfied)

PART A **SATISFIED YES ☐ NO ☑**

(All parts 1, 2, and 3 below must be satisfied for the same one hour, for any four consecutive 15-minute periods)

1. The total delay experienced by traffic on one minor street approach (one direction only) controlled by a STOP sign equals or exceeds four vehicle-hours for a one-lane approach, or five vehicle-hours for a two-lane approach; AND 663 veh * 9.4 s/veh / 3600 s/hr = 1.73 veh-hrs	Yes ☐	No ☑
2. The volume on the same minor street approach (one direction only) equals or exceeds 100 vph for one moving lane of traffic or 150 vph for two moving lanes; AND	Yes ☑	No ☐
3. The total entering volume serviced during the hour equals or exceeds 800 vph for intersections with four or more approaches or 650 vph for intersections with three approaches.	Yes ☑	No ☐

PART B **SATISFIED YES ☐ NO ☑**

APPROACH LANES	One	2 or More	4:15 PM	Hour
Both Approaches - Major Street		✔	305	
Higher Approach - Minor Street		✔	663	

The plotted point falls above the applicable curve in Figure 4C-3. (URBAN AREAS)	Yes ☐	No ☑
OR, The plotted point falls above the applicable curve in Figure 4C-4. (RURAL AREAS)	Yes ☐	No ☐

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.

Future With Project - Weekday PM Peak Hour

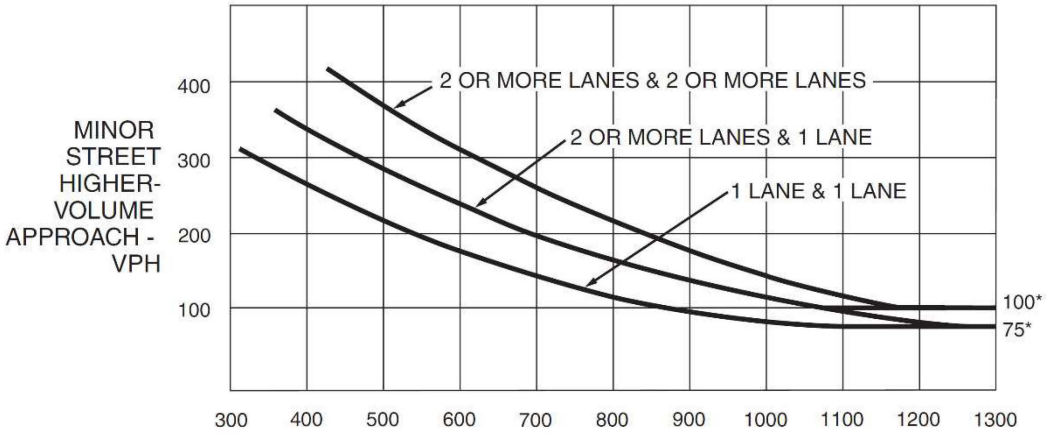
* (305,663)

Figure 4C-3. Warrant 3, Peak Hour

*Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

Figure 4C-4. Warrant 3, Peak Hour (70% Factor)

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 40 MPH ON MAJOR STREET)



*Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor-street approach with one lane.

Existing Conditions

Figure 4C-101 (CA). Traffic Signal Warrants Worksheet (Sheet 4 of 5)

WARRANT 6 - Coordinated Signal System **SATISFIED YES ☐ NO ☐**
(All Parts Must Be Satisfied)

MINIMUM REQUIREMENTS	DISTANCE TO NEAREST SIGNAL	
≥ 1000 ft	N _____ ft, S _____ ft, E _____ ft, W _____ ft	Yes ☐ No ☐
On a one-way street or a street that has traffic predominantly in one direction, the adjacent traffic control signals are so far apart that they do not provide the necessary degree of vehicular platooning.		Yes ☐ No ☐
OR, On a two-way street, adjacent traffic control signals do not provide the necessary degree of platooning and the proposed and adjacent traffic control signals will collectively provide a progressive operation.		

WARRANT 7 - Crash Experience Warrant **SATISFIED YES ☐ NO ☑**
(All Parts Must Be Satisfied)

Adequate trial of alternatives with satisfactory observance and enforcement has failed to reduce the crash frequency.			Yes ☐ No ☑
REQUIREMENTS	Number of crashes reported within a 12 month period susceptible to correction by a traffic signal, and involving injury or damage exceeding the requirements for a reportable crash.		Yes ☐ No ☑
5 OR MORE	Refer to Appendix Table E-1		
REQUIREMENTS	CONDITIONS	✓	
ONE CONDITION SATISFIED 80%	Warrant 1, Condition A - Minimum Vehicular Volume		Yes ☐ No ☑
	OR, Warrant 1, Condition B - Interruption of Continuous Traffic		
	OR, Warrant 4, Pedestrian Volume Condition Ped Vol ≥ 80% of Figure 4C-5 through Figure 4C-8		

WARRANT 8 - Roadway Network **SATISFIED YES ☐ NO ☐**
(All Parts Must Be Satisfied)

MINIMUM VOLUME REQUIREMENTS	ENTERING VOLUMES - ALL APPROACHES	✓	FULFILLED
1000 Veh/Hr	During Typical Weekday Peak Hour _____ Veh/Hr and has 5-year projected traffic volumes that meet one or more of Warrants 1, 2, and 3 during an average weekday.		Yes ☐ No ☐
	OR During Each of Any 5 Hrs. of a Sat. or Sun _____ Veh/Hr		

CHARACTERISTICS OF MAJOR ROUTES	MAJOR ROUTE A	MAJOR ROUTE B	
Hwy. System Serving as Principal Network for Through Traffic			
Rural or Suburban Highway Outside Of, Entering, or Traversing a City			
Appears as Major Route on an Official Plan			
Any Major Route Characteristics Met, Both Streets			Yes ☐ No ☐

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.

Future With Project - Weekday AM Peak Hour

Figure 4C-101 (CA). Traffic Signal Warrants Worksheet (Sheet 2 of 5)

WARRANT 2 - Four Hour Vehicular Volume **SATISFIED* YES ☐ NO ☐**

Record hourly vehicular volumes for any four hours of an average day.

