Mission & Linden Townhomes

Categorical Exemption Report

prepared by
City of Pomona
Planning Department
505 S. Garey Avenue
Pomona, California 91766

prepared with the assistance of
Rincon Consultants, Inc.
1980 Orange Tree Lane, Suite 105
Redlands, California 92374

October 2020

RINCON CONSULTANTS, INC.
Environmental Scientists | Planners | Engineers
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Table of Contents

Tables

Figures

Appendices

Categorical Exemption Report

This report serves as the technical documentation of an environmental analysis performed by Rincon Consultants, Inc. for the Mission & Linden Townhomes (project) in the City of Pomona. The intent of the analysis is to document whether the project is eligible for a Class 32 Categorical Exemption (CE). The report provides an introduction, project description, and evaluation of the project's consistency with the requirements for a Class 32 exemption. This includes an analysis of the project's potential impacts in the areas of biological resources, traffic, air quality and greenhouse gas, noise, water quality, and historic resources. The report concludes that the project is eligible for a Class 32 CE.

1. Introduction

The City of Pomona proposes to adopt a Class 32 CE for a proposed project at 675 E. Mission Boulevard (Project). The State CEQA Guidelines Section 15332 states that a CE is allowed when:

a. The project is consistent with the applicable general plan designation and all applicable general plan policies as well as with applicable zoning designation and regulations.
b. The proposed development occurs within city limits on a project site of no more than five acres substantially surrounded by urban uses.
c. The project site has no value as habitat for endangered, rare, or threatened species.
d. Approval of the project would not result in any significant effects relating to traffic, noise, air quality, or water quality.
e. The site can be adequately served by all required utilities and public services.

Additionally, State CEQA Guidelines Section 15300.2 provides exceptions to a categorical exemption as follows:

a. Location. Classes 3, 4, 5, 6, and 11 are qualified by consideration of where the project is to be located – a project that is ordinarily insignificant in its impact on the environment may in a particularly sensitive environment be significant. Therefore, these classes are considered to apply all instances, except where the project may impact on an environmental resource of hazardous or critical concern where designated, precisely mapped, and officially adopted pursuant to law by federal, state, or local agencies.
b. Cumulative Impact. All exemptions for these classes are inapplicable when the cumulative impact of successive projects of the same type in the same place, over time is significant.
c. Significant Effect. A categorical exemption shall not be used for an activity where there is a reasonable possibility that the activity will have a significant effect on the environment due to unusual circumstances.
d. Scenic Highways. A categorical exemption shall not be used for a project which may result in damage to scenic resources, including but not limited to, trees, historic buildings, rock outcroppings, or similar resources, within a highway officially designated as a state scenic

highway. This does not apply to improvements which are required as mitigation by an adopted negative declaration or certified EIR.

e. Hazardous Waste Sites. A categorical exemption shall not be used for a project located on a site which is included on any list compiled pursuant to Section 65962.5 of the Government Code.

f. Historical Resources. A categorical exemption shall not be used for a project which may cause a substantial adverse change in the significance of a historical resource.

Rincon Consultants, Inc. evaluated the project's consistency with the above requirements, including its potential impacts in the areas of biological resources, traffic, noise, air quality and greenhouse gas, water quality, and exceptions to the exemption to confirm the project's eligibility for the Class 32 exemption.

2. Project Description

The project site is located at 675 E. Mission Boulevard in the City of Pomona, Los Angeles County, California. The site includes seven parcels identified as Assessor Parcel No. (APN) 8335-014-911, 8335-014-914, 8335-014-917, 8335-014-908, 8335-014-912, 8335-014-909, 8335-014-913 and an alley to be vacated that total 1.46 acres (63,598 square feet). The site has been previously disturbed and is currently vacant.

Figure 1 shows the location of the project site. The neighborhood mainly consists of single- and multi-family residential uses with some commercial uses along E. Mission Boulevard. The project site is located on the north side of E. Mission Boulevard. S. Linden Street forms the west boundary, E. Eleanor Street forms the east boundary, and E. 4th Street forms the north boundary of the project site.

The proposed project is considered an infill project because the site was previously disturbed and developed, is currently vacant, and is substantially surrounded by development. There is a vacant lot immediately to the west of the project site used for parking. The project would involve development of 36 townhome units in seven new buildings with associated residential amenities and features. The proposed site plan is shown in Figure 2 and the tentative tract map is shown in Figure 3. Figure 4 and Figure 5 show the proposed building elevations.

The building footprint of 31,348 square feet would occupy approximately 49.3 percent of the total lot area. The seven buildings would be up to three stories with a maximum building height of 35 feet. The 36 townhome units would have three to four bedrooms per unit, with a total gross livable area of 65,266 square feet.[1] All of the units would have patios on the ground level or outdoor decks on the second level, depending on the unit type.

Two vehicular access points to the project site would be located along E. 4th Street, with the driveway located in the northeast quadrant designated for entry only, and the driveway located in the northwest quadrant designated for exit only. Two pedestrian access points to the project site would be provided along E. Mission Boulevard with security gates to maintain residential privacy.

[1] The proposed project plans include an alternative layout for unit A, which would reduce the number of tandem parking spaces (3 vs 2 covered parking spaces for each unit A) and increase the amount of livable area on the ground floor as a result. Therefore, total gross livable area for the alternative proposed plan (not shown in Figure 2) would be 70,558 square feet. Proposed parking for the alternative plan would be similar to the project with the exception of tandem parking spaces (30 vs 2).

The proposed units would contain 72 ground-level covered parking spaces for residential use with 30 tandem parking spaces, 11 on-site parking spaces, 39 street-parking spaces along the west, north, and east sides of the project site. Street parking does not contribute to the City's on-site parking requirement.

Although specific landscape plans are not available at this time, the project would be required to comply with the Water Efficient Landscape Ordinance (Ord. No. 4232) for the landscaping provided along the perimeter of the project site and between the buildings as indicated on Figure 2.

Construction would occur over approximately 16 months, with construction anticipated to begin in mid- to late-2020 and be completed in late 2021 or early 2022. The project would require approximately five feet of soil excavation for building foundations. The excavated soils would be recompacted and redistributed on site. Therefore, the project would have no import or export of soils nor associated haul trips for exported soils.

The project will be required to process the following entitlement: Development Plan Review for the purposes of reviewing compliance with the Corridors Specific Plan (CSP) standards, Tentative Tract Map for subdivision purposes, and General Plan Conformity for the vacation of the existing alley.

Table 1 Project Characteristics

Existing	
Address	675 E. Mission Boulevard
Assessor's Parcel Number (APN)	8335-014-911, 8335-014-914, 8335-014-917, 8335-014-908, 8335-014-912, 8335-014-909, 8335-014-913
Lot Area	63,598 SF (1.46 acres)
Existing uses	Vacant
Proposed	
Floor Area[1]	65,266 gross SF; 60,284 net SF
Density	24.7 DU/acre
Maximum Building Height	35 feet (3-stories)
Units[1]	3-bedroom: 34 units 1,752 to 1,956 SF gross SF; 1,616 to 1,804 SF net SF per unit 4-bedroom: 2 units 2,273 gross SF; 2,117 net SF per unit **Total: 36 units**
Parking[1]	
Covered Parking	72 spaces
Tandem Parking	30 spaces
On-Site Parking	11 spaces
	Total: 113 spaces
Street Parking	39 spaces (Does not count towards on-site parking requirements)

Source: Withee Malcolm Architects 2019

SF = square feet

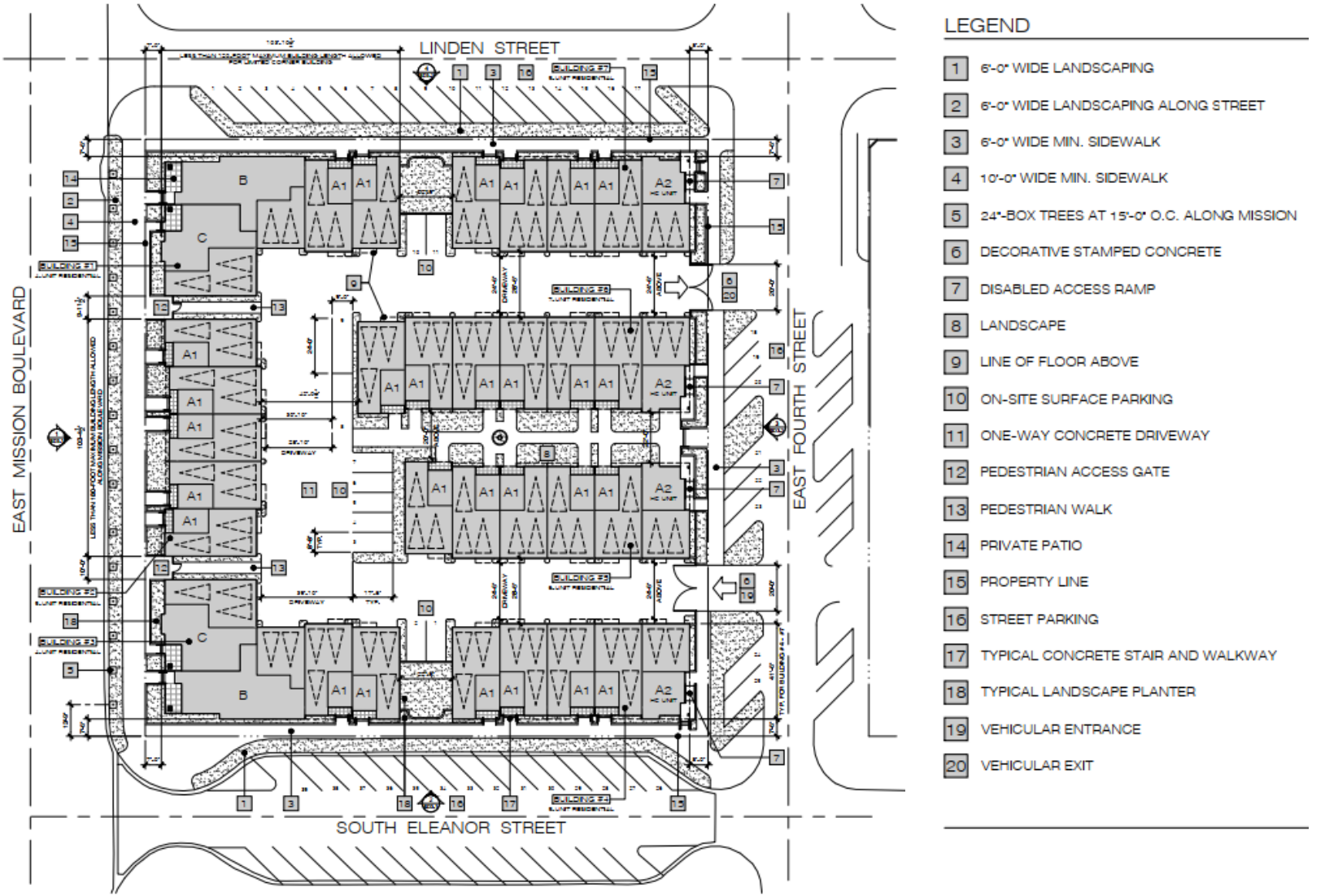
[1] Floor area, unit square footage, and parking presented above is representative of proposed project plans and does not consider the alternative project plan with a modified floor plan for unit type A1.

Figure 1 Project Location

Imagery provided by Microsoft Bing and its licensors © 2019.

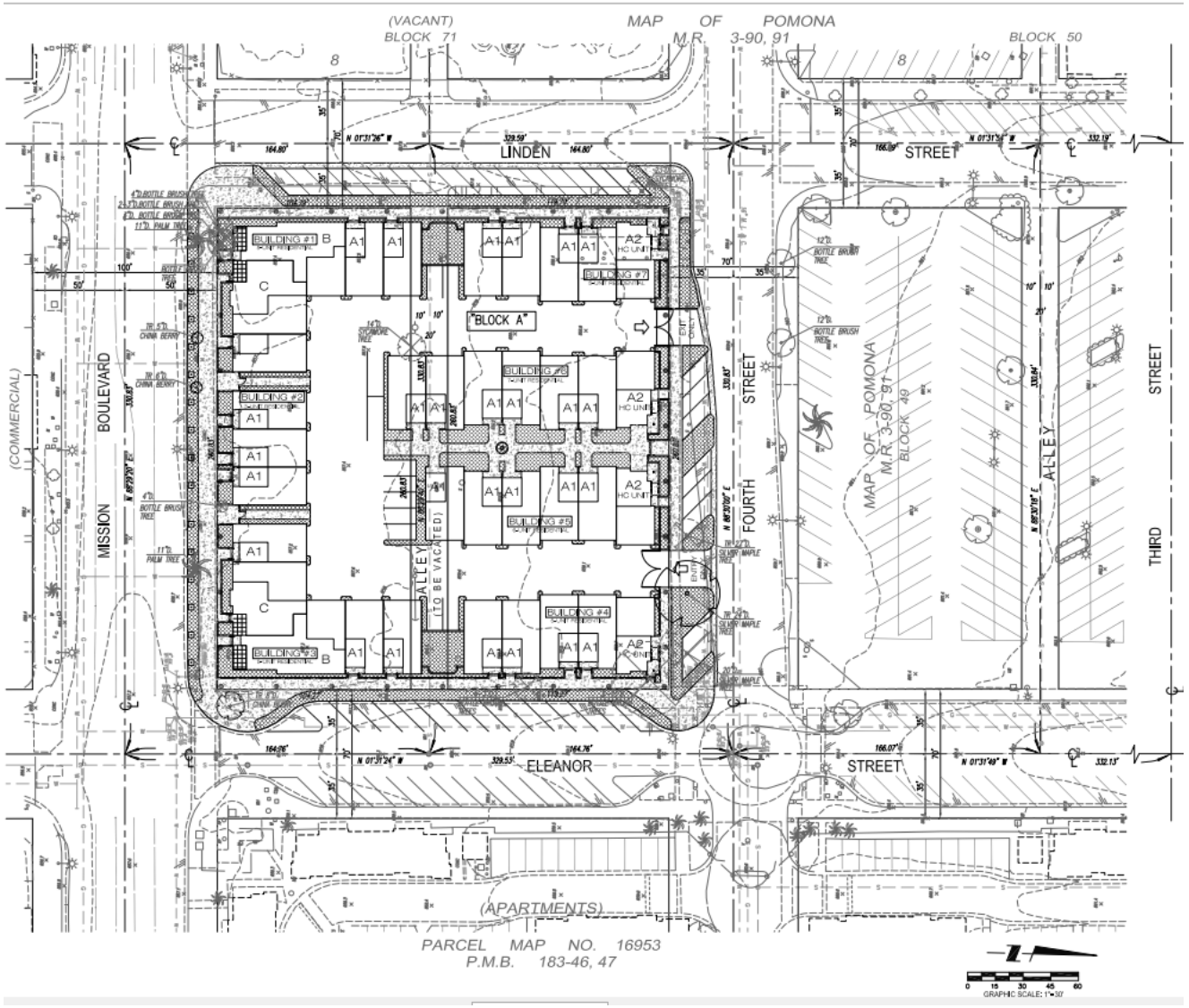
Fig 1 Project Location

Figure 2 Proposed Site Plan



Source: Withee Malcom Architects 2019

Figure 3 Tentative Tract No. 70570



Source: Withee Malcom Architects 2019

Figure 4 South and East Building Elevations

Source: Withee Malcom Architects 2019

Figure 5 West and North Building Elevations

Source: Withee Malcom Architects 2019

3. Existing Site Conditions

The project site is a generally flat, rectangular lot located at 675 E. Mission Boulevard, between Linden Street and S. Eleanor Street to the west and east, respectively; and E. 4th Street to the north. Figure 6a and Figure 6b contain photos of the project site in its current condition. The project site is vacant with evidence of previous disturbance.

The northern half of the project site is currently located in the Downtown Pomona Specific Plan (DT-SP) area which is comprised of seven different land use districts. The project site is located in the Mixed Use-Institutional (MU-I) land use district, which allows development of attached multi-family dwelling units such as the proposed project under a Conditional Use Permit (CUP).

The southern half of the project site, fronting E. Mission Boulevard, is also located in the Midtown Segment area of the Corridors Specific Plan (CSP) . The proposed attached multi-family dwelling units are permitted in the Midtown Segment. The City intends on rezoning the entire project site to be included in the CSP as part of the pending update to the DT-SP, which will be effective on September 4, 2019. Therefore, the project is analyzed under the CSP standards only.

The project site is located in an urbanized area, surrounded by surface parking lots, single- and multi-family dwellings, and commercial retail businesses. Table 2 provides a summary of existing land uses in the immediate vicinity of the project site.

Table 2 Existing Land Use

Location		Existing Use	Zoning District	General Plan Designation
Subject Property		Vacant	DT-SP (Mixed Use-Institutional), CSP (Midtown Segment)	Transit Oriented District: Neighborhood
Surrounding Properties	North	Surface parking lot	DT-SP (Mixed Use-Institutional), CSP (Midtown Segment)	Transit Oriented District: Neighborhood
	South	Single-family residential, Commercial	DT-SP (Mixed Use-Arterial Retail), CSP (Midtown Segment)	Neighborhood Edge
	East	Multi-family residential	DT-SP (Residential Multiple Family), CSP (Midtown Segment)	Transit Oriented District: Neighborhood
	West	Vacant	DT-SP (Mixed Use-Institutional), CSP (Midtown Segment)	Transit Oriented District: Neighborhood

Vegetation on the project site consists of non-native ground cover, one ornamental tree near the middle of the site, and several ornamental street trees along E. Mission Boulevard and the northeast corner along 4th Street. There are no surface water features present on the project site.

Figure 6a Photographs of the Project Site

Center of project site, looking southeast (L) and southwest (R)

Commercial uses along E. Mission Boulevard, south of project site

Southwest corner of project site, looking east along S. Linden Street (L) and northeast (R)

Figure 6b Photographs of the Project Site

Center of project site, looking northwest (L) and northeast (R)

Center of project site, looking east (L) and southern end of project site looking east (R)

West boundary of project site, looking west (L). Northeast corner of project site, looking southwest (R)

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4. Consistency Analysis

Criterion (a)

The project is consistent with the applicable general plan designation and all applicable general plan policies as well as with applicable zoning designation and regulations.

The proposed project would entail development of 36 multi-family residential units as infill development on a vacant site in an urbanized area of Pomona. The project is consistent with the applicable General Plan designation and all applicable General and Specific Plan policies, as well as with applicable zoning designation and regulations. Consistency with the applicable requirements for the project under the Downtown Specific Plan (DT-SP) and Corridors Specific Plan (CSP) is analyzed below and shown in Table 3.

Permitted Uses

The project site has a General Plan land use designation of Transit Oriented District: Neighborhood, which promotes a range of contemporary housing types that aims to concentrate compatible housing within walking distance to the Downtown Core. The project site has a zoning designation of MU-I in the Downtown Pomona Specific Plan Area (DT-SP), wherein the development standards in the DT-SP area apply to the project site and project pursuant to Pomona Zoning Code (PZC) Part II Section .490. The southern half of the project site, fronting E. Mission Boulevard, is also located in the CSP in the Midtown Segment, which allows attached multi-family dwelling developments. However, the City intends on rezoning the entire project site to be included in the CSP as part of the pending update to the DT-SP, which will be effective on September 4, 2019. Therefore, the project is analyzed under the CSP standards.

Lot Coverage, Density, and Height

The building footprint of 31,348 square feet would occupy approximately 49.3 percent of the total lot area of 63,598 square feet. According to the General Plan, the maximum density for Transect Zone 5 (T5), where the project site is located, is 80 dwelling units per acre (du/ac). The proposed project would have a density of 24.7 du/ac, which is permitted and below the T5 maximum residential density.

The minimum unit size for residential developments in the Midtown Segment of the CSP is 1,000 square feet for 3-bedroom units. As summarized in Table 1, the proposed project would provide 34 bedroom units ranging between 1,616 to 1,804 net square feet per unit, and two 4-bedroom units that would be 2,117 net square feet per unit. Therefore, the project would be consistent with the minimum unit size requirement stated in the CSP.

The maximum building height for the Midtown Segment of the CSP is three stories and 36 feet. The proposed project would be a maximum of 35 feet in height with up to three stories. Therefore, the project would be consistent with the height requirements of the CSP.

Setbacks

The project site fronts all four streets (E. Mission Boulevard, S. Linden Street, E. 4th Street, and S. Eleanor). Therefore, only the front yard setback standard applies to the project. The CSP

Development Standards for the Midtown Segment contains a minimum front yard setback of five feet and maximum setback of 20 feet along Mission Boulevard, and a minimum setback of five feet and maximum setback of 15 feet for the three other streets. As shown in the proposed site plan (Figure 2) and detailed in Table 3, all buildings would comply with the front yard setbacks of the respective fronting street as noted.

The CSP also states that the minimum space between buildings is 20 feet. The project would provide an approximately 22.8-foot setback between buildings 1 and 7 and buildings 3 and 4. However, the project would provide approximately ten feet between buildings 1, 2, and 3 (on both sides of building 2). According to the CSP Section 2.0.5(F), a deviation greater than 20 percent would require a variance in accordance with Pomona Zoning Ordinance Section .560-C. As the deviation would be less than 20 percent, a request for deviation would be applicable, and can be granted when, in the opinion of the Community Development Director, significantly greater benefits from the project can be provided than would occur if all the minimum requirements were met.

Parking

The CSP parking regulation for the Midtown Segment requires a minimum of 2.5 parking spaces per 3-bedroom unit, and 3 parking spaces per 4-bedroom unit for project residents. A minimum of one parking space and maximum of 1.2 parking spaces are required for every four units (nine spaces required for the proposed 36 total units). Therefore, the project is required to provide a minimum of 100 parking spaces in total to meet residential and guest parking needs.

The project would provide 72 covered and 30 tandem covered parking stalls for residential use, and 11 guest parking spaces, for a total of 113 spaces on the project site. Therefore, the project would be consistent with the parking regulations of the CSP[2].

Design and Landscaping

As shown in Figure 4 and Figure 5, the proposed project would feature a stucco façade with cementitious fiber board siding accents on the ground level and metal work accents on all floors, large dual glazed vinyl windows, and clean modern lines. The buildings are designed with articulation to create a varied streetscape aesthetic, with low-level wood and cinder block planters to create visual interest at the pedestrian scale. Landscaping would be provided around the perimeter of the project site with a shared common outdoor open space between buildings 5 and 6 for residential use. Landscaping would include drought tolerate plants.

[2] The parking consistency analysis is based on the proposed project and does not include analysis for Plan 1A-Alternative.

Table 3 Consistency with Zoning Ordinance Requirements

	CSP	Proposed Project
Height	3 stories	35 feet up to 3 stories
Density (dwelling units per acre; du/ac)	Maximum 80 du/ac	24.7 du/ac
Minimum Unit Size	1,000 square feet/3-bd unit	1,616-1,804 square feet/3-bd unit 2,117 square feet/4-bd unit
Setbacks	Mission Blvd: Minimum 5 feet, Maximum 20 feet Linden Street: Minimum 5 feet, Maximum 15 feet Fourth Street: Minimum 5 feet, Maximum 15 feet Eleanor Street: Minimum 5 feet, Maximum 15 feet	Mission Blvd: 7.5 feet Linden Street: 7.5 feet Fourth Street: 8 feet Eleanor Street: 7.5 feet
Parking	2.5 spaces/3-bd unit, 3 spaces/4-bd unit+ 1 guest space/4 dwelling units **100 total spaces required**	72 spaces in private garage + 30 tandem garage + 11 guest parking spaces **113 provided**

General Plan Consistency

The General Plan has several land-use policies that are relevant to the proposed project, including those related community character and quality. Table 4 presents an evaluation of the project's consistency with applicable General Plan policies. As shown in Table 4 the proposed project would be consistent with applicable General Plan policies.

Table 4 Consistency with Pomona General Plan Policies

Policy	Consistency
6D.P11: In "boulevard" segments, require buildings to activate the street by locating main entrances toward the street/sidewalk.	**Consistent:** According to Figure 2, two pedestrian access points onto the project site would be located along E. Mission Boulevard, and the ground-level would consist of patios and planter boxes with articulated building facades to provide aesthetic appeal and a welcoming residential vibe at the pedestrian scale. The nine units fronting E. Mission Boulevard would also have street-facing main entrances to be used by project residents, which would activate the street. Therefore, the project would be consistent with Policy 6D.P11 due to the provision of project elements that would activate E. Mission Boulevard.
6D.P13: Where street activity is important, locate new development closer to the sidewalk with buildings lining the majority of the property frontage. ▪ Punctuate important intersections with taller buildings ▪ Require the majority of each building frontage to be located at or near the sidewalk. Define specific standards, including maximum setbacks, in the Zoning Ordinance.	**Consistent:** According to Figure 2, Figure 4, and Figure 5, the proposed buildings would cover the majority of the property frontage along E. Mission Boulevard as well as S. Linden Street and S. Eleanor Street. As noted in Table 3 and shown in Figure 2, the proposed building setbacks would be consistent with the CSP.
6D.P14: Encourage development with parking located to the side or rear of buildings, in shared parking facilities, and in parking structures.	**Consistent:** As shown in Figure 2, 72 standard parking spaces would be provided in ground-level garages attached to each residential unit. The project would also include 30 tandem parking spaces in select units. The proposed site plan shows a total of 11 on-site parking spaces, which would not be readily visible from the streets. Therefore, the project would be consistent with Policy 6D.P14.
6D.P21: Require developers to provide pedestrian amenities along with new development and focus on connections between parks, transit, and surrounding properties.	**Consistent.** The project site is located between existing bus stops located at the corners of E. Mission Boulevard and S. Palomares Street, and E. Mission Boulevard and S. Towne Avenue, which are approximately 680 feet from the project site. The proposed project includes improvements to the sidewalks along the perimeter of the project site and the placement of landscaped planter beds to enhance site aesthetics at the pedestrian scale. Ground-level patios and building entrances along E. Mission Boulevard, S. Linden Street, and S. Eleanor Street would further encourage pedestrian walkability in the immediate vicinity of the project site by encouraging project residents to utilize the sidewalk. Therefore, the project would be consistent with Policy 6D.P21.
6E.P1: Permit a range of multi-family residential and residentially compatible development types in clusters at major crossroads throughout the city as identified in Fig. 6.3 Pomona Tomorrow and Fig. 7-A.8 Transect Tomorrow.	**Consistent.** According to GP Figure 6.3, the project site is designated for neighborhood use types in the transit-oriented district. According to GP Figure 7-A.8, the project site is in the T5 transect zone, which has a maximum allowable development for up to six floors and 80 du/ac. The proposed project would create a density of 24.7 du/ac, and proposed buildings would be a maximum of three stories in height. Therefore, the project would be consistent with Policy 6E.P1.

Policy	Consistency
7E.P22: Minimize emissions from residential and commercial uses through the following: ▪ Encourage new development to incorporate sustainability design solutions such as those outlined in the LEED ratings systems ▪ Require high efficiency heating and other appliances, such as cooking equipment, refrigerators, furnaces, and low NOx water heaters in new and renovated residential units ▪ Require new residential and commercial buildings to comply with or exceed requirements of CCR Title 24 ▪ Encourage passive solar building design and landscaping conducive to passive solar energy use for both residential and commercial uses (i.e.: building orientation in a south to southeast direction, planting deciduous trees on west sides of structures, landscaping with drought resistant species, and use of groundcover rather than pavement to reduce heat reflection) ▪ Provide natural gas hookups to fireplaces or require residential use of EPA-certified wood stoves, pellet stoves, or fireplace inserts	**Consistent.** The project incorporates several LEED design principals, such as the infill location in an existing urban neighborhood outside of a FEMA floodplain, in proximity to existing bus stops, and the use of native and/or drought tolerant plants in on site landscaping. The proposed residential units would contain high efficiency heating systems and appliances, and building construction, materials, and design comply with requirements of Title 24. The residential units would have natural gas hookups for the kitchens, but no fire places or wood stoves. The applicant will consider solar energy use for the proposed buildings, pending final project design.
7E.P24: For both private and public construction in new development and renovations, encourage rainwater and wastewater Best Management Practices (BMPs) to minimize rainwater runoff, and maximize rainwater and greywater collection and reuse.	**Consistent.** The project would include a rainwater collection system and wastewater best management practices (BMPs), which would be used to maintain on site landscaping.
7E.P25: Encourage the use of water efficient appliances and fixtures in new development and upgrades in existing development.	**Consistent.** The project would incorporate water efficient appliances and fixtures for all residential units and common area uses on site. Therefore, the project would be consistent with Policy 7E.P25.
7E.P27: Encourage the use of drought tolerant plant species (especially native plants), and low water use irrigation such as drip irrigation and rainwater capture systems.	**Consistent.** The project would incorporate native and/or drought tolerant plant species for all proposed landscaping on site. Project features also include a rainwater capture system to further reduce water use for landscape maintenance. Therefore, the project would be consistent with Policy 7E.P27.
7F.P3: In new development, locate larger scale buildings and more active uses, such as multi-family housing, commercial uses, institutional uses, or parks along wider streets with building entrances oriented towards streets, utilizing shopfronts, porches, patios, or outdoor spaces that overlook or interact with front yards or sidewalks.	**Consistent.** As shown in Figure 2, proposed buildings would be located along E. Mission Boulevard, S. Linden Street, and S. Eleanor Street. Two pedestrian access points onto the project site would be located along E. Mission Boulevard, and the ground-level would consist of patios and planter boxes with articulated building facades to provide aesthetic appeal, activate the streets, and create a welcoming residential vibe at the pedestrian scale. Therefore, the project would be consistent with Policy 7F.P3.

The proposed project would be consistent with applicable General Plan land use designation, General Plan policies, zoning designation and regulations. Therefore, the project is consistent with criterion ‘a’ of State CEQA Guidelines Section 15332, pertaining to Class 32 exemptions for infill development projects.

Criterion (b)

The proposed development occurs within city limits on a project site of no more than five acres substantially surrounded by urban uses.

The project site is 1.46 acres and vacant, with signs of previous disturbance. The project site vicinity is a developed urban neighborhood, and the site is immediately surrounded by urban residential, institutional, and commercial uses on all sides, as summarized in Table 2 above. Photos documenting the urban character of the project site and surrounding area are provided in Figure 6. The proposed project would constitute infill development of the project site. Therefore, the project is consistent with criterion 'b' of State CEQA Guidelines Section 15332, pertaining to Class 32 exemptions for infill development projects.

Criterion (c)

The project site has no value as habitat for endangered, rare, or threatened species.

The project site has no value as habitat for endangered, rare, or threatened species. The project site is located in a developed urban area that lacks habitat that would be suitable for sensitive animal or plant species. In addition, the project site itself is evident of prior disturbance and contains non-native ground cover and ornamental trees. The vegetation on site does not provide quality or sufficient habitat for sensitive species due to the small size, lack of native vegetation, and urban context. Therefore, the project is consistent with criterion 'c' of State CEQA Guidelines Section 15332, pertaining to Class 32 exemptions for infill development projects.

Criterion (d)

Approval of the project would not result in any significant effects relating to traffic, noise, air quality, or water quality.

The following discussion provides an analysis of the project's potential effects with respect to traffic, noise, air quality and greenhouse gas emissions, and water quality.

A. Traffic

The following analysis of potential traffic impacts from the proposed project is based on the Traffic Impact Analysis (TIA) completed by Ganddini Group, Inc. in May 2019, and is included as Appendix B. The TIA study area consists of five study intersections in the vicinity of the project site and the two proposed driveways along E. 4th Street. Two study intersections currently operate at level of service (LOS) F during both AM and PM peak hours: S. Linden Street at E. Mission Boulevard, and S. Eleanor Street at E. Mission Boulevard (Appendix B).

Daily, morning peak hour, evening peak hour, and Saturday peak hour trips for the proposed project were calculated using the trip generation rates published in the Institute of Transportation Engineers (ITE) Trip Generation Manual, 10th Edition (2017). Trip rates are based on ITE Land Use Code 220 for Multifamily Housing (Low-Rise). The project is estimated to generate approximately 264 daily trips, including 17 trips during the AM peak hour and 20 trips during the PM peak hour (Appendix B).

The TIA analyzed the following scenarios: Existing Plus Project, Opening Year (2022) without Project, and Opening Year (2022) with Project. In all three scenarios, two study intersections—S. Linden Street at E. Mission Boulevard, and S. Eleanor Street at E. Mission Boulevard—resulted in LOS F.

Other study intersections and the two proposed driveways were determined to operate at LOS B or better during AM and PM peak hours (Appendix B).

No off-site traffic mitigation measure improvements were identified in the TIA since the project is forecast to result in no significant traffic impacts at the study intersections for the analyzed scenarios.

Site Access

The proposed project would include two vehicular access points to the project site located along E. 4th Street, with the driveway located in the northeast quadrant designated for entry only, and the driveway located in the northwest quadrant designated for exit only. Therefore, vehicles would circulate in and out of the project site in a counter-clockwise manner.

Once on site, residents would have access to covered parking garages on the ground level through the private circulation driveway. A total of 11 guest parking spaces would be provided on-site, uncovered and accessible through the private circulation driveway. The proposed project would not result in inadequate emergency access or introduce any design features or incompatible uses, such as sharp curves or dangerous intersections, that would substantially increase traffic-related hazards at the site.

Construction Traffic

Construction traffic impacts could be significant if the project would create a prolonged impact due to lane closure; impede emergency vehicle access; create traffic hazards to bicycles and/or pedestrians; or result in similar substantial impediments to circulation or safety.

Construction vehicles, haul trucks, and construction workers would primarily travel along Mission Boulevard, Towne Avenue, and Garey Avenue, which are designated truck routes in the City pursuant to Pomona City Code (PCC) Subpart A, Chapter 58, Article V, Division 2, Section 58-294. As stated in Section 2, *Project Description*, construction of the project would require approximately five feet of soil excavation. However, no haul trips would be required since all excavated soils would be recompacted and redistributed on site.

The proposed project would not involve road closures that would significantly affect emergency vehicle access or create significant hazards to bicycles and pedestrians. The total number of construction trips would generally be staggered throughout the day, with most trips occurring during off-peak hours. To reduce temporary disruptions on the adjacent roadway network due to construction activities, the project would be subject to the standard City of Pomona condition of approval requiring preparation and approval of a Construction Management Plan prior to the initiation of construction activities. This plan would address the following items:

- Maintain existing access for land uses in proximity of the project site during project construction.
- Schedule deliveries and hauling of construction materials to non-peak travel periods, including night hours and weekends.
- Coordinate deliveries and hauling to reduce the potential of trucks waiting to load or unload for extended periods of time.
- Minimize obstruction of through-traffic lanes on Mission Boulevard.
- Meet the requirements of the Planning and Public Works/ Transportation Divisions with respect to construction scheduling and coordination with other construction near the project site, heavy

hauling and material delivery routing, types of trucks, use limitations per hour, hours of operations, traffic plan submission for different stages, pedestrian and vehicular access, street use permit process, daily street cleanliness and maintenance and safety after work, and parking management for construction workers.

On-street parking of construction-related vehicles is not allowed. The maximum number of construction parking spaces would be identified, and the applicant would be required to accommodate parking either at the project site or at a nearby site from which workers would be transported to the site. With the provision of such parking, it is anticipated there would be sufficient on-site access for workers traveling to the project site. Therefore, no additional management plans for construction workers are necessary.

In addition, traffic impacts are temporary by their nature, and would have no effect on traffic and circulation beyond the construction period.

Vehicle Miles Travelled

The City of Pomona is a member of the San Gabriel Valley Council of Governments (SGVCOG) and has adopted the SGVCOG's VMT screening and assessment approach. The project was screened for potential vehicle miles travelled (VMT) impacts using SGVCOG's Regional VMT Analysis Tool, pursuant to CEQA Guidelines Section 15064.3. The project site is within a regional transportation planning area, and the screening analysis concludes that the project site is located in an area that currently has low VMT (Appendix B). Implementation of the project would not change the VMT level for the project site, which would remain low. Based on the screening analysis, the project as designed and the proposed uses are below the VMT screening level threshold. Therefore, the project would have less than significant impact on VMT.

Conclusion

Based on the assessment of traffic impacts, parking, site access, construction impacts, and VMT impacts, implementation of the project would have a less than significant impacts related to traffic.

B. Noise

Noise Characteristics and Measurement

Noise level (or volume) is generally measured in decibels (dB) using the A-weighted sound pressure level (dBA). The A-weighting scale is an adjustment to the actual sound power levels to be consistent with that of human hearing response, which is most sensitive to frequencies around 4,000 Hertz (about the highest note on a piano) and less sensitive to low frequencies (below 100 Hertz).

One of the most frequently used noise metrics that considers duration as well as sound power level is the equivalent noise level (L_{eq}). The L_{eq} is defined as the steady A-weighted level that is equivalent to the same amount of energy as that contained in the actual varying levels over a period of time (essentially, L_{eq} is the average sound level).

Noise levels typically attenuate at a rate of 6 dBA per doubling of distance from point sources (such as construction equipment). Noise from lightly travelled roads typically attenuates at a rate of about 4.5 dBA per doubling of distance. Noise from heavily travelled roads typically attenuates at about 3 dBA per doubling of distance, while noise from a point source typically attenuates at about 6 dBA

per doubling of distance. Noise levels may also be reduced by the introduction of intervening structures. For example, a single row of buildings between the receptor and the noise source reduces the noise level by about 5 dBA, while a solid wall or berm that breaks the line-of-sight reduces noise levels by 5 to 10 dBA. The construction style for new buildings in California generally provides a reduction of exterior-to-interior noise levels of about 30 dBA with closed windows (Federal Highway Administration [FHWA] 2006).

The time period in which noise occurs is also important since noise that occurs at night tends to be more disturbing than that which occurs during the day. Community noise is usually measured using Day-Night Average Level (DNL), which is the 24-hour average noise level with a 10-dBA penalty for noise occurring during nighttime (10 PM to 7 AM) hours, or Community Noise Equivalent Level (CNEL), which is the 24-hour average noise level with a 5 dBA penalty for noise occurring from 7 PM to 10 PM and a 10 dBA penalty for noise occurring from 10 PM to 7 AM. Noise levels described by DNL and CNEL usually do not differ by more than 1 dBA. In practice, CNEL and DNL are used interchangeably.

Noise Standards

The Noise & Safety chapter of the Pomona General Plan Update (GPU) provides a description of existing noise levels and sources and incorporates comprehensive goals and policies. The GPU includes the Community Noise Exposure table (Table 5), which establishes acceptable exterior noise standards for various uses. Noise exposure in the range of 50 dB CNEL to 65 dB CNEL is normally acceptable and noise exposure in the range of <65 dB CNEL to 70 dB CNEL is conditionally acceptable for multi-family residential developments.

Table 5 Community Noise Exposure

	Community Noise Exposure L_{dn} or CNEL, dB						
Use	**<55**	**55-60**	**60-65**	**65-70**	**70-75**	**75-80**	**>80**
Residential – Single-Family, Duplex	NA[1]	NA CA[2]	CA	CA	NU[3]	CU[4]	CU
Residential – Multi-Family	NA	NA	NA CA	CA	NU	CU	CU

Source: Adapted from Pomona 2014.

[1] NA = Normally Acceptable. Specified land use is satisfactory, based upon the assumption that any building involved is of normal conventional construction, without any special noise insulation requirements.

[2] CA = Conditionally Acceptable. New construction or development should be undertaken only after a detailed analysis of the noise reduction requirements is made and needed noise insulation features included in the design. Conventional construction, but with closed windows and fresh air supply systems or air conditioning will normally suffice.

[3] NU = Normally Unacceptable. New construction or development should generally be discouraged. If new construction or development does proceed, a detailed analysis of the noise reduction requirements must be made and needed noise insulation features included in the design.

[4] CU = Clearly Unacceptable. New construction or development should generally not be undertaken.

To implement the City's noise policies, the City adopted Chapter 18, Article 7 Noise and Vibration Control (Noise Ordinance) in the Pomona Municipal Code (PMC). The City's Noise Ordinance states that it is the City's policy to regulate and control unnecessary, excessive, and annoying noise and vibration in the city to maintain public health, welfare, and safety.