APPROACH LANES	One	2 or More					Hour
Both Approaches - Major Street							
Higher Approach - Minor Street							

*All plotted points fall above the applicable curve in Figure 4C-1. (URBAN AREAS)	Yes ☐	No ☐
OR, All plotted points fall above the applicable curve in Figure 4C-2. (RURAL AREAS)	Yes ☐	No ☐

WARRANT 3 - Peak Hour **SATISFIED YES ☐ NO ☑**
(Part A or Part B must be satisfied)

PART A **SATISFIED YES ☐ NO ☑**

(All parts 1, 2, and 3 below must be satisfied for the same one hour, for any four consecutive 15-minute periods)

1. The total delay experienced by traffic on one minor street approach (one direction only) controlled by a STOP sign equals or exceeds four vehicle-hours for a one-lane approach, or five vehicle-hours for a two-lane approach; AND 89 veh * 16.2 s/veh / 3600 s/hr = 0.40 veh-hrs	Yes ☐	No ☑
2. The volume on the same minor street approach (one direction only) equals or exceeds 100 vph for one moving lane of traffic or 150 vph for two moving lanes; AND	Yes ☐	No ☑
3. The total entering volume serviced during the hour equals or exceeds 800 vph for intersections with four or more approaches or 650 vph for intersections with three approaches.	Yes ☑	No ☐

PART B **SATISFIED YES ☐ NO ☑**

APPROACH LANES	One	2 or More	7:15 AM	Hour
Both Approaches - Major Street		✔	1201	
Higher Approach - Minor Street		✔	89	

The plotted point falls above the applicable curve in Figure 4C-3. (URBAN AREAS)	Yes ☐	No ☑
OR, The plotted point falls above the applicable curve in Figure 4C-4. (RURAL AREAS)	Yes ☐	No ☐

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.

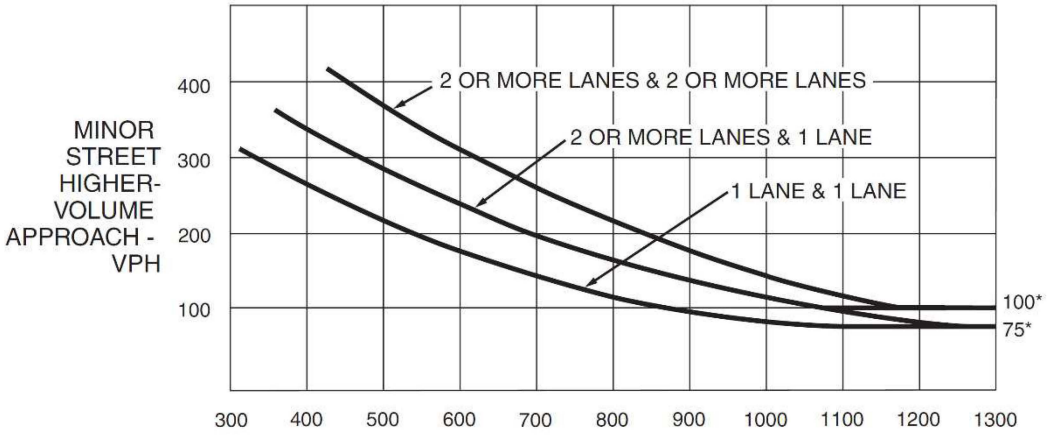
Future With Project - Weekday AM Peak Hour

Figure 4C-3. Warrant 3, Peak Hour

*Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

Figure 4C-4. Warrant 3, Peak Hour (70% Factor)

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 40 MPH ON MAJOR STREET)



*Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor-street approach with one lane.

Future With Project - Weekday PM Peak Hour

Figure 4C-101 (CA). Traffic Signal Warrants Worksheet (Sheet 2 of 5)

WARRANT 2 - Four Hour Vehicular Volume **SATISFIED* YES ☐ NO ☐**

Record hourly vehicular volumes for any four hours of an average day.

APPROACH LANES	One	2 or More				Hour
Both Approaches - Major Street						
Higher Approach - Minor Street						

*All plotted points fall above the applicable curve in Figure 4C-1. (URBAN AREAS)	Yes ☐	No ☐
OR, All plotted points fall above the applicable curve in Figure 4C-2. (RURAL AREAS)	Yes ☐	No ☐

WARRANT 3 - Peak Hour **SATISFIED YES ☐ NO ☑**
(Part A or Part B must be satisfied)

PART A **SATISFIED YES ☐ NO ☑**

(All parts 1, 2, and 3 below must be satisfied for the same one hour, for any four consecutive 15-minute periods)

1. The total delay experienced by traffic on one minor street approach (one direction only) controlled by a STOP sign equals or exceeds four vehicle-hours for a one-lane approach, or five vehicle-hours for a two-lane approach; AND 127 veh * 18.5 s/veh / 3600 s/hr = 0.65 veh-hrs	Yes ☐	No ☑
2. The volume on the same minor street approach (one direction only) equals or exceeds 100 vph for one moving lane of traffic or 150 vph for two moving lanes; AND	Yes ☑	No ☐
3. The total entering volume serviced during the hour equals or exceeds 800 vph for intersections with four or more approaches or 650 vph for intersections with three approaches.	Yes ☑	No ☐

PART B **SATISFIED YES ☐ NO ☑**

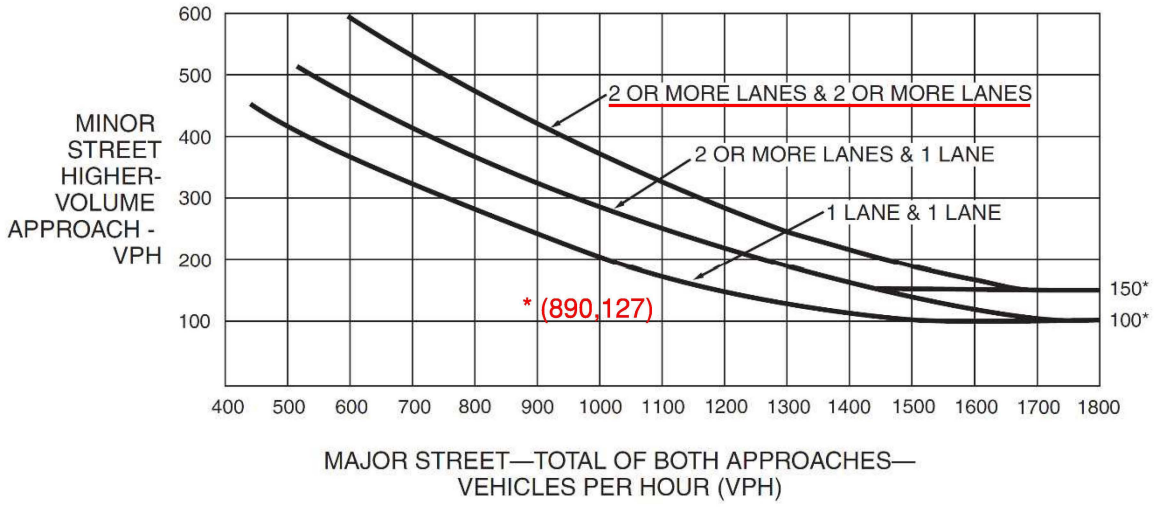
APPROACH LANES	One	2 or More	5:00 PM	Hour
Both Approaches - Major Street		✔	890	
Higher Approach - Minor Street		✔	127	

The plotted point falls above the applicable curve in Figure 4C-3. (URBAN AREAS)	Yes ☐	No ☑
OR, The plotted point falls above the applicable curve in Figure 4C-4. (RURAL AREAS)	Yes ☐	No ☐

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.

Future With Project - Weekday PM Peak Hour

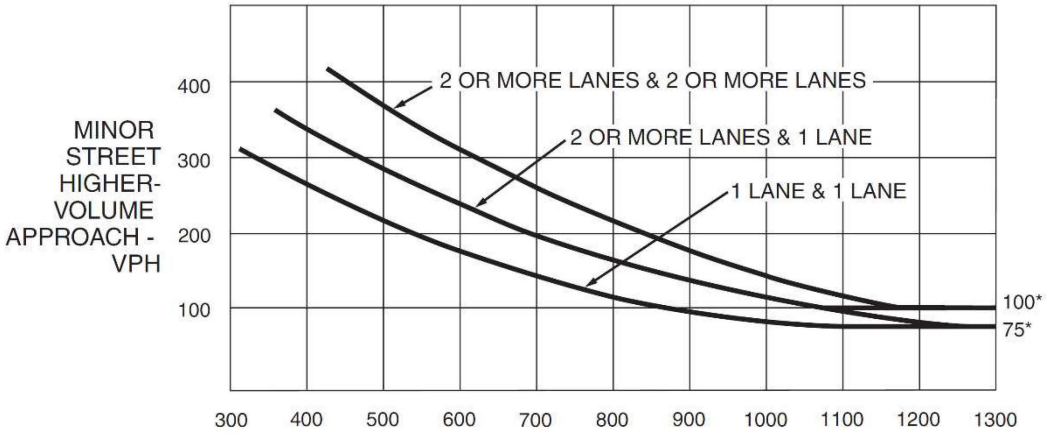
Figure 4C-3. Warrant 3, Peak Hour



*Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

Figure 4C-4. Warrant 3, Peak Hour (70% Factor)

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 40 MPH ON MAJOR STREET)



*Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor-street approach with one lane.

Existing Conditions

Figure 4C-101 (CA). Traffic Signal Warrants Worksheet (Sheet 4 of 5)

WARRANT 6 - Coordinated Signal System **SATISFIED YES ☐ NO ☐**
(All Parts Must Be Satisfied)

MINIMUM REQUIREMENTS	DISTANCE TO NEAREST SIGNAL	
≥ 1000 ft	N _____ ft, S _____ ft, E _____ ft, W _____ ft	Yes ☐ No ☐
On a one-way street or a street that has traffic predominantly in one direction, the adjacent traffic control signals are so far apart that they do not provide the necessary degree of vehicular platooning.		Yes ☐ No ☐
OR, On a two-way street, adjacent traffic control signals do not provide the necessary degree of platooning and the proposed and adjacent traffic control signals will collectively provide a progressive operation.		

WARRANT 7 - Crash Experience Warrant **SATISFIED YES ☐ NO ☑**
(All Parts Must Be Satisfied)

Adequate trial of alternatives with satisfactory observance and enforcement has failed to reduce the crash frequency.			Yes ☐ No ☑
REQUIREMENTS	Number of crashes reported within a 12 month period susceptible to correction by a traffic signal, and involving injury or damage exceeding the requirements for a reportable crash.		Yes ☐ No ☑
5 OR MORE	Refer to Appendix Table E-1		
REQUIREMENTS	CONDITIONS	✓	
ONE CONDITION SATISFIED 80%	Warrant 1, Condition A - Minimum Vehicular Volume		Yes ☐ No ☑
	OR, Warrant 1, Condition B - Interruption of Continuous Traffic		
	OR, Warrant 4, Pedestrian Volume Condition Ped Vol ≥ 80% of Figure 4C-5 through Figure 4C-8		

WARRANT 8 - Roadway Network **SATISFIED YES ☐ NO ☐**
(All Parts Must Be Satisfied)

MINIMUM VOLUME REQUIREMENTS	ENTERING VOLUMES - ALL APPROACHES	✓	FULFILLED
1000 Veh/Hr	During Typical Weekday Peak Hour _____ Veh/Hr and has 5-year projected traffic volumes that meet one or more of Warrants 1, 2, and 3 during an average weekday.		Yes ☐ No ☐
	OR During Each of Any 5 Hrs. of a Sat. or Sun _____ Veh/Hr		

CHARACTERISTICS OF MAJOR ROUTES	MAJOR ROUTE A	MAJOR ROUTE B	
Hwy. System Serving as Principal Network for Through Traffic			
Rural or Suburban Highway Outside Of, Entering, or Traversing a City			
Appears as Major Route on an Official Plan			
Any Major Route Characteristics Met, Both Streets			Yes ☐ No ☐

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.