The Noise Ordinance states that noise sources associated with or vibration created by construction, repair, remodeling or grading of any real property shall not take place between the hours of

8:00 PM and 7:00 AM on weekdays including Saturday. Such activities are prohibited at any time on Sunday or a federal holiday. The aforementioned activities are also not to exceed the noise standard of 65 dBA as measured on residential property.

Some land uses are more sensitive to ambient noise levels than other uses due to the amount of noise exposure and the types of activities involved. The project entails the construction of 36 multi-family residential units, which is considered a noise-sensitive land use. The project site is surrounded by surface parking lots, single- and multi-family dwellings, and commercial retail businesses. The nearest sensitive receptors to the project site are the adjacent residences located north, east, and south of the project site. Multi-family residential buildings are located approximately 400 feet northwest, and 200 feet east from the center of the project site, and single-family residential dwellings are located approximately 230 feet south from the center of the project site.

Existing Ambient Noise Levels

The primary source of noise in the vicinity of the project site is motor vehicle traffic, including automobiles, trucks, buses, and motorcycles along E. Mission Boulevard. While typical conversation noise may occur at nearby residential and commercial uses, these noise events would be sporadic and limited in volume. Thus, traffic is the main contributor to existing ambient noise levels.

To characterize existing noise levels in the project vicinity, three 15-minute noise measurements were taken between 12:00 PM and 1:00 PM on May 7, 2019, using an Extech 407780A ANSI Type 2, A-weighted integrating sound level meter 5 feet above ground level.

Figure 7 shows the on-site noise measurement locations, and Table 6 identifies the measured noise levels. Noise measurement 1 (NM1) was taken along E. Mission Boulevard near the center of the southern boundary of the site, intended to characterize noise along E. Mission Boulevard which is a secondary local transit corridor (City of Pomona 2014a). The location was sited away from the nearby intersections to avoid capturing vehicle starts and stops. NM2 was taken from the northeast corner of the project site on S. Eleanor Street, intended to characterize noise along Eleanor Street near existing multi-family residential receptors to the east of the project site. NM3 was taken from the northwest corner of the project site on E. 4th Street, intended to characterize noise along E. 4th Street.

Table 6 Onsite Noise Measurement Results

Measurement Number	Measurement Location	Primary Noise Sources	Sample Time	L_{eq} (dBA)
1	Center of project site frontage, along E. Mission Boulevard	E. Mission Boulevard	12:34 PM – 12:49 PM	67.6
2	Northeast corner of project site, on S. Eleanor Street	E. Mission Boulevard	12:14 PM – 12:29 PM	53.8
3	Northwest corner of project site, on E. 4th Street	E. Mission Boulevard	4:36 PM – 4:51 PM	52.8

Source: Rincon field visit on May 7, 2019 using an Extech 407780A ANSI Type II Integrating sound level meter.
Refer to Appendix C for noise monitoring data sheets.

Figure 7 Noise Measurement Locations

Imagery provided by Microsoft Bing and its licensors © 2019.

As shown in Table 6, noise levels were highest along E. Mission Boulevard at 67.6 dBA L_{eq}. Therefore, the existing ambient noise conditions along E. Mission Boulevard exceed the maximum normally acceptable exterior noise level of 65 dB CNEL, as shown in Table 5 and as stated in the City's Noise Ordinance. According to Section 18-311(b.2) of the City's Noise Ordinance, the applicable exterior noise standard plus 5 dBA is permitted for a cumulative period of up to 15 minutes in any hour; therefore, the maximum acceptable exterior noise level may be up to 70 dBA for a cumulative period of up to 15 minutes in any hour. However, Section 18-311(c) of the City's Noise Ordinance states that if ambient noise levels exceed any of the cumulative noise limit categories specified in subsections 18-311(b.1-b.4), the cumulative period applicable to the noise limit category shall be increased to reflect existing ambient noise levels. Therefore, the ambient existing noise level along E. Mission Boulevard is acceptable since it is below 70 dBA.

Furthermore, as shown in Table 5, an exterior noise level exposure of up to 70 dB CNEL is conditionally acceptable for multi-family residential uses. Therefore, based on existing ambient noise level measurement results and the City's Noise Ordinance for cumulative and ambient noise, project operational noise impacts are assessed according to the 70 dB CNEL standard. This approach is consistent with the generally accepted noise analysis approach (*Jensen v City of Santa Rosa 2018*).

Construction Noise

The project would result in temporary noise level increases during site preparation, excavation, paving, and building. The grading phase of project construction tends to create the highest construction noise levels because of the operation of heavy equipment. Project construction is estimated to occur over approximately 16 months, and would be prohibited between the hours of 8:00 PM and 7:00 AM on weekdays and Saturdays pursuant to the City's Noise Ordinance.

Noise levels for each construction phase of the project were estimated using the Federal Highway Administration's (FHWA) Roadway Construction Noise Model (RCNM) based on default equipment from the California Emissions Estimator Model (CalEEMod, v. 2016.3.2; Appendix C).

Project construction noise was modeled by construction phase to estimate noise levels that would be generated by construction activities at nearby residential uses. Noise was modeled using the Roadway Construction Noise Model (RCNM) developed by the FHWA to predict construction noise levels for a variety of construction operations. RCNM estimates the combined noise levels produced by specific equipment in each phase of construction based on the distance to the nearest receptor. The type of equipment utilized during each phase was based on defaults in CalEEMod used to model emissions, as construction equipment details have not yet been finalized for the project. The CalEEMod default construction equipment list and construction noise model worksheets are provided in Appendix C. The distances for noise from construction equipment represents the distances to the nearest noise sensitive receptors. However, construction equipment would not operate from only one location or operate exclusively along the project boundary near residential uses. Therefore, the noise levels presented in Table 7 are a conservative estimate.

Table 7 Construction Noise Levels During Different Phases of Construction

	L_{eq} dBA	
Phase	200 feet from center of site	400 feet from center of site
Site Preparation	73	67
Grading	73	67
Building Construction	71	65
Paving	71	65
Architectural Coating	62	56

See Appendix C for calculations. Based on standard attenuation rate of 6 dBA per doubling of distance.

Construction noise impacts would vary at different phases of construction. Maximum noise levels at the nearest noise-sensitive receptors would be approximately 73 dBA L_{eq} at 200 feet and 67 dBA L_{eq} at 400 feet during the site preparation and grading phases, as shown in Table 7. Building construction would be the longest phase, lasting approximately 200 days, and would generate noise levels of approximately 71 dBA L_{eq} at 200 feet to 65 dBA L_{eq} at 400 feet. The City's Noise Ordinance prohibits construction activity noise between the hours of 8:00 PM and 7:00 AM on weekdays, Sundays, and federal holidays. The maximum allowable exterior noise level between the hours of 7:00 AM to 8:00 PM is 65 dBA L_{eq} in multi-family residential.

The GPU EIR acknowledges the potential for temporary construction noise impacts associated with full buildout, but concludes that such impacts resulting from development under the GPU and CSP would be less than significant with adherence to policies in the GPU and the City's Noise Ordinance. Therefore, although construction noise impacts resulting from the project may periodically exceed the City's allowable exterior noise levels of 65 dBA, the project would have a less than significant impact due to the temporary nature of construction-related noise.

Construction Vibration

Vibration is a unique form of noise because its energy is carried through buildings, structures, and the ground, whereas sound is simply carried through the air. Thus, vibration is generally felt rather than heard. Some vibration effects can be caused by noise (e.g., the rattling of windows from passing trucks). This phenomenon is caused by the coupling of the acoustic energy at frequencies that are close to the resonant frequency of the material being vibrated. Typically, ground-borne vibration generated by manmade activities attenuates rapidly as distance from the source of the vibration increases.

PMC Section 18-305 states that any vibration created shall not endanger the public health, welfare and safety. No quantitative standards are established. Vibration impacts are analyzed using the thresholds from Caltrans' *Transportation and Construction Vibration Guidance Manual* and the FTA's *Transit Noise and Vibration Impact Assessment Manual* (Caltrans 2013b; FTA 2018). From these documents, the applicable thresholds for the vibration analysis are 0.5 peak particle velocity (PPV) inches per second at residential structures and the human "distinctly perceptible" threshold of 0.25 PPV inches per second.

Construction activities known to generate excessive ground-borne vibration, such as pile driving, would not be conducted to implement the project. The greatest anticipated source of vibration during general project construction activities would be from a roller, which would be used during

paving activities and, when accounting for building setbacks, may be used within 105 feet of the nearest off-site residential structure. A vibratory roller would create approximately 0.043 inches per second PPV at a distance of 105 feet[3] (Caltrans 2013b). This would be lower than what is considered a distinctly perceptible impact for humans of 0.25 inches per second PPV, and the structural damage impact to residential structures of 0.5 inches per second PPV. Therefore, temporary impacts associated with the roller (and other potential equipment) would be less than significant.

The project does not include any substantial vibration sources associated with operation. Therefore, operational vibration impacts would be less than significant.

Operational Noise

Existing uses near the project site may periodically be subject to noises associated with operation of the proposed project, including noise that is typical of residential development such as conversations, music, trash hauling, engine noise from the movement of vehicles in the parking area, beeping from locking and unlocking vehicles, and noise associated with rooftop ventilation and heating systems. Additionally, conversations taking place on the ground-floor outdoor paseo may be heard at adjacent residences. However, this activity would not substantially contribute to average ambient noise levels and would be comparable to similar activities at the existing residential uses on neighboring properties.

In addition, the proposed project would generate traffic noise from vehicles traveling to and from the project site. As discussed in the traffic analysis provided under criterion 'd,' the proposed project would generate approximately 264 daily trips, with 17 trips during the AM peak hour and 20 trips during the PM peak hour (Appendix B). The project-specific TIA concludes that the project generated traffic would have negligible change in the level of service for study intersections, and project trips would not double the amount of traffic in the vicinity of the project site (Appendix B). Roughly a doubling of traffic volume would be necessary to generate a perceptible increase in roadway noise levels of 3 dBA or more. Therefore, the minimal amount of traffic generated by the proposed project relative to existing traffic volumes on local roadways would not result in a perceptible increase in roadway noise.

Conclusion

The proposed project would not result in a significant long-term increase in traffic noise levels, and temporary construction noise impacts would be less than significant based on compliance with the City's time restrictions on construction activities pursuant to the City's standard conditions for the project. The project's operational noise would be similar to noise from other nearby residences and would be less than significant in the context of the existing noise in the surrounding area. Therefore, noise-related impacts resulting from implementation of the proposed project would be less than significant.

C. Air Quality

The project site is located in Pomona, in the South Coast Air Basin (SCAB), which is under the jurisdiction of the South Coast Air Quality Management District (SCAQMD). The SCAQMD recommends the use of quantitative thresholds to determine the significance of temporary

[3] $PPV_{equipment} = PPV_{ref}(25/D)^n$ (in/sec) where PPV_{ref} is the reference PPV at 25 feet (0.210 in/sec for rollers), D is the distance from equipment to the receiver in feet, and n is 1.1 (the value related to the attenuation rate through ground) (Caltrans 2013b).

construction-related pollutant emissions and project operations. These thresholds are shown in Table 8.

The SCAQMD has also developed Localized Significance Thresholds (LSTs), which were devised in response to concern regarding exposure of individuals to criteria pollutants in local communities. LSTs represent the maximum emissions from a project that will not cause or contribute to an air quality exceedance of the most stringent applicable federal or state ambient air quality standard at the nearest sensitive receptor, taking into consideration ambient concentrations in each source receptor area (SRA), project size, and distance to the sensitive receptor. However, LSTs do not apply to projects that are categorically exempt under CEQA, such as the proposed project which is considered exempt as a Class 32 infill development project.

Table 8 SCAQMD Air Quality Significance Thresholds

	Mass Daily Thresholds	
Pollutant	Operation Thresholds (lbs/day)	Construction Thresholds (lbs/day)
NO_X	55	100
ROG[1]	55	75
PM_{10}	150	150
$PM_{2.5}$	55	55
SO_X	150	150
CO	550	550

[1] Reactive Organic Gases (ROG) are formed during combustion and evaporation of organic solvents. ROG are also referred to as Volatile Organic Compounds (VOC).

Source: SCAQMD 2019

Construction Emissions

Development of the proposed project would involve site grading, excavation, new building construction, and other construction-related activities that have the potential to generate substantial air pollutant emissions. Temporary construction emissions from these activities were estimated using the California Emissions Estimator Model (CalEEMod, v. 2016.3.2), based on the proposed site plan (Figure 2) and construction information provided by the applicant. Table 9 shows the maximum daily construction emissions. Emissions from construction activities would not exceed SCAQMD daily significance thresholds and would not result in any significant air quality impacts.

Table 9 Estimated Construction Emissions

	Maximum Daily Emissions (lbs/day)				
	ROG	NO_X	CO	PM_{10}	$PM_{2.5}$
Construction Year 2020	2.2	18.4	14.3	3.6	2.1
Construction Year 2021	40.9	14.1	13.9	1.0	0.7
SCAQMD Threshold	75	100	550	150	55
Exceed SCAQMD Threshold?	**No**	**No**	**No**	**No**	**No**

Source: CalEEMod v. 2016.3.2

Note: Please see Appendix D for complete modeling results. For a conservative estimate of project emissions, construction and operational emissions were modeled and reported for the maximum day during the winter, since emission estimates are typically higher in the winter months compared to the summer months. Winter emission estimates are then compared to the SCAQMD thresholds.

Operational Emissions

Long-term operational emissions associated with the proposed project are those associated with vehicle trips (mobile emissions) and the use of natural gas, consumer products, and architectural coatings (area source emissions) upon buildout of the project. Heavily congested intersections can lead to long-term mobile emissions that exceed carbon monoxide (CO) standards and lead to CO hotspots. CO hotspots are locations where the federal or state ambient air quality standards could be exceeded because of the concentration of motor vehicles that are idling. Other factors contributing to a CO hotspot include the configuration of the intersection, distance to sensitive receptors, and patterns of air circulation. However, as discussed in the Traffic section above, the proposed project would not result in significant traffic increases at intersections and would not require analysis for CO hotspots, based on Caltrans' Transportation Project CO Protocol Manual.

As shown in Table 10, the emissions generated by the proposed project would not exceed the SCAQMD's daily operational thresholds for any pollutant and would not significantly affect regional air quality. Therefore, the project would have a less than significant impact on air quality from operational emissions.

Table 10 Estimated Operational Emissions

	Daily Emissions (lbs/day)				
	ROG	NO_X	CO	PM_{10}	$PM_{2.5}$
Area	1.5	<0.1	3.0	<0.1	<0.1
Energy	<0.1	0.2	0.1	<0.1	<0.1
Mobile	0.4	2.2	5.0	1.6	0.4
Project Emissions	1.8	1.9	8.1	1.6	0.4
SCAQMD Thresholds	55	55	550	150	50
Exceed Thresholds?	**No**	**No**	**No**	**No**	**No**

Source: CalEEMod v. 2016.3.2

Note: See Appendix D for complete modeling results. For a conservative estimate of project emissions, construction and operational emissions were modeled and reported for the maximum day during the winter, since emission estimates are typically higher in the winter months compared to the summer months. Winter emission estimates are then compared to the SCAQMD thresholds.

Conclusion

The operation and construction emissions associated with the proposed project would not generate significant air quality impacts as shown in the CalEEMod results summarized in Table 9 and Table 10. Additionally, as discussed in the Traffic section, this project would not result in significant increases in traffic at intersections. Thus, the project would not require analysis for CO hotspots, based on the recommendations contained in Caltrans' Transportation Project CO Protocol Manual.

D. Greenhouse Gas Emissions

The majority of individual projects do not generate sufficient greenhouse gas (GHG) emissions to directly influence climate change. However, physical changes caused by a project can contribute incrementally to cumulative effects that are significant, even if individual changes resulting from a project are limited. The issue of climate change typically involves an analysis of whether a project's contribution towards an impact would be cumulatively considerable. "Cumulatively considerable" means that the incremental effects of an individual project are significant when viewed in connection with the effects of past projects, other current projects, and probable future projects (CEQA Guidelines, Section 15064[h][1]).

In guidance provided by the SCAQMD's GHG CEQA Significance Threshold Working Group in September 2010, SCAQMD considered a tiered approach to determine the significance of residential and commercial projects. The draft tiered approach is outlined in meeting minutes dated September 29, 2010.

Tier 1 - If the project is exempt from further environmental analysis under existing statutory or categorical exemptions, there is a presumption of less than significant impacts with respect to climate change. If not, then the Tier 2 threshold should be considered.

Tier 2 - Consists of determining whether or not the project is consistent with a GHG reduction plan that may be part of a local general plan, for example. The concept embodied in this tier is equivalent to the existing concept of consistency in CEQA Guidelines section 15064(h)(3), 15125(d) or 15152(a). Under this Tier, if the project is consistent with the qualifying local GHG reduction plan, it is not significant for GHG emissions. If there is not an adopted plan, then a Tier 3 approach would be appropriate.

Tier 3 - Establishes a screening significance threshold level to determine significance. The Working Group has provided a recommendation of 3,000 metric tons (MT) of CO_2e per year for residential projects.

Tier 4 - Establishes a service population threshold to determine significance. The Working Group has provided a recommendation of 4.8 MT CO_2e per year for land use projects and 6.6 MT CO_2e per year for plan level projects. The per capita efficiency targets are based on the AB 32 GHG reduction target and 2020 GHG emissions inventory prepared for ARB's 2008 Scoping Plan.[4]

Tier 1 applies because the project falls under a categorical exemption pursuant to CEQA (Class 32). The analysis provided below further confirms that the project would not result in significant GHG emissions, wherein estimated project GHG emissions are compared to the bright line threshold of 3,000 MT CO_2e per year for residential projects.

[4] SCAQMD took the 202 statewide GHG reduction target for land-use-only GHG emissions sectors and divided it by the 2020 statewide employment for the land use sectors to derive a per capita GHG efficiency metric that coincides with the GHG reduction targets of AB 32 for year 2020.

The value of 3,000 MT CO_2e per year was developed in accordance with AB 32 requirements of GHG emissions at 1990 levels by 2020. SB 32 has codified a target of 40 percent below 1990 emissions levels by 2030. Combined with the California Office of Planning and Research (OPR) Technical Advisory on CEQA and Climate Change (OPR 2008) guidance that quantitative analysis should be done up until the final year of build-out, a project provides a fair share contribution toward California's long-term GHG emissions targets if the GHG emissions meet or exceed the threshold in the project's build-out year for California to stay on the path to meet its 2030 GHG reduction goal. To meet this path, emissions would need to be reduced by 4.98 percent per year from 2020 to 2030. Applying this to the bright line threshold of 3,000 MT CO_2e per year would result in a 2022 (the project's operational year) bright line threshold of 2,719 MT CO_2e per year. This threshold was applied to the GHG emissions for the project.

Construction Emissions

Based on the CalEEMod results, construction activity for the project would generate an estimated 324 metric tons of CO_2e (as shown in Table 11) during construction. Amortized over a 30-year period (the assumed life of the project), construction of the proposed project would generate approximately 11 metric tons of CO_2e per year. Emissions from construction are amortized for the purpose of comparison with annual operational emissions over the estimated 30-year life of the project.

Table 11 Estimated Construction Emissions of Greenhouse Gases

	Construction Emissions (metric tons CO_2e)
Total Emissions	324
Amortized over 30 years	11 MT CO_2e/year

See Appendix D for GHG emission worksheets and assumptions.

Operational Emissions

Long-term operational emissions relate to area sources based on consumer product use and landscape maintenance, energy use, solid waste generation, water use, and residential transportation. Table 12 summarizes the combined construction, operational, and mobile GHG emissions associated with the project. The combined annual project emissions are estimated at 389 metric tons of CO_2e per year. Therefore, the project would not exceed SCAQMD's bright line threshold and project GHG emissions impacts would be less than significant.

Table 12 Combined Annual Emissions of Greenhouse Gases

Emission Source	Annual Emissions (MT CO_2e)
Project Construction	11
Project Operational	
Area	1
Energy	91
Solid Waste	8
Water	18
Project Mobile	
CO_2 and CH_4	321
N_2O	15
Total Emissions from Project	465
SCAQMD Threshold	2,719
Exceed Threshold?	**No**

See Appendix D for CalEEMod worksheets.

Conclusion

The proposed project entails a use that is consistent with existing General Plan and Specific Plan policies, and zoning district regulations, as discussed under criterion 'a.' The estimated annual project-related GHG emissions would be below the SCAQMD's bright line threshold, as summarized in Table 12. Therefore, the project would not generate GHG emissions that would result in a significant impact.

E. Water Quality

Urban runoff can have a variety of harmful effects. Oil and grease contain a number of hydrocarbon compounds, some of which are toxic to aquatic organisms at low concentrations. Heavy metals such as lead, cadmium, and copper are the most common metals found in urban stormwater runoff. These metals can be toxic to aquatic organisms and have the potential to contaminate drinking water supplies. Nutrients from fertilizers, including nitrogen and phosphorous, can result in excessive or accelerated growth of vegetation or algae, resulting in oxygen depletion and additional impaired uses of water.

The project site is currently vacant with evidence of disturbance. The northern half of the project site is covered with loose gravel, and the southern half of the project site contains bare, compacted soil with patches of non-native vegetation (weeds). Stormwater runoff that does not infiltrate on site currently enters storm drains on the corner of E. Mission Boulevard and S. Linden Street and flows to existing City drainage facilities. Lot coverage under the proposed project would consist of approximately 49.3 percent of the total lot area (31,348 square-foot building footprint on a 63,598 square-foot site). The proposed project would include more impervious surface than compared to existing conditions.

The applicant would be required to comply with all City requirements under the current National Pollutant Discharge Elimination System (NPDES) MS4 Permit during construction and operation of

the project. The City requires the preparation of a Stormwater Pollution Prevention Plan (SWPPP) in order to comply with the NPDES. The SWPPP must describe the site, the facility, erosion and sediment controls, runoff water quality monitoring, means of waste disposal, implementation and approved local plans, control of construction sediment and erosion control measures, maintenance responsibilities, and non-stormwater management controls, as well as incorporation of Low Impact Development (LID) Best Management Practices (BMPs) such as the Best Available Technology Economically Achievable (BAT) and the Best Conventional Pollutant Control Technology (BCT) in order to avoid discharging pollutants into waterways. The SWPPP requirements would need to be satisfied prior to beginning construction on any project located on a site greater than one acre.

BMPs would be required during general operation of the project to meet storm water runoff water quality standards and waste discharge requirements. Required compliance with the project SWPPP and City's NPDES requirements would reduce the potential for adverse water quality and hydrology effects. Development of the proposed project would not result in a reduction in groundwater recharge or otherwise affect the underlying groundwater basin; would not result in additional stormwater runoff; and would not degrade the quality of stormwater runoff from the site with SWPPP compliance.

Conclusion

The proposed project would be required to comply with the City's current NPDES permit and project-specific SWPPP. Since the project would implement BMPs during construction and use permanent LID measures for ongoing operation, the impacts related to water quality would be less than significant.

Therefore, the project is consistent with criterion 'd' of State CEQA Guidelines Section 15332, pertaining to Class 32 exemptions for infill development projects based on the analyses provided in subsections 'a' through 'e' of criterion 'd.'

Criterion (e)

The site can be adequately served by all required utilities and public services.

The site can be adequately served by all required utilities and public services. The project would be located in an existing urban area served by existing public utilities and services. A substantial increase in demand for services or utilities would not be anticipated with implementation of the proposed project. The City of Pomona provides water, sewer, and solid waste collection services to existing uses in the immediate project site vicinity and would continue to provide these services to the proposed project. Electricity would be provided by Southern California Edison and gas would be provided by SoCalGas, both of whom are existing service providers for the project site and vicinity. Therefore, the project is consistent with criterion 'e' of State CEQA Guidelines Section 15332, pertaining to Class 32 exemptions for infill development projects.

5. Exceptions to the Exemption Analysis

Criterion (a)

Location. Classes 3, 4, 5, 6, and 11 are qualified by consideration of where the project is to be located – a project that is ordinarily insignificant in its impact on the environment may in a particularly sensitive environment be significant. Therefore, these classes are considered to apply all instances, except where the project may impact on an environmental resource of hazardous or critical concern where designated, precisely mapped, and officially adopted pursuant to law by federal, state, or local agencies.

This exception only applies to Class 3, 4, 5, 6, and 11 categorical exemptions. The proposed project is an infill development project, consistent with a Class 32 categorical exemption. Therefore, exception criterion 'a' does not apply to the project.

Criterion (b)

Cumulative Impact. All exemptions for these classes are inapplicable when the cumulative impact of successive projects of the same type in the same place, over time is significant.

The project site is located in a developed urban neighborhood. Existing uses in the immediate vicinity of the project site consist of surface parking lots, single- and multi-family residential dwellings, and commercial retail businesses. There are 17 renovation and construction projects within a 1-mile radius of the project site, summarized in Table 13. The proposed project entails residential uses on a site that is currently vacant with signs of prior disturbance. As stated in the analysis above for Class 32 categorical exemption criterion 'a,' the proposed project is consistent with development standards applicable to the existing zoning district. Project construction would result in less than significant environmental impacts to residents in the immediate vicinity of the project site with adherence to the City's conditions of approval. All of the projects listed in Table 13 are likewise subject to City conditions and/or mitigation measures applied on a project-by-project basis. Therefore, exception criterion 'b' does not apply to this project.

Table 13 Cumulative Projects within One-Mile Radius of Project Site

Address	Use	Project Type
295 W. 2nd Street	Mixed-use	Renovation and new construction
424 W. Commercial Street	Residential	New construction
543 W. Center Street	Residential	Minor development
590 W. Grand Avenue	Residential	New construction
636 E. Grand Avenue	Residential	New construction
665 E. 6th Street	Residential	New construction
690 S. Reservoir Street	Warehouse	New construction
952 E. 9th Street	Residential	Tentative Tract Map
1061 E. Phillips Street	Residential	New construction
1110 S. Reservoir Street	Warehouse and Office Space	New construction
1131 E. 2nd Street	Industrial	New construction
1198 S. San Antonio Street	Residential	New construction
1326 E. 9th Street	Light Industrial	New construction
1385 S. San Antonio Street	Residential	New construction
1439 S. Palomares Street	Residential	New construction
1535 S. Reservoir Street	Residential	Tentative Tract Map
1538 S. Towne Avenue	Residential	New construction

Source: City of Pomona 2019a and 2019b.

Criterion (c)

Significant Effect. A categorical exemption shall not be used for an activity where there is a reasonable possibility that the activity will have a significant effect on the environment due to unusual circumstances.

As described in Section 3, *Existing Site Conditions*, the project site is generally flat and vacant, with evidence of previous disturbance, and is located in an urbanized area. The project site has no value as a habitat area for endangered, rare, or threatened species due to the small size, lack of native vegetation, and urban context. The project site does not contain any scenic resources. There are no unusual circumstances that would cause significant environmental impacts due to the proposed multi-family residential project. Therefore, exception criterion 'c' does not apply to the project.

Criterion (d)

Scenic Highways. A categorical exemption shall not be used for a project which may result in damage to scenic resources, including but not limited to, trees, historic buildings, rock outcroppings, or similar resources, within a highway officially designated as a state scenic highway. This does not apply to improvements which are required as mitigation by an adopted negative declaration or certified EIR.

The project site is located approximately 1.5 miles south of Interstate 10 (I-10), 1.7 miles east of CA State Route 71 (SR-71), and 2.2 miles north of SR-60. None of these routes are designated as a scenic highway (Caltrans 2018). The project site is relatively flat, is not visible from any of these

highways, and is located in an urbanized residential neighborhood. Therefore, exception criterion ‘d’ does not apply to the project.

Criterion (e)

Hazardous Waste Sites. A categorical exemption shall not be used for a project located on a site which is included on any list compiled pursuant to Section 65962.5 of the Government Code.

The project site is not listed as a hazardous waste site according to the EnviroStor and GeoTracker databases (DTSC 2019; SWRCB 2015). Therefore, exception criterion ‘e’ does not apply to the project.

Criterion (f)

Historical Resources. A categorical exemption shall not be used for a project which may cause a substantial adverse change in the significance of a historical resource.

The project site is vacant and is located in an urbanized neighborhood that is developed with residential, institutional, and commercial uses. The project site was developed with residential homes, though historic aerial maps indicate those buildings were all removed in the late 1980s to early 1990s, and the project site remained vacant since (NETR 2019). As noted in Section 2, *Project Description*, the project site shows signs of previous disturbance.

There are no buildings or structures of historic significance on the project site or immediate vicinity according to General Plan Figure 7-F.2, *Historic Districts and Landmarks* (City of Pomona 2014a).

Ground disturbance during project construction would occur in order to excavate and establish the foundations of the new proposed buildings. However, no soil would be exported or imported on site since excavated soils would be recompacted and redistributed on site.

The project would comply with the City’s standard conditions pertaining to tribal cultural resources, archaeological resources, human remains, and paleontological resources should such resources, previously unknown, be encountered during ground disturbing construction activities. The City’s standard conditions include procedures to halt work until found resources are appropriately handled, assessed, and/or recorded by qualified personnel to prevent damage to found resources.

Therefore, the proposed project would not have a significant impact on historic resources, and exception criterion ‘f’ does not apply to the project.

6. Summary

Based on this analysis, the proposed Tentative Tract 70570 Project meets all criteria for a Class 32 Categorical Exemption pursuant to CEQA Guidelines Section 15332. There are no exceptions, pursuant to State CEQA Guidelines Section 15300.2, to the Class 32 Categorical Exemption that apply to the project.

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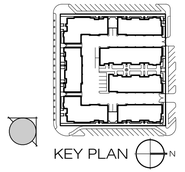
Appendix A

Project Site Plans



CONCEPTUAL RENDERING
VIEW FROM EAST MISSION BOULEVARD

MISSION & LINDEN TOWNHOMES

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PROJECT ANALYSIS

LEGAL DESCRIPTION:	BLOCK 'A' LOT #7 & #8 BLK #72
APPRAISAL PARCEL NUMBER:	8335-014-917
LOT SIZE:	±63,597.60 S.F. (1.46 ACRES)
NUMBER OF DWELLING UNITS:	36 DWELLING UNITS
DENSITY:	24.7 DU/ACRE
COVERAGE:	± 31,348 S.F. (49.29%)
BUILDING HEIGHT:	35'-0"
NUMBER OF STORIES:	3 STORIES
ZONING CLASSIFICATION:	DPSP
GENERAL PLAN DESIGNATION:	(MU-I) DPSP
BUILDING CONSTRUCTION:	TYPE V-A (FULLY SPRINKLERED)

NOTE: (2) PARCELS ARE WITHIN THIS PROPOSED DEVELOPMENT AND THERE IS (1) ALLEY BEING VACATED (CITY OWNED).

UNIT ANALYSIS

UNITS	TYPE	QUANTITY	GROSS LIVABLE AREA	TOTAL GROSS LIVABLE AREA	NET LIVABLE AREA	TOTAL NET LIVABLE AREA
A1	3 BDR + 2.5 BA	28	1,752 S.F.	49,056 S.F.	1,616 S.F.	45,248 S.F.
A2	3 BDR + 2 BA + (2) 0.5 BA	4	1,956 S.F.	7,824 S.F.	1,804 S.F.	7,216 S.F.
B	4 BDR + 3 BA	2	2,273 S.F.	4,546 S.F.	2,117 S.F.	4,234 S.F.
C	3 BDR + 2.5 BA	2	1,920 S.F.	3,840 S.F.	1,793 S.F.	3,586 S.F.
TOTAL		36		65,266 S.F.		60,284 S.F.

UNIT ANALYSIS WITH PLAN A1-ALT.

UNITS	TYPE	QUANTITY	GROSS LIVABLE AREA	TOTAL GROSS LIVABLE AREA	NET LIVABLE AREA	TOTAL NET LIVABLE AREA
A1-ALT.	3 BDR + 3.5 BA	28	1,941 S.F.	54,348 S.F.	1,795 S.F.	50,260 S.F.
A2	3 BDR + 2 BA + (2) 0.5 BA	4	1,956 S.F.	7,824 S.F.	1,804 S.F.	7,216 S.F.
B	4 BDR + 3 BA	2	2,273 S.F.	4,546 S.F.	2,117 S.F.	4,234 S.F.
C	3 BDR + 2.5 BA	2	1,920 S.F.	3,840 S.F.	1,793 S.F.	3,586 S.F.
TOTAL		36		70,558 S.F.		65,296 S.F.

PARKING ANALYSIS

COVERED PARKING	72 STANDARD STALLS
TANDEM PARKING	30 TANDEM STALLS
OPEN PARKING (ON SITE)	11 STANDARD STALLS
OPEN PARKING (STREET)	39 STANDARD STALLS
TOTAL PROVIDED	152 PARKING STALLS

PARKING ANALYSIS WITH PLAN A1-ALT.

COVERED PARKING	72 STANDARD STALLS
TANDEM PARKING	2 TANDEM STALLS
OPEN PARKING (ON SITE)	11 STANDARD STALLS
OPEN PARKING (STREET)	39 STANDARD STALLS
TOTAL PROVIDED	124 PARKING STALLS

VICINITY MAP N.T.S.

N

SHEET INDEX:

ARCHITECTURAL

PROJECT SUMMARY

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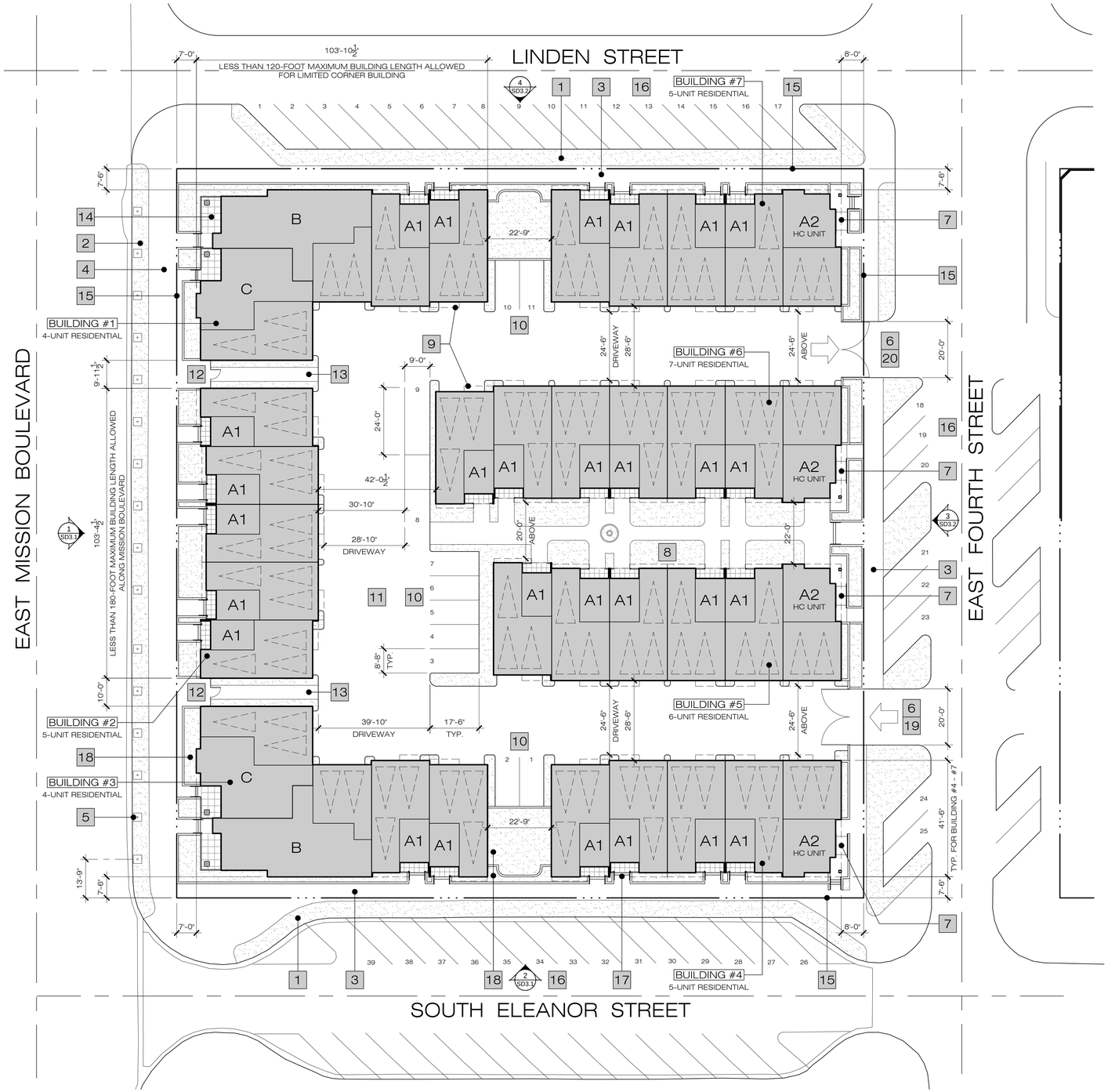

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1. 6'-0" WIDE LANDSCAPING
2. 6'-0" WIDE LANDSCAPING ALONG STREET
3. 6'-0" WIDE MIN. SIDEWALK
4. 10'-0" WIDE MIN. SIDEWALK
5. 24"-BOX TREES AT 15'-0" O.C. ALONG MISSION
6. DECORATIVE STAMPED CONCRETE
7. DISABLED ACCESS RAMP
8. LANDSCAPE
9. LINE OF FLOOR ABOVE
10. ON-SITE SURFACE PARKING
11. ONE-WAY CONCRETE DRIVEWAY
12. PEDESTRIAN ACCESS GATE
13. PEDESTRIAN WALK
14. PRIVATE PATIO
15. PROPERTY LINE
16. STREET PARKING
17. TYPICAL CONCRETE STAIR AND WALKWAY
18. TYPICAL LANDSCAPE PLANTER
19. VEHICULAR ENTRANCE
20. VEHICULAR EXIT

SITE PLAN

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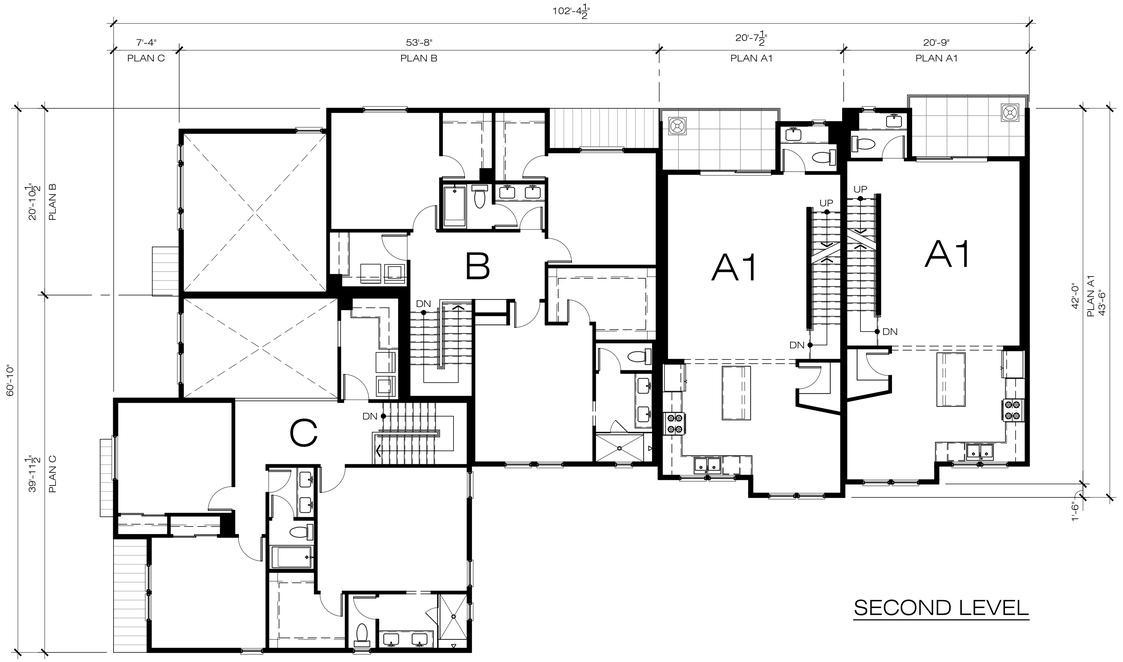