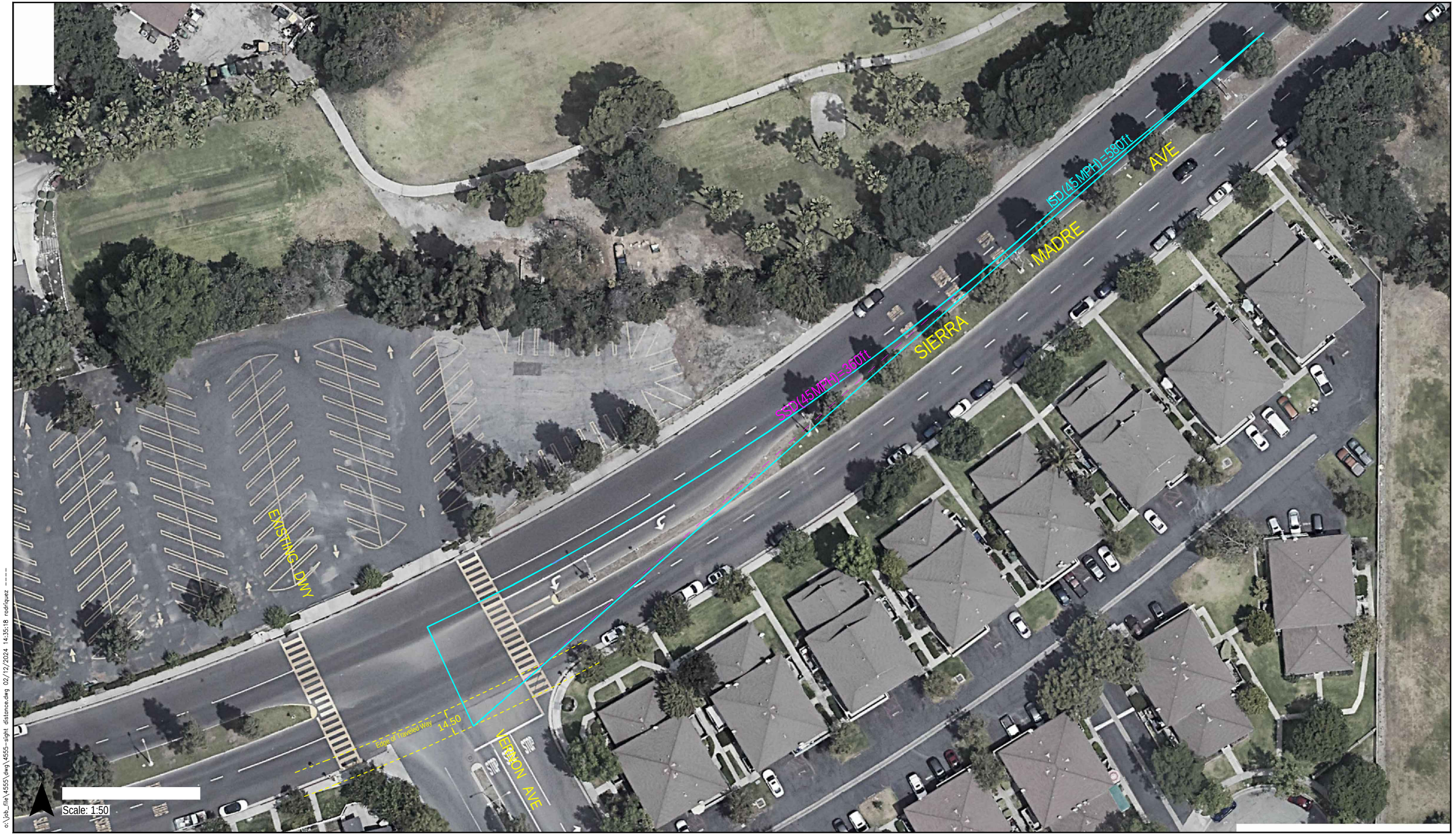
Appendix Table E-1
COLLISION HISTORY [1]

NO.	DATE OF COLLISION	TIME OF DAY	DAY OF WEEK	DISTANCE FROM INTERSECTION	WEATHER CONDITIONS	ROADWAY SURFACE	LIGHTING	MOVEMENT PRECEDING COLLISION		PRIMARY COLLISION FACTOR	VEHICLE CODE VIOLATION SUBSECTION	TYPE OF COLLISION	VEHICLE INVOLVED WITH	COLLISION SEVERITY	NUMBER KILLED	NUMBER INJURED
								AT FAULT PARTY	OTHER PARTY							
Vernon Avenue/Sierra Madre Avenue																
1	08/23/2022	6:38 PM	Tuesday	In Intersection	Clear	Dry	Daylight	Unknown	Parked	Unsafe Speed	22350	Hit Object	Parked Motor Vehicle	PDO	0	0
2	10/27/2021	6:52 PM	Wednesday	165' West	Clear	Dry	Dark - Street Lights	Eastbound Proceeding Straight	Eastbound Parked	Under the Influence of Alcohol or Drug	23152A	Sideswipe	Parked Motor Vehicle	Fatal	1	0
3	01/23/2021	8:17 AM	Saturday	14' South	Clear	Dry	Dark - Street Lights	Westbound Other Unsafe Turning	-	Unsafe Speed	22350	Hit Object	Fixed Object	PDO	0	0
4	02/20/2020	8:21 PM	Thursday	200' East	Clear	Dry	Dark - Street Lights	Eastbound Proceeding Straight	Eastbound Parked	Under the Influence of Alcohol or Drug	23152A	Sideswipe	Parked Motor Vehicle	PDO	0	0
5	01/01/2020	9:58 AM	Wednesday	In Intersection	Clear	Dry	Daylight	-	Eastbound Ran Off Road	Unknown	-	Head-On	Fixed Object	PDO	0	0
6	09/01/2018	9:34 PM	Saturday	68' West	Clear	Dry	Dark - Street Lights	Southbound Proceeding Straight	Westbound Entering Traffic	Automobile Right of Way	21804A	Vehicle/ Pedestrian	Bicycle	Injury (Other Visible)	0	1
700 Block of Sierra Madre Avenue																
7	06/13/2021	6:50 PM	Sunday	1' North	Clear	Slippery	Daylight	Westbound Making Right Turn	-	Unsafe Speed	22350	Other	Bicycle	Injury (Severe)	0	1
Todd Avenue/Sierra Madre Avenue																
8	01/13/2023	9:35 AM	Friday	215' East	Cloudy	Dry	Daylight	Eastbound Proceeding Straight	Eastbound Stopped	Improper Turning	22107	Rear End	Other Motor Vehicle	Injury (Other Visible)	0	1
9	01/25/2022	7:23 PM	Tuesday	In Intersection	Clear	Dry	Dark - Street Lights	-	Northbound Changing Lanes	Unknown	-	Head-On	Fixed Object	PDO	0	0
10	11/15/2020	4:29 PM	Sunday	69' East	Clear	Dry	Daylight	Westbound Proceeding Straight	Westbound Stopped	Unsafe Speed	22350	Rear End	Other Motor Vehicle	PDO	0	0
11	05/05/2020	4:59 PM	Tuesday	20' West	Clear	Dry	Daylight	Westbound Proceeding Straight	Southbound Proceeding Straight	Traffic Signals & Signs	22450A	Broadside	Bicycle	Injury (Severe)	0	1
12	08/24/2019	2:10 AM	Saturday	146' East	Clear	Dry	Dark - Street Lights	Eastbound Proceeding Straight	-	Under the Influence of Alcohol or Drug	23152A	Head-On	Fixed Object	PDO	0	0