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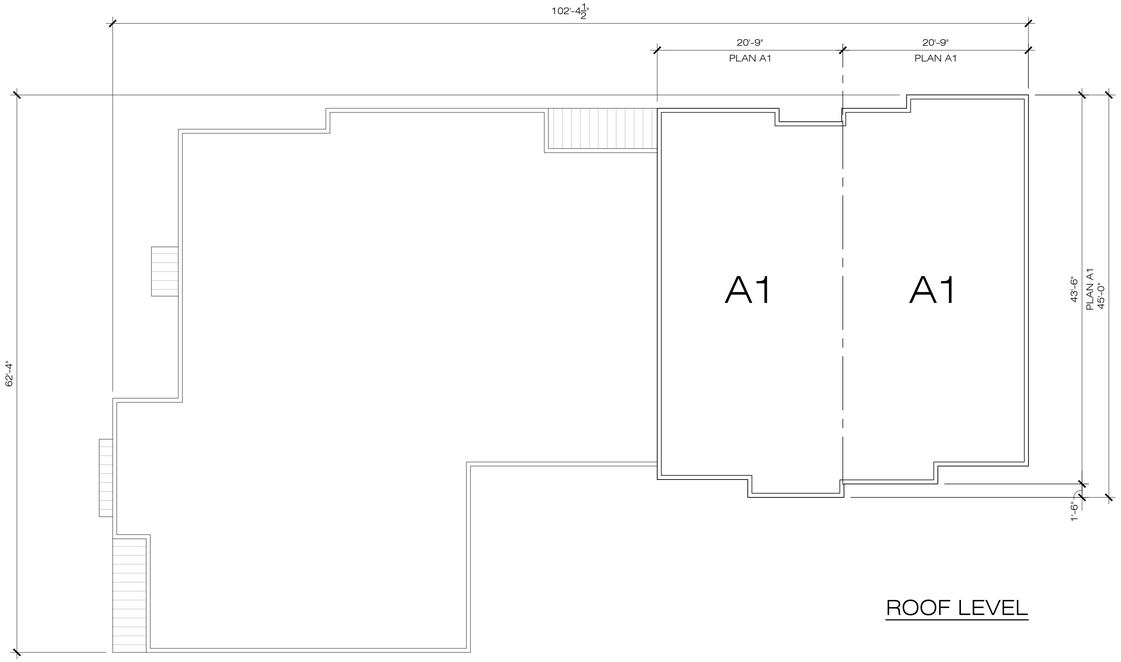

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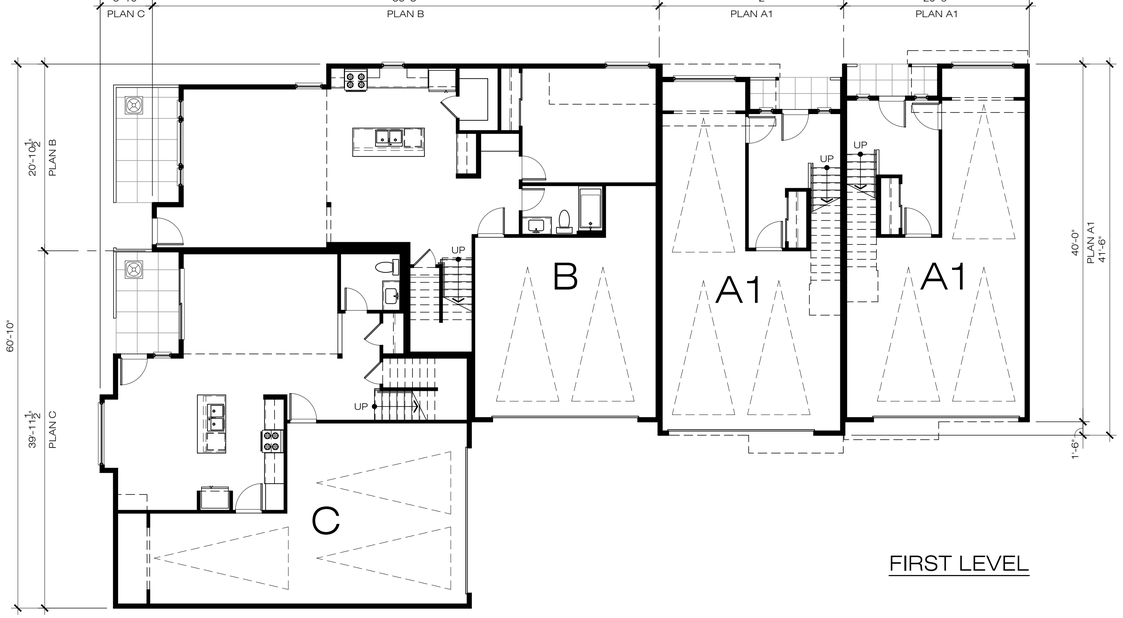

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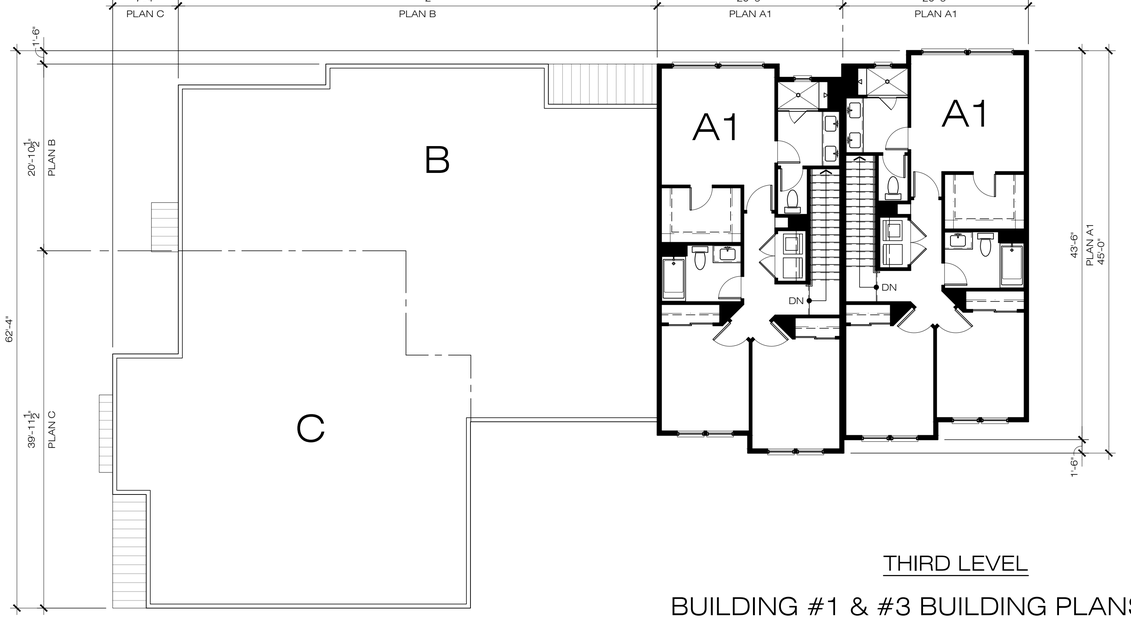

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BUILDING #1 & #3 BUILDING PLANS

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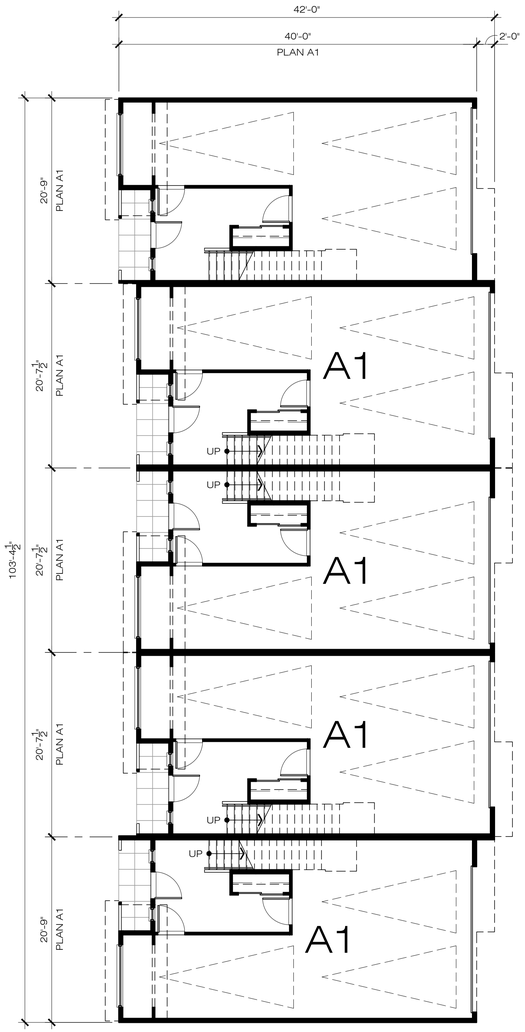

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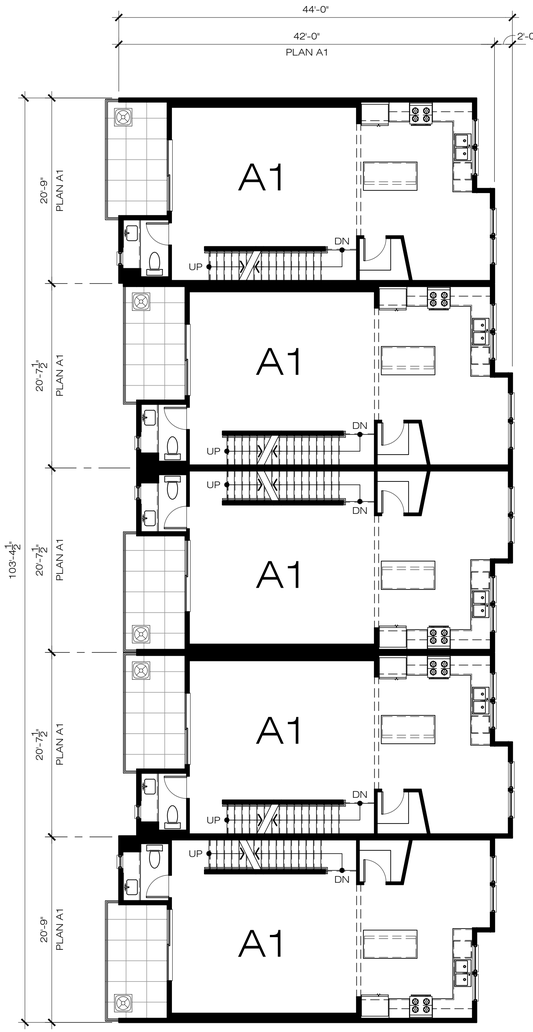

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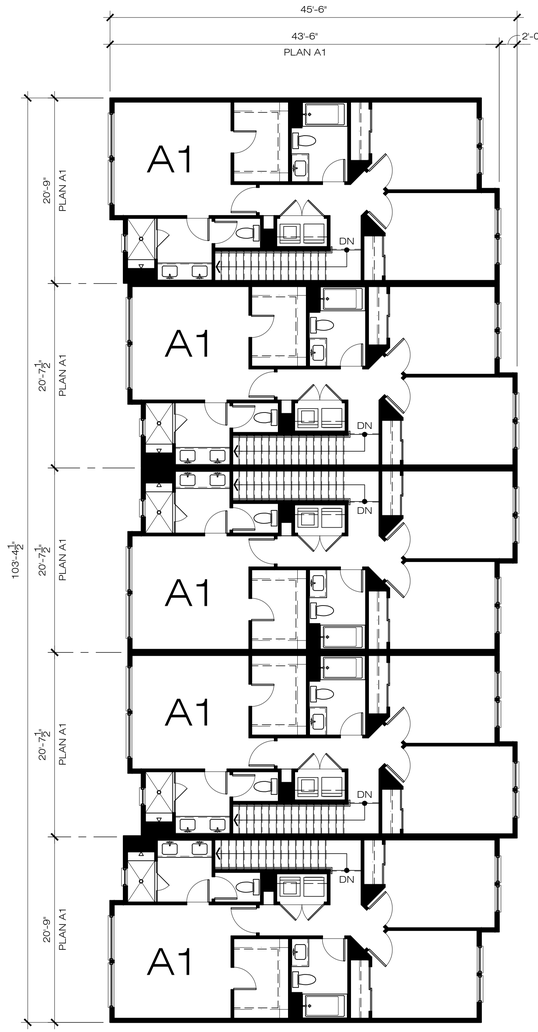

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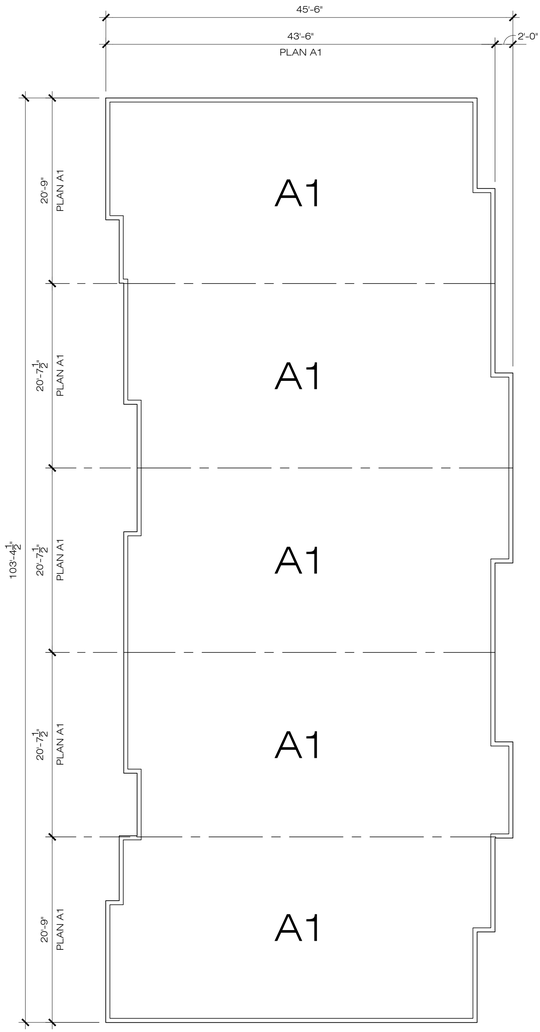

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BUILDING #2 BUILDING PLANS

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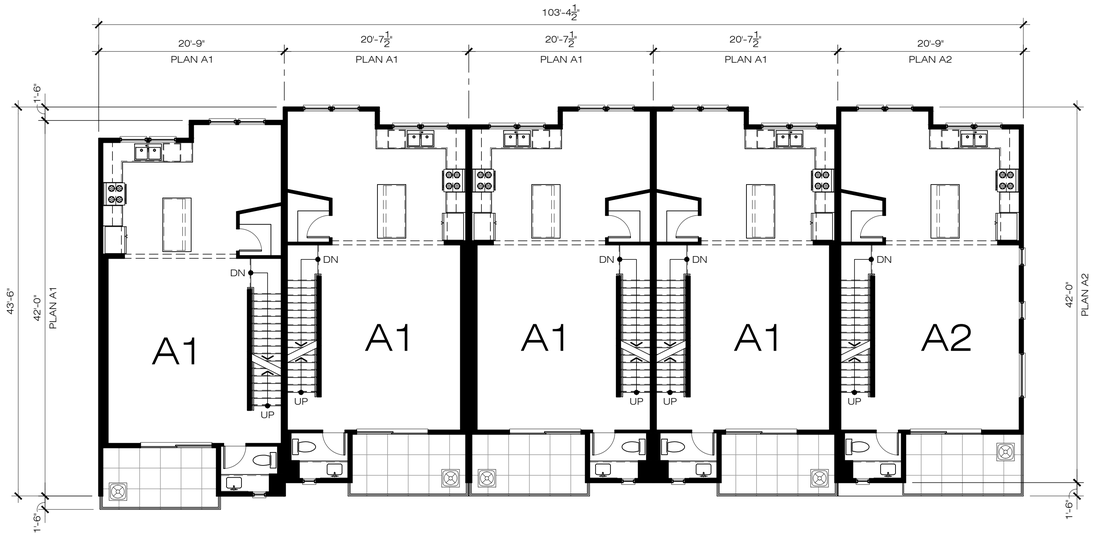

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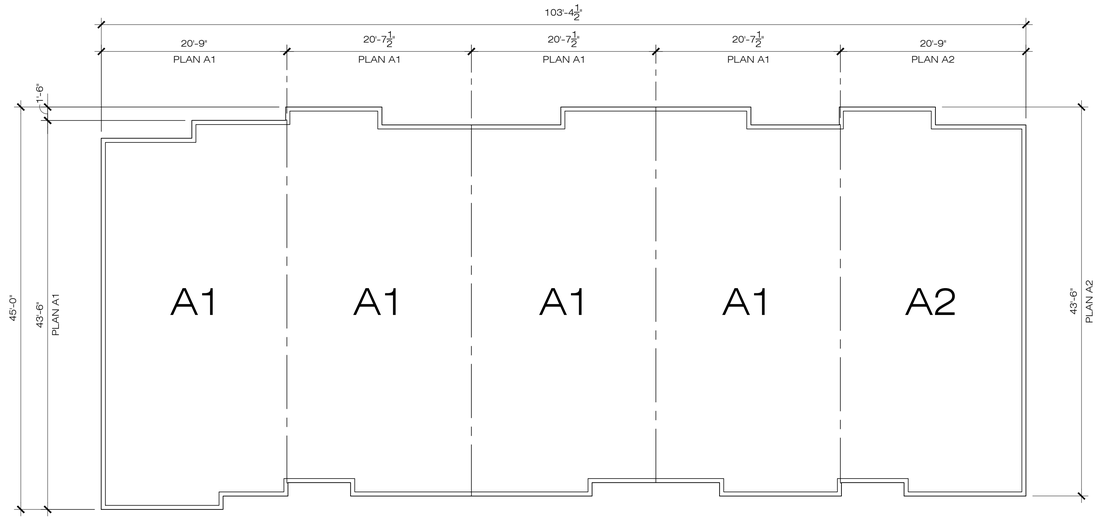

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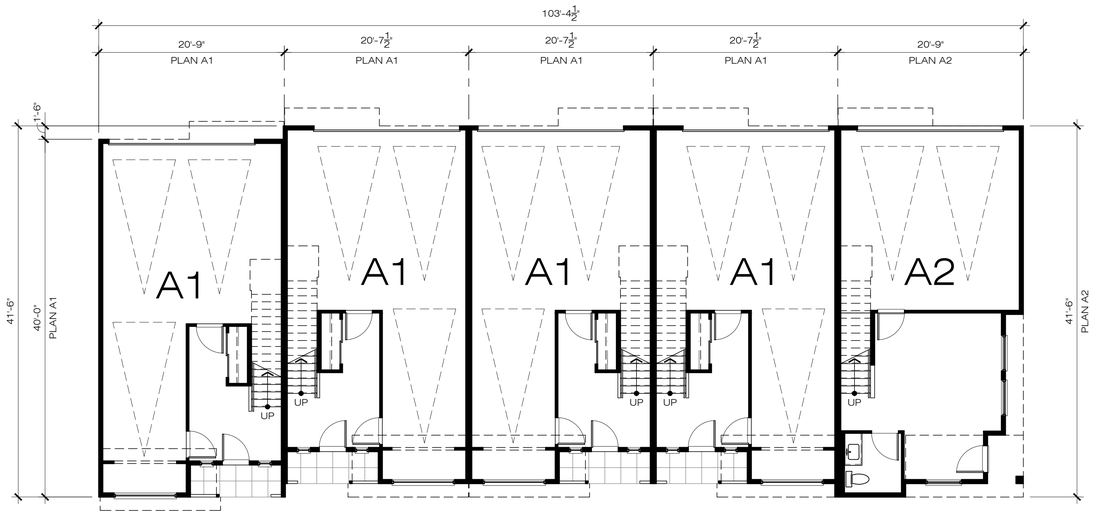

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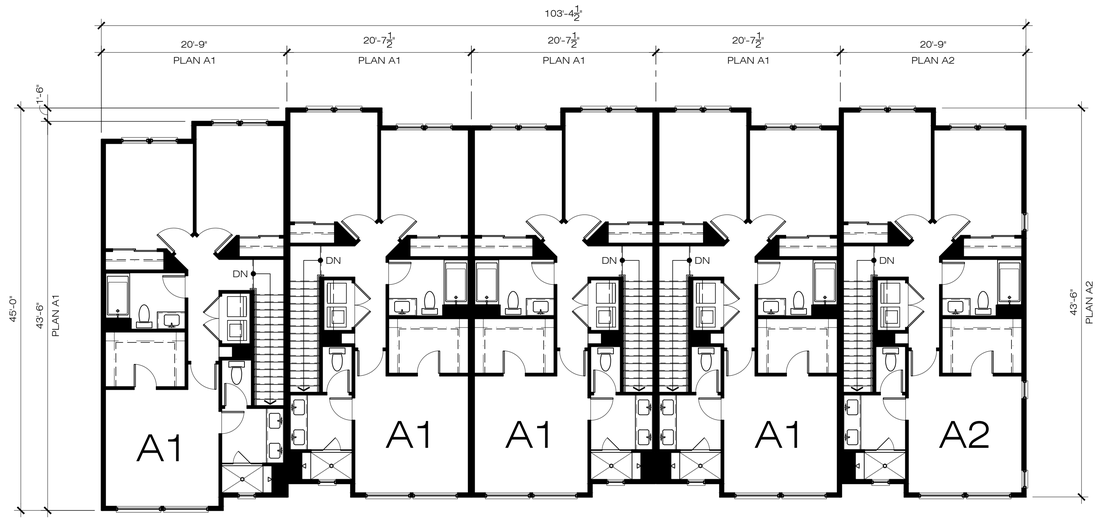

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BUILDING #4 & #7 BUILDING PLANS

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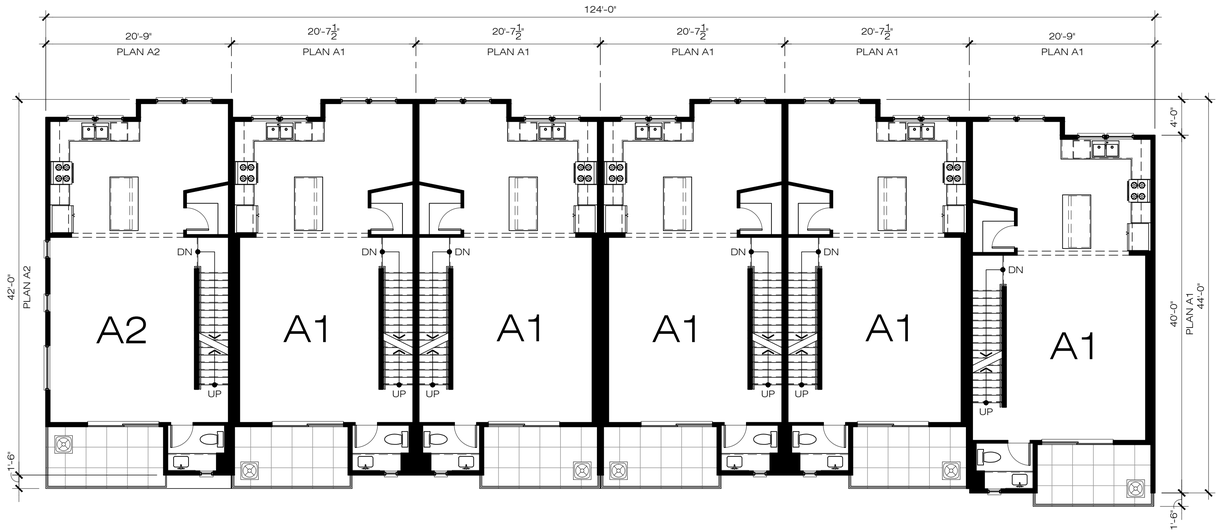

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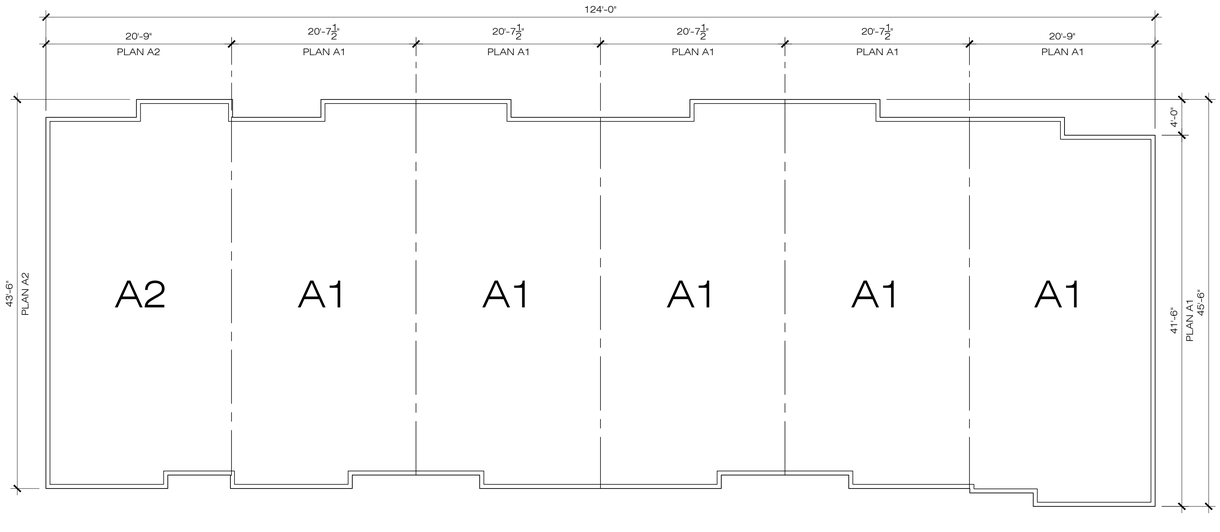

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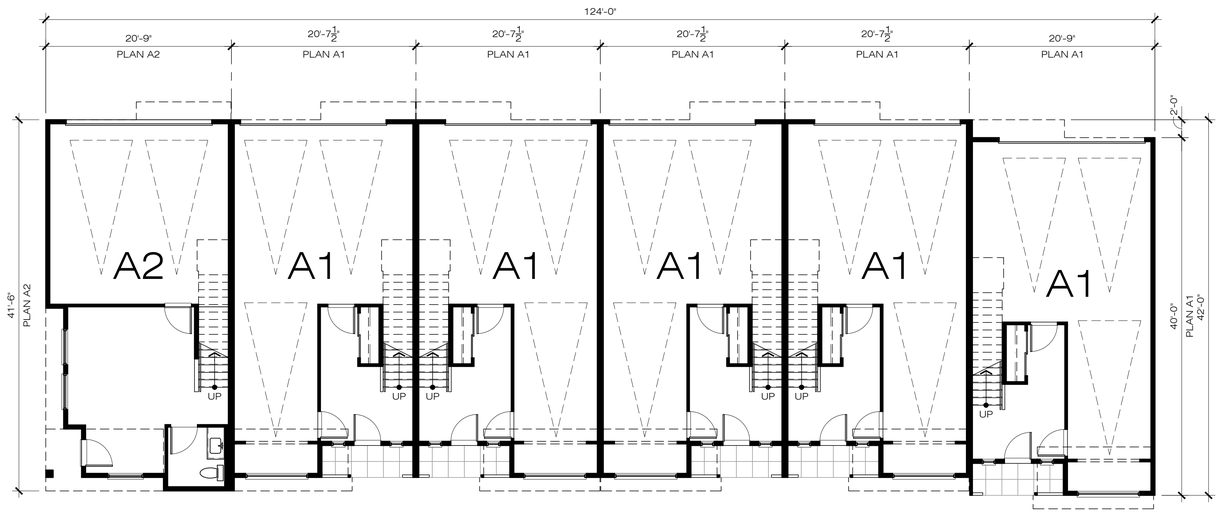

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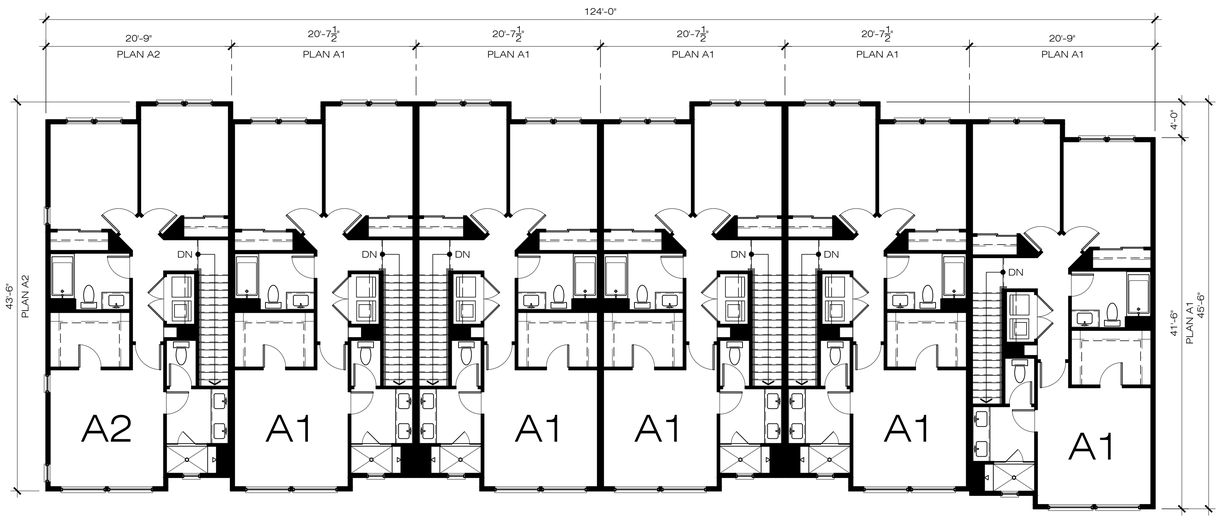

THIRD LEVEL

BUILDING #5 BUILDING PLANS

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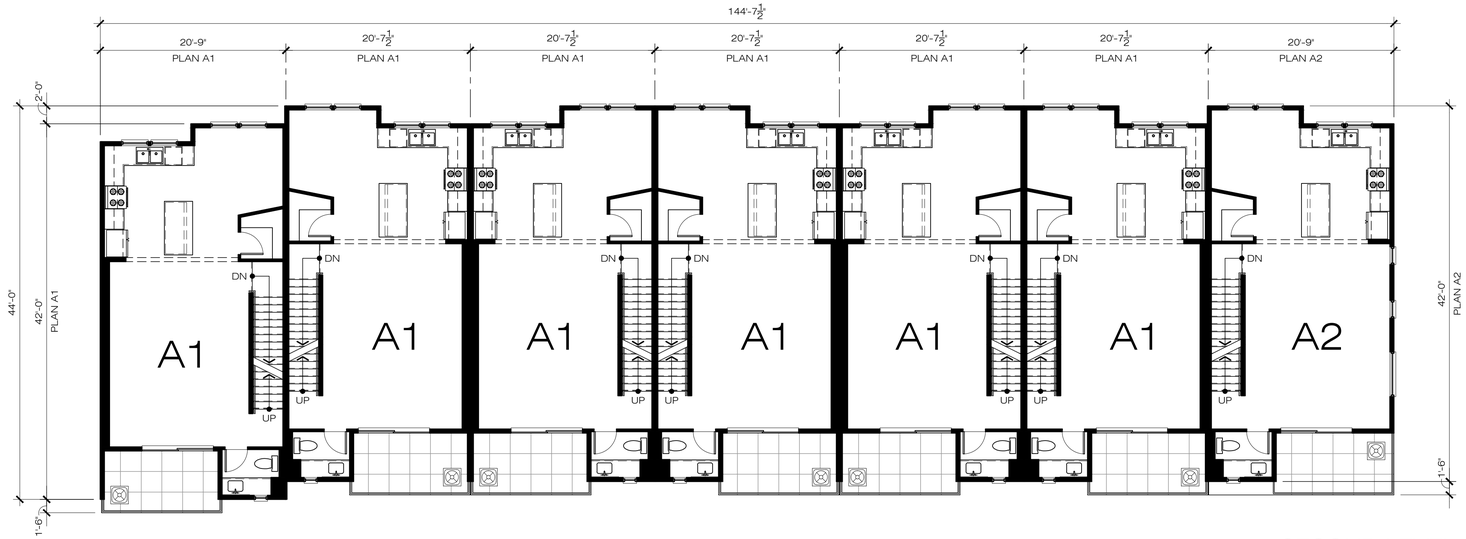

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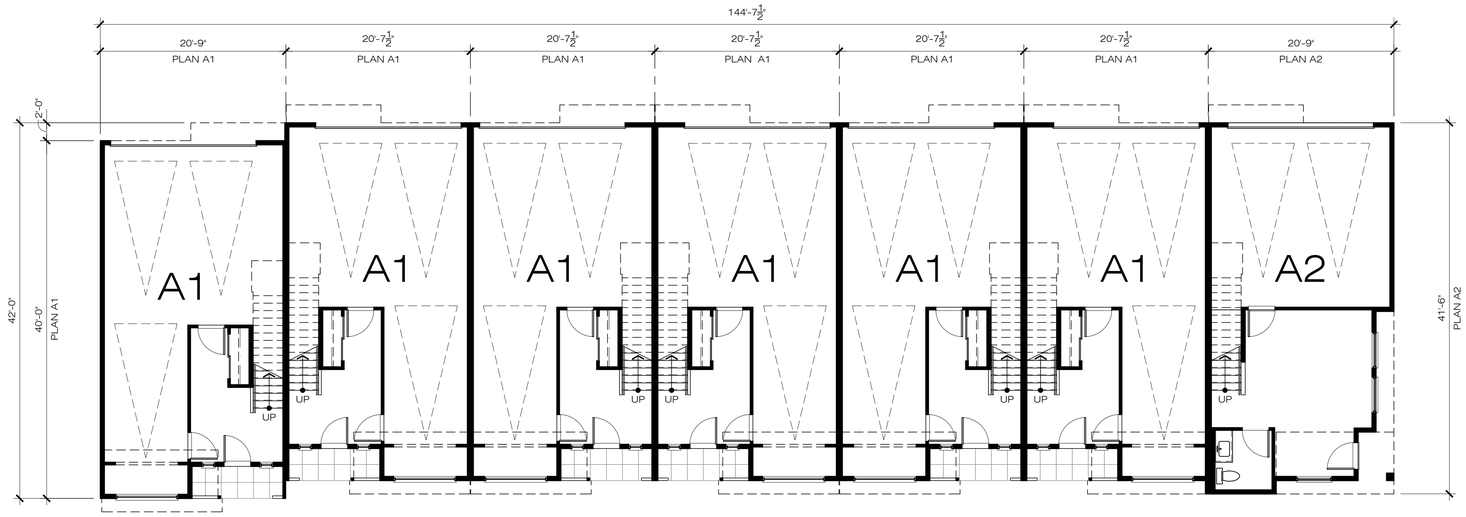

FIRST LEVEL

BUILDING #6 BUILDING PLANS

FIRST LEVEL & SECOND LEVEL

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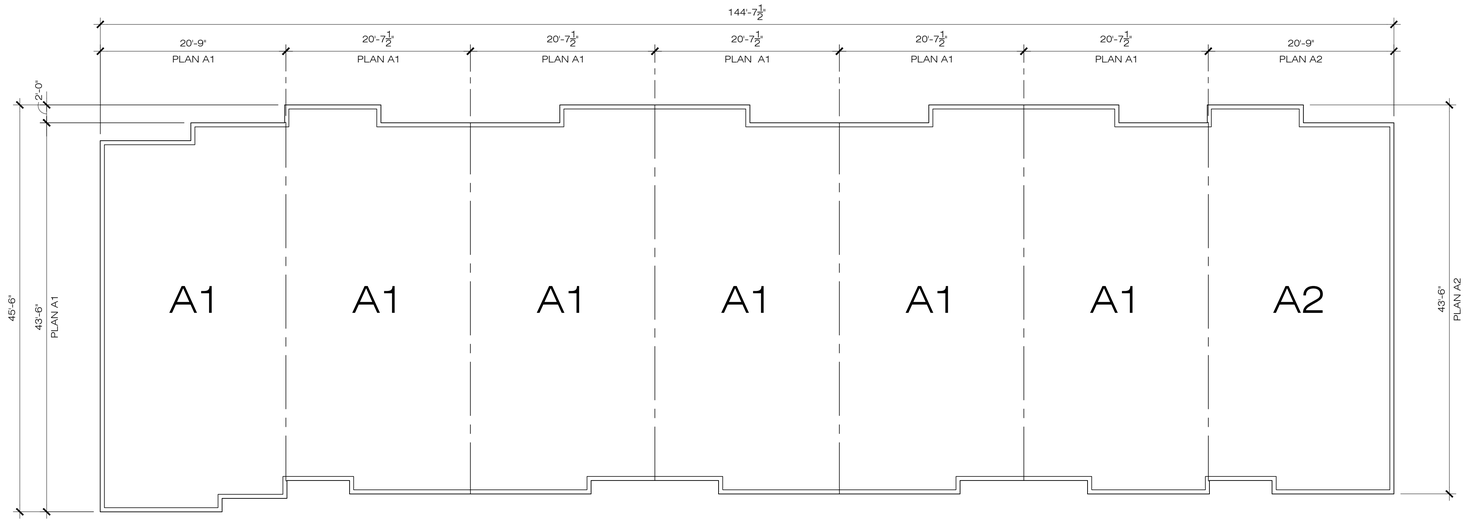

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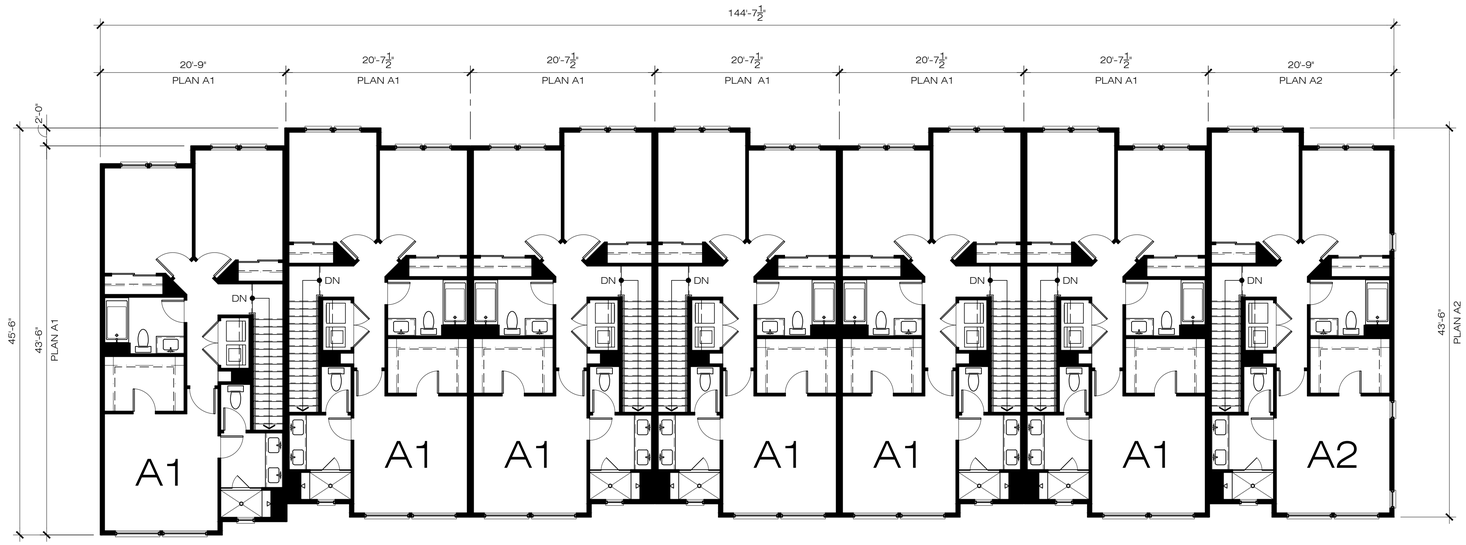

THIRD LEVEL

BUILDING #6 BUILDING PLANS

THIRD LEVEL & ROOF LEVEL

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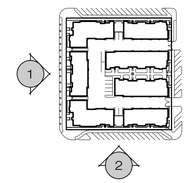
SOUTH ELEANOR STREET
EAST ELEVATION (2)

EAST MISSION BOULEVARD
SOUTH ELEVATION (1)

LEGEND

A	CEMENTITIOUS FIBER BOARD HORIZONTAL SIDING	E	SECURITY GATE
B	C.M.U. PLANTER	F	STUCCO
C	METAL CANOPY	G	DUAL GLAZED VINYL WINDOW
D	METAL GUARDRAIL	H	VEHICULAR ENTRY / EXIT GATE



EXTERIOR ELEVATIONS

MISSION & LINDEN TOWNHOMES

603 - 675 EAST MISSION BOULEVARD &
638 - 692 EAST 4TH STREET, POMONA, CA 91766

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scale: 1/8" = 1'-0"
0 4 8 16 32

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f. 310. 217. 0425

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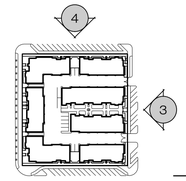
SHEET
SD
3.1

LINDEN STREET
WEST ELEVATION 4

LEGEND

A	CEMENTITIOUS FIBER BOARD HORIZONTAL SIDING	E	SECURITY GATE
B	C.M.U. PLANTER	F	STUCCO
C	METAL CANOPY	G	DUAL GLAZED VINYL WINDOW
D	METAL GUARDRAIL	H	VEHICULAR ENTRY / EXIT GATE



EAST FOURTH STREET
NORTH ELEVATION 3

EXTERIOR ELEVATIONS

MISSION & LINDEN TOWNHOMES

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638 - 692 EAST 4TH STREET, POMONA, CA 91766

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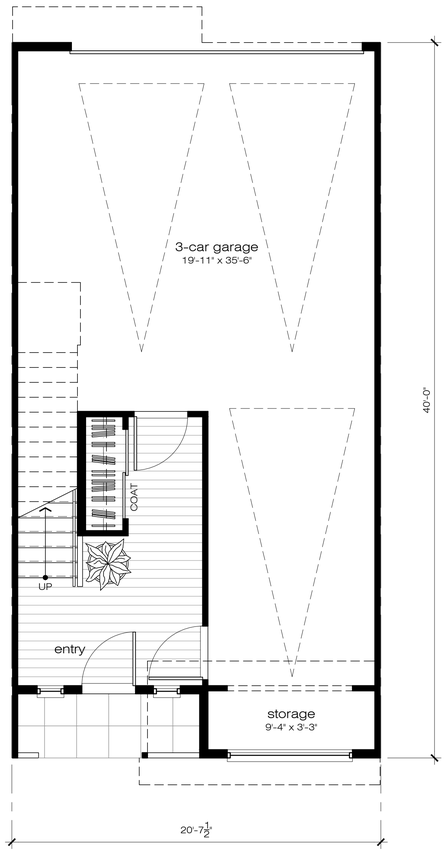
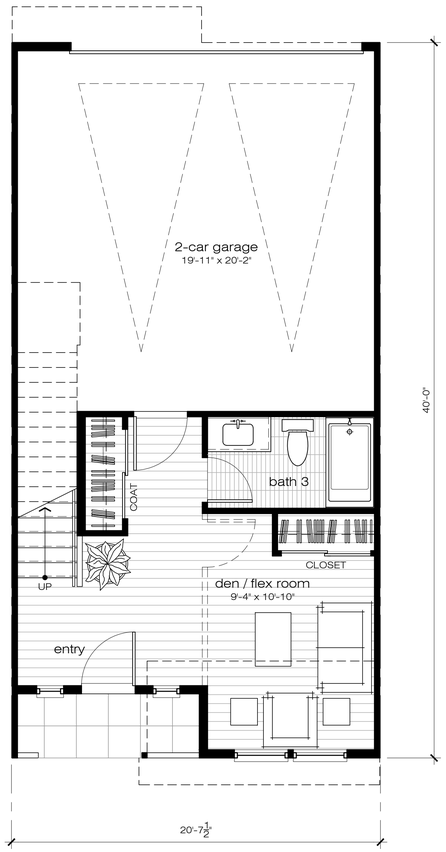


FIRST LEVEL

GROSS AREA: 172 S.F.
NET AREA: 155 S.F.

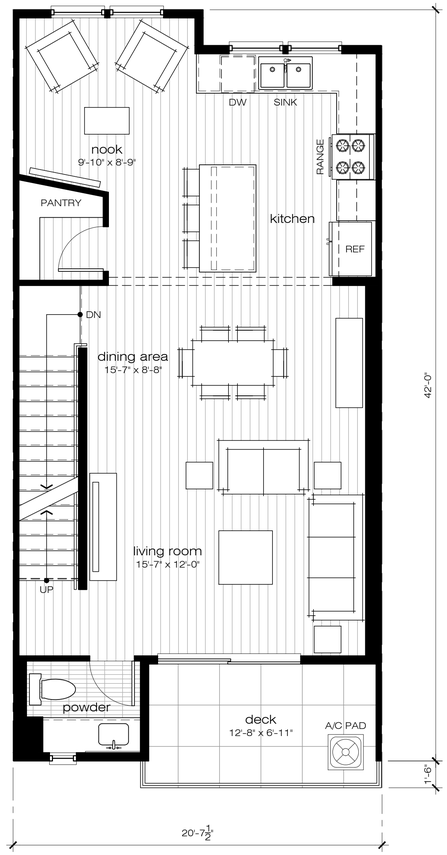
TOTAL GROSS AREA: 1,752 S.F.
TOTAL NET AREA: 1,616 S.F.
QUANTITY: 28 UNITS MAX. (VARIES)



FIRST LEVEL - ALT.

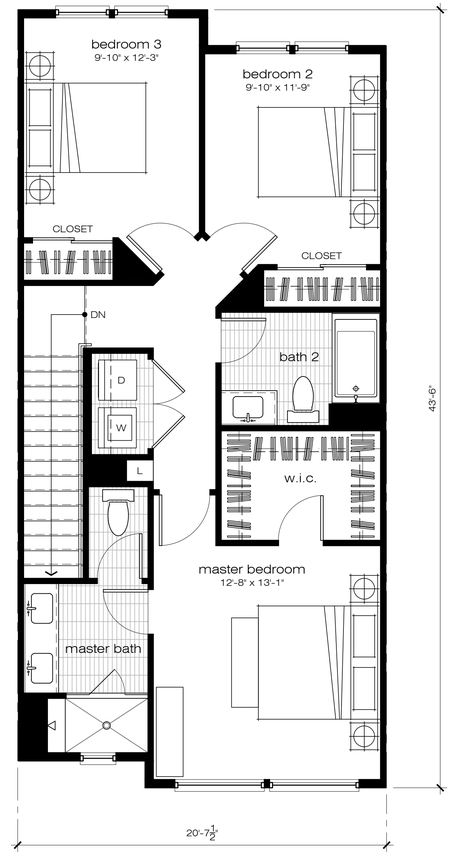
GROSS AREA: 361 S.F.
NET AREA: 334 S.F.

TOTAL GROSS AREA: 1,941 S.F.
TOTAL NET AREA: 1,795 S.F.
QUANTITY: 28 UNITS MAX. (VARIES)



SECOND LEVEL

GROSS AREA: 717 S.F.
NET AREA: 657 S.F.



THIRD LEVEL

GROSS AREA: 863 S.F.
NET AREA: 804 S.F.

PLAN A1 UNIT PLANS

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scale: 1/4" = 1'-0"
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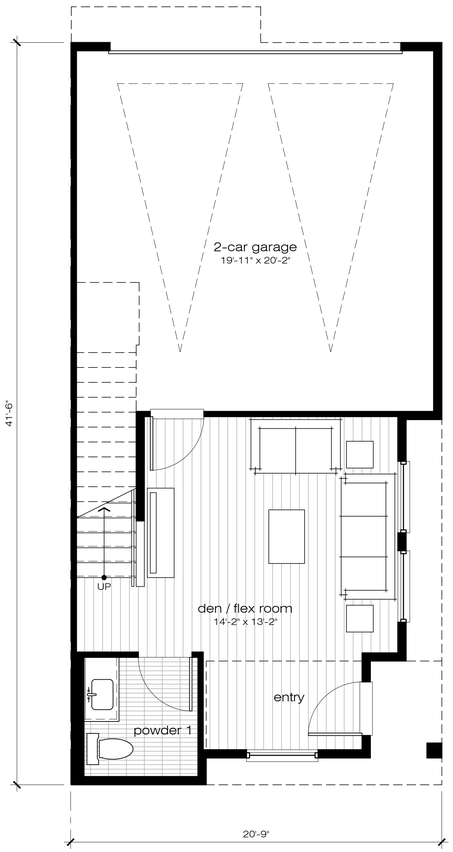
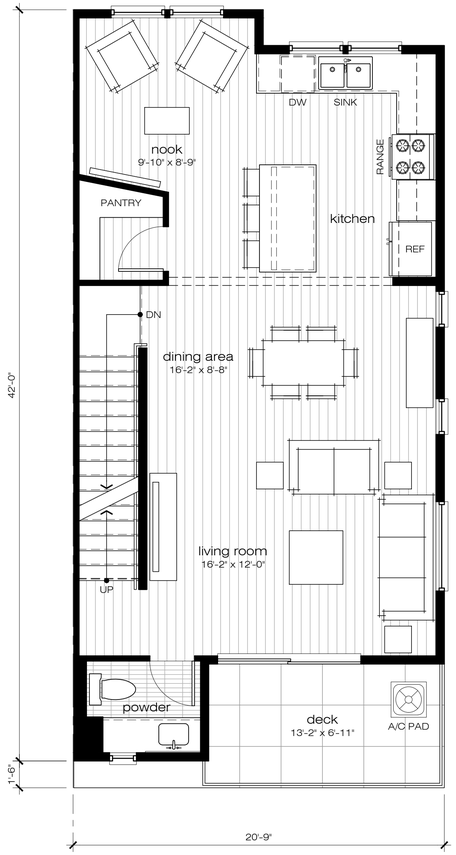


FIRST LEVEL

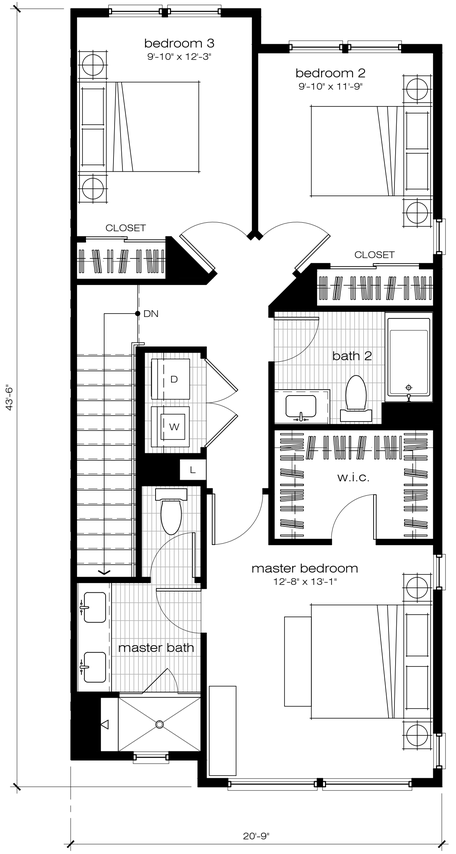
GROSS AREA: 363 S.F.
NET AREA: 331 S.F.

TOTAL GROSS AREA: 1,956 S.F.
TOTAL NET AREA: 1,804 S.F.
QUANTITY: 4 UNITS



SECOND LEVEL

GROSS AREA: 723 S.F.
NET AREA: 669 S.F.



THIRD LEVEL

GROSS AREA: 870 S.F.
NET AREA: 804 S.F.

PLAN A2 UNIT PLANS

MISSION & LINDEN TOWNHOMES

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638 - 692 EAST 4TH STREET, POMONA, CA 91766

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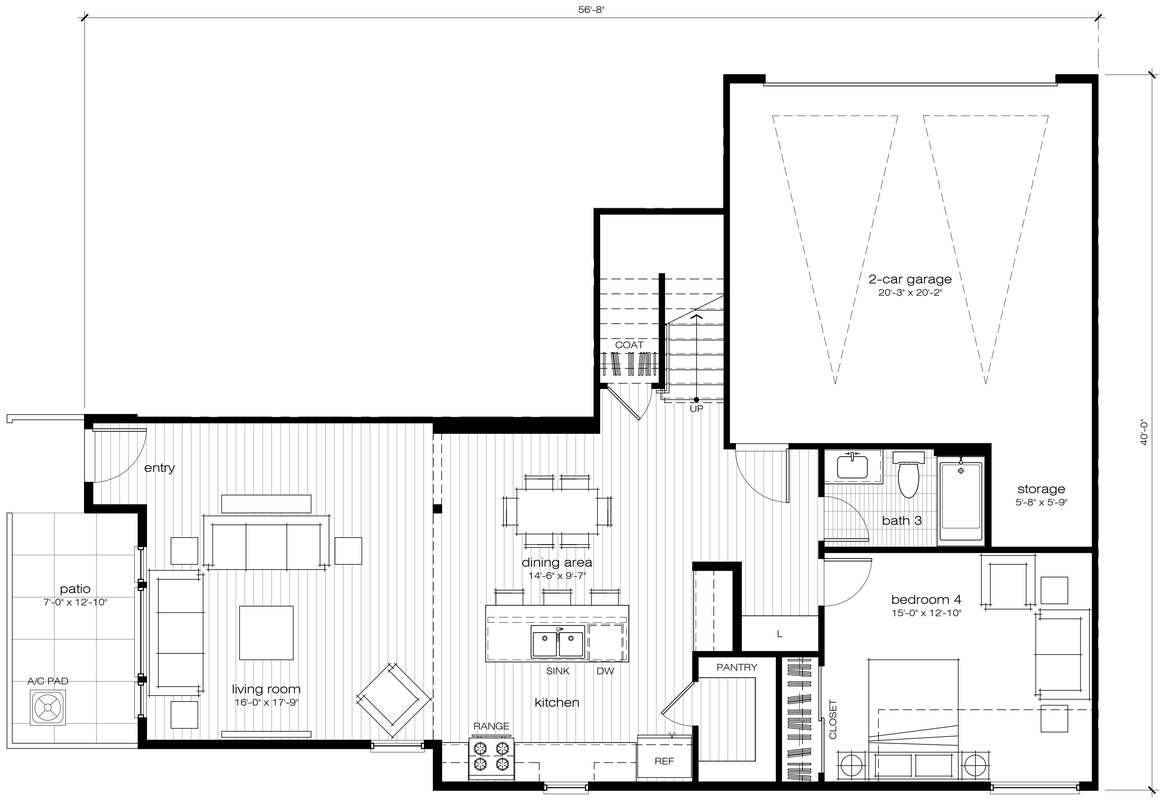
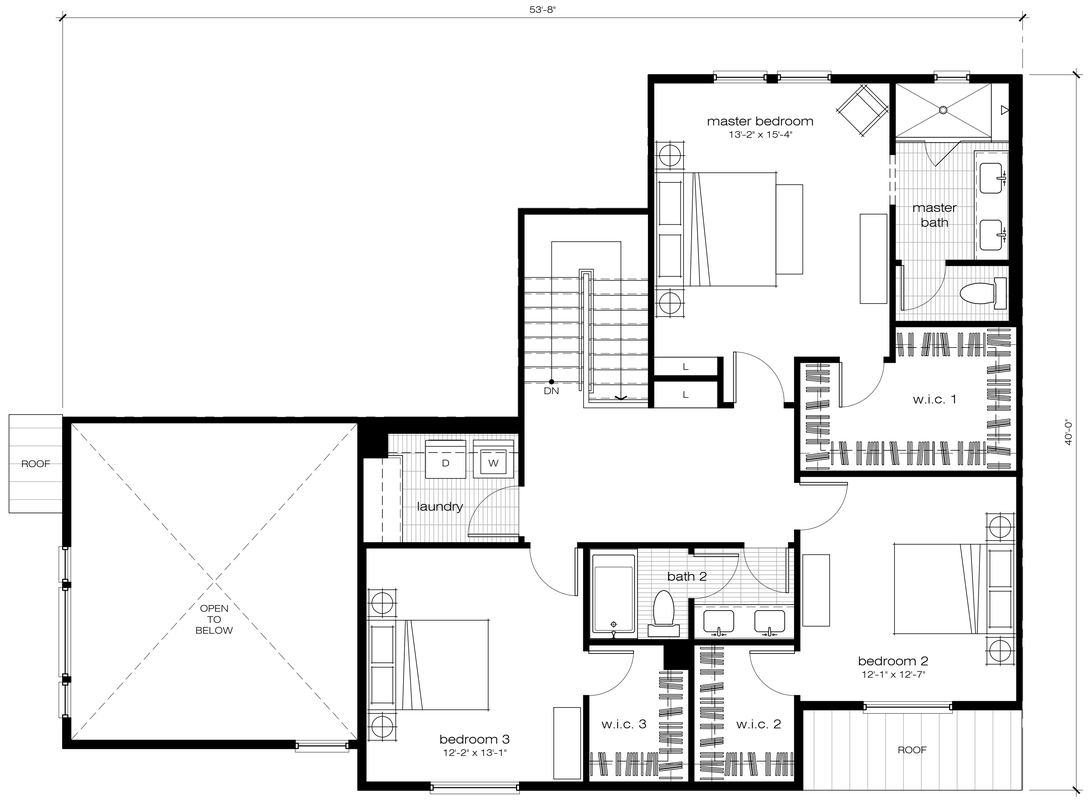


FIRST LEVEL

GROSS AREA: 1,119 S.F.
NET AREA: 1,047 S.F.

TOTAL GROSS AREA: 2,273 S.F.
TOTAL NET AREA: 2,117 S.F.
QUANTITY: 2 UNITS



SECOND LEVEL

GROSS AREA: 1,154 S.F.
NET AREA: 1,070 S.F.

PLAN B UNIT PLANS

MISSION & LINDEN TOWNHOMES

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638 - 692 EAST 4TH STREET, POMONA, CA 91766

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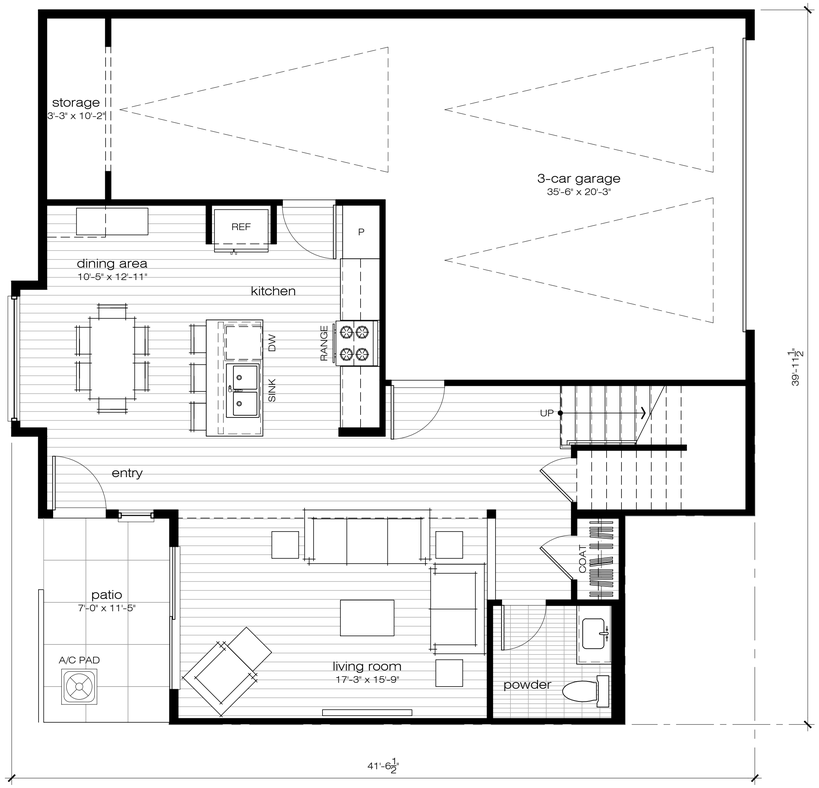

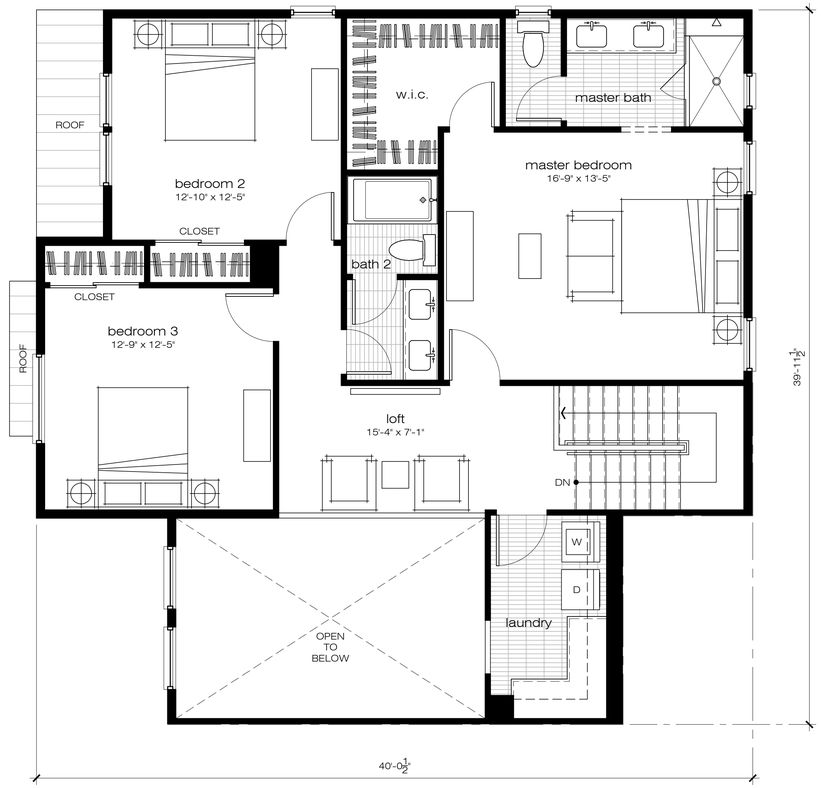

FIRST LEVEL

GROSS AREA: 808 S.F.
NET AREA: 756 S.F.

TOTAL GROSS AREA: 1,926 S.F.
TOTAL NET AREA: 1,801 S.F.
QUANTITY: 2 UNITS

SECOND LEVEL

GROSS AREA: 1,118 S.F.
NET AREA: 1,045 S.F.

PLAN C UNIT PLANS

MISSION & LINDEN TOWNHOMES

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638 - 692 EAST 4TH STREET, POMONA, CA 91766

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f. 310. 217. 0425

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Appendix B

Traffic Impact Analysis and VMT Evaluation Tool Report

TTM 70570
TRAFFIC IMPACT ANALYSIS

City of Pomona

June 25, 2019

Traffic Engineering ● Transportation Planning ● Parking ● Noise & Vibration
Air Quality ● Global Climate Change ● Health Risk Assessment

TTM 70570
TRAFFIC IMPACT ANALYSIS

City of Pomona

June 25, 2019

prepared by
Brandon Alvarado, EIT
Giancarlo Ganddini, PE, PTP

GANDDINI GROUP INC
550 Parkcenter Drive, Suite 202
Santa Ana, CA 92705
(714) 795-3100 | www.ganddini.com

18-0169

TABLE OF CONTENTS

APPENDICES

LIST OF TABLES

LIST OF FIGURES

EXECUTIVE SUMMARY

The purpose of this Traffic Impact Analysis is to provide an assessment of traffic operations resulting from development of the proposed TTM 70570 project and to identify measures necessary to mitigate potentially significant traffic impacts. This report analyzes traffic impacts for the anticipated project opening year in Year 2022, at which time it is anticipated to be generating trips at its ultimate potential.

Although this is a technical report, effort has been made to write the report clearly and concisely. A glossary is provided in Appendix A to assist the reader with terms related to transportation engineering.

PROJECT DESCRIPTION

The project site is located at 675 East Mission Boulevard in the City of Pomona. The project site is proposed to be developed with 36 dwelling units of multi-family housing (low-rise). Project site access is proposed at East 4th Street via one outbound only driveway (Project West Driveway) and one inbound only driveway (Project East Driveway). For the purposes of this analysis, the project is assumed to be fully operational by Year 2022.

EXISTING OPERATIONS

The study intersections currently operate within acceptable Levels of Service (D or better) during the peak hours for Existing conditions, with the exception of the following intersections (see Table 1):

- South Linden Street (NS) at East Mission Boulevard (EW) - #2 (LOS F, AM/PM peak hours)
- South Eleanor Street (NS) at East Mission Boulevard (EW) - #4 (LOS F, AM/PM peak hours)

PROJECT TRIPS

The proposed project is forecast to generate approximately 264 daily trips, including 17 trips during the AM peak hour and 20 trips during the PM peak hour (see Table 2).

FORECAST OPERATIONS

Existing Plus Project Conditions: The study intersections are forecast to operate within acceptable Levels of Service (D or better) during the peak hours for Existing Plus Project conditions, with the exception of the following intersections (see Table 3):

- South Linden Street (NS) at East Mission Boulevard (EW) - #2 (LOS F, AM/PM peak hours)
- South Eleanor Street (NS) at East Mission Boulevard (EW) - #4 (LOS F, AM/PM peak hours)

A significant impact at an unsignalized intersection operating at an unacceptable pre-project Level of Service is defined to occur if the project adds 10 trips to any approach, and/or the intersection meets the peak hour traffic signal warrant after the addition of project traffic. For both intersections, neither criteria is satisfied. Therefore, the proposed project is forecast to result in no significant traffic impacts during the peak hours for Existing Plus Project conditions.

Opening Year (2022) Without Project: The study intersections are forecast to operate within acceptable Levels of Service (D or better) during the peak hours for Opening Year (2022) Without Project conditions, with the exception of the following intersections (see Table 4):

- South Linden Street (NS) at East Mission Boulevard (EW) - #2 (LOS F, AM/PM peak hours)
- South Eleanor Street (NS) at East Mission Boulevard (EW) - #4 (LOS F, AM/PM peak hours)

Opening Year (2022) With Project: The study intersections are forecast to operate within acceptable Levels of Service (D or better) during the peak hours for Opening Year (2022) With Project conditions, with the exception of the following intersections (see Table 5):

- South Linden Street (NS) at East Mission Boulevard (EW) - #2 (LOS F, AM/PM peak hours)
- South Eleanor Street (NS) at East Mission Boulevard (EW) - #4 (LOS F, AM/PM peak hours)

A significant impact at an unsignalized intersection operating at an unacceptable pre-project Level of Service is defined to occur if the project adds 10 trips to any approach, and/or the intersection meets the peak hour traffic signal warrant after the addition of project traffic. For both intersections, neither criteria is satisfied. Therefore, the proposed project is forecast to result in no significant traffic impacts during the peak hours for Opening Year (2022) With Project conditions.

SITE ACCESS

Sight Distance Analysis

Some of the proposed parking spaces on 4th Street along the north project site frontage are located within the restricted use area (see Figure 26). Vehicles parked within these spaces may obstruct the line of sight between westbound oncoming traffic and vehicles exiting the Project West Driveway, and should therefore be removed,

Pedestrian Crossings

Based on existing traffic conditions and surrounding land uses, a marked crosswalk is not recommended across East 4th Street at Linden Street.

There does not appear to be any major commercial or recreational uses on either side of East Mission Boulevard in the project vicinity that would generate the pedestrian crossing volume or desire paths likey to result in a high priority for installation of marked crosswalks at the study intersections. Additionally, East Mission Boulevard does not meet any traffic signal warrants. As such, a crosswalk across East Mission Boulevard is not currently recommended.

OFF-SITE MITIGATION MEASURES

No off-site mitigation measure improvements were identified since the proposed project is forecast to result in no significant traffic impacts at the study intersections for the scenarios analyzed.

GENERAL RECOMMENDATIONS

All roadway design, traffic signing and striping, and traffic control improvements relating to the proposed project should be constructed in accordance with applicable engineering standards to the satisfaction of the City of Pomona Public Works Department.

On-site traffic signing and striping plans should be submitted for City of Pomona approval in conjunction with detailed construction plans for the project.

Off-street parking should be provided to meet City of Pomona Municipal Code requirements.

The final grading, landscaping, and street improvement plans should demonstrate that sight distance standards are met in accordance with applicable City of Pomona/California Department of Transportation sight distance standards.

1. INTRODUCTION

This section describes the purpose and objectives, project location, proposed development, and study area. Figure 1 shows the project location map and Figure 2 illustrates the project site plan.

PURPOSE AND OBJECTIVES

The purpose of this Traffic Impact Analysis is to provide an assessment of traffic operations resulting from development of the proposed TTM 70570 project and to identify measures necessary to mitigate potentially significant traffic impacts. This report analyzes traffic impacts for the anticipated project opening year in Year 2022, at which time it is anticipated to be generating trips at its ultimate potential.

Although this is a technical report, effort has been made to write the report clearly and concisely. A glossary is provided in Appendix A to assist the reader with terms related to transportation engineering.

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STUDY AREA

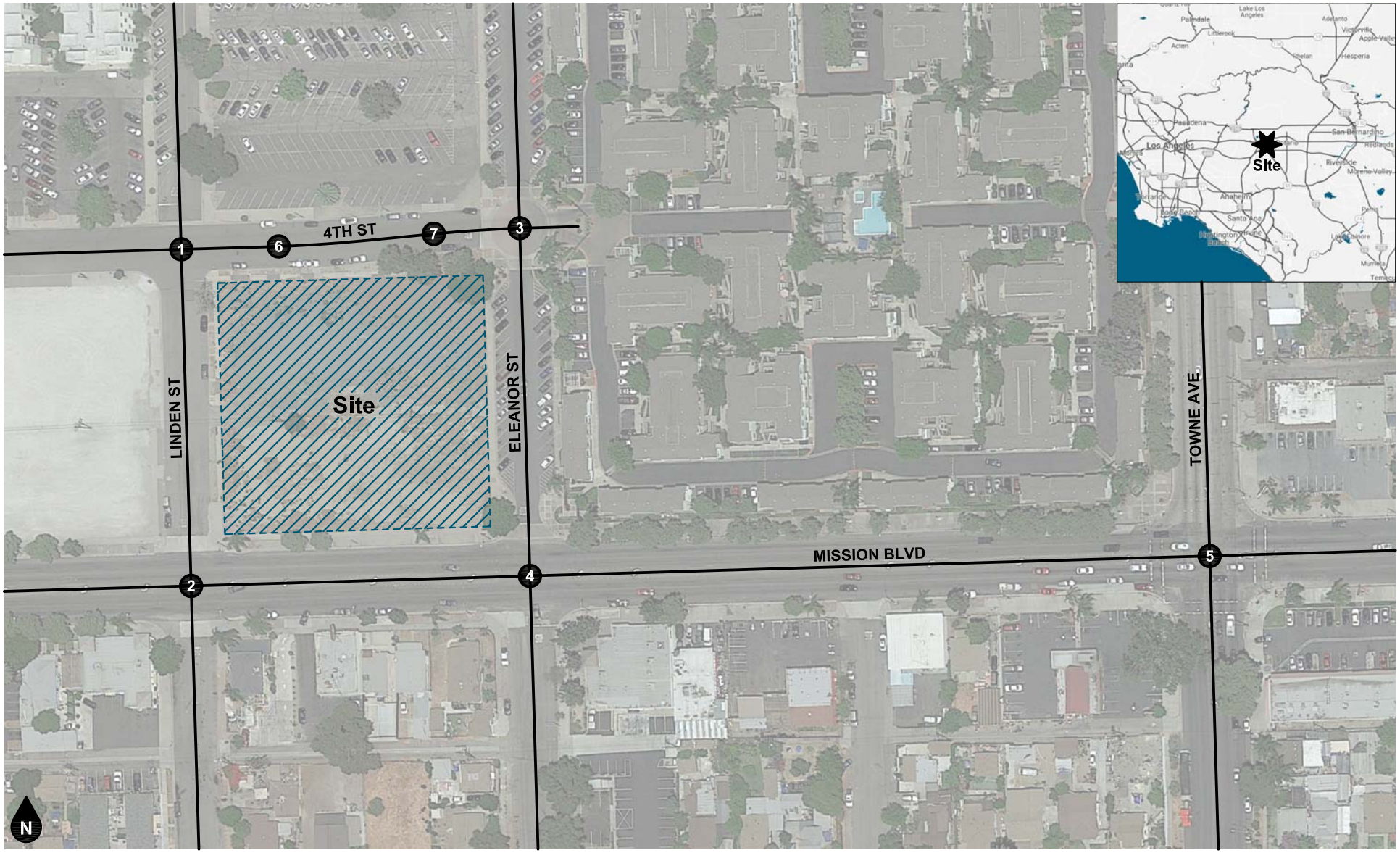
Based on the study intersections identified in the scoping agreement (Appendix B), the study area consists of the following study intersections within the City of Pomona:

Study Intersections	Jurisdiction
1. South Linden Street (NS) at East 4th Street (EW)	City of Pomona
2. South Linden Street (NS) at East Mission Boulevard (EW)	City of Pomona
3. South Eleanor Street (NS) at East 4th Street (EW)	City of Pomona
4. South Eleanor Street (NS) at East Mission Boulevard (EW)	City of Pomona
5. South Towne Avenue (NS) at East Mission Boulevard (EW)	City of Pomona
6. Project West Driveway (NS) at East 4th Street (EW)	City of Pomona
7. Project East Driveway (NS) at East 4th Street (EW)	City of Pomona

ANALYSIS SCENARIOS

The following scenarios are analyzed during typical weekday AM and PM peak hour conditions in accordance with the City of Pomona Traffic Impact Study Guidelines (February 2012):

- Existing Conditions
- Existing Plus Project Conditions
- Opening Year (2022) Without Project Conditions
- Opening Year (2022) With Project Conditions



Legend

(#) Study Intersection

Figure 1
Project Location Map

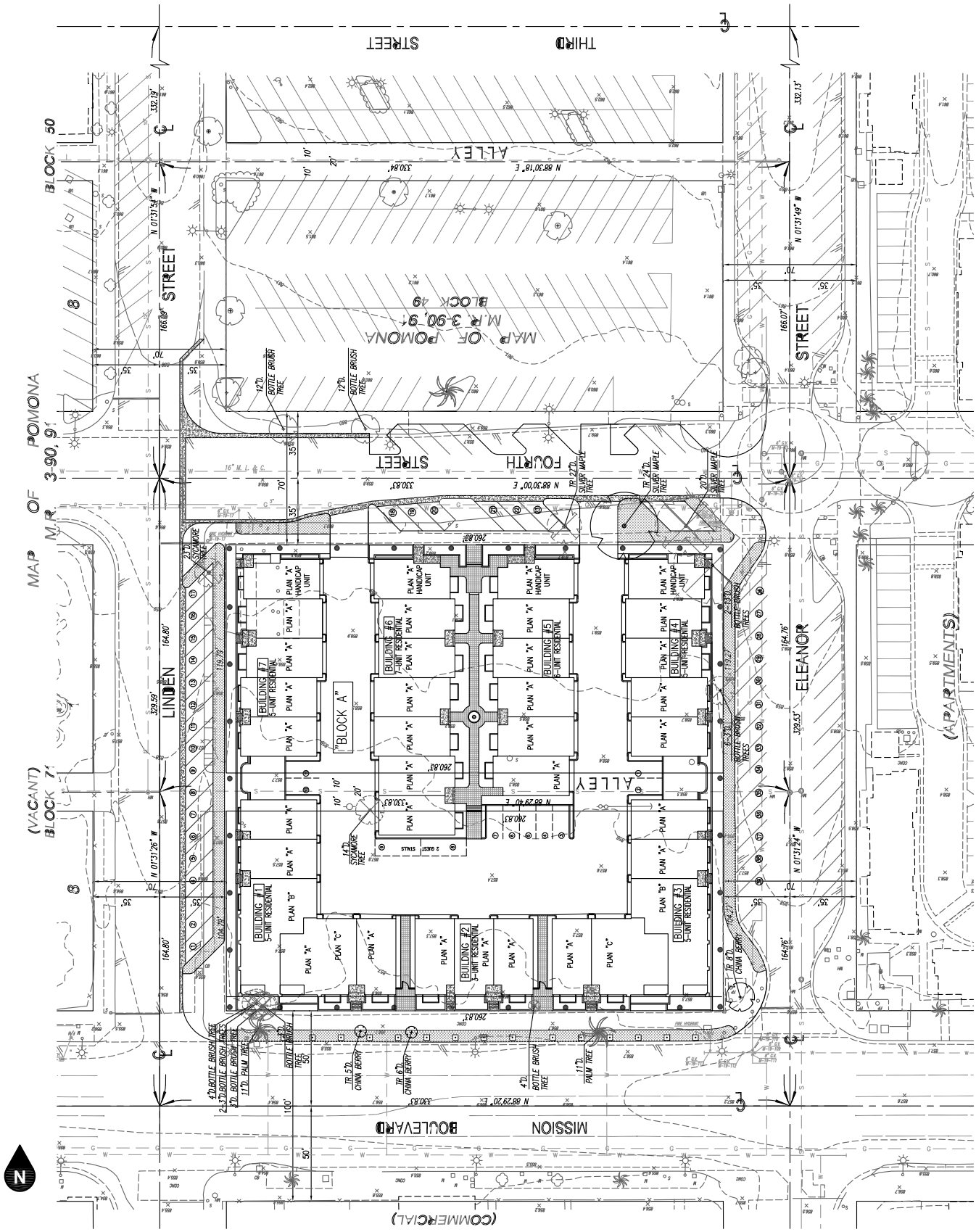


Figure 2
Site Plan

2. METHODOLOGY

This section discusses the analysis methodologies used to assess transportation facility performance as adopted by the respective jurisdictional agencies. The scope of this traffic impact analysis is based on the guidance provided in the City of Pomona Traffic Impact Study Guidelines (February 2012).

INTERSECTION DELAY METHODOLOGY

The technique used to assess the performance of intersections in the City of Pomona is known as the intersection delay methodology based on the procedures contained in the Highway Capacity Manual (Transportation Research Board, 6th Edition). The methodology considers the traffic volume and distribution of movements, traffic composition, geometric characteristics, and signalization details to calculate the average control delay per vehicle and corresponding Level of Service. Control delay is defined as the portion of delay attributed to the intersection traffic control (such as a traffic signal or stop sign) and includes initial deceleration, queue move-up time, stopped delay, and final acceleration delay. The intersection control delay is then correlated to Level of Service based on the following thresholds:

Level of Service	Intersection Control Delay (Seconds / Vehicle)	
	Signalized Intersection	Unsignalized Intersection
A	≤ 10.0	≤ 10.0
B	> 10.0 to ≤ 20.0	> 10.0 to ≤ 15.0
C	> 20.0 to ≤ 35.0	> 15.0 to ≤ 25.0
D	> 35.0 to ≤ 55.0	> 25.0 to ≤ 35.0
E	> 55.0 to ≤ 80.0	> 35.0 to ≤ 50.0
F	> 80.0	> 50.0

Source: Transportation Research Board, Highway Capacity Manual (6th Edition).

Level of Service is used to qualitatively describe the performance of a roadway facility, ranging from Level of Service A (free-flow conditions) to Level of Service F (extreme congestion and system failure). At intersections with traffic signal or all way stop control, Level of Service is determined by the average control delay for the overall intersection. At intersections with cross street stop control (i.e., one- or two-way stop control), Level of Service is determined by the average control delay for the worst individual movement (or movements sharing a single lane).

Intersection delay/Level of Service analysis was performed using the Vistro (Version 6.00-00) software. The intersection Level of Service analysis has been performed in accordance with City of Pomona Traffic Impact Study Guidelines (February 2012), including optimized signal timing, lost time, and recommended saturation flow rates.

PERFORMANCE STANDARDS

Level of Service D is considered the minimum acceptable Level of Service for intersections within City of Pomona.

THRESHOLDS OF SIGNIFICANCE

Based on the performance standards established by the City of Pomona, a potentially significant transportation impact is defined to occur if:

Signalized Intersections:

- Any study intersection that is operating at a LOS 'A', 'B', 'C' or 'D' for any study scenario without project traffic in which the addition of project traffic causes the intersection to degrade to a LOS 'E' or 'F' shall mitigate that impact so as to bring the intersection back to at least LOS 'D'.