[1] Collision data were requested from the California Highway Patrol's (CHP) online Statewide Integrated Traffic Records System (SWITRS) database on February 10, 2024. Records were requested for the most recent five year period. According to the SWITRS website, data from seven months prior to the date of request should be considered incomplete due to a collision records processing backlog. Therefore, the most recent five year period is assumed to include July 1, 2018 through June 30, 2023. Collisions which occurred from July 1, 2023 to the present have been included for informational purposes.

APPENDIX F

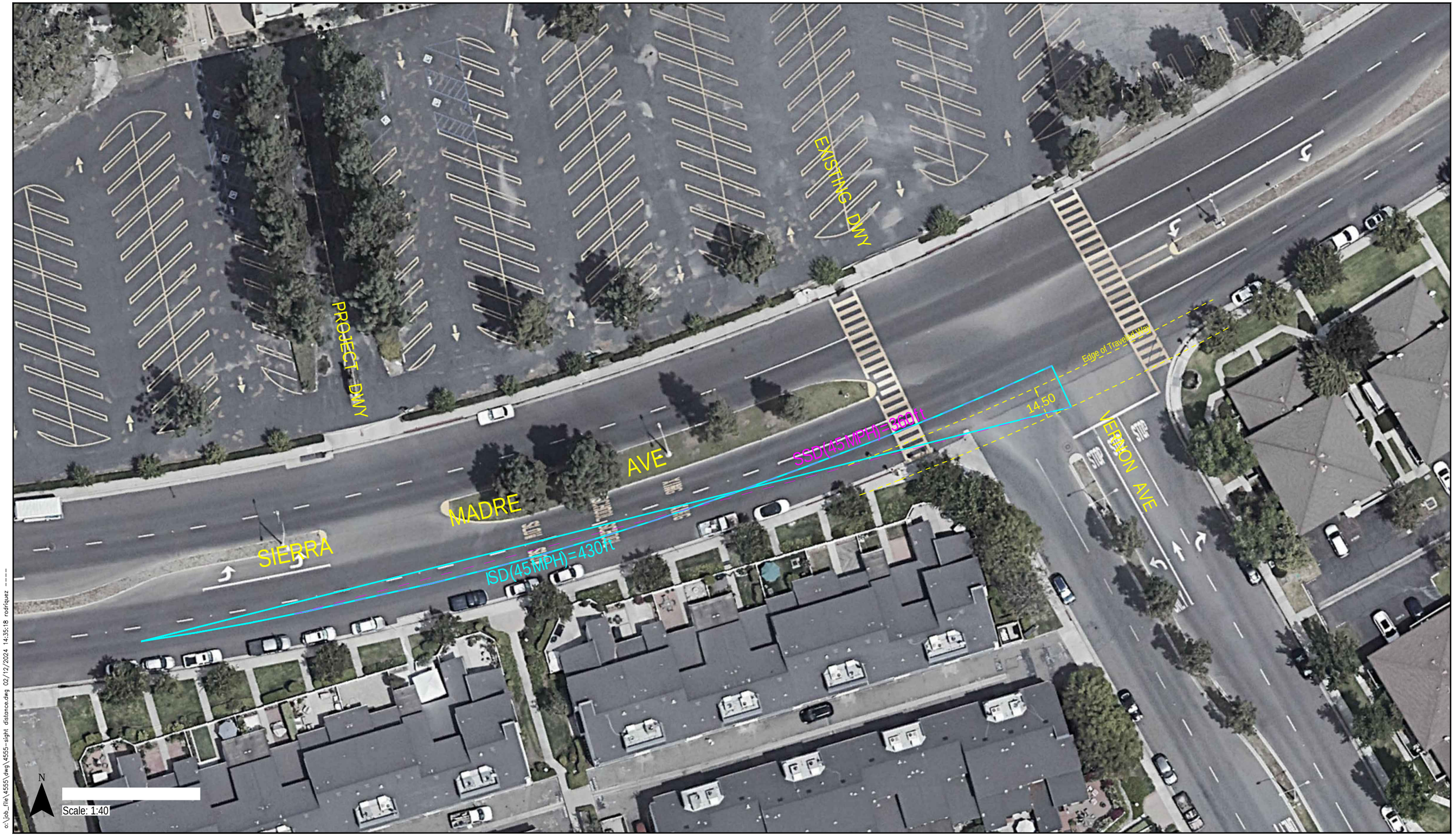
SIGHT DISTANCE ANALYSIS



o:\job_file\4555\dwg\4555-sight distance.dwg 02/12/2024 14:35:18 rodriguez

LLG

Appendix Figure F-1
Sight Distance at Vernon Avenue/Sierra Madre Avenue
Left-Turn From Stop
Azusa Greens Redevelopment Project