- Any study intersection that is operating at a LOS 'E' or 'F' for any study scenario without project traffic shall mitigate any impacts so as to bring the intersection back to the overall level of delay established prior to project traffic being added.

Unsignalized Intersections:

An impact is considered significant if the study determines that either section a) or both sections b) and c) occur:

a) The addition of project related traffic causes the intersection to move from a LOS 'D' or better to a LOS 'E' or worse; or

b) The project contributes additional traffic to an intersection that is already projected to operate at an LOS 'E' or 'F' with background traffic (per Section 3.2 b)); and

c) One or both of the following conditions are met:
   1) The project adds ten (10) or more trips to any approach
   2) The intersection meets the peak hour traffic signal warrant after the addition of project traffic (per Section 3.2 c)).

If a project is forecast to cause a significant traffic impact, feasible mitigation measures that will reduce the impact to a less than significant level are identified. Mitigation measures can be in many forms, including the addition of lanes, traffic control modification, or demand management measures. If no feasible mitigation measures can be identified for a significantly impacted facility, the impact will remain significant and unavoidable and a statement of overriding considerations is required.

3. EXISTING CONDITIONS

EXISTING ROADWAY SYSTEM

Figure 3 identifies the lane geometry and intersection traffic controls for Existing conditions based on a field survey of the study area. Regional access to the project area is provided by State Route 71 (SR-71) west of the project site and Interstate 10 (I-10) north of the project site. The key north-south roadways providing local circulation are Linden Street, Eleanor Street and Towne Avenue. The key east-west roadways providing local circulation are 4th Street and Mission Boulevard.

Linden Street is a two lane undivided roadway and is classified as a Local Street in the City of Pomona General Plan. On-street parking is generally permitted in the study area. No bicycle facilities are provided in the study area. Sidewalks are provided on the both sides of the roadway.

Eleanor Street is a two lane undivided roadway and is classified as a Local Street in the City of Pomona General Plan. On-street parking is generally permitted in the study area, with striped parking provided between 4th Street and Mission Boulevard. No bicycle facilities are provided in the study area. Sidewalks are provided on the both sides of the roadway.

Towne Avenue is a four lane divided roadway and is classified as a Major Arterial in the City of Pomona General Plan. On-street parking is generally permitted in the project vicinity. No bicycle facilities are currently provided in the study area. Sidewalks are provided on both sides of the roadway.

4th Street is a two lane undivided roadway and is classified as a Collector in the City of Pomona General Plan. On-street parking is generally permitted in the study area. No bicycle facilities are provided in the study area. Sidewalks are provided on the both sides of the roadway.

Mission Boulevard is a four lane divided roadway and is classified as a Major Arterial in the City of Pomona General Plan. On-street parking is generally permitted in the project vicinity. No bicycle facilities are currently provided in the study area; however, Mission Boulevard is identified as a potential future bicycle facility. Sidewalks are provided on both sides of the roadway.

PEDESTRIAN FACILITIES

Existing pedestrian facilities in the project vicinity are shown on Figure 4. Pedestrian sidewalks are currently provided along all project site frontages.

BICYCLE ROUTES

Mission Boulevard is identified as a potential future bicycle facility in the City of Pomona General Plan. The City of Pomona bicycle route map is illustrated on Figure 5.

TRUCK ROUTES

The City of Pomona truck route map is illustrated on Figure 6.

TRANSIT FACILITIES

Figure 7 shows the existing transit routes available in the project vicinity. The study area is currently served by Foothill Transit Route 480 along Mission Boulevard.

GENERAL PLAN CONTEXT

Figure 8 shows the City of Pomona General Plan Mobility and Access Component roadway classifications map. This figure shows the nature and extent of arterial and collector highways that are needed to adequately serve the ultimate development depicted by the Land Use Element of the General Plan. The City of Pomona standard roadway cross-sections are illustrated on Figure 9.

EXISTING ROADWAY VOLUMES

Figure 10 shows the Existing average daily traffic volumes. The Existing average daily traffic volumes have been factored from peak hour intersection turning movement volumes using the following formula for each intersection leg:

Evening Peak Hour (Approach Volume + Exit Volume) x 10 = Leg Volume.

Existing peak hour intersection turning movement volumes are based upon AM peak period and PM peak period intersection turning movement counts obtained in May 2019 during typical weekday conditions. The AM peak period was counted between 7:00 AM and 9:00 AM and the PM peak period was counted between 4:00 PM and 6:00 PM. The actual peak hour within the peak period is the four consecutive 15 minute periods with the highest total volume when all movements are added together. Thus, the weekday PM peak hour at one intersection may be 4:45 PM to 5:45 PM if those four consecutive 15 minute periods have the highest combined volume. Intersection turning movement count worksheets are provided in Appendix C.

Figure 11 and Figure 12 show the Existing AM and PM peak hour intersection turning movement volumes.

EXISTING INTERSECTION LEVEL OF SERVICE

The intersection Levels of Service for Existing conditions have been calculated and are shown in Table 1. Existing intersection Level of Service worksheets are provided in Appendix D.

The study intersections currently operate within acceptable Levels of Service (D or better) during the peak hours for Existing conditions, with the exception of the following intersections (see Table 1):

- South Linden Street (NS) at East Mission Boulevard (EW) - #2 (LOS F, AM/PM peak hours)
- South Eleanor Street (NS) at East Mission Boulevard (EW) - #4 (LOS F, AM/PM peak hours)

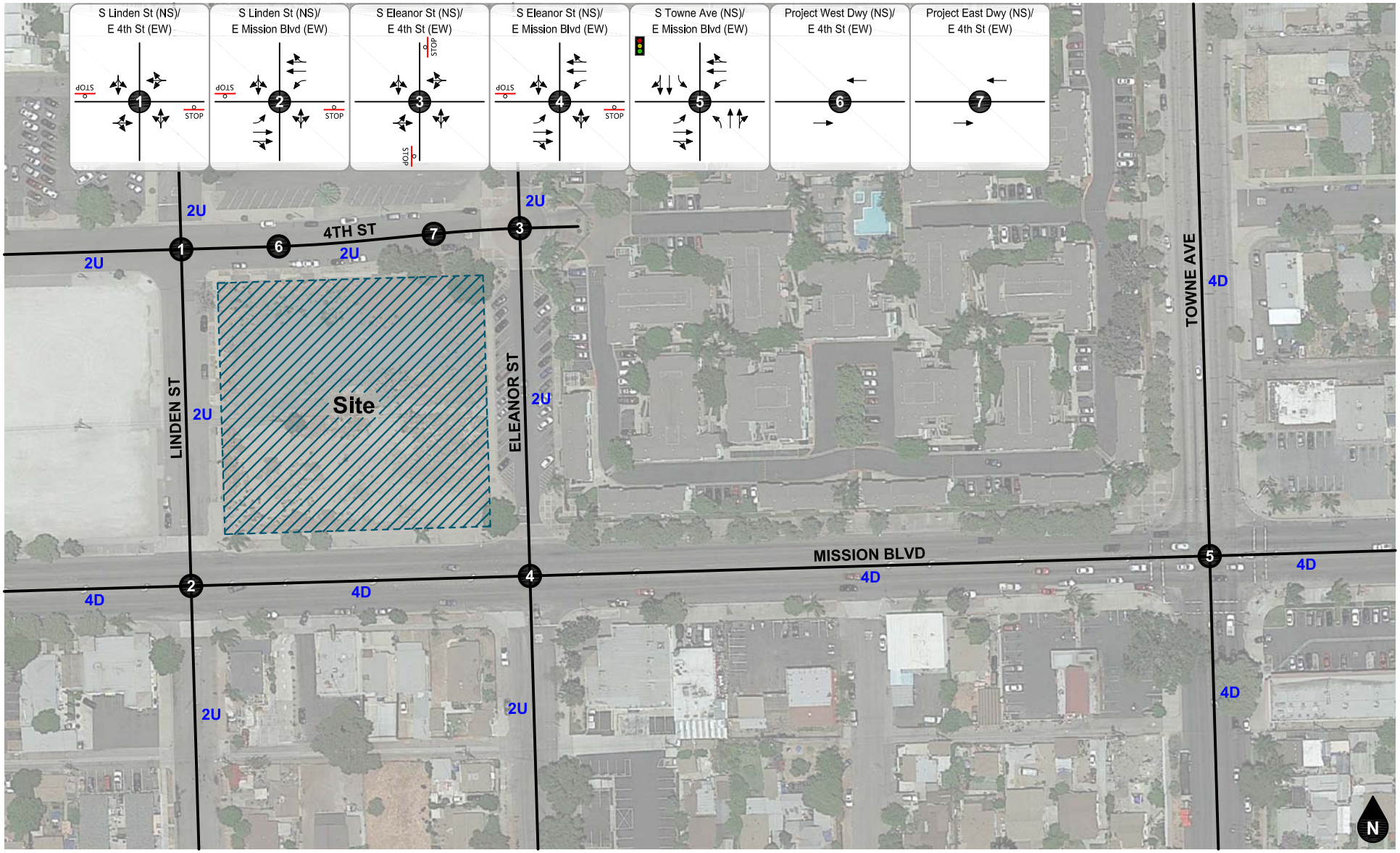
Table 1
Existing Intersection Levels of Service

ID	Study Intersection	Traffic Control[1]	AM Peak Hour		PM Peak Hour	
			Delay[2]	LOS[3]	Delay[2]	LOS[3]
1.	South Linden Street at East 4th Street	CSS	9.5	A	9.6	A
2.	South Linden Street at East Mission Boulevard	CSS	54.7	F	63.2	F
3.	South Eleanor Street at East 4th Street	CSS	9.6	A	9.6	A
4.	South Eleanor Street at East Mission Boulevard	CSS	53.4	F	70.1	F
5.	South Towne Avenue at East Mission Boulevard	TS	15.4	B	15.1	B

Notes:
(1) CSS = Cross Street Stop; TS = Traffic Signal

(2) Delay is shown in seconds/vehicle. For intersections with traffic signal or all way stop control, overall average intersection delay and LOS are shown. For intersections with cross street stop control, LOS is based on average delay of the worst individual lane (or movements sharing a lane).

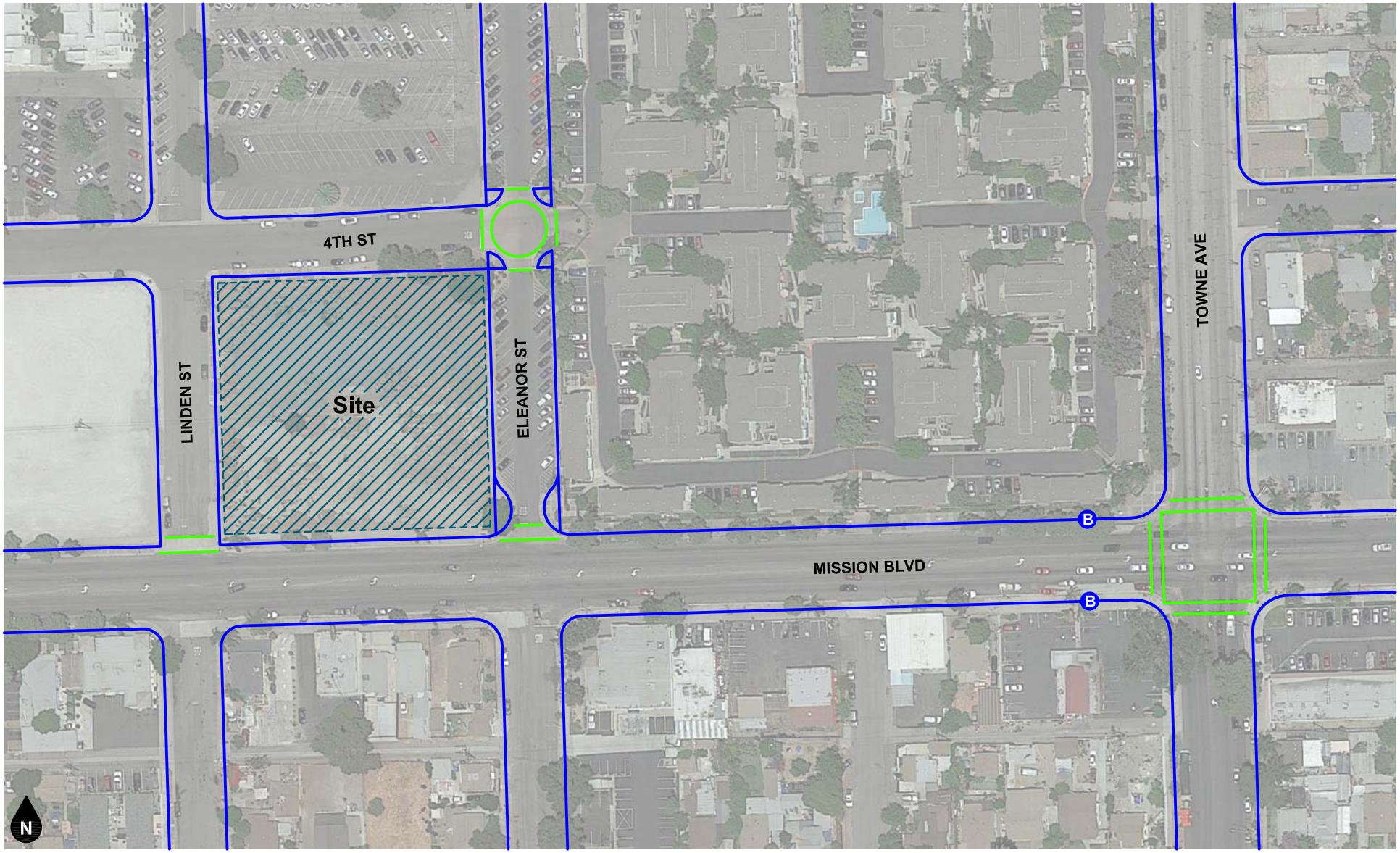
(3) LOS = Level of Service



Legend

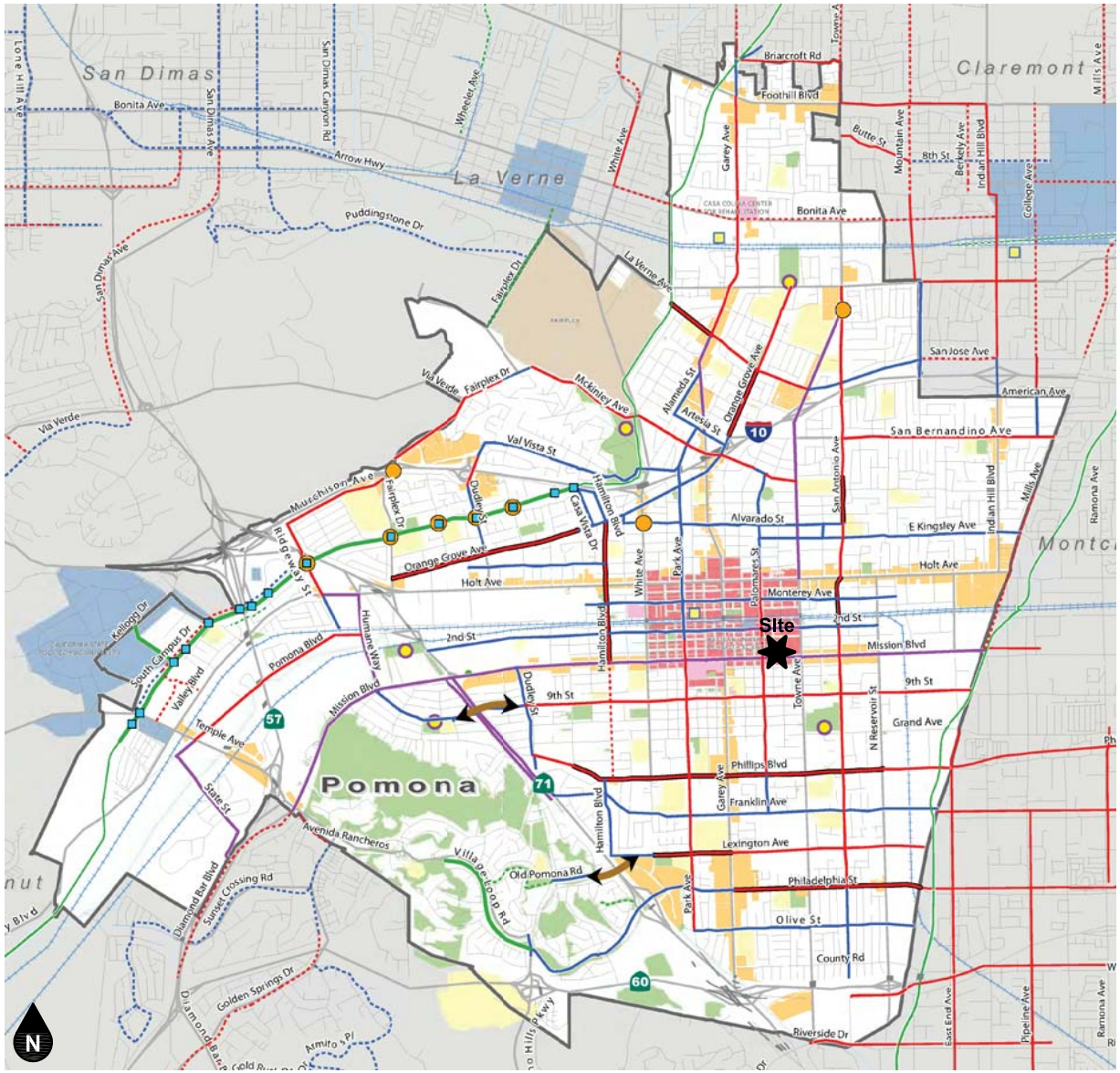
- Traffic Signal
- STOP Stop Sign
- #D #-Lane Divided Roadway
- #U #-Lane Undivided Roadway
- Existing Lane

Figure 3
Existing Lane Geometry and Intersection Traffic Controls



Legend
- Sidewalk
- Cross Walk
- B Bus Stop

Figure 4
Existing Pedestrian Facilities



Potential Future Connection
Bike Path Access Points
Intersection / Crossing Improvements

Proposed Bike Facilities

Bike Path
Bike Path (Long Term)
Bike Lane
Bike Route
Bike Lane After Road Diet
Bike Lane After Removal of Parking
Potential Future Bike Facilities
Transit Centers
Day Labor Center
Bridges
Community Centers

Existing Bike Facilities

Bike Path
Bike Lane
Bike Route
City Boundary

Zoning / Land Use

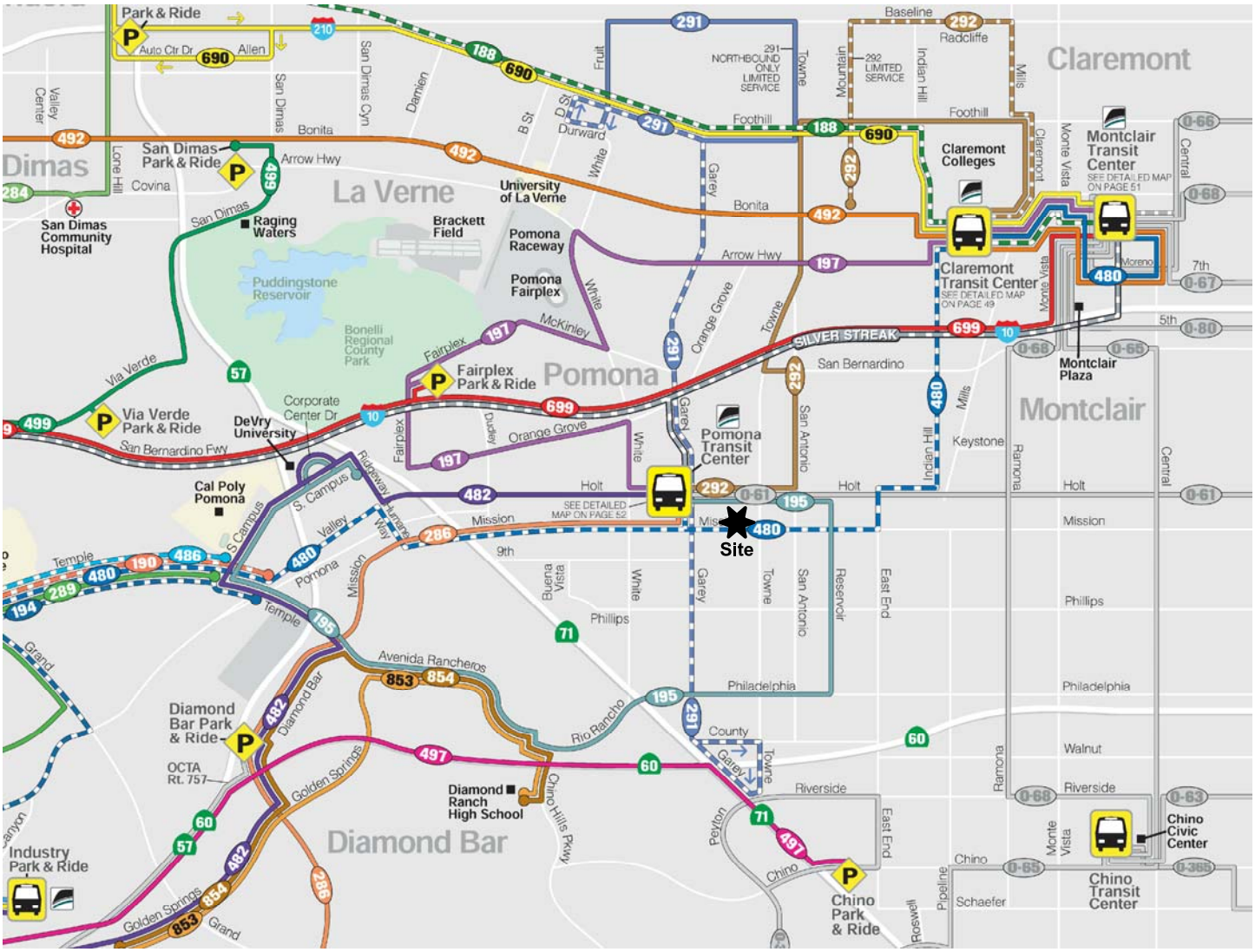
Commercial
Parks, Open Spaces, Vacant
Civic Center / Public Buildings
Fairplex
Schools
Universities
Downtown Specific Plan Area

Figure 5
City of Pomona Bicycle Routes

Source: City of Pomona

Figure 6
City of Pomona Truck Routes

Source: City of Pomona



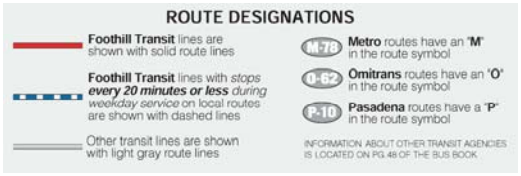


Figure 7
Existing Transit Routes

Source: Foothill Transit

Figure 8
City of Pomona General Plan Mobility and Access Component

Source: City of Pomona

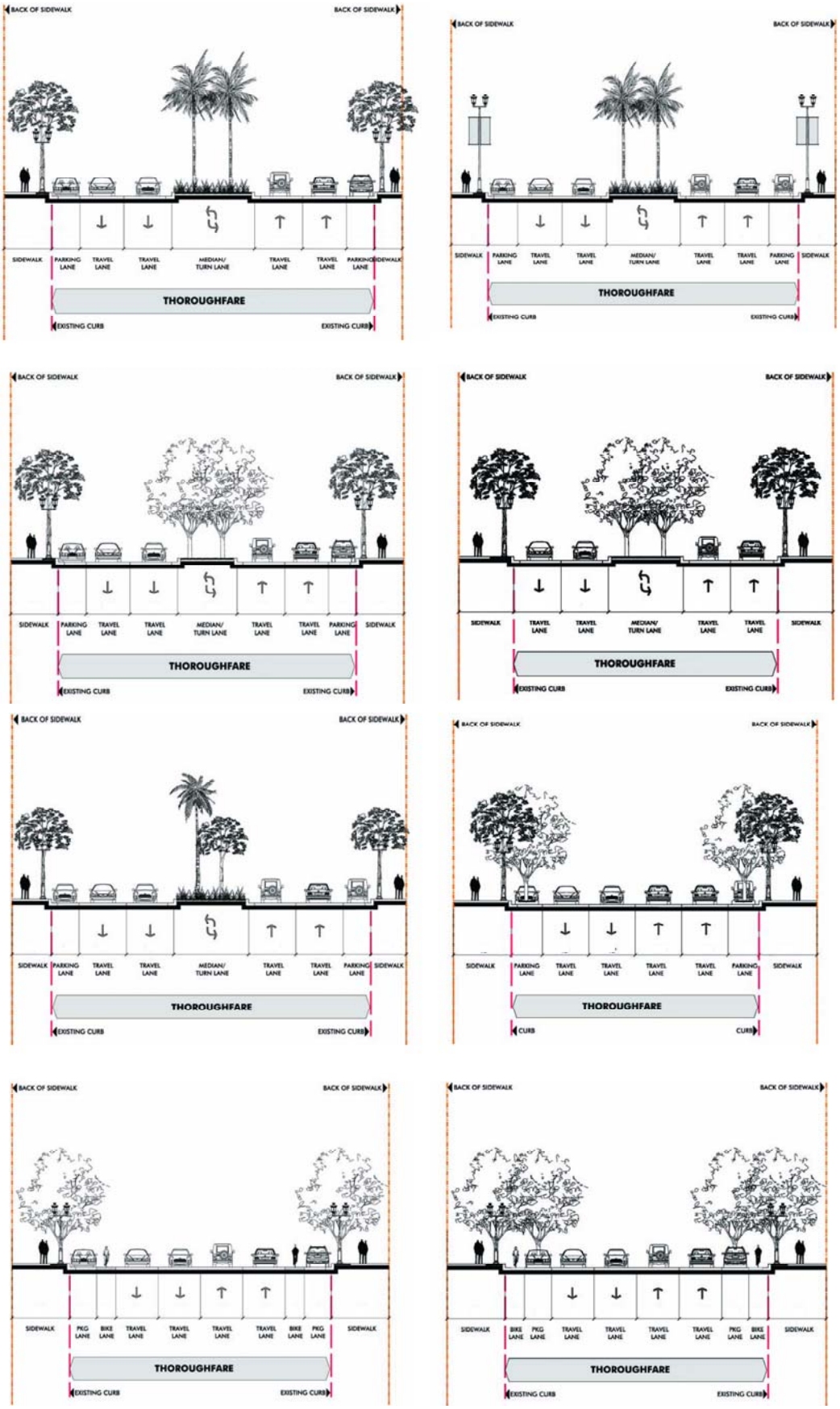
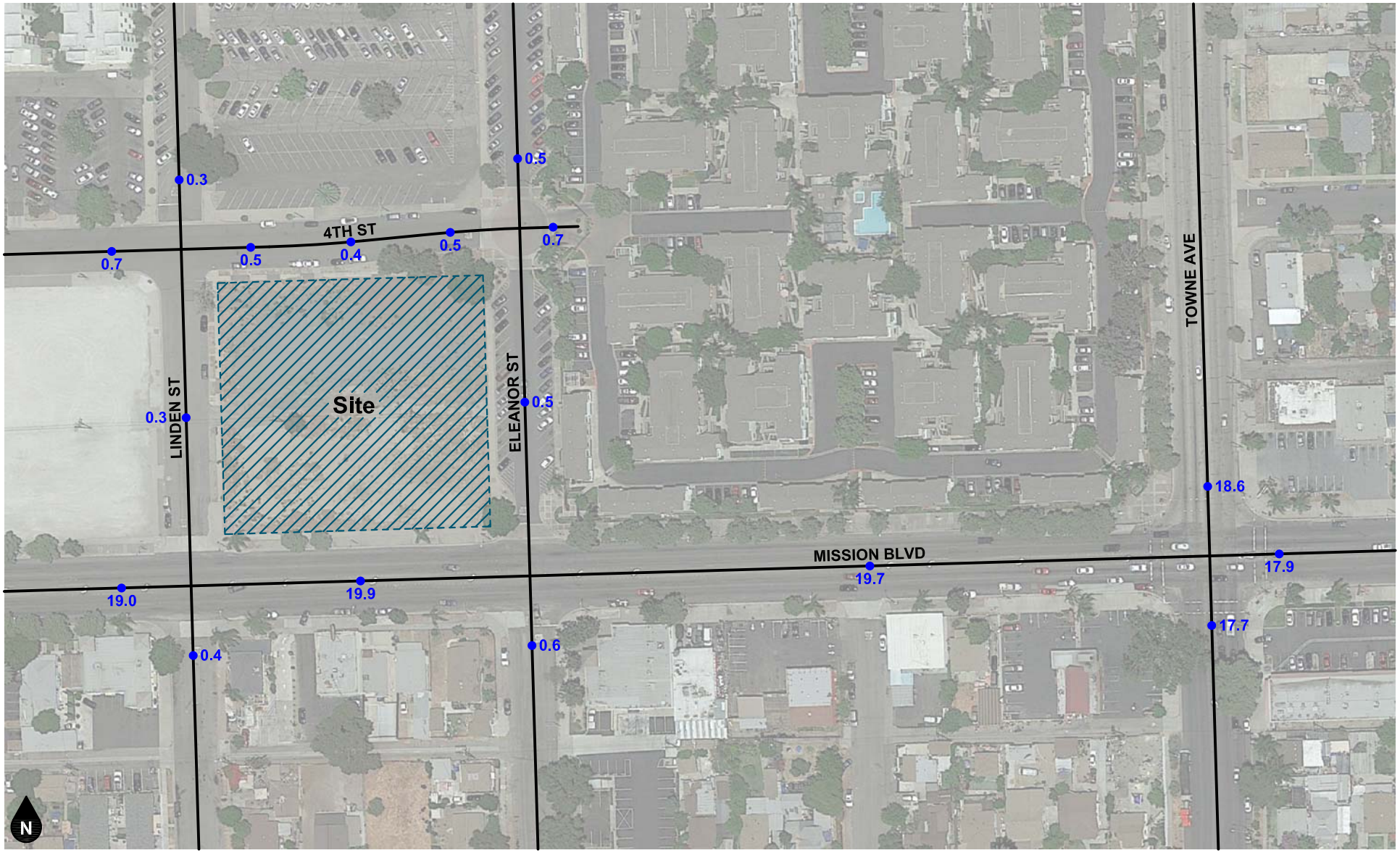


Figure 9
City of Pomona General Plan Roadway Cross-Sections

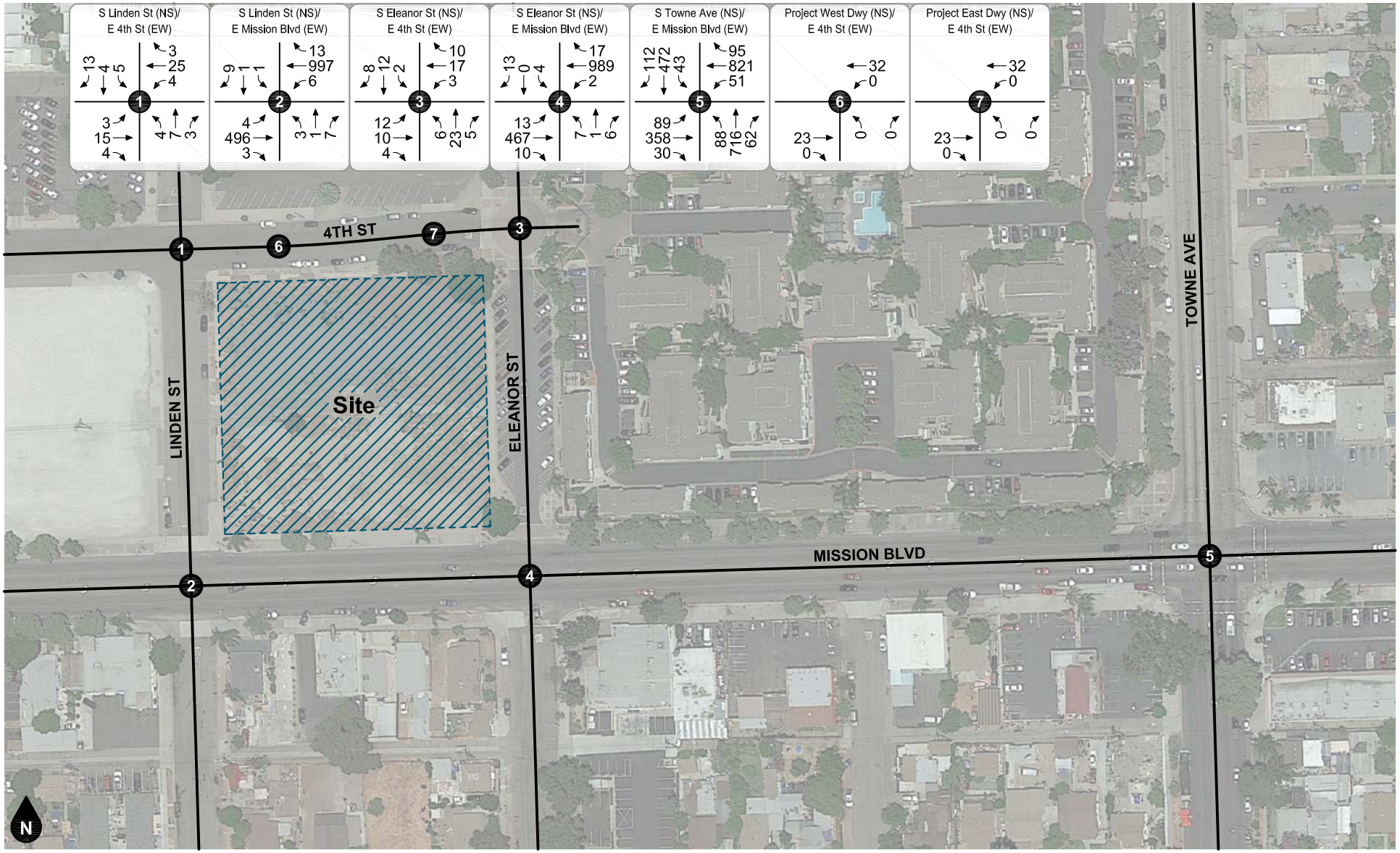
Source: City of Pomona



Legend

●## Vehicles Per Day (1,000's)

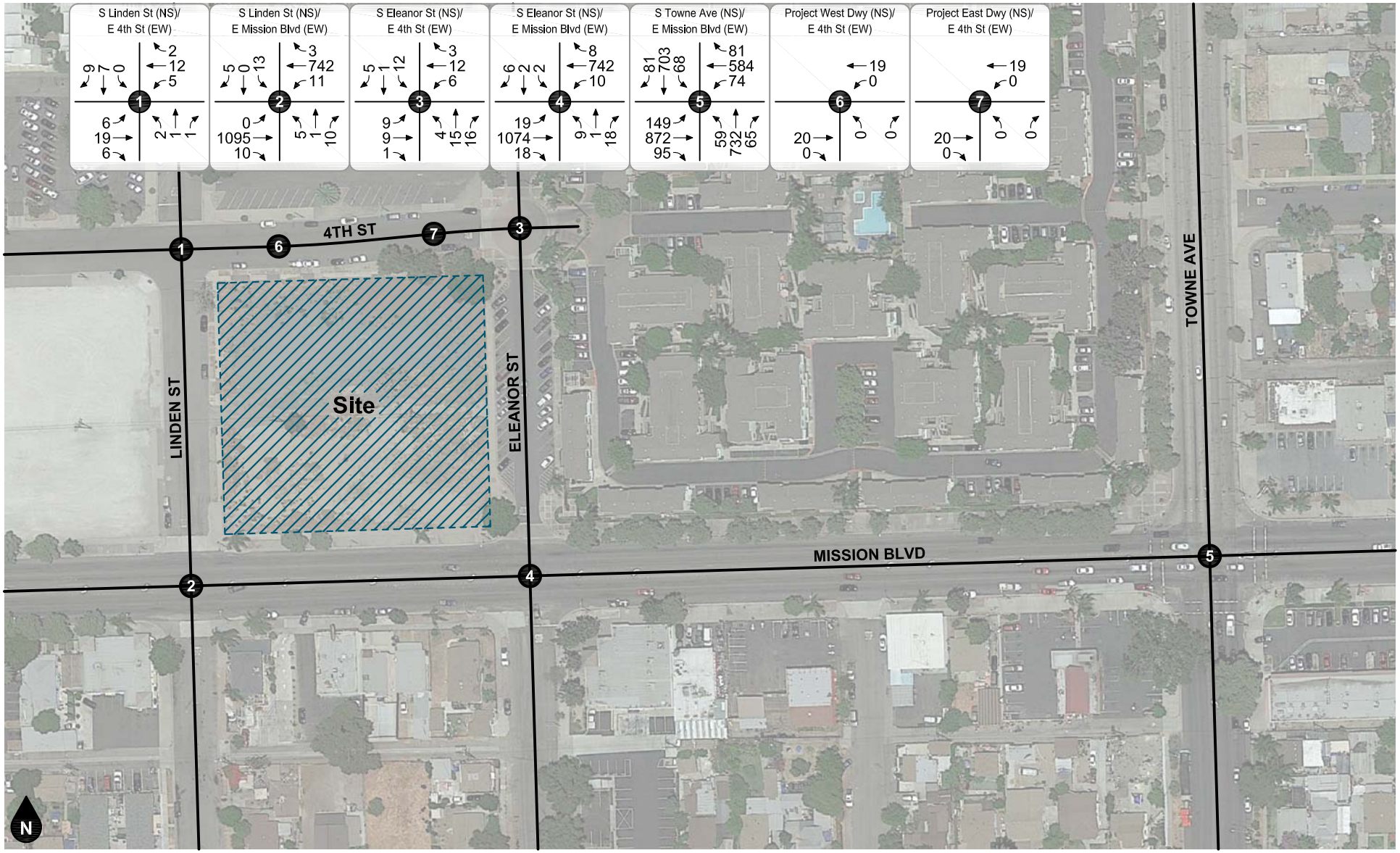
Figure 10
Existing Average Daily Traffic Volumes



Legend

(#) Study Intersection

Figure 11
Existing AM Peak Hour Intersection Turning Movement Volumes



Legend

(#) Study Intersection

Figure 12
Existing PM Peak Hour Intersection Turning Movement Volumes

4. PROJECT TRIP FORECASTS

This section describes how project trip generation, trip distribution, and trip assignment forecasts were developed. The forecast project-only volumes are illustrated on figures contained in this section.

PROJECT TRIP GENERATION

Table 2 shows the project trip generation based upon trip generation rates obtained from the Institute of Transportation Engineers, Trip Generation Manual, 10th Edition, 2017. Trip generation rates for Land Use Code 220 (Multifamily Housing (Low-Rise)) were used for the proposed project. Trip generation rates were determined for daily trips, AM peak hour trips, and PM peak hour trips for the proposed land use. The number of trips forecast to be generated by the proposed land use is determined by multiplying the trip generation rates by the land use quantity.

As shown in Table 2, the proposed project is forecast to generate approximately 264 daily trips, including 17 trips during the AM peak hour and 20 trips during the PM peak hour.

PROJECT TRIP DISTRIBUTION AND ASSIGNMENT

Figure 13 shows the forecast outbound and inbound directional distribution patterns for the project. The project trip distribution patterns were determined in consultation with City of Pomona staff and are based on review of existing volume data, surrounding land uses, and the local and regional roadway facilities in the project vicinity.

Based on the identified project trip generation and distributions, project average daily traffic volumes have been calculated and are shown on Figure 14. The AM and PM peak hour intersection turning movement volumes expected from the project are depicted on Figure 15 and Figure 16.

Table 2
Project Trip Generation

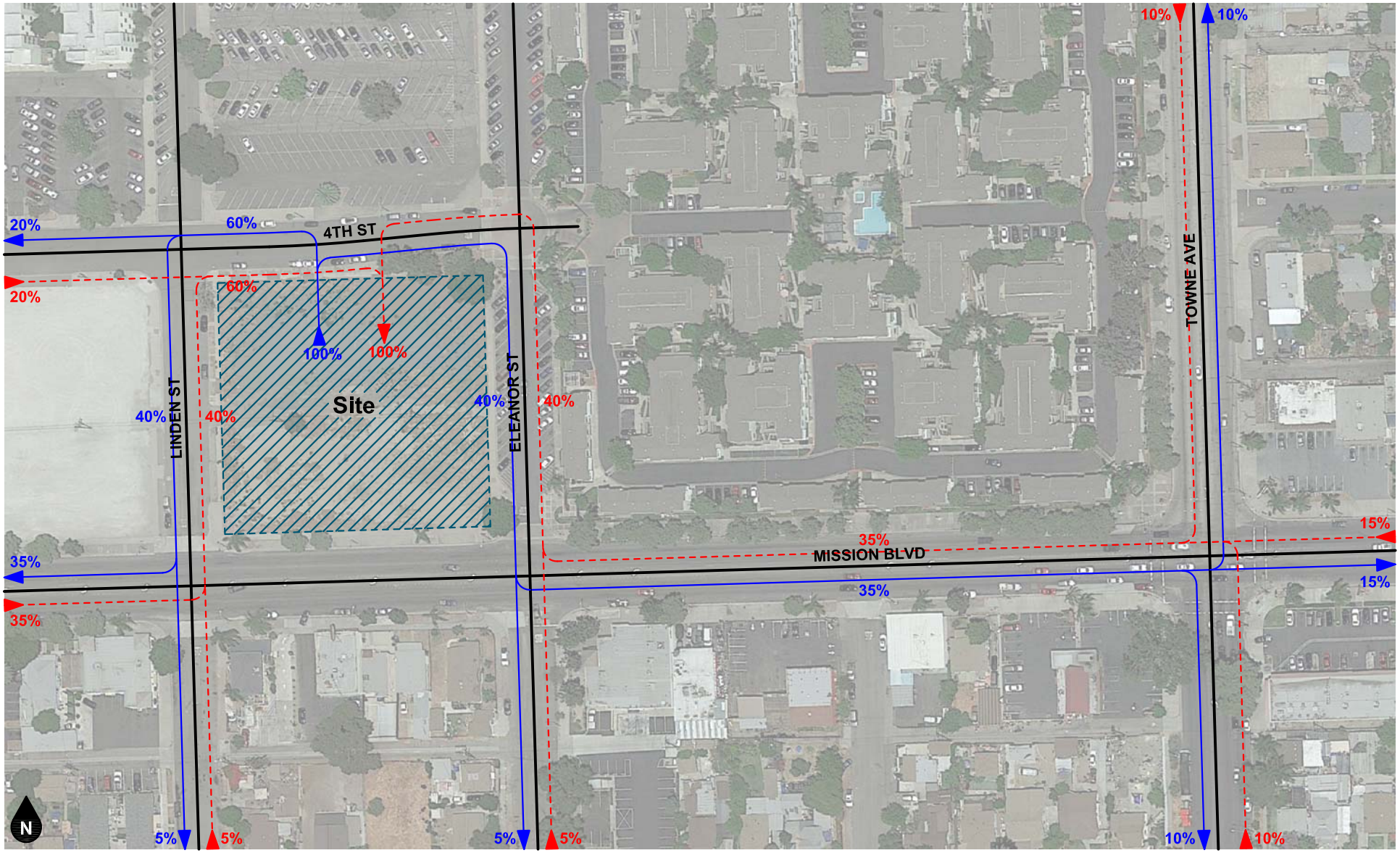
Trip Generation Rates									
			AM Peak Hour			PM Peak Hour			
Land Use	Source[1]	Unit[2]	% In	% Out	Rate	% In	% Out	Rate	Daily
Multifamily Housing (Low-Rise)	ITE 220	DU	23%	77%	0.46	63%	37%	0.56	7.32

Trips Generated									
			AM Peak Hour			PM Peak Hour			
Land Use	Quantity	Unit[2]	In	Out	Total	In	Out	Total	Daily
Multifamily Housing (Low-Rise)	36	DU	4	13	17	13	7	20	264

Notes:

(1) ITE = Institute of Transportation Engineers, Trip Generation Manual, 10th Edition, 2017; ### = Land Use Code

(2) DU = Dwelling Units

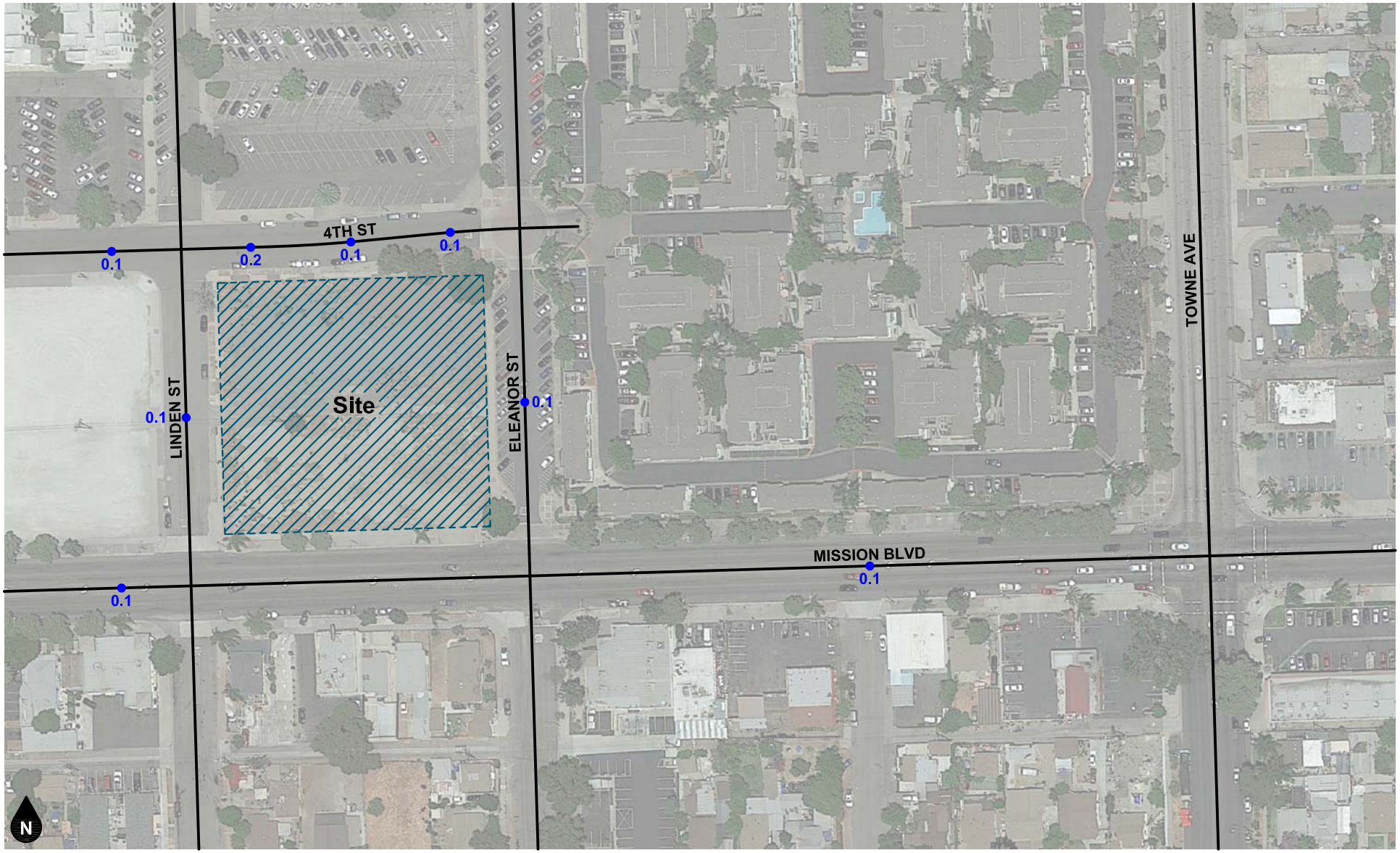


Legend

10% Percent To Project

10% Percent From Project

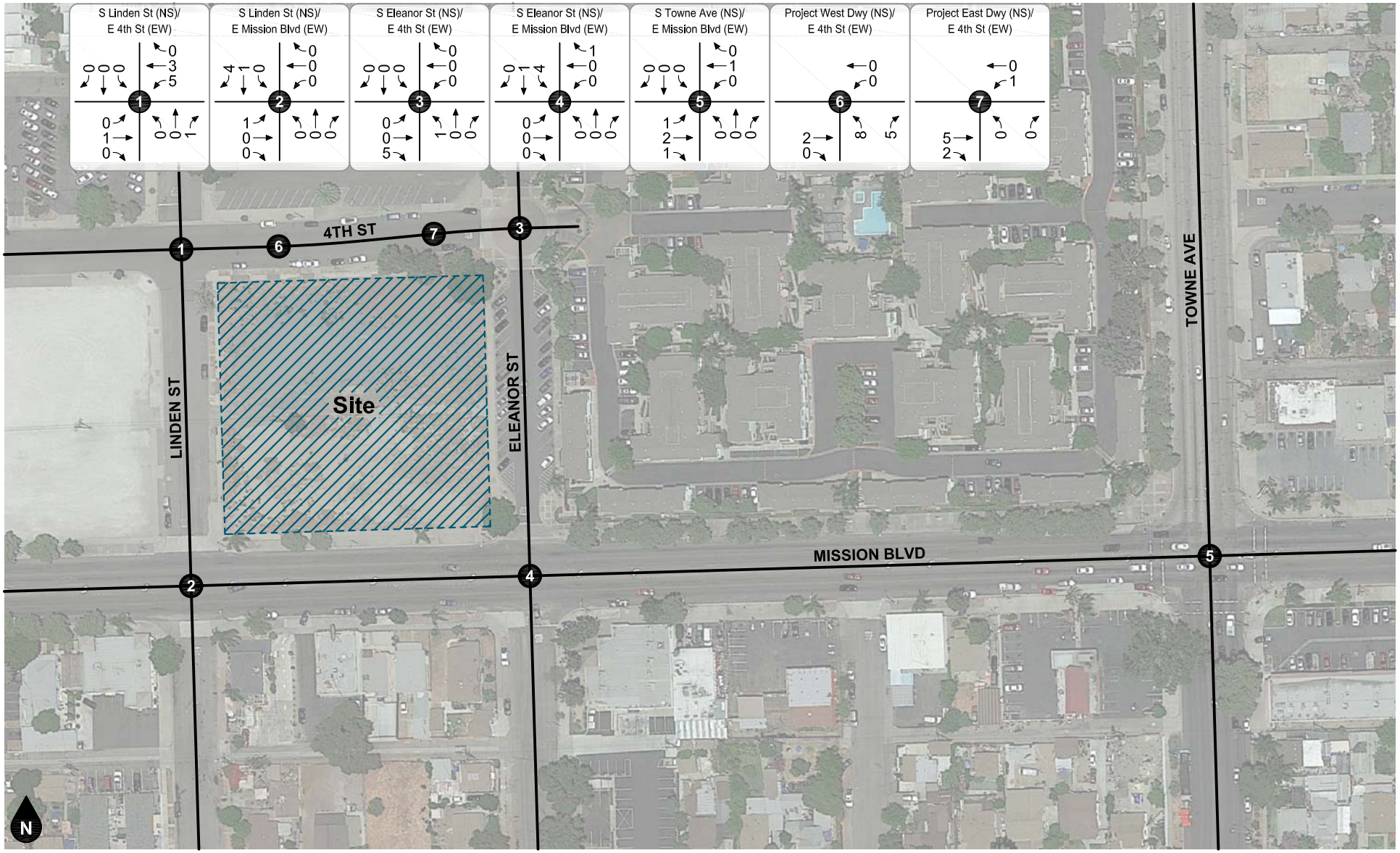
Figure 13
Project Trip Distribution



Legend

●## Vehicles Per Day (1,000's)

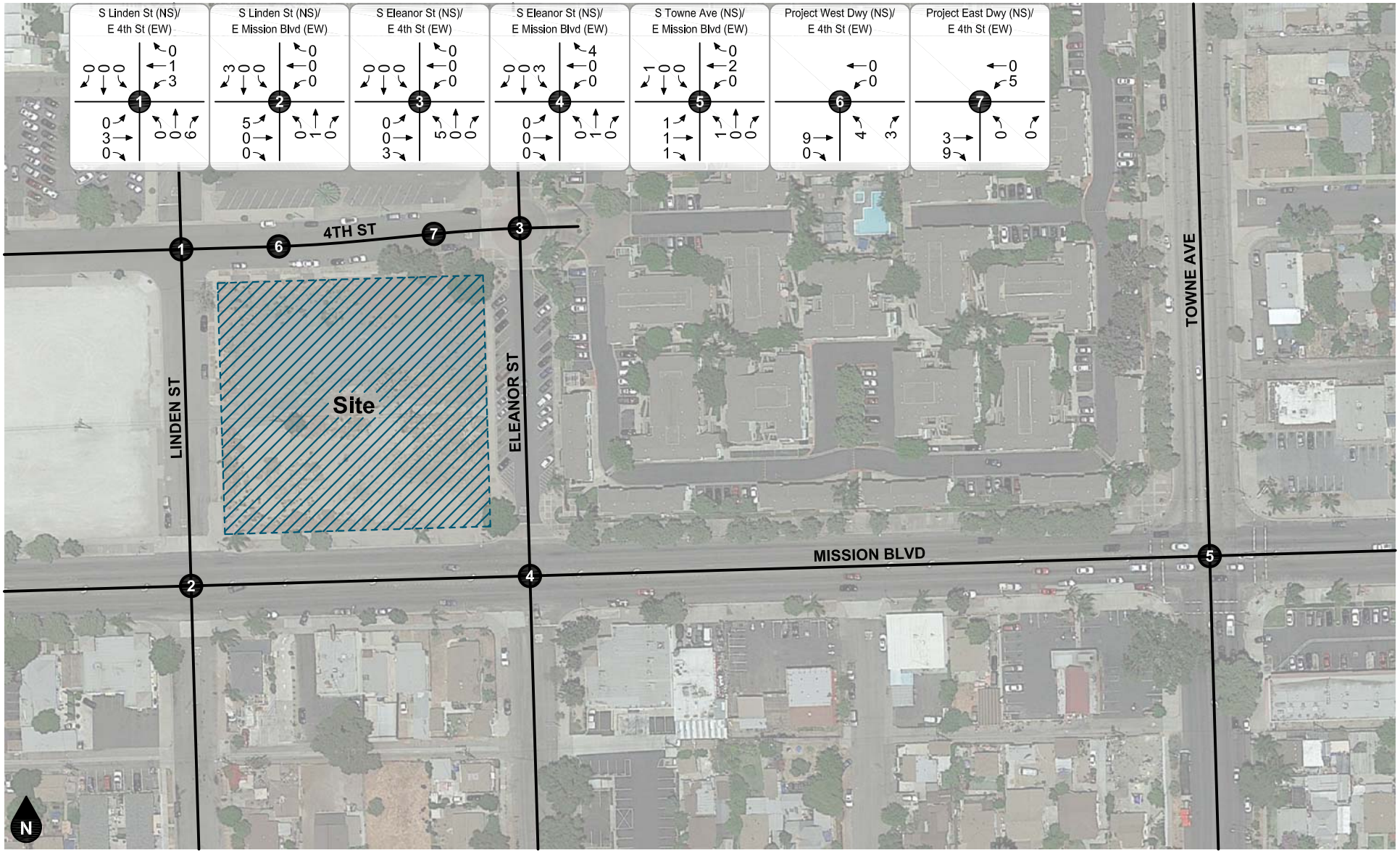
Figure 14
Project Average Daily Traffic Volumes



Legend

(#) Study Intersection

Figure 15
Project AM Peak Hour Intersection Turning Movement Volumes



Legend

(#) Study Intersection

Figure 16
Project PM Peak Hour Intersection Turning Movement Volumes

5. FUTURE VOLUME FORECASTS

This section describes how future volume forecasts for each analysis scenario were developed. Forecast study area volumes are illustrated on figures contained in this section.

METHOD OF PROJECTION

To develop future traffic volumes, existing volumes are combined with project trips, ambient growth, and other development trips (as necessary). The opening year for analysis purposes in this report is 2022.

Ambient Growth

To account for ambient growth on roadways, existing volumes were increased by a growth rate of two percent (2%) per year over a three-year period. This equates to a total growth factor of approximately 1.06. The ambient growth was conservatively applied to all movements at the study intersections.

Other Development

According to the City of Pomona Traffic Impact Study Guidelines (February 2012):

> "For developments projected to generate fewer than 200 gross peak hour trips, the future project opening year base traffic volumes shall be estimated using an annual growth factor of two (2) percent per year or as directed by the City Traffic Engineer.
>
> If the project is expected to generate over 200 gross peak hour trips, the Project's Opening Year Background Traffic should include an annual ambient growth factor as determined by the City Traffic Engineer plus cumulative projects (i.e. development projects that have been approved by the City but have not yet been fully occupied)."

Since the proposed project is projected to generate fewer than 200 gross peak hour trips, the two percent annual growth factor has been utilized to account for other development.

ANALYSIS SCENARIO VOLUME FORECASTS

Existing Plus Project

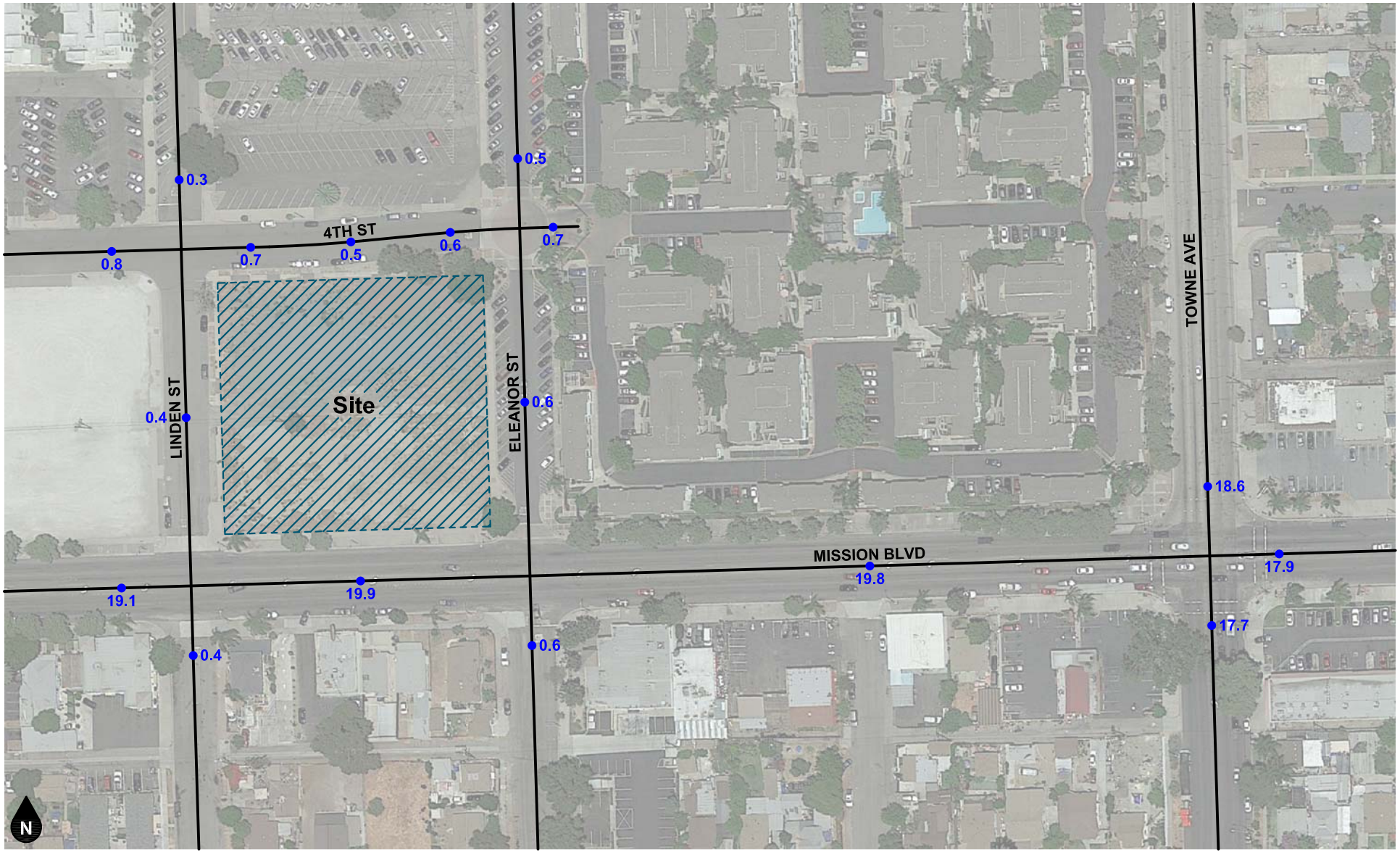
Existing Plus Project volume forecasts were developed by adding the project generated trips to Existing volumes. Existing Plus Project average daily traffic volumes are shown on Figure 17. Existing Plus Project AM and PM peak hour intersection turning movement volumes are shown on Figure 18 and Figure 19.

Opening Year (2022) Without Project

Opening Year (2022) Without Project volume forecasts were developed by adding ambient growth to Existing volumes. Opening Year (2022) Without Project average daily traffic volumes are shown on Figure 20. Opening Year (2022) Without Project AM and PM peak hour intersection turning movement volumes are shown Figure 21 and Figure 22.

Opening Year (2022) With Project

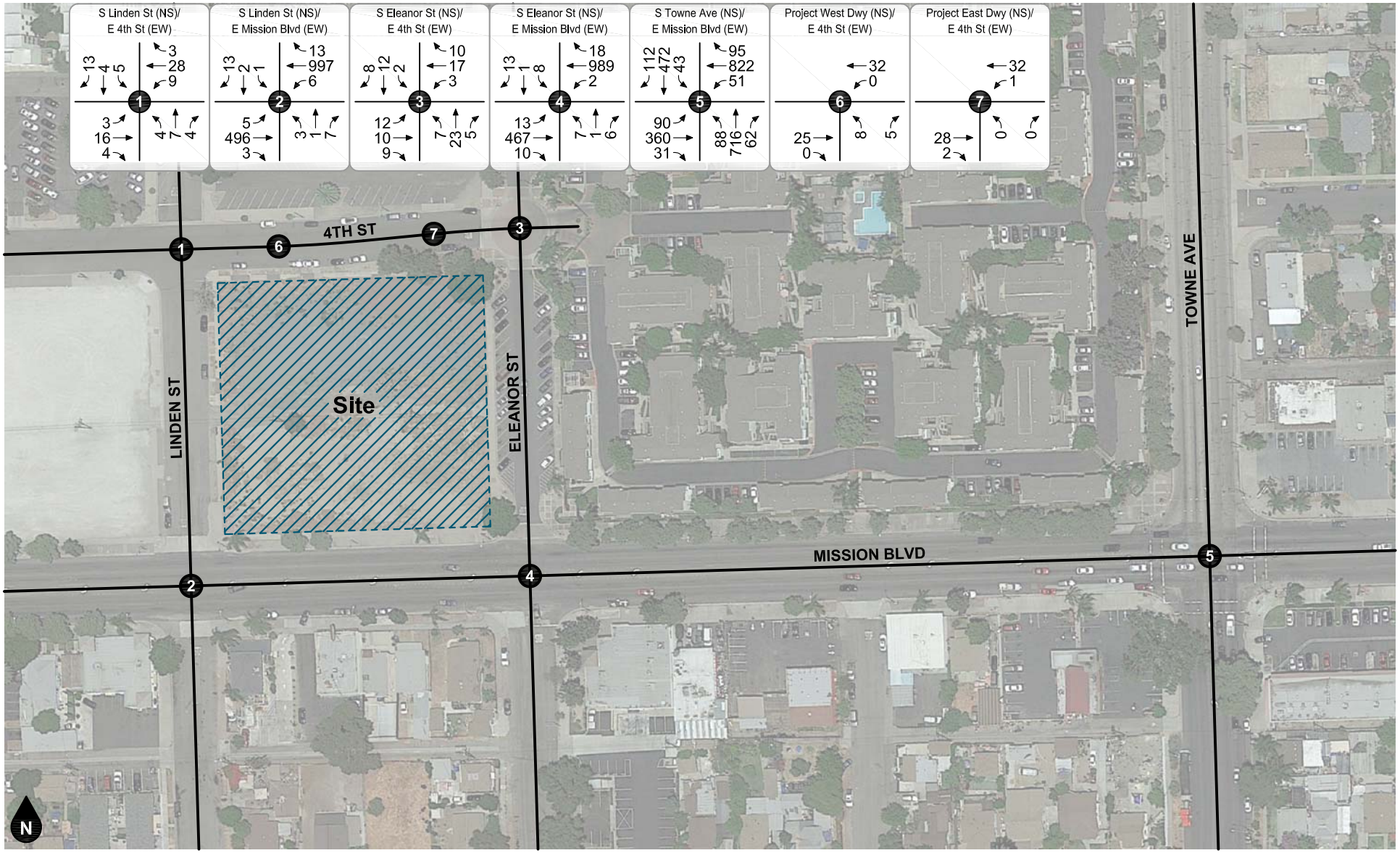
Opening Year (2022) With Project volumes were developed by adding project generated trips to the Opening Year (2022) Without Project forecast volumes. Opening Year (2022) With Project average daily traffic volumes are shown on Figure 23. Opening Year (2022) With Project AM and PM peak hour intersection turning movement volumes are shown on Figure 24 and Figure 25.



Legend

●## Vehicles Per Day (1,000's)

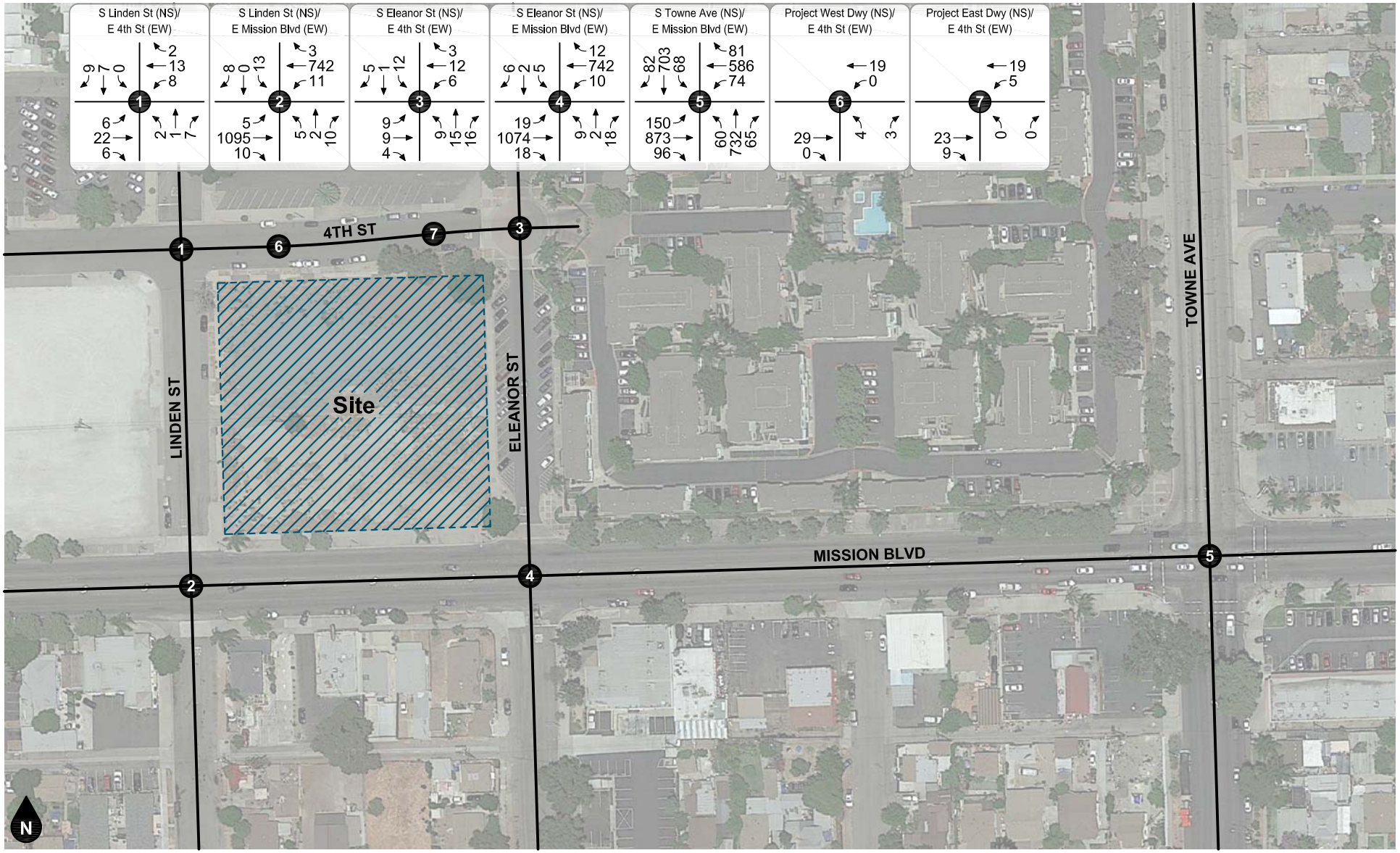
Figure 17
Existing Plus Project Average Daily Traffic Volumes



Legend

(#) Study Intersection

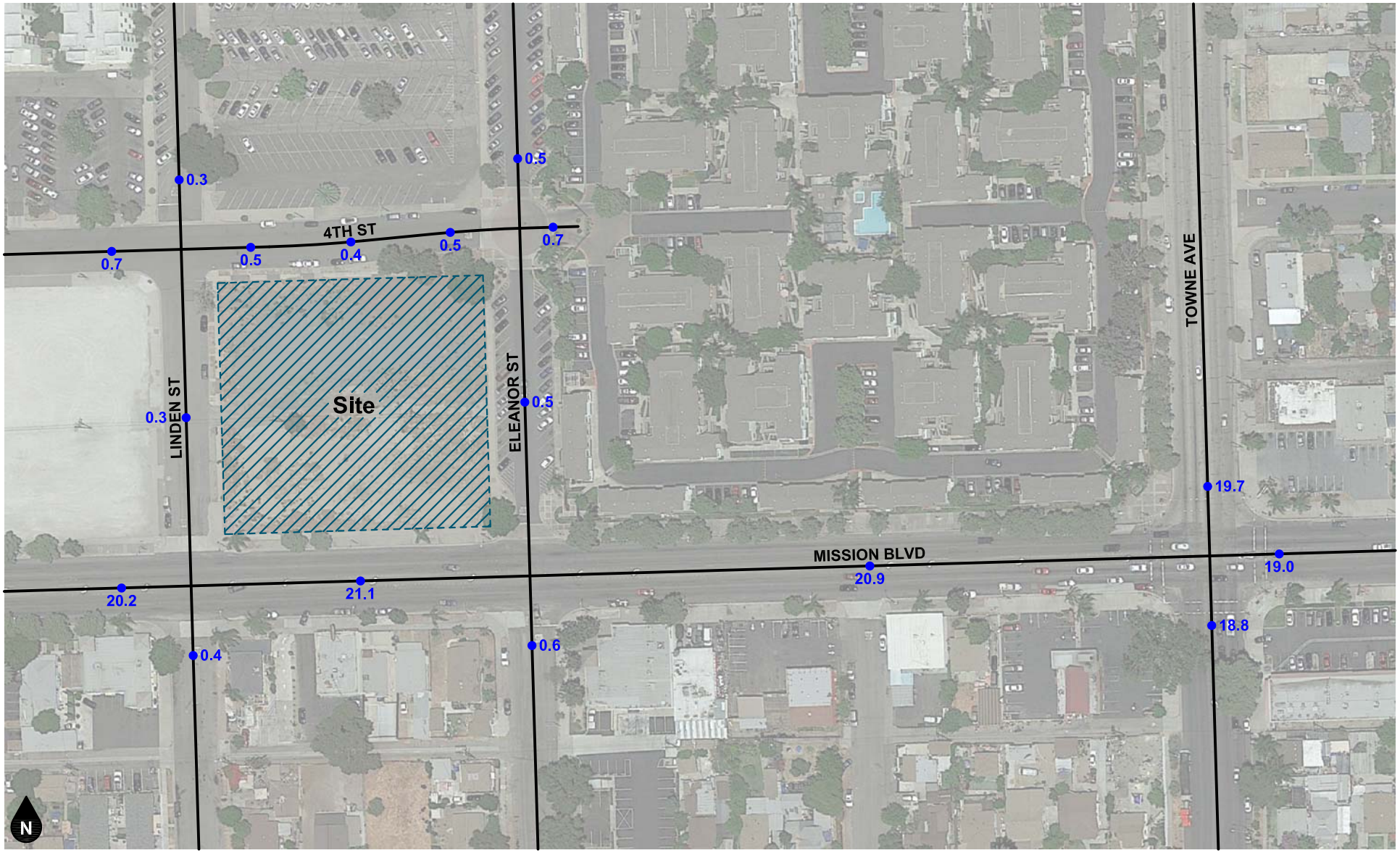
Figure 18
Existing Plus Project
AM Peak Hour Intersection Turning Movement Volumes



Legend

(#) Study Intersection

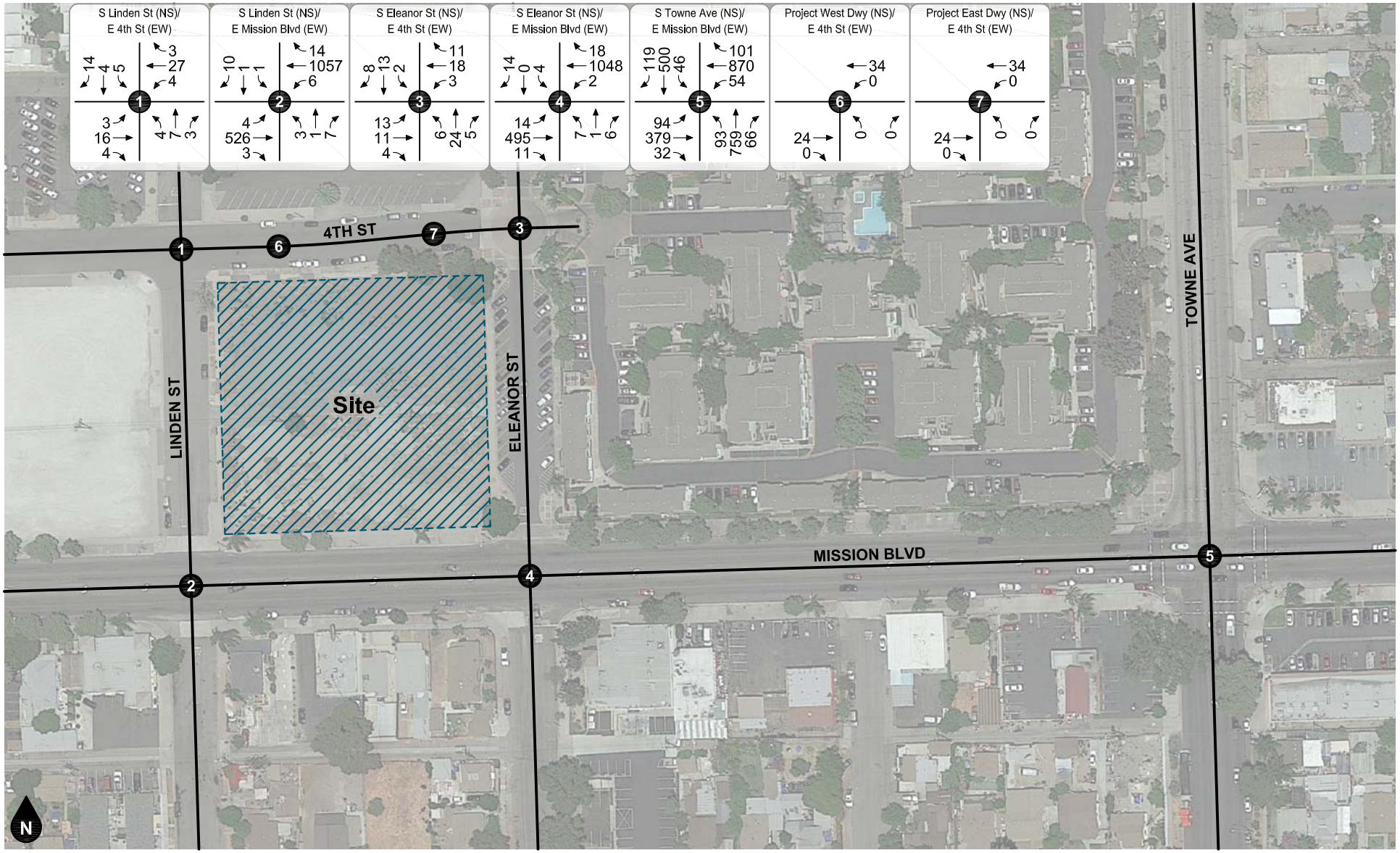
Figure 19
Existing Plus Project
PM Peak Hour Intersection Turning Movement Volumes



Legend

●## Vehicles Per Day (1,000's)

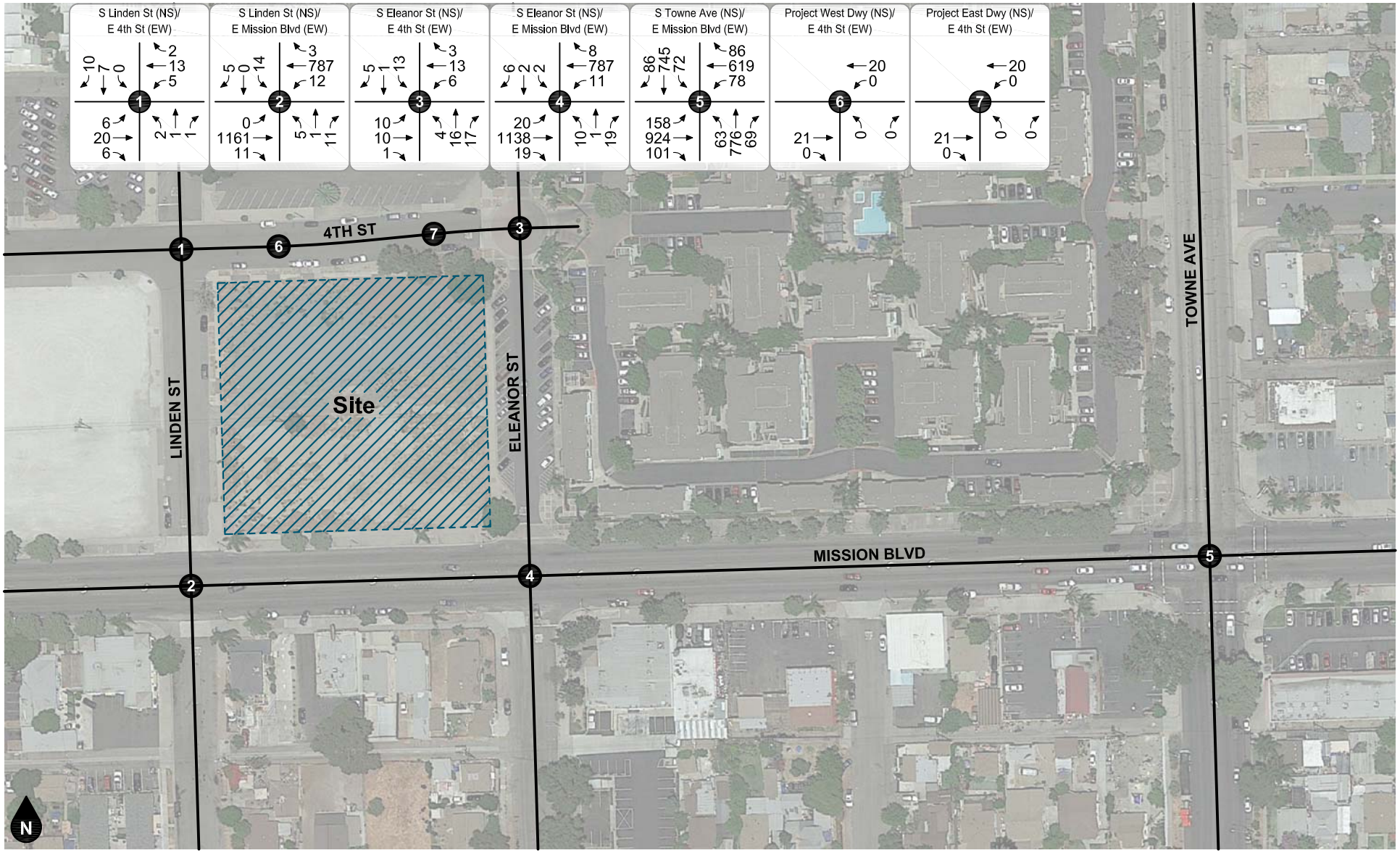
Figure 20
Opening Year (2022) Without Project Average Daily Traffic Volumes