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LLG

Appendix Figure F-2
Sight Distance at Vernon Avenue/Sierra Madre Avenue
Right-Turn From Stop
Azusa Greens Redevelopment Project

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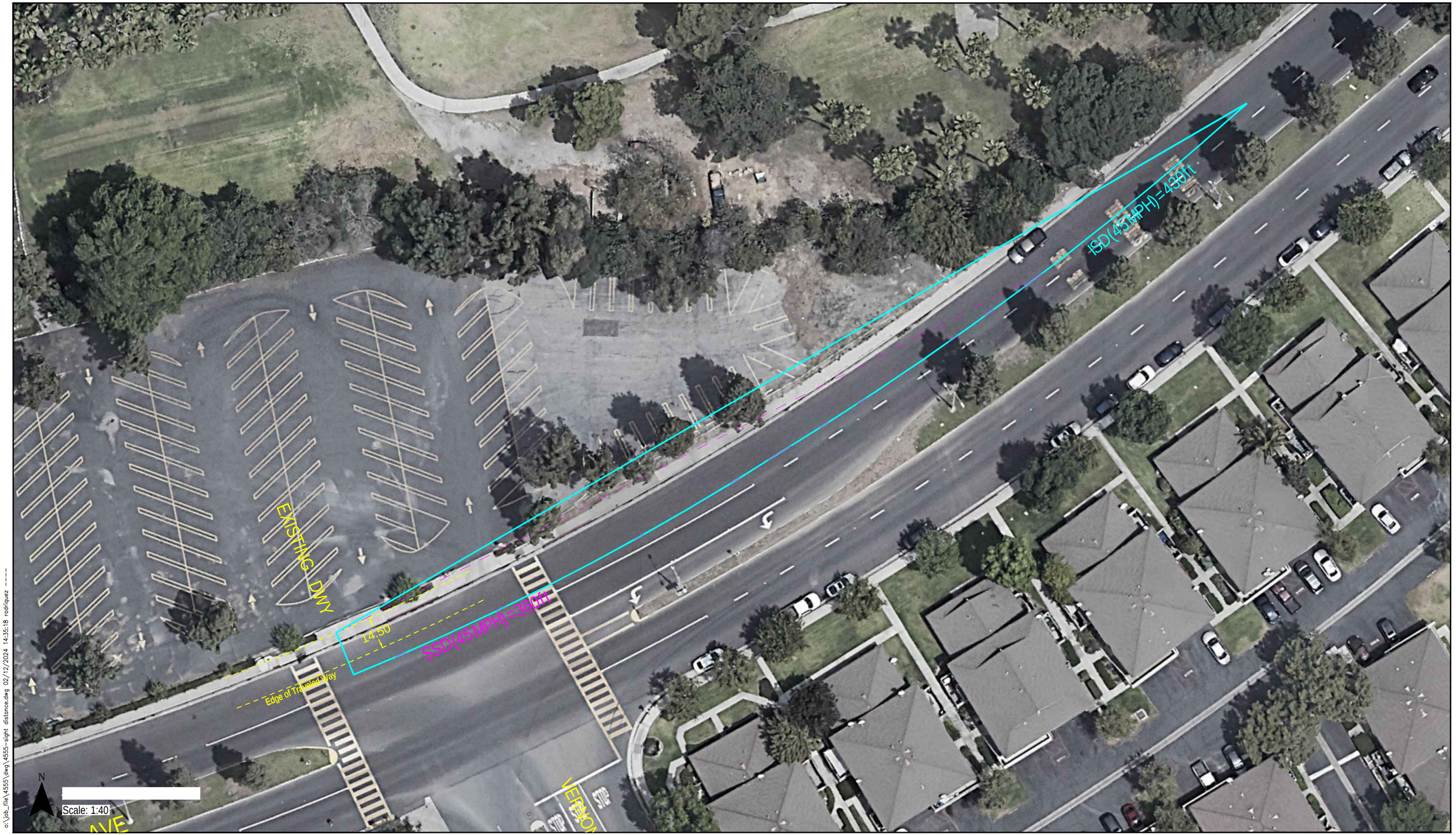
Appendix Figure F-3
Sight Distance at Existing Driveway/Sierra Madre Avenue
Left-Turn From Stop
Azusa Greens Redevelopment Project



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LLG

Appendix Figure F-4
Sight Distance at Existing Driveway/Sierra Madre Avenue
Right-Turn From Stop
Azusa Greens Redevelopment Project