Legend

(#) Study Intersection

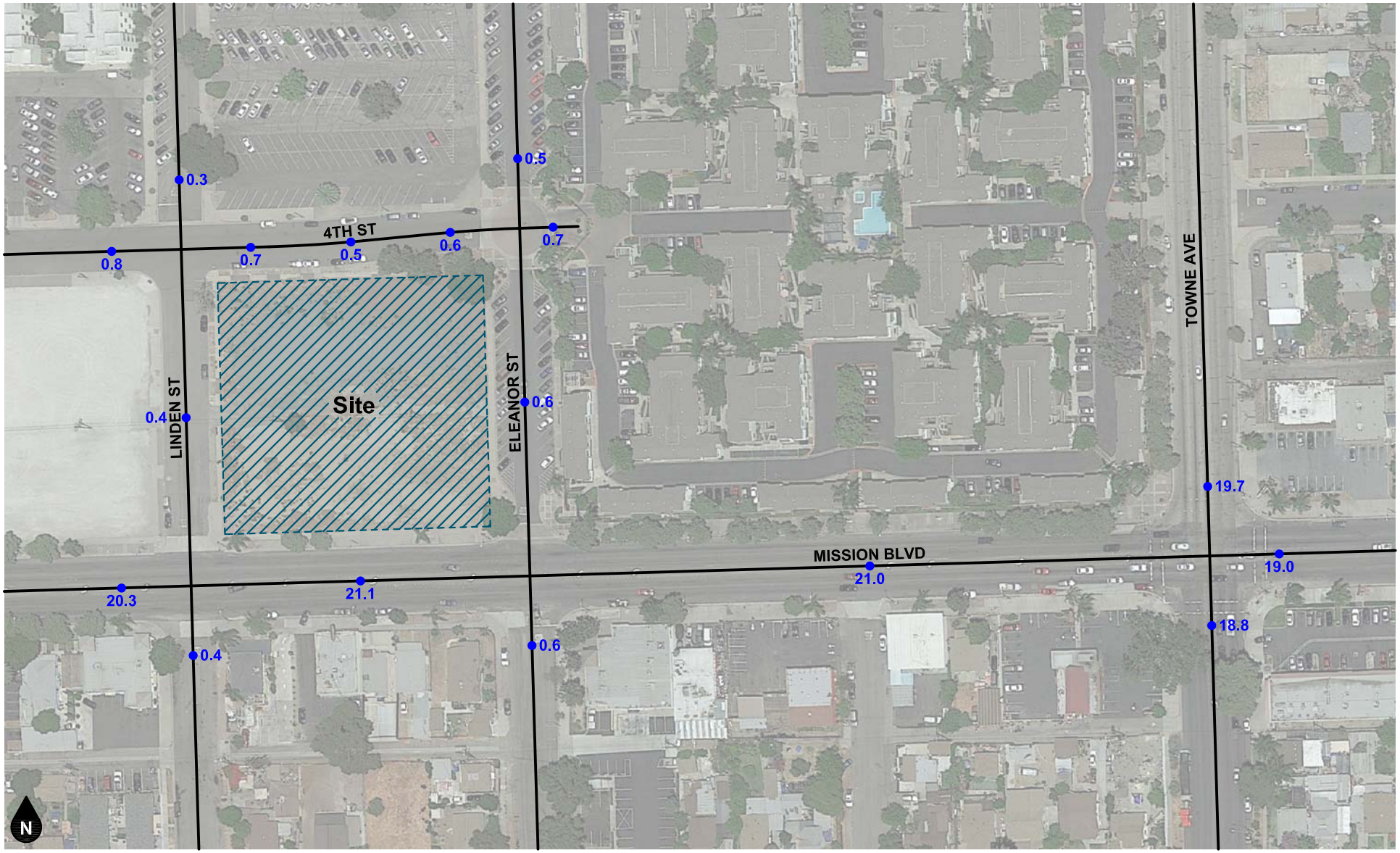
Figure 21
Opening Year (2022) Without Project
AM Peak Hour Intersection Turning Movement Volumes



Legend

(#) Study Intersection

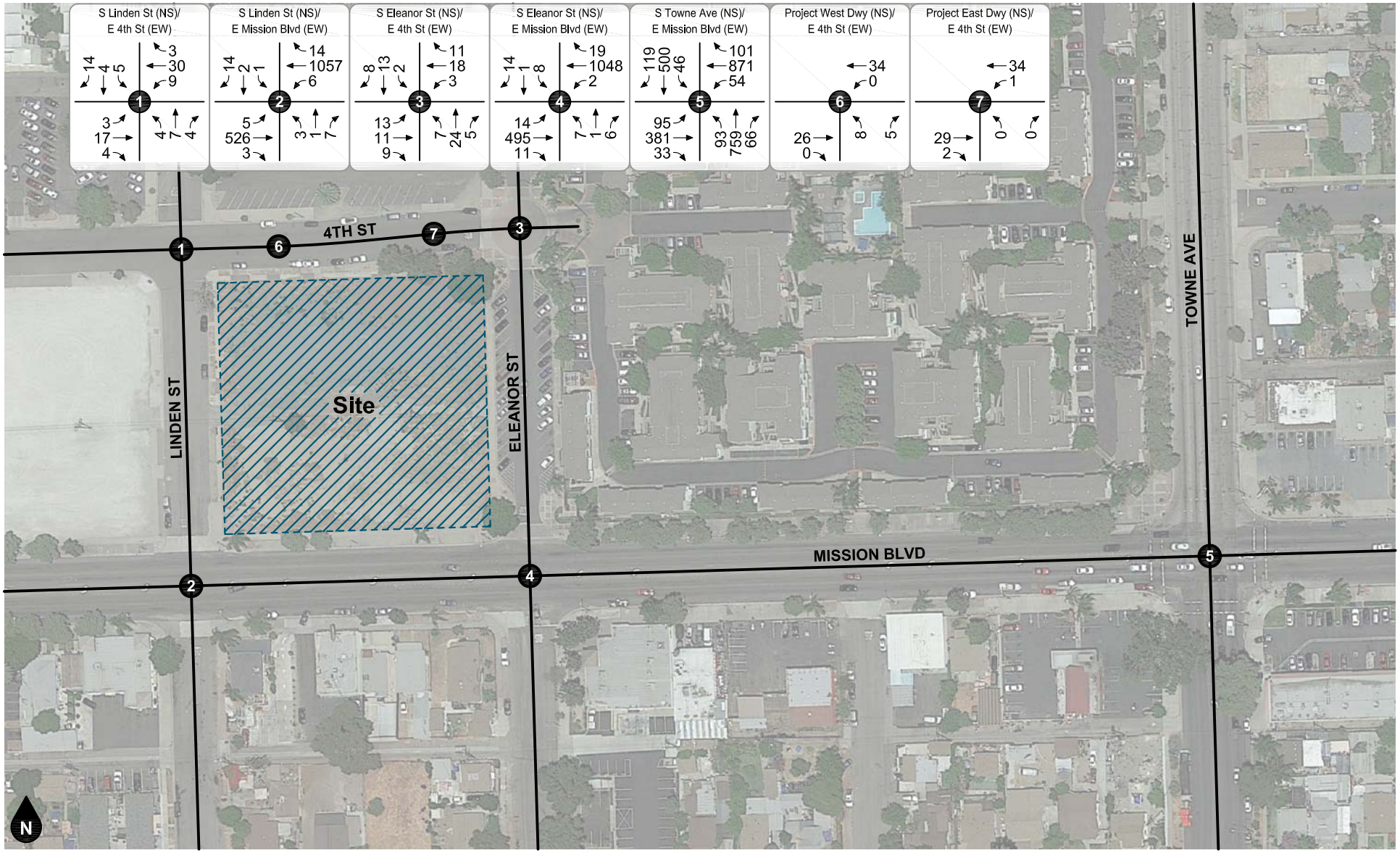
Figure 22
Opening Year (2022) Without Project
PM Peak Hour Intersection Turning Movement Volumes



Legend

●## Vehicles Per Day (1,000's)

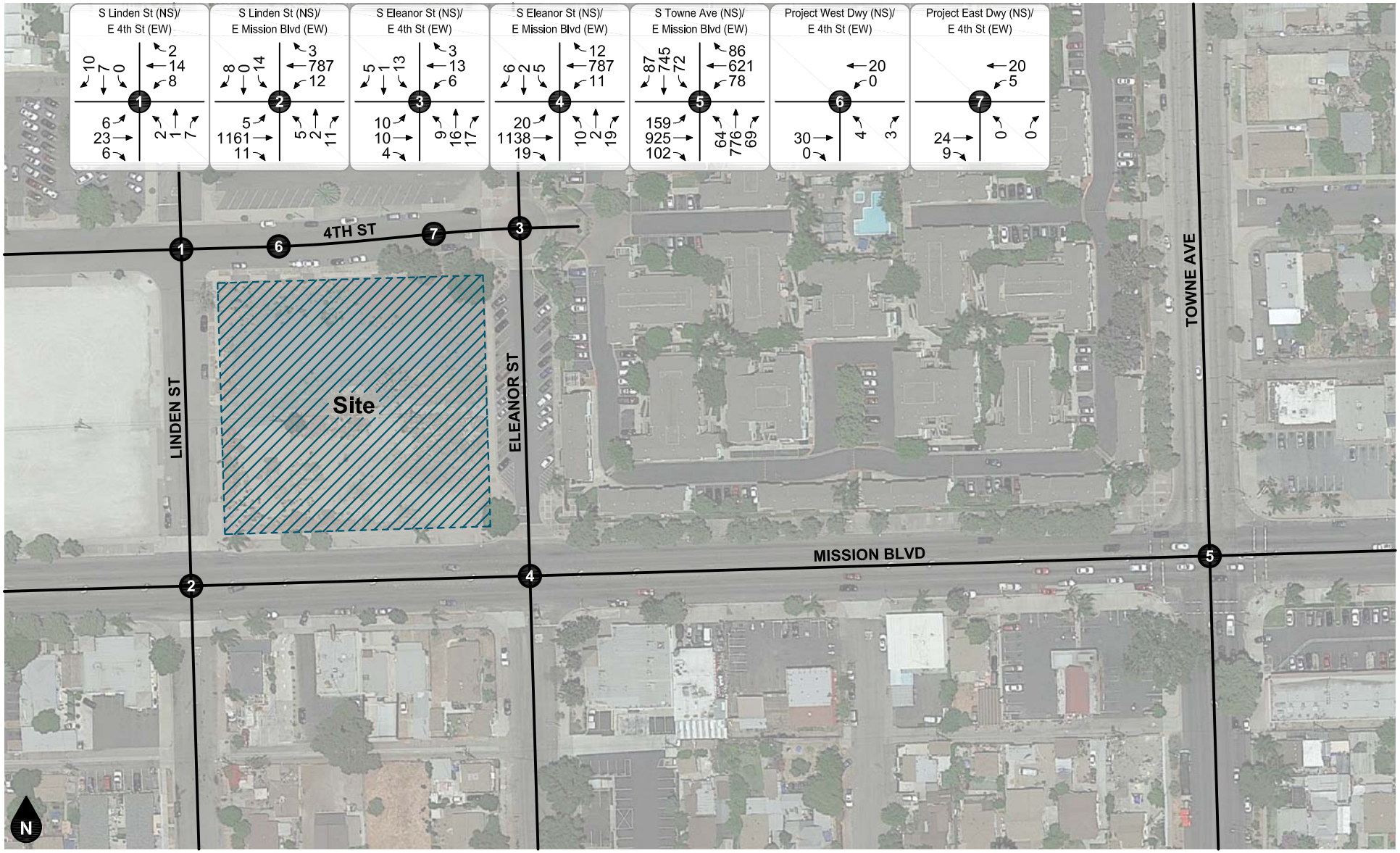
Figure 23
Opening Year (2022) With Project Average Daily Traffic Volumes



Legend

(#) Study Intersection

Figure 24
Opening Year (2022) With Project
AM Peak Hour Intersection Turning Movement Volumes



Legend

Study Intersection

Figure 25
Opening Year (2022) With Project
PM Peak Hour Intersection Turning Movement Volumes

6. FUTURE OPERATIONAL ANALYSIS

Detailed intersection Level of Service calculation worksheets for each of the following analysis scenarios are provided in Appendix D.

EXISTING PLUS PROJECT

The intersection Levels of Service for Existing Plus Project conditions have been calculated and are shown in Table 3. The study intersections are forecast to operate within acceptable Levels of Service (D or better) during the peak hours for Existing Plus Project conditions, with the exception of the following intersections (see Table 3):

- South Linden Street (NS) at East Mission Boulevard (EW) - #2 (LOS F, AM/PM peak hours)
- South Eleanor Street (NS) at East Mission Boulevard (EW) - #4 (LOS F, AM/PM peak hours)

A significant impact at an unsignalized intersection operating at an unacceptable pre-project Level of Service is defined to occur if the project adds 10 trips to any approach, and/or the intersection meets the peak hour traffic signal warrant after the addition of project traffic. For both intersections, neither criteria is satisfied. Therefore, the proposed project is forecast to result in no significant traffic impacts during the peak hours for Existing Plus Project conditions. Peak hour traffic signal warrants are provided in Appendix E.

OPENING YEAR (2022) WITHOUT PROJECT

The intersection Levels of Service for Opening Year (2022) Without Project conditions have been calculated and are shown in Table 4. The study intersections are forecast to operate within acceptable Levels of Service (D or better) during the peak hours for Opening Year (2022) Without Project conditions, with the exception of the following intersections (see Table 4):

- South Linden Street (NS) at East Mission Boulevard (EW) - #2 (LOS F, AM/PM peak hours)
- South Eleanor Street (NS) at East Mission Boulevard (EW) - #4 (LOS F, AM/PM peak hours)

OPENING YEAR (2022) WITH PROJECT

The intersection Levels of Service for Opening Year (2022) With Project conditions have been calculated are shown in Table 5. The study intersections are forecast to operate within acceptable Levels of Service (D or better) during the peak hours for Opening Year (2022) With Project conditions, with the exception of the following intersections (see Table 5):

- South Linden Street (NS) at East Mission Boulevard (EW) - #2 (LOS F, AM/PM peak hours)
- South Eleanor Street (NS) at East Mission Boulevard (EW) - #4 (LOS F, AM/PM peak hours)

A significant impact at an unsignalized intersection operating at an unacceptable pre-project Level of Service is defined to occur if the project adds 10 trips to any approach, and/or the intersection meets the peak hour traffic signal warrant after the addition of project traffic. For both intersections, neither criteria is satisfied. Therefore, the proposed project is forecast to result in no significant traffic impacts during the peak hours for Opening Year (2022) With Project conditions. Peak hour traffic signal warrants are provided in Appendix E.

Table 3
Existing Plus Project Intersection Levels of Service

ID	Study Intersection	Traffic Control[1]	AM Peak Hour		PM Peak Hour	
			Delay[2]	LOS[3]	Delay[2]	LOS[3]
1.	South Linden Street at East 4th Street	CSS	9.6	A	9.7	A
2.	South Linden Street at East Mission Boulevard	CSS	54.9	F	64.3	F
3.	South Eleanor Street at East 4th Street	CSS	9.6	A	9.7	A
4.	South Eleanor Street at East Mission Boulevard	CSS	56.5	F	71.7	F
5.	South Towne Avenue at East Mission Boulevard	TS	15.4	B	15.2	B
6.	Project West Driveway at East 4th Street	CSS	8.8	A	8.8	A
7.	Project East Driveway at East 4th Street	CSS	8.8	A	8.8	A

Notes:
(1) CSS = Cross Street Stop; TS = Traffic Signal

(2) Delay is shown in seconds/vehicle. For intersections with traffic signal or all way stop control, overall average intersection delay and LOS are shown. For intersections with cross street stop control, LOS is based on average delay of the worst individual lane (or movements sharing a lane).

(3) LOS = Level of Service

Table 4
Opening Year (2022) Without Project Intersection Levels of Service

ID	Study Intersection	Traffic Control[1]	AM Peak Hour		PM Peak Hour	
			Delay[2]	LOS[3]	Delay[2]	LOS[3]
1.	South Linden Street at East 4th Street	CSS	9.5	A	9.6	A
2.	South Linden Street at East Mission Boulevard	CSS	63.3	F	75.4	F
3.	South Eleanor Street at East 4th Street	CSS	9.6	A	9.7	A
4.	South Eleanor Street at East Mission Boulevard	CSS	62.0	F	83.2	F
5.	South Towne Avenue at East Mission Boulevard	TS	16.1	B	15.8	B

Notes:

(1) CSS = Cross Street Stop; TS = Traffic Signal

(2) Delay is shown in seconds/vehicle. For intersections with traffic signal or all way stop control, overall average intersection delay and LOS are shown. For intersections with cross street stop control, LOS is based on average delay of the worst individual lane (or movements sharing a lane).

(3) LOS = Level of Service

Table 5
Opening Year (2022) With Project Intersection Levels of Service

ID	Study Intersection	Traffic Control[1]	AM Peak Hour		PM Peak Hour	
			Delay[2]	LOS[3]	Delay[2]	LOS[3]
1.	South Linden Street at East 4th Street	CSS	9.6	A	9.7	A
2.	South Linden Street at East Mission Boulevard	CSS	63.6	F	76.7	F
3.	South Eleanor Street at East 4th Street	CSS	9.6	A	9.8	A
4.	South Eleanor Street at East Mission Boulevard	CSS	66.2	F	85.4	F
5.	South Towne Avenue at East Mission Boulevard	TS	16.1	B	15.9	B
6.	Project West Driveway at East 4th Street	CSS	8.9	A	8.8	A
7.	Project East Driveway at East 4th Street	CSS	8.8	A	8.8	A

Notes:
(1) CSS = Cross Street Stop; TS = Traffic Signal

(2) Delay is shown in seconds/vehicle. For intersections with traffic signal or all way stop control, overall average intersection delay and LOS are shown. For intersections with cross street stop control, LOS is based on average delay of the worst individual lane (or movements sharing a lane).

(3) LOS = Level of Service

7. SITE ACCESS

SIGHT DISTANCE ANALYSIS

The sight distance requirements for the Project Driveways at East 4th Street were determined based on the stopping sight distance standards (Table 201.1) and corner sight distance standards (Table 405.1A) contained in the Highway Design Manual (California Department of Transportation, July/December 2018).

There is no posted speed limit on East 4th Street in the project vicinity. Based on a presumed design speed of 30 miles per hour for East 4th Street, a stopping sight distance of 200 feet is required along the path of travel. A corner sight distance of 331 feet is required for left-turns from a stop and approximately 287 feet is required for right-turns from a stop. In accordance with Highway Design Manual standards, the driver at the project driveway is assumed to be located at the centerline and setback a minimum of 10 feet plus the shoulder width of the major road, but not less than 15 feet.

Figure 26 shows the left-turn corner sight distance requirements for the Project West Driveway at East 4th Street, as well as the stopping sight distance requirements. The sight distance to the east (viewing oncoming westbound traffic) is shown up until the exit gate for the residential property east of South Eleanor Street, as that is the maximum distance where a vehicle could be in the driver's view from the driveway. Sight distance for the Project East Driveway is not shown since the driveway is inbound only.

The area between the line of sight and the path of travel of the approaching vehicle on the major road is defined as the Restricted Use Area, and should be kept clear of any landscaping and objects over 30" tall that may interfere with the line of sight. The Highway Design Manual notes that the minimum corner sight distance at private road intersections should be equal to the stopping sight distance. As shown on Figure 26, some of the proposed parking spaces on 4th Street along the north project site frontage are located within the restricted use area, and should therefore be removed. Vehicles parked within these spaces would potentially obstruct the line of sight between westbound oncoming traffic and vehicles exiting the Project West Driveway. Recommended red curb markings (18 feet west of the driveway and 76 feet east of the driveway) have also been identified on Figure 26.

PEDESTRIAN CROSSWALK ASSESSMENT

Although a traffic signal is not forecast to be warranted at the unsignalized study intersections for Opening Year (2022) With Project conditions, pedestrian crossing safety has been assessed at the request of the City of Pomona.

A comprehensive study published by the Federal Highway Administration (FHWA), Safety Effects of Marked Versus Unmarked Crosswalks at Uncontrolled Locations, September 2005, analyzed five years of pedestrian crashes at 1,000 marked and 1,000 unmarked crosswalks. Table 6 shows the summary recommendations from the FHWA study for installing marked crosswalks at uncontrolled locations.

Table 6. Summary of FHWA Recommendations for Installing Marked Crosswalks

Roadway Type (Number of Travel Lanes and Median Type)	Vehicle ADT ≤ 9,000			Vehicle ADT >9,000 to 12,000			Vehicle ADT >12,000–15,000			Vehicle ADT > 15,000		
	Speed Limit**											
	≤ 48.3 km/h (30 mi/h)	56.4 km/h (35 mi/h)	64.4 km/h (40 mi/h)	≤ 48.3 km/h (30 mi/h)	56.4 km/h (35 mi/h)	64.4 km/h (40 mi/h)	≤ 48.3 km/h (30 mi/h)	56.4 km/h (35 mi/h)	64.4 km/h (40 mi/h)	≤ 48.3 km/h (30 mi/h)	56.4 km/h (35 mi/h)	64.4 km/h (40 mi/h)
Two lanes	C	C	P	C	C	P	C	C	N	C	P	N
Three lanes	C	C	P	C	P	P	P	P	N	P	N	N
Multilane (four or more lanes) with raised median***	C	C	P	C	P	N	P	P	N	N	N	N
Multilane (four or more lanes) without raised median	C	P	N	P	P	N	N	N	N	N	N	N

* These guidelines include intersection and midblock locations with no traffic signals or stop signs on the approach to the crossing. They do not apply to school crossings. A two-way center turn lane is not considered a median. Crosswalks should not be installed at locations that could present an increased safety risk to pedestrians, such as where there is poor sight distance, complex or confusing designs, a substantial volume of heavy trucks, or other dangers, without first providing adequate design features and/or traffic control devices. Adding crosswalks alone will not make crossings safer, nor will they necessarily result in more vehicles stopping for pedestrians. Whether or not marked crosswalks are installed, it is important to consider other pedestrian facility enhancements (e.g., raised median, traffic signal, roadway narrowing, enhanced overhead lighting, traffic-calming measures, curb extensions), as needed, to improve the safety of the crossing. These are general recommendations; good engineering judgment should be used in individual cases for deciding where to install crosswalks.

** Where the speed limit exceeds 64.4 km/h (40 mi/h), marked crosswalks alone should not be used at unsignalized locations.

*** The raised median or crossing island must be at least 1.2 m (4 ft) wide and 1.8 m (6 ft) long to serve adequately as a refuge area for pedestrians, in accordance with MUTCD and American Association of State Highway and Transportation Officials (AASHTO) guidelines.

C = Candidate sites for marked crosswalks. Marked crosswalks must be installed carefully and selectively. Before installing new marked crosswalks, an engineering study is needed to determine whether the location is suitable for a marked crosswalk. For an engineering study, a site review may be sufficient at some locations, while a more indepth study of pedestrian volume, vehicle speed, sight distance, vehicle mix, and other factors may be needed at other sites. It is recommended that a minimum utilization of 20 pedestrian crossings per peak hour (or 15 or more elderly and/or child pedestrians) be confirmed at a location before placing a high priority on the installation of a marked crosswalk alone.

P = Possible increase in pedestrian crash risk may occur if crosswalks are added without other pedestrian facility enhancements. These locations should be closely monitored and enhanced with other pedestrian crossing improvements, if necessary, before adding a marked crosswalk.

N = Marked crosswalks alone are insufficient, since pedestrian crash risk may be increased by providing marked crosswalks alone. Consider using other treatments, such as traffic-calming treatments, traffic signals with pedestrian signals where warranted, or other substantial crossing improvement to improve crossing safety for pedestrians.

Additional crosswalk guidance is available in the California Manual on Uniform Traffic Control Devices (California MUTCD). The California MUTCD, Section 3B.18, provides the following guidance regarding the use of crosswalk markings:

> 08 Crosswalk lines should not be used indiscriminately. An engineering study should be performed before a marked crosswalk is installed at a location away from a traffic control signal or an approach controlled by a STOP or YIELD sign. The engineering study should consider the number of lanes, the presence of a median, the distance from adjacent signalized intersections, the pedestrian volumes and delays, the average daily traffic (ADT), the posted or statutory speed limit or 85th-percentile speed, the geometry of the location, the possible consolidation of multiple crossing points, the availability of street lighting, and other appropriate factors.
>
> 09 New marked crosswalks across uncontrolled roadways should include other measures designed to reduce traffic speeds, shorten crossing distances, enhance driver awareness of the crossing, and/or provide active warning of pedestrian presence, where the speed limit exceeds 35 mph and either: A. The roadway has four or more lanes of travel without a raised median or pedestrian refuge island and an ADT of 12,000 vehicles per day or greater; or B. The roadway has four or more lanes of travel with a raised median or pedestrian refuge island and an ADT of 15,000 vehicles per day or greater.

East 4th Street Assessment

East 4th Street is a two lane roadway without a raised median in the project vicinity; there is no posted speed limit and existing ADT is less than 9,000 vehicles per day. The intersection of East 4th Street and Eleanor Street includes pavement texturing to delineate pedestrian crossings and existing enhancements include intersection bulb-outs. East 4th Street is uncontrolled at Linden Street with no marked crosswalks. Based on the FHWA and California MUTCD guideance, East 4th Street at Linden Street is a candidate for marked crosswalks since it has two lanes and a presumed speed limit of 30 miles per hour or less. Per FHWA guidance,

it is recommended that a minimum utilization of 20 pedestrian crossings (or minimum of 15 for elderly and child pedestrians) be confirmed before placing high priority on the installation of a marked crosswalk alone. Based on review of existing traffic conditions and surrounding land uses, it is unlikely that this criteria is satisfied; therefore, a marked crosswalk is not recommended across East 4th Street at Linden Street.

East Mission Boulevard Assessment

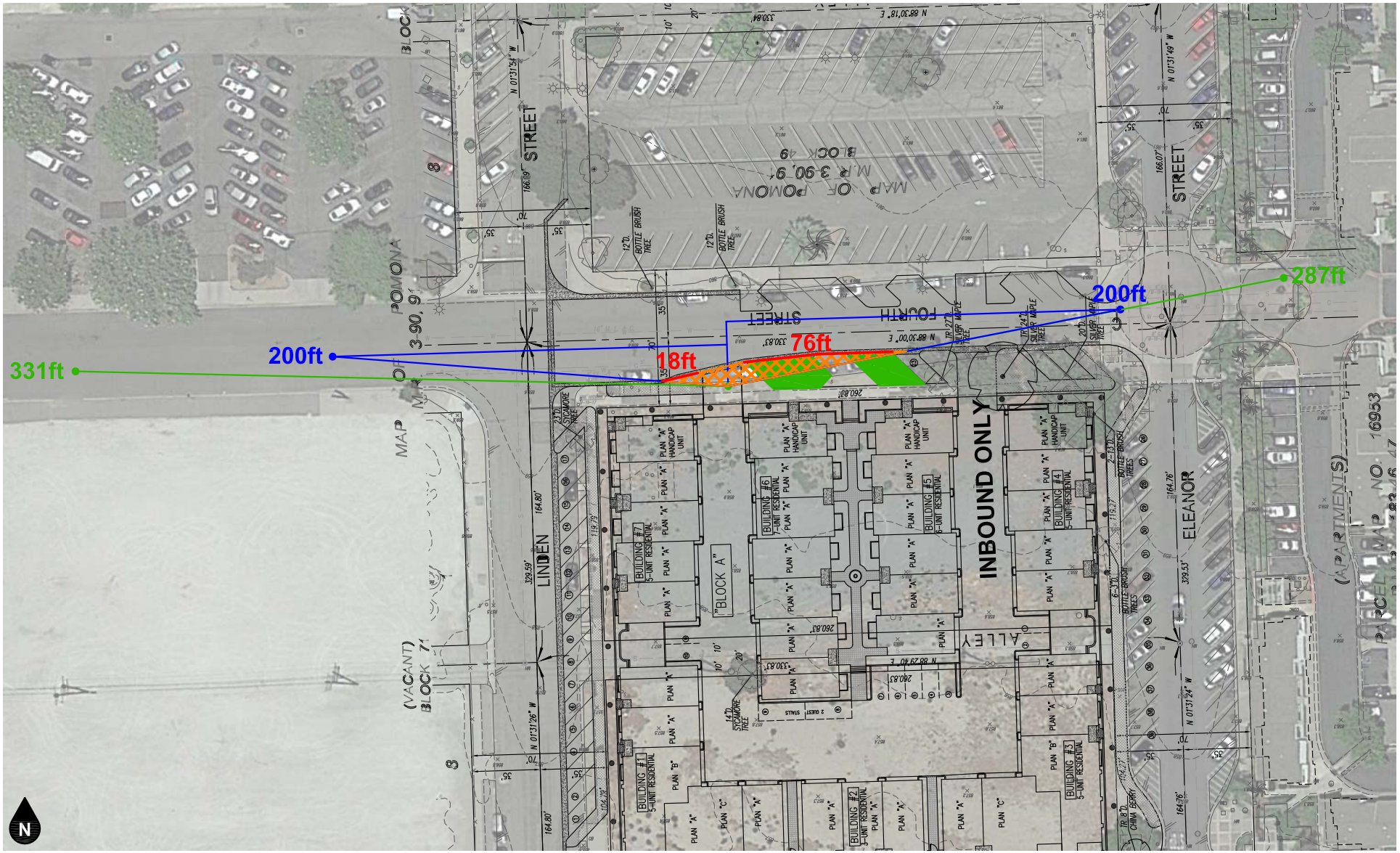
East Mission Boulevard is a four lane roadway without a raised median in the project vicinity; the posted speed limit is 35 miles per hour and the existing ADT volume is greater than 15,000 vehicles per day. Marked and signalized crosswalks on Mission Boulevard are provided at Palomares Street approximately 330 feet west of the project site and Towne Avenue approximately 630 feet east of the project site.

Based on the FHWA and California MUTCD guidance, a marked crosswalk alone is insufficient on East Mission Boulevard since pedestrian crash risk may increase by providing crosswalks alone. Other treatments such as traffic calming, pedestrian signals (where warranted), or other substantial crossing improvements to improve crossing safety should be considered.

It is recommended that a minimum utilization of 20 pedestrian crossings (or minimum of 15 for elderly and child pedestrians) be confirmed before placing high priority on the installation of a marked crosswalk. There does not appear to be any major commercial or recreational uses on either side of East Mission Boulevard in the project vicinity that would generate the pedestrian crossing volume or desire paths likey to result in a high priority for installation of marked crosswalks at the study intersections. Additionally, East Mission Boulevard does not meet any traffic signal warrants. As such, a crosswalk across East Mission Boulevard is not currently recommended.

Pedestrian Crossing Enhancements

Appendix F contains an informational brief from the FHWA regarding treatments for uncontrolled marked crosswalks. Such treatments may be considered should future developments and traffic conditions require the installation of a marked crosswalk on East Mission Boulevard; however, crosswalks at the Mission Boulevard study intersections are not currently recommended.



Legend

- Corner Sight Distance
- Stopping Sight Distance
- Restricted Use Area
- Recommended Red Curb
- Restricted Parking

Figure 26
Sight Distance Analysis for Project West Driveway at East 4th Street

8. CONCLUSIONS

OFF-SITE MITIGATION MEASURES

No off-site mitigation measure improvements were identified since the proposed project is forecast to result in no significant traffic impacts at the study intersections for the scenarios analyzed.

SIGHT DISTANCE ANALYSIS

As shown on Figure 26, some of the proposed parking spaces on 4th Street along the north project site frontage are located within the restricted use area, and should therefore be removed. Vehicles parked within these spaces would potentially obstruct the line of sight between westbound oncoming traffic and vehicles exiting the Project West Driveway. Recommended red curb markings (18 feet west of the driveway and 76 feet east of the driveway) have also been identified on Figure 26.

GENERAL RECOMMENDATIONS

All roadway design, traffic signing and striping, and traffic control improvements relating to the proposed project should be constructed in accordance with applicable engineering standards to the satisfaction of the City of Pomona Public Works Department.

On-site traffic signing and striping plans should be submitted for City of Pomona approval in conjunction with detailed construction plans for the project.

Off-street parking should be provided to meet City of Pomona Municipal Code requirements.

The final grading, landscaping, and street improvement plans should demonstrate that sight distance standards are met in accordance with applicable City of Pomona/California Department of Transportation sight distance standards.

APPENDICES

Appendix A Glossary
Appendix B Scoping Agreement
Appendix C Volume Count Worksheets
Appendix D Level of Service Worksheets
Appendix E Traffic Signal Warrant Worksheets
Appendix F Information Brief: Treatments for Uncontrolled Marked Crosswalks

APPENDIX A

GLOSSARY

GLOSSARY OF TERMS

ACRONYMS

AC	Acres
ADT	Average Daily Traffic
Caltrans	California Department of Transportation
DU	Dwelling Unit
ICU	Intersection Capacity Utilization
LOS	Level of Service
TSF	Thousand Square Feet
V/C	Volume/Capacity
VMT	Vehicle Miles Traveled

TERMS

AVERAGE DAILY TRAFFIC: The average 24-hour volume for a stated period divided by the number of days in that period. For example, Annual Average Daily Traffic is the total volume during a year divided by 365 days.

BANDWIDTH: The number of seconds of green time available for through traffic in a signal progression.

BOTTLENECK: A point of constriction along a roadway that limits the amount of traffic that can proceed downstream from its location.

CAPACITY: The maximum number of vehicles that can be reasonably expected to pass over a given section of a lane or a roadway in a given time period.

CHANNELIZATION: The separation or regulation of conflicting traffic movements into definite paths of travel by the use of pavement markings, raised islands, or other suitable means to facilitate the safe and orderly movements of both vehicles and pedestrians.

CLEARANCE INTERVAL: Nearly same as yellow time. If there is an all red interval after the end of a yellow, then that is also added into the clearance interval.

CONTROL DELAY: The component of delay, typically expressed in seconds per vehicle, resulting from the type of traffic control at an intersection. Control delay is measured by comparison with the uncontrolled condition; it includes delay incurred by slowing down, stopping/waiting, and speeding up.

CORDON: An imaginary line around an area across which vehicles, persons, or other items are counted (in and out).

CORNER SIGHT DISTANCE: The minimum sight distance required by the driver of a vehicle to cross or enter the lanes of the major roadway without requiring approaching traffic travelling at a given speed to radically alter their speed or trajectory. Corner sight distance is measured from the driver's eye at 42 inches above the pavement to an object height of 36 inches above the pavement in the center of the nearest approach lane.

CYCLE LENGTH: The time period in seconds required for a traffic signal to complete one full cycle of indications.

CUL-DE-SAC: A local street open at one end only and with special provisions for turning around.

DAILY CAPACITY: A theoretical value representing the daily traffic volume that will typically result in a peak hour volume equal to the capacity of the roadway.

DELAY: The time consumed while traffic is impeded in its movement by some element over which it has no control, usually expressed in seconds per vehicle.

DEMAND RESPONSIVE SIGNAL: Same as traffic-actuated signal.

DENSITY: The number of vehicles occupying in a unit length of the through traffic lanes of a roadway at any given instant. Usually expressed in vehicles per mile.

DETECTOR: A device that responds to a physical stimulus and transmits a resulting impulse to the signal controller.

DESIGN SPEED: A speed selected for purposes of design. Features of a highway, such as curvature, superelevation, and sight distance (upon which the safe operation of vehicles is dependent) are correlated to design speed.

DIRECTIONAL SPLIT: The percent of traffic in the peak direction at any point in time.

DIVERSION: The rerouting of peak hour traffic to avoid congestion.

FORCED FLOW: Opposite of free flow.

FREE FLOW: Volumes are well below capacity. Vehicles can maneuver freely and travel is unimpeded by other traffic.

GAP: Time or distance between successive vehicles in a traffic stream, rear bumper to front bumper.

HEADWAY: Time or distance spacing between successive vehicles in a traffic stream, front bumper to front bumper.

INTERCONNECTED SIGNAL SYSTEM: A number of intersections that are connected to achieve signal progression.

LEVEL OF SERVICE: A qualitative measure of a number of factors, which include speed and travel time, traffic interruptions, freedom to maneuver, safety, driving comfort and convenience, and operating costs.

LOOP DETECTOR: A vehicle detector consisting of a loop of wire embedded in the roadway, energized by alternating current and producing an output circuit closure when passed over by a vehicle.

MINIMUM ACCEPTABLE GAP: Smallest time headway between successive vehicles in a traffic stream into which another vehicle is willing and able to cross or merge.

MULTI-MODAL: More than one mode; such as automobile, bus transit, rail rapid transit, and bicycle transportation modes.

OFFSET: The time interval in seconds between the beginning of green at one intersection and the beginning of green at an adjacent intersection.

PLATOON: A closely grouped component of traffic that is composed of several vehicles moving, or standing ready to move, with clear spaces ahead and behind.

PASSENGER CAR EQUIVALENT (PCE): A metric used to assess the impact of larger vehicles, such as trucks, recreational vehicles, and buses, by converting the traffic volume of larger vehicles to an equivalent number of passenger cars.

PEAK HOUR: The 60 consecutive minutes with the highest number of vehicles.

PRETIMED SIGNAL: A type of traffic signal that directs traffic to stop and go on a predetermined time schedule without regard to traffic conditions. Also, fixed time signal.

PROGRESSION: A term used to describe the progressive movement of traffic through several signalized intersections.

QUEUE: The number of vehicles waiting at a service area such as a traffic signal, stop sign, or access gate.

QUEUE LENGTH: The length of vehicle queue, typically expressed in feet, waiting at a service area such as a traffic signal, stop sign, or access gate.

SCREEN-LINE: An imaginary line or physical feature across which all trips are counted, normally to verify the validity of mathematical traffic models.

SHARED/RECIPROCAL PARKING AGREEMENT: A written binding document executed between property owners to provide a designated number of off-street parking stalls within a designated area to be available for specified businesses or land uses.

SIGHT DISTANCE: The continuous length of roadway visible to a driver or roadway user.

SIGNAL CYCLE: The time period in seconds required for one complete sequence of signal indications.

SIGNAL PHASE: The part of the signal cycle allocated to one or more traffic movements.

STACKING DISTANCE: The length of area available behind a service area, such as a traffic signal or gate, for vehicle queueing to occur.

STARTING DELAY: The delay experienced in initiating the movement of queued traffic from a stop to an average running speed through an intersection.

STOPPING SIGHT DISTANCE: The minimum distance required by the driver of a vehicle on the major roadway travelling at a given speed to bring the vehicle to a stop after an object on the road becomes visible. Stopping sight distance is measured from the driver's eye at 42 inches above the pavement to an object height of 6 inches above the pavement.

TRAFFIC-ACTUATED SIGNAL: A type of traffic signal that directs traffic to stop and go in accordance with the demands of traffic, as registered by the actuation of detectors.

TRIP: The movement of a person or vehicle from one location (origin) to another (destination). For example, from home to store to home is two trips, not one.

TRIP-END: One end of a trip at either the origin or destination (i.e., each trip has two trip-ends). A trip-end occurs when a person, object, or message is transferred to or from a vehicle.

TRIP GENERATION RATE: The quantity of trips produced and/or attracted by a specific land use stated in terms of units such as per dwelling, per acre, and per 1,000 square feet of floor space.

TRUCK: A vehicle having dual tires on one or more axles, or having more than two axles.

TURNING RADIUS: The circular arc formed by the smallest turning path radius of the front outside tire of a vehicle, such as that performed by a U-turn maneuver. This is based on the length and width of the wheel base as well as the steering mechanism of the vehicle.