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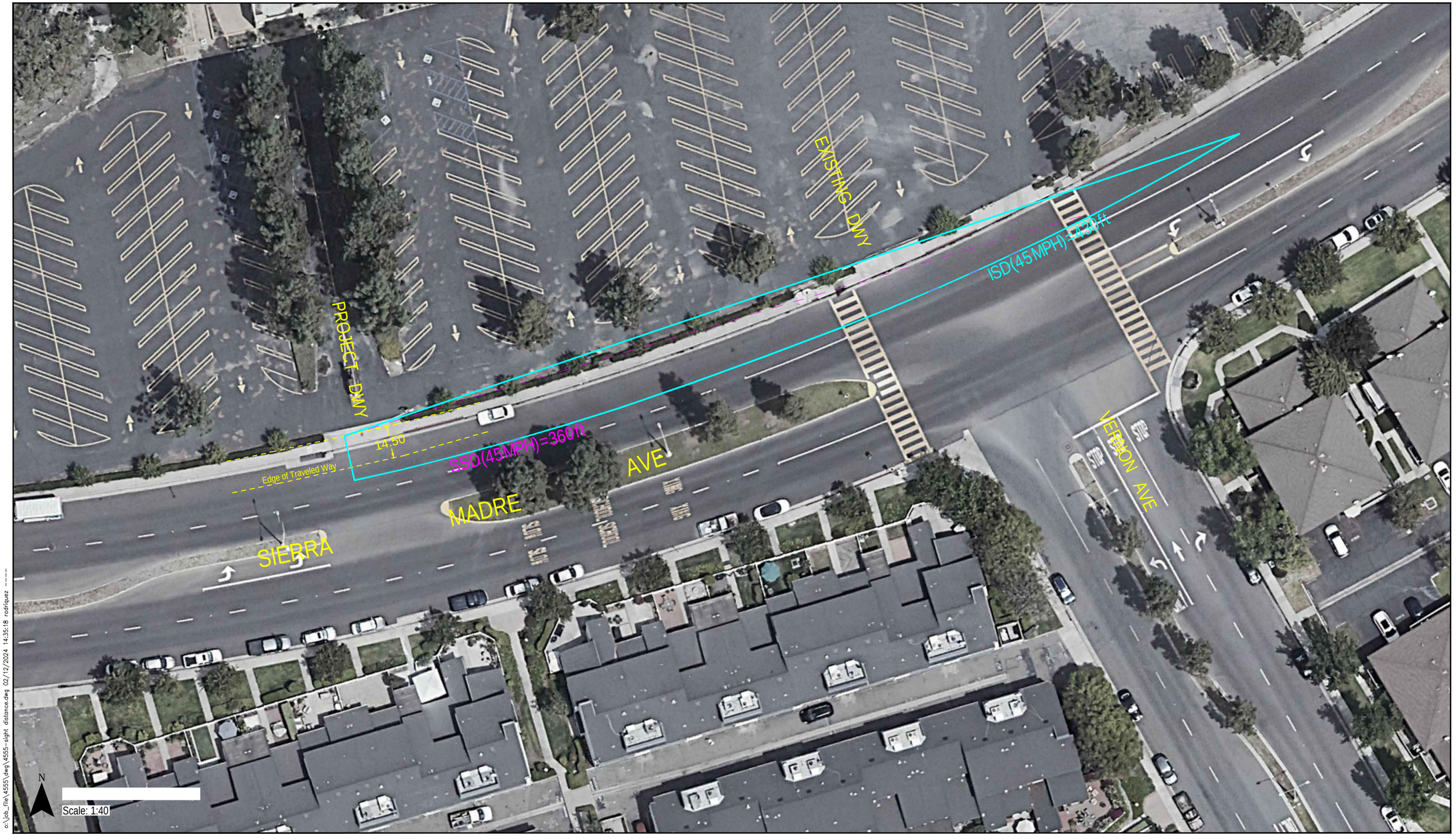
LLG

Appendix Figure F-5

Sight Distance at Project Driveway/Sierra Madre Avenue

Left-Turn From Stop

Azusa Greens Redevelopment Project



o:_job_file\4555\dwg\4555-sight distance.dwg 02/12/2024 14:35:18 rodriguez

LLG

Appendix Figure F-6
Sight Distance at Project Driveway/Sierra Madre Avenue
Right-Turn From Stop
Azusa Greens Redevelopment Project

APPENDIX G

MIDBLOCK CROSSING ANALYSIS

Appendix Table G-1
COLLISION HISTORY [1]

NO.	CASE ID	DATE OF COLLISION	TIME OF DAY	DAY OF WEEK	DISTANCE FROM INTERSECTION	WEATHER CONDITIONS	ROADWAY SURFACE	LIGHTING	MOVEMENT PRECEDING COLLISION		PRIMARY COLLISION FACTOR	VEHICLE CODE VIOLATION SUBSECTION	TYPE OF COLLISION	VEHICLE INVOLVED WITH	COLLISION SEVERITY	NUMBER KILLED	NUMBER INJURED
									AT FAULT PARTY	OTHER PARTY							
Lori Ann Avenue/Sierra Madre Avenue																	
1	9551751	10/08/2022	11:53 AM	Saturday	34' West	Clear	Dry	Daylight	Eastbound Proceeding Straight	Eastbound Stopped	Unsafe Speed	22350	Rear End	Non-Collision	Injury (Complaint of Pain)	0	3
2	9110087	05/24/2020	10:25 PM	Sunday	25' North	Clear	Dry	Dark - Street Lights	Westbound Making Right Turn	-	Under the Influence of Alcohol or Drug	23152A	Head-On	Fixed Object	PDO	0	0
Virginia Ann Drive/Sierra Madre Avenue																	
3	8719409	09/01/2018	9:28 AM	Saturday	25' East	Clear	Dry	Dark - Street Lights	Eastbound Proceeding Straight	-	Under the Influence of Alcohol or Drug	23152A	Hit Object	Fixed Object	PDO	0	0
Sunset Avenue/Sierra Madre Avenue																	
4	9382100	11/20/2021	3:10 PM	Saturday	156' East	Clear	Dry	Daylight	Eastbound Proceeding Straight	Eastbound Parked	Unsafe Speed	22350	Sideswipe	Parked Motor Vehicle	Injury (Complaint of Pain)	0	1

[1] Collision data were requested from the California Highway Patrol's (CHP) online Statewide Integrated Traffic Records System (SWITRS) database on February 10, 2024. Records were requested for the most recent five year period. According to the SWITRS website, data from seven months prior to the date of request should be considered incomplete due to a collision records processing backlog. Therefore, the most recent five year period is assumed to include July 1, 2018 through June 30, 2023. Collisions which occurred from July 1, 2023 to the present have been included for informational purposes.

Example RRFB Sign Assembly

Image Credit: FHWA

o:\job_file\4555\dwg\4555-midblock crossing improvements.dwg 05/28/2024 18:13:22 rodriquez

LLG

Appendix Figure G-1
Conceptual Plan of Midblock Crossing Improvements
Sierra Madre Avenue West of Lori Ann Avenue
Azusa Greens Redevelopment Project

Example RRFB Sign Assembly

Image Credit: FHWA

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LLG

Appendix Figure G-2
Conceptual Plan of Midblock Crossing Improvements
Sierra Madre Avenue West of Sunset Avenue
Azusa Greens Redevelopment Project

MEMORANDUM

To:	Yara Fisher HELIX Environmental Planning	Date:	April 4, 2025
From:	David S. Shender, P.E. Linscott, Law & Greenspan, Engineers	LLG Ref:	1-23-4555-1
Subject:	**Assessment of Modified Project Description** **Azusa Greens Redevelopment Project** City of Azusa, California		

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Pasadena
Irvine
San Diego

Linscott, Law & Greenspan, Engineers (LLG) has prepared this memorandum to provide a brief assessment of the modified project description for the proposed Azusa Greens Redevelopment Project (the "Project") located in the City of Azusa. LLG recently prepared a study[1] (the "Transportation Study") evaluating the potential transportation effects of the Project.

The Project development description evaluated in the Transportation Study and associated vehicle trip generation forecast are summarized on Table 2-1 therein. As shown in Table 2-1, the Project proposes the development of 230 senior housing residential units, including 150 apartment units and 80 duplex/triplex units. Also proposed is 353,075 square feet of light industrial building floor area, as well as retention of a portion of the prior golf course use (i.e., nine holes). Table 2-1 in the Transportation Study indicates that the Project is forecast to generate 2,823 vehicle trips (approximately 1,412 inbound trips and approximately 1,411 outbound trips) on a daily basis during a typical weekday. During the weekday morning (AM) commuter peak hour, the Project is forecast to generate 332 vehicle trips (262 inbound trips and 70 outbound trips). Similarly, during the weekday afternoon (PM) commuter peak hour, the Project is forecast to generate 323 vehicle trips (85 inbound trips and 238 outbound trips).

LLG understands the Project's development description has been slightly modified (the "Modified Project") related to the residential component. While the Modified Project proposes development of the same number of senior housing residential units (230 units), the type of units has been slightly adjusted so as to provide four more apartment type units (154 units in total) and four fewer duplex/triplex units (76 units in total) as compared to the Project. The Modified Project does not propose any changes to the light industrial and golf course components of the Project.

An updated trip generation forecast was prepared for the Modified Project and is attached to this memorandum. As shown in the table, the Modified Project is forecast to generate 2,819 daily vehicle trips, 332 AM peak hour vehicle trips, and 323 PM peak hour vehicle trips. When compared to the trip generation forecast provided in the Transportation Study prepared for the Project, the Modified Project is forecast to generate four fewer daily vehicle trips, as well as an equivalent number of AM and PM peak hour vehicle trips.

[1] *Transportation Impact Study – Azusa Greens Redevelopment Project*, LLG, August 22, 2024.

Based on the updated trip generation forecast, it can be concluded that the analysis provided in the Transportation Study suitably and conservatively evaluates the potential transportation effects of the Modified Project. No revisions are required to the Transportation Study related to the Modified Project.

Please contact us with any questions regarding this assessment of the Modified Project.

cc: File

attachment

Table 2-1
PROJECT TRIP GENERATION FORECAST (UPDATE)

TRIP GENERATION RATES [1]									
	ITE LAND USE		WEEKDAY	WEEKDAY AM PEAK HOUR			WEEKDAY PM PEAK HOUR		
ITE LAND USE CATEGORY	CODE	VARIABLE	DAILY	IN (%)	OUT (%)	TOTAL	IN (%)	OUT (%)	TOTAL
General Light Industrial	110	Per 1,000 SF	4.87	88%	12%	0.74	14%	86%	0.65
General Light Industrial (Trucks)	110-T	Per 1,000 SF	0.25	60%	40%	0.01	50%	50%	0.01
Senior Adult Housing - Single-Family	251	Per Dwelling Unit	4.31	33%	67%	0.24	61%	39%	0.30
Senior Adult Housing - Multifamily	252	Per Dwelling Unit	3.24	34%	66%	0.20	56%	44%	0.25
Golf Course	430	Per Hole	30.38	79%	21%	1.76	53%	47%	2.91

PROJECT TRIP GENERATION FORECAST									
	ITE LAND USE		DAILY TRIP ENDS [2]	AM PEAK HOUR VOLUMES [2]			PM PEAK HOUR VOLUMES [2]		
LAND USE	CODE	SIZE	VOLUMES	IN	OUT	TOTAL	IN	OUT	TOTAL
Senior Housing Component									
Senior Housing - Multifamily Units	252	154 DU	499	11	20	31	22	17	39
Senior Housing - Duplex and Triplex Units	251	76 DU	328	6	12	18	14	9	23
Subtotal Senior Housing Component			***827***	***17***	***32***	***49***	***36***	***26***	***62***
Industrial Component									
[A] Light Industrial (All Vehicle Trip Ends)	110	353,075 GSF	***1,719***	230	31	261	32	197	229
[B] - Truck Trip Ends	110-T		88	2	2	4	2	2	4
- 2-Axle (32.7% of All Trucks) [3]				1	1	2	1	1	2
- 3-Axle (17.9% of All Trucks) [3]				0	0	0	0	0	0
- 4+-Axle (49.4% of All Trucks) [3]				1	1	2	1	1	2
- 2-Axle (1.5 PCE)				2	2	4	2	2	4
- 3-Axle (2.0 PCE)				0	0	0	0	0	0
- 4-Axle (3.0 PCE)				3	3	6	3	3	6
[C] Subtotal Trucks (PCE Adjusted)				***5***	***5***	***10***	***5***	***5***	***10***
[A-B] - Passenger Car Trip Ends				***228***	***29***	***257***	***30***	***195***	***225***
Subtotal Industrial Component [4]			***1,719***	***233***	***34***	***267***	***35***	***200***	***235***
Golf Course Component									
Azusa Greens Golf Course	430	9 Holes	273	13	3	16	14	12	26
Subtotal Golf Course Component			***273***	***13***	***3***	***16***	***14***	***12***	***26***
NET NEW PROJECT TRIPS			***2,819***	***263***	***69***	***332***	***85***	***238***	***323***

[1] Source: ITE "Trip Generation Manual", 11th Edition, 2021.
[2] Trips are one-way traffic movements, entering or leaving.
[3] Based on information contained in the "Truck Trip Generation Study for City of Fontana, County of San Bernardino, State of California" prepared by Transportation Engineering and Planning, Inc., August 2003 for Light Industrial land uses. A PCE factor of 1.5 was applied to all 2-axle trucks, while a PCE factor of 2.0 was applied to all 3-axle trucks and a PCE factor of 3.0 was applied to all 4 or more axle trucks.
[4] The daily trip subtotal represents all daily vehicle trip ends ([A]), while the weekday AM and PM peak hour trip subtotals represent the sum of the passenger vehicle trip ends and the PCE-adjusted truck trip ends ([A-B] + [C]).