UNBALANCED FLOW: Heavier traffic flow in one direction than the other. On a daily basis, most facilities have balanced flow. During the peak hours, flow is seldom balanced in an urban area.

VEHICLE MILES OF TRAVEL: A measure of the amount of usage of a section of highway, obtained by multiplying the average daily traffic by length of facility in miles.

APPENDIX B

SCOPING AGREEMENT

TRAFFIC IMPACT STUDY SCOPE
CITY OF POMONA

Project Name: TTM 70570
Project Address: 675 East Mission Boulevard
Project Description: 36 dwelling units of multi-family housing (low-rise)

	Consultant	**Developer**
Name:	GANDDINI GROUP, INC.	CITY OF POMONA REDEVELOPMENT AGENCY
Address:	550 Parkcenter Drive Suite 202 Santa Ana, CA 92705	505 S. Garey Avenue P.O. Box 660 Pomona, CA 91769
Telephone:	(714) 795-3100 x 106	(909) 620-2311
E-mail:	brandon@ganddini.com	

A. Trip Generation

Existing Land Use Vacant **Proposed Land Use** Residential
Existing Zoning Downtown SP – MUI **Proposed Zoning** Downtown SP – MUI

	Current Trip Generation			**Proposed Trip Generation**		
	In	**Out**	**Total**	**In**	**Out**	**Total**
AM Trips	0	0	0	4	13	17
PM Trips	0	0	0	13	7	20

B. Trip Geographic Distribution: See Figure 3.

C. Background Traffic

Project Build-out Year 2022 **Annual Ambient Growth Rate:** 2 %

D. Study intersections:

1. South Linden Street (NS) / East 4th Street (EW)
2. South Linden Street (NS) / East Mission Boulevard (EW)
3. South Eleanor Street (NS) / East 4th Street (EW)
4. South Eleanor Street (NS) / East Mission Boulevard (EW)
5. South Towne Avenue (NS) / East Mission Boulevard (EW)

E. Specific issues to be addressed in the Study

Analysis of enhanced pedestrian crossings at intersections #1-4 will be included. Sight distance analysis will be conducted for both project driveways.

Approved By:

City of Pomona Traffic Engineering Date

#18-0169

Table 1
Project Trip Generation

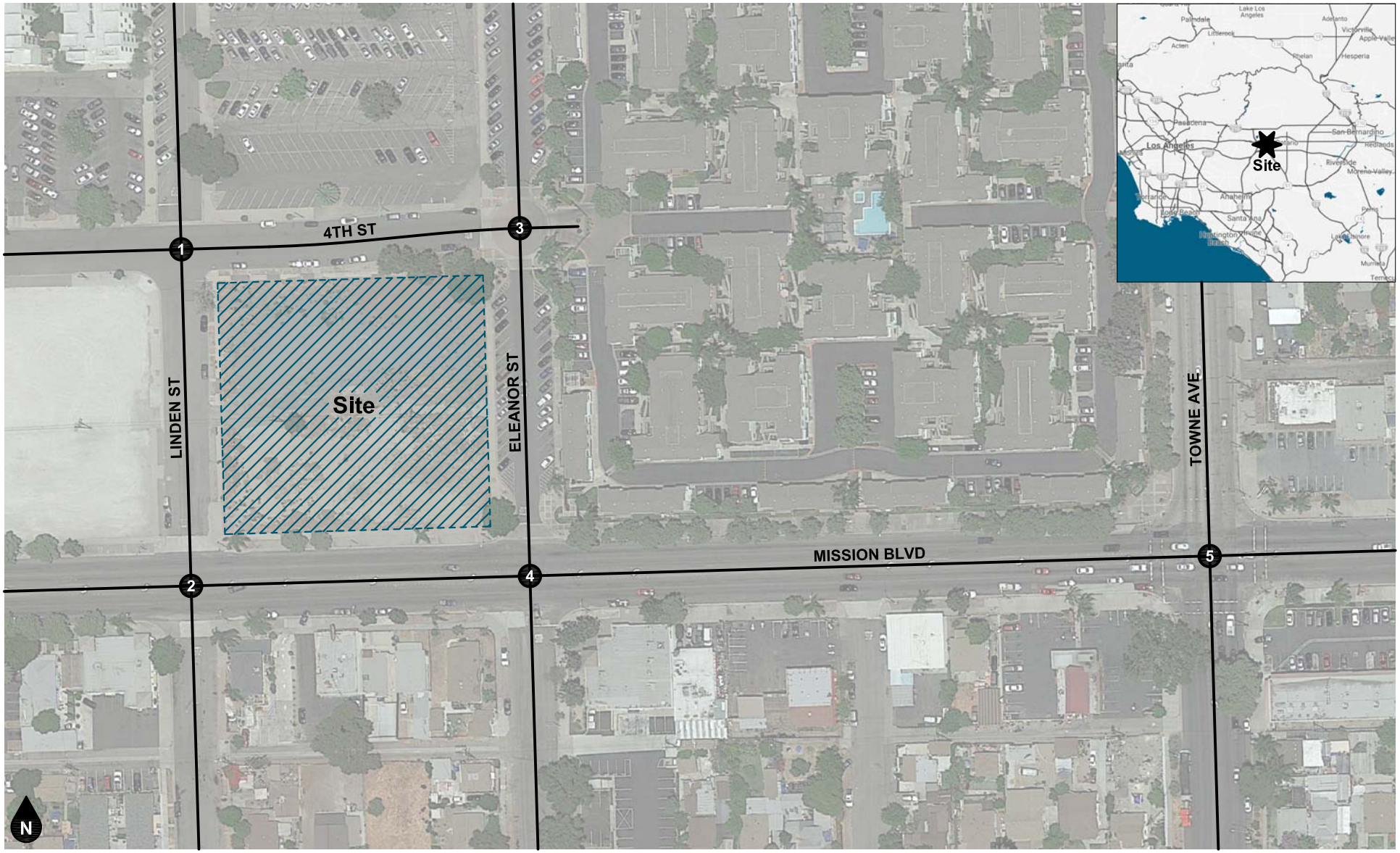
Trip Generation Rates									
			AM Peak Hour			PM Peak Hour			
Land Use	Source[1]	Unit[2]	% In	% Out	Rate	% In	% Out	Rate	Daily
Multifamily Housing (Low-Rise)	ITE 220	DU	23%	77%	0.46	63%	37%	0.56	7.32

Trips Generated									
			AM Peak Hour			PM Peak Hour			
Land Use	Quantity	Unit[2]	In	Out	Total	In	Out	Total	Daily
Multifamily Housing (Low-Rise)	36	DU	4	13	17	13	7	20	264

Notes:

(1) ITE = Institute of Transportation Engineers, Trip Generation Manual, 10th Edition, 2017; ### = Land Use Code

(2) DU = Dwelling Units



Legend

(#) Study Intersection

Figure 1
Project Location Map

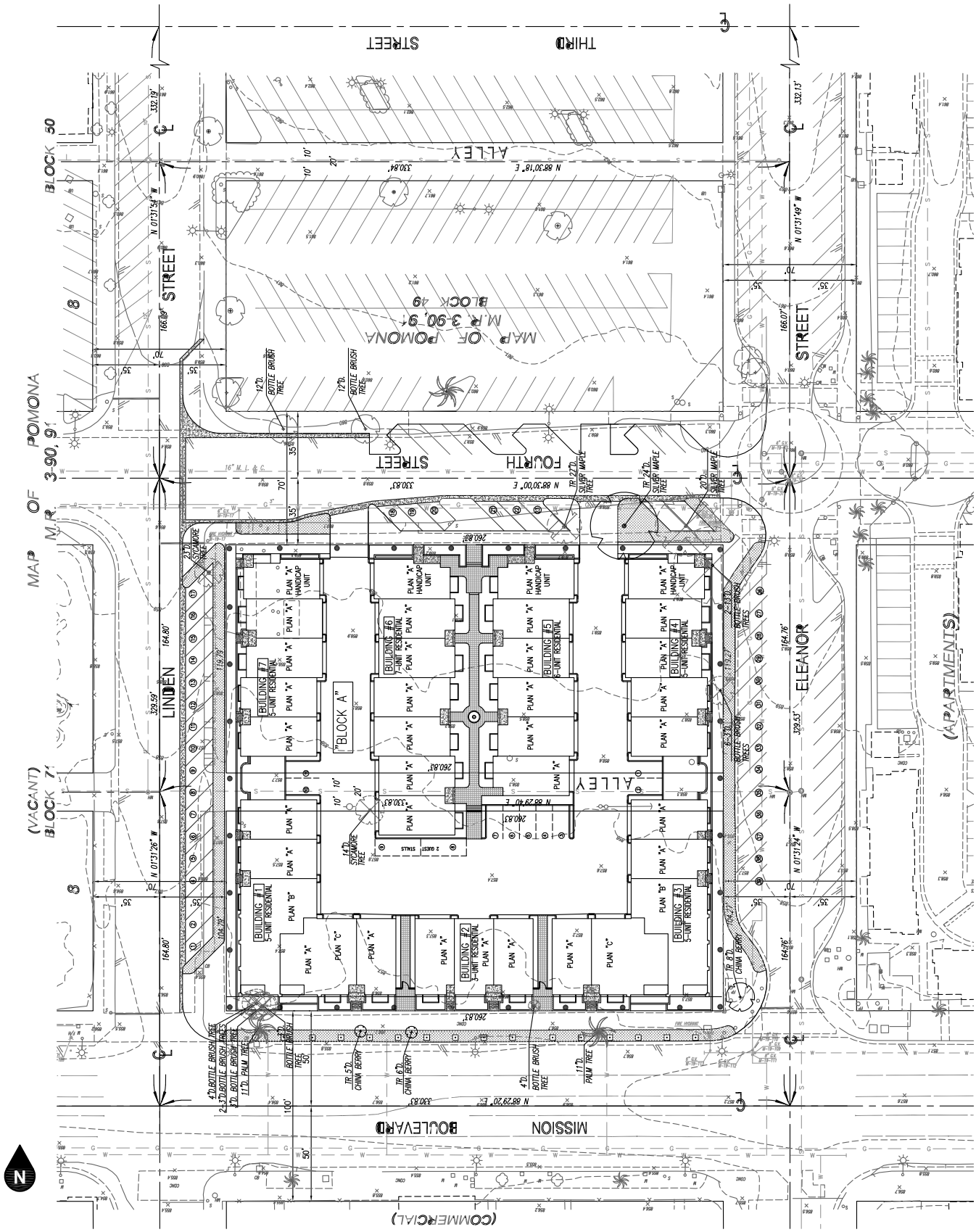
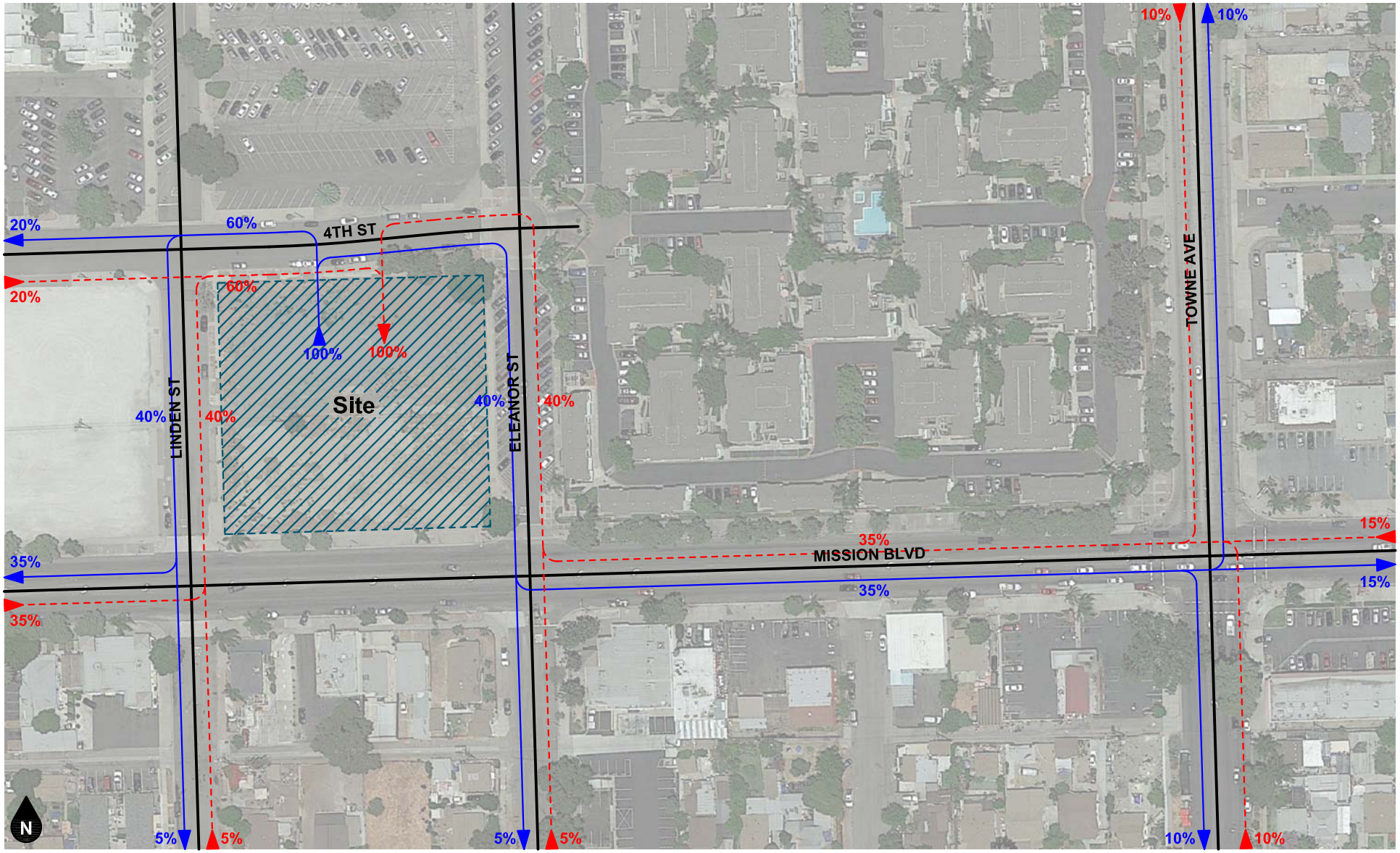


Figure 2
Site Plan



Legend

10% Percent To Project

10% Percent From Project

Figure 3
Project Trip Distribution

APPENDIX C

VOLUME COUNT WORKSHEETS

INTERSECTION TURNING MOVEMENT COUNTS

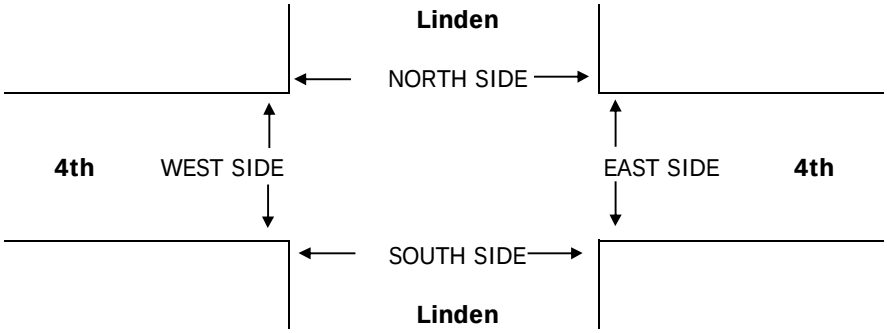
PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:					
Thu, May 9, 19	LOCATION:	Pomona	PROJECT #:	SC2194
	NORTH & SOUTH:	Linden	LOCATION #:	1
	EAST & WEST:	4th	CONTROL:	STOP N/S

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N ◄ W E ► S ▼

		NORTHBOUND Linden			SOUTHBOUND Linden			EASTBOUND 4th			WESTBOUND 4th			
	LANES:	NL 0	NT 1	NR 0	SL 0	ST 1	SR 0	EL 0	ET 1	ER 0	WL 0	WT 1	WR 0	TOTAL
AM	7:00 AM	0	1	0	0	1	0	1	1	1	1	1	0	7
	7:15 AM	0	0	0	0	1	3	0	0	0	2	3	0	9
	7:30 AM	2	3	1	1	0	2	0	3	0	1	10	2	25
	7:45 AM	1	2	0	1	2	4	2	4	2	1	6	0	25
	8:00 AM	0	0	2	1	1	3	0	6	1	1	4	1	20
	8:15 AM	1	2	0	2	1	4	1	2	1	1	5	0	20
	8:30 AM	0	2	0	0	3	0	4	2	0	0	1	2	14
	8:45 AM	2	0	0	3	2	1	0	2	0	0	2	0	12
	VOLUMES	6	10	3	8	11	17	8	20	5	7	32	5	132
	APPROACH %	32%	53%	16%	22%	31%	47%	24%	61%	15%	16%	73%	11%	
	APP/DEPART	19	/	23	36	/	23	33	/	31	44	/	55	0
	BEGIN PEAK HR		7:30 AM											
	VOLUMES	4	7	3	5	4	13	3	15	4	4	25	3	90
	APPROACH %	29%	50%	21%	23%	18%	59%	14%	68%	18%	13%	78%	9%	
	PEAK HR FACTOR		0.583			0.786			0.688			0.615		0.900
	APP/DEPART	14	/	13	22	/	12	22	/	23	32	/	42	0
PM	4:00 PM	0	1	0	0	1	1	3	2	0	4	2	0	14
	4:15 PM	0	0	0	0	1	2	1	4	1	2	3	1	15
	4:30 PM	1	0	0	0	3	3	3	3	0	1	3	1	18
	4:45 PM	0	1	1	0	1	3	0	4	2	0	2	0	14
	5:00 PM	1	0	0	0	2	1	2	8	3	2	4	0	23
	5:15 PM	1	0	0	0	1	1	1	4	0	0	4	0	12
	5:30 PM	0	1	0	1	0	2	0	2	2	1	2	0	11
	5:45 PM	1	0	0	0	2	2	0	3	3	1	7	1	20
	VOLUMES	4	3	1	1	11	15	10	30	11	11	27	3	127
	APPROACH %	50%	38%	13%	4%	41%	56%	20%	59%	22%	27%	66%	7%	
	APP/DEPART	8	/	15	27	/	32	51	/	33	41	/	47	0
	BEGIN PEAK HR		4:15 PM											
	VOLUMES	2	1	1	0	7	9	6	19	6	5	12	2	70
	APPROACH %	50%	25%	25%	0%	44%	56%	19%	61%	19%	26%	63%	11%	
	PEAK HR FACTOR		0.500			0.667			0.596			0.792		0.761
	APP/DEPART	4	/	8	16	/	18	31	/	20	19	/	24	0



INTERSECTION TURNING MOVEMENT COUNTS

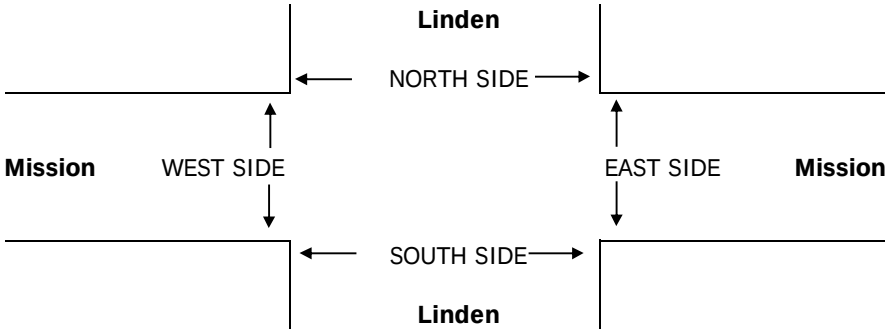
PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:	LOCATION:	Pomona	PROJECT #:	SC2194
Thu, May 9, 19	NORTH & SOUTH:	Linden	LOCATION #:	2
	EAST & WEST:	Mission	CONTROL:	STOP N/S

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N ◄ W E ► S ▼

		NORTHBOUND Linden			SOUTHBOUND Linden			EASTBOUND Mission			WESTBOUND Mission			
	LANES:	NL 0	NT 1	NR 0	SL 0	ST 1	SR 0	EL 1	ET 2	ER 0	WL 1	WT 2	WR 0	TOTAL
AM	7:00 AM	1	0	1	0	0	2	0	79	0	2	212	0	297
	7:15 AM	0	0	1	0	0	2	0	98	2	1	227	1	332
	7:30 AM	1	1	4	1	0	2	2	115	2	0	254	5	387
	7:45 AM	1	0	2	0	0	3	0	150	0	2	300	5	463
	8:00 AM	1	0	0	0	1	2	0	117	0	3	218	1	343
	8:15 AM	0	0	1	0	0	2	2	114	1	1	225	2	348
	8:30 AM	0	0	1	0	1	1	0	92	2	0	188	2	287
	8:45 AM	0	0	2	0	0	2	0	105	3	4	191	3	310
	VOLUMES	4	1	12	1	2	16	4	870	10	13	1,815	19	2,767
	APPROACH %	24%	6%	71%	5%	11%	84%	0%	98%	1%	1%	98%	1%	
	APP/DEPART	17	/	23	19	/	25	884	/	883	1,847	/	1,836	0
	BEGIN PEAK HR		7:30 AM											
	VOLUMES	3	1	7	1	1	9	4	496	3	6	997	13	1,541
	APPROACH %	27%	9%	64%	9%	9%	82%	1%	99%	1%	1%	98%	1%	
	PEAK HR FACTOR		0.458			0.917			0.838			0.827		0.832
	APP/DEPART	11	/	17	11	/	10	503	/	504	1,016	/	1,010	0
PM	4:00 PM	0	0	3	1	0	3	1	208	2	1	172	0	391
	4:15 PM	0	0	3	2	0	2	0	279	3	3	188	0	480
	4:30 PM	1	1	3	4	0	1	0	262	0	1	185	0	458
	4:45 PM	3	0	0	4	0	2	0	261	6	5	190	2	473
	5:00 PM	1	0	4	3	0	0	0	293	1	2	179	1	484
	5:15 PM	1	0	5	1	0	1	0	274	2	8	157	1	450
	5:30 PM	0	0	5	1	0	3	0	237	1	4	149	1	401
	5:45 PM	3	0	5	3	0	2	0	235	3	1	146	1	399
	VOLUMES	9	1	28	19	0	14	1	2,049	18	25	1,366	6	3,536
	APPROACH %	24%	3%	74%	58%	0%	42%	0%	99%	1%	2%	98%	0%	
	APP/DEPART	38	/	8	33	/	40	2,068	/	2,100	1,397	/	1,388	0
	BEGIN PEAK HR		4:15 PM											
	VOLUMES	5	1	10	13	0	5	0	1,095	10	11	742	3	1,895
	APPROACH %	31%	6%	63%	72%	0%	28%	0%	99%	1%	1%	98%	0%	
	PEAK HR FACTOR		0.800			0.750			0.940			0.959		0.979
	APP/DEPART	16	/	4	18	/	19	1,105	/	1,121	756	/	751	0



INTERSECTION TURNING MOVEMENT COUNTS

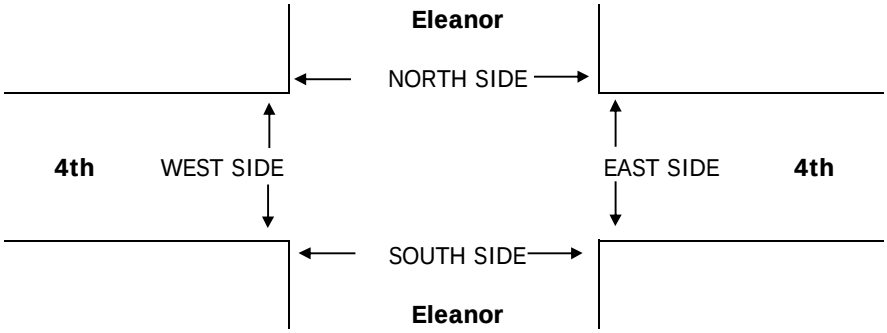
PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:	LOCATION:	Pomona	PROJECT #:	SC2194
Thu, May 9, 19	NORTH & SOUTH:	Eleanor	LOCATION #:	3
	EAST & WEST:	4th	CONTROL:	STOP E

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N ◄ W E ► S ▼

		NORTHBOUND Eleanor			SOUTHBOUND Eleanor			EASTBOUND 4th			WESTBOUND 4th			
	LANES:	NL 0	NT 1	NR 0	SL 0	ST 1	SR 0	EL 0	ET 1	ER 0	WL 0	WT 1	WR 0	TOTAL
AM	7:00 AM	0	0	0	1	3	0	0	0	0	2	1	3	10
	7:15 AM	0	2	0	1	0	0	0	1	0	5	4	1	14
	7:30 AM	3	5	1	0	2	2	3	3	2	0	6	5	32
	7:45 AM	1	5	0	0	4	3	2	3	0	1	5	1	25
	8:00 AM	1	7	3	1	4	2	5	4	2	2	2	0	33
	8:15 AM	1	6	1	1	2	1	2	0	0	0	4	4	22
	8:30 AM	2	3	3	0	4	1	1	1	1	0	0	0	16
	8:45 AM	2	8	1	1	2	2	3	0	2	2	0	0	23
	VOLUMES	10	36	9	5	21	11	16	12	7	12	22	14	175
	APPROACH %	18%	65%	16%	14%	57%	30%	46%	34%	20%	25%	46%	29%	
	APP/DEPART	55	/	67	37	/	41	35	/	25	48	/	42	0
	BEGIN PEAK HR		7:30 AM											
	VOLUMES	6	23	5	2	12	8	12	10	4	3	17	10	112
	APPROACH %	18%	68%	15%	9%	55%	36%	46%	38%	15%	10%	57%	33%	
	PEAK HR FACTOR		0.773			0.786			0.591			0.682		0.848
	APP/DEPART	34	/	45	22	/	19	26	/	17	30	/	31	0
PM	4:00 PM	0	4	2	1	2	3	0	3	3	0	2	2	22
	4:15 PM	1	6	1	1	2	1	3	3	1	0	2	1	22
	4:30 PM	0	1	2	3	2	1	1	1	0	0	4	0	15
	4:45 PM	1	5	0	1	3	1	1	3	1	0	2	1	19
	5:00 PM	1	1	9	2	0	0	2	6	0	4	1	2	28
	5:15 PM	2	7	3	1	1	1	2	2	1	1	3	0	24
	5:30 PM	1	4	0	3	0	3	5	1	0	1	3	1	22
	5:45 PM	0	3	4	6	0	1	0	0	0	0	5	0	19
	VOLUMES	6	31	21	18	10	11	14	19	6	6	22	7	171
	APPROACH %	10%	53%	36%	46%	26%	28%	36%	49%	15%	17%	63%	20%	
	APP/DEPART	58	/	55	39	/	23	39	/	55	35	/	38	0
	BEGIN PEAK HR		5:00 PM											
	VOLUMES	4	15	16	12	1	5	9	9	1	6	12	3	93
	APPROACH %	11%	43%	46%	67%	6%	28%	47%	47%	5%	29%	57%	14%	
	PEAK HR FACTOR		0.729			0.643			0.594			0.750		0.830
	APP/DEPART	35	/	29	18	/	9	19	/	35	21	/	20	0



INTERSECTION TURNING MOVEMENT COUNTS

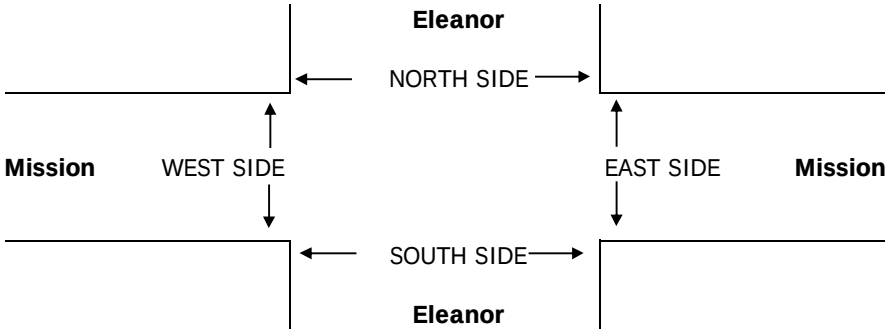
PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:	LOCATION:	Pomona	PROJECT #:	SC2194
Thu, May 9, 19	NORTH & SOUTH:	Eleanor	LOCATION #:	4
	EAST & WEST:	Mission	CONTROL:	STOP N/S

NOTES:

AM PM MD OTHER OTHER — ▲ N ◄ W E ► S ▼

		NORTHBOUND Eleanor			SOUTHBOUND Eleanor			EASTBOUND Mission			WESTBOUND Mission			
	LANES:	NL 0	NT 1	NR 0	SL 0	ST 1	SR 0	EL 1	ET 2	ER 0	WL 1	WT 2	WR 0	TOTAL
AM	7:00 AM	2	0	3	3	0	3	0	73	1	1	211	0	297
	7:15 AM	1	0	0	0	0	4	2	97	0	1	232	0	337
	7:30 AM	2	0	2	0	0	4	4	95	2	0	223	4	336
	7:45 AM	2	0	2	0	0	5	2	147	4	1	293	4	460
	8:00 AM	2	1	0	2	0	4	5	107	2	1	242	3	369
	8:15 AM	1	0	2	2	0	0	2	118	2	0	231	6	364
	8:30 AM	1	1	5	1	1	3	2	93	2	2	173	6	290
	8:45 AM	3	1	2	5	0	0	2	103	0	5	197	5	323
	VOLUMES	14	3	16	13	1	23	19	833	13	11	1,802	28	2,776
	APPROACH %	42%	9%	48%	35%	3%	62%	2%	96%	2%	1%	98%	2%	
	APP/DEPART	33	/	49	37	/	24	865	/	863	1,841	/	1,840	0
	BEGIN PEAK HR		7:30 AM											
	VOLUMES	7	1	6	4	0	13	13	467	10	2	989	17	1,529
	APPROACH %	50%	7%	43%	24%	0%	76%	3%	95%	2%	0%	98%	2%	
	PEAK HR FACTOR		0.875			0.708			0.801			0.846		0.831
	APP/DEPART	14	/	31	17	/	12	490	/	477	1,008	/	1,009	0
PM	4:00 PM	3	0	4	3	0	3	5	196	3	5	168	1	391
	4:15 PM	4	0	3	1	1	1	5	287	4	2	181	2	491
	4:30 PM	1	1	4	0	0	1	1	242	8	4	184	2	448
	4:45 PM	2	0	2	1	0	2	5	273	3	3	171	1	463
	5:00 PM	2	0	9	0	1	2	8	272	3	1	206	3	507
	5:15 PM	5	0	5	3	0	1	9	287	6	1	154	3	474
	5:30 PM	1	0	6	0	0	1	3	235	7	3	159	2	417
	5:45 PM	2	0	2	0	0	0	5	250	1	5	141	2	408
	VOLUMES	20	1	35	8	2	11	41	2,042	35	24	1,364	16	3,599
	APPROACH %	36%	2%	63%	38%	10%	52%	2%	96%	2%	2%	97%	1%	
	APP/DEPART	56	/	58	21	/	59	2,118	/	2,087	1,404	/	1,395	0
	BEGIN PEAK HR		4:15 PM											
	VOLUMES	9	1	18	2	2	6	19	1,074	18	10	742	8	1,909
	APPROACH %	32%	4%	64%	20%	20%	60%	2%	97%	2%	1%	98%	1%	
	PEAK HR FACTOR		0.636			0.833			0.938			0.905		0.941
	APP/DEPART	28	/	28	10	/	28	1,111	/	1,096	760	/	757	0



INTERSECTION TURNING MOVEMENT COUNTS

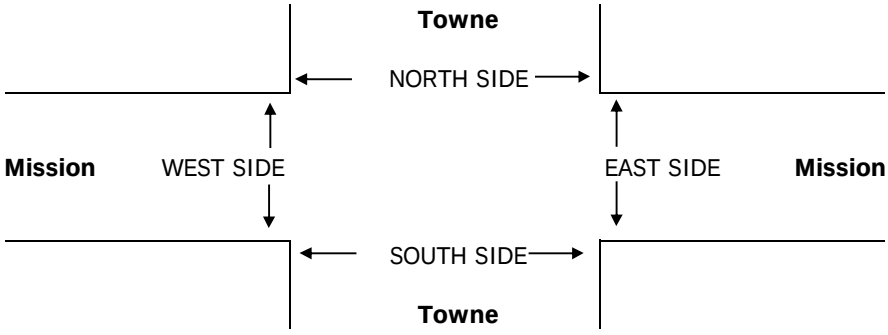
PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:	LOCATION:	Pomona	PROJECT #:	SC2194
Thu, May 9, 19	NORTH & SOUTH:	Towne	LOCATION #:	5
	EAST & WEST:	Mission	CONTROL:	SIGNAL

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N ◄ W E ► S ▼

		NORTHBOUND Towne			SOUTHBOUND Towne			EASTBOUND Mission			WESTBOUND Mission			
	LANES:	NL 1	NT 2	NR 0	SL 1	ST 2	SR 0	EL 1	ET 2	ER 0	WL 1	WT 2	WR 0	TOTAL
AM	7:00 AM	18	128	10	7	120	31	15	59	10	10	152	15	575
	7:15 AM	20	148	9	11	91	24	14	76	7	11	197	13	621
	7:30 AM	19	200	16	11	151	17	26	69	7	14	229	25	784
	7:45 AM	21	204	22	6	126	40	26	109	11	16	230	30	841
	8:00 AM	25	180	14	14	96	27	18	85	7	7	170	25	668
	8:15 AM	23	132	10	12	99	28	19	95	5	14	192	15	644
	8:30 AM	21	156	13	10	75	22	19	65	6	12	136	19	554
	8:45 AM	24	140	13	14	68	21	26	77	3	11	145	15	557
	VOLUMES	171	1,288	107	85	826	210	163	635	56	95	1,451	157	5,244
	APPROACH %	11%	82%	7%	8%	74%	19%	19%	74%	7%	6%	85%	9%	
	APP/DEPART	1,566	/	1,608	1,121	/	976	854	/	828	1,703	/	1,832	0
	BEGIN PEAK HR		7:30 AM											
	VOLUMES	88	716	62	43	472	112	89	358	30	51	821	95	2,937
	APPROACH %	10%	83%	7%	7%	75%	18%	19%	75%	6%	5%	85%	10%	
	PEAK HR FACTOR		0.877			0.876			0.817			0.876		0.873
	APP/DEPART	866	/	900	627	/	553	477	/	463	967	/	1,021	0
PM	4:00 PM	16	185	18	17	154	26	23	159	21	16	133	17	785
	4:15 PM	10	170	19	17	164	23	41	219	21	21	147	12	864
	4:30 PM	13	184	20	20	176	21	36	195	21	17	151	19	873
	4:45 PM	12	179	18	17	163	25	35	218	27	19	157	14	884
	5:00 PM	19	182	12	17	171	15	43	232	27	18	147	30	913
	5:15 PM	15	187	15	14	193	20	35	227	20	20	129	18	893
	5:30 PM	12	178	23	21	190	22	34	181	28	11	118	24	842
	5:45 PM	22	160	25	21	143	14	48	178	17	20	123	18	789
	VOLUMES	119	1,425	150	144	1,354	166	295	1,609	182	142	1,105	152	6,843
	APPROACH %	7%	84%	9%	9%	81%	10%	14%	77%	9%	10%	79%	11%	
	APP/DEPART	1,694	/	1,872	1,664	/	1,678	2,086	/	1,903	1,399	/	1,390	0
	BEGIN PEAK HR		4:30 PM											
	VOLUMES	59	732	65	68	703	81	149	872	95	74	584	81	3,563
	APPROACH %	7%	86%	8%	8%	83%	10%	13%	78%	9%	10%	79%	11%	
	PEAK HR FACTOR		0.986			0.938			0.924			0.947		0.976
	APP/DEPART	856	/	962	852	/	872	1,116	/	1,005	739	/	724	0



APPENDIX D

LEVEL OF SERVICE WORKSHEETS

EXISTING

TTM 70570

Vistro File: G:\...\AME.vistro
Report File: G:\...\E AM.pdf

Scenario 1 Existing
5/15/2019

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	S Linden St (NS) at E 4th St (EW)	Two-way stop	HCM 6th Edition	SB Thru	0.005	9.5	A
2	S Linden St (NS) at E Mission Blvd (EW)	Two-way stop	HCM 6th Edition	NB Thru	0.014	54.7	F
3	S Eleanor St (NS) at E 4th St (EW)	Two-way stop	HCM 6th Edition	WB Thru	0.025	9.6	A
4	S Eleanor St (NS) at E Mission Blvd (EW)	Two-way stop	HCM 6th Edition	SB Thru	0.000	53.4	F
5	S Towne Ave (NS) at E Mission Blvd (EW)	Signalized	HCM 6th Edition	SB Left	0.557	15.4	B

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

Intersection Level Of Service Report
Intersection 1: S Linden St (NS) at E 4th St (EW)

Control Type:	Two-way stop	Delay (sec / veh):	9.5
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.005

Intersection Setup

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

Volumes

Name												
Base Volume Input [veh/h]	4	7	3	5	4	13	3	15	4	4	25	3
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	4	7	3	5	4	13	3	15	4	4	25	3
Peak Hour Factor	0.9000	0.9000	0.9000	0.9000	0.9000	0.9000	0.9000	0.9000	0.9000	0.9000	0.9000	0.9000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	1	2	1	1	1	4	1	4	1	1	7	1
Total Analysis Volume [veh/h]	4	8	3	6	4	14	3	17	4	4	28	3
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

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

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.01	0.00	0.01	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	9.07	9.44	8.47	9.04	9.47	8.54	7.28	0.00	0.00	7.26	0.00	0.00
Movement LOS	A	A	A	A	A	A	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.05	0.05	0.05	0.08	0.08	0.08	0.01	0.01	0.01	0.01	0.01	0.01
95th-Percentile Queue Length [ft/ln]	1.30	1.30	1.30	1.91	1.91	1.91	0.14	0.14	0.14	0.19	0.19	0.19
d_A, Approach Delay [s/veh]	9.15			8.82			0.91			0.83		
Approach LOS	A			A			A			A		
d_I, Intersection Delay [s/veh]	4.08											
Intersection LOS	A											

Intersection Level Of Service Report
Intersection 2: S Linden St (NS) at E Mission Blvd (EW)

Control Type:	Two-way stop	Delay (sec / veh):	54.7
Analysis Method:	HCM 6th Edition	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.014

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	1	0	0	1	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	225.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	3	1	7	1	1	9	4	496	3	6	997	13
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	3	1	7	1	1	9	4	496	3	6	997	13
Peak Hour Factor	0.8320	0.8320	0.8320	0.8320	0.8320	0.8320	0.8320	0.8320	0.8320	0.8320	0.8320	0.8320
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	1	0	2	0	0	3	1	149	1	2	300	4
Total Analysis Volume [veh/h]	4	1	8	1	1	11	5	596	4	7	1198	16
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

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

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.03	0.01	0.01	0.01	0.01	0.03	0.01	0.01	0.00	0.01	0.01	0.00
d_M, Delay for Movement [s/veh]	33.75	54.68	11.09	52.20	54.11	13.96	11.37	0.00	0.00	8.73	0.00	0.00
Movement LOS	D	F	B	F	F	B	B	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.18	0.18	0.18	0.16	0.16	0.16	0.03	0.00	0.00	0.02	0.00	0.00
95th-Percentile Queue Length [ft/ln]	4.42	4.42	4.42	4.04	4.04	4.04	0.66	0.00	0.00	0.54	0.00	0.00
d_A, Approach Delay [s/veh]	21.41			19.99			0.09			0.05		
Approach LOS	C			C			A			A		
d_I, Intersection Delay [s/veh]	0.35											
Intersection LOS	F											

Intersection Level Of Service Report
Intersection 3: S Eleanor St (NS) at E 4th St (EW)

Control Type:	Two-way stop	Delay (sec / veh):	9.6
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.025

Intersection Setup

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

Volumes

Name												
Base Volume Input [veh/h]	6	23	5	2	12	8	12	10	4	3	17	10
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	6	23	5	2	12	8	12	10	4	3	17	10
Peak Hour Factor	0.8480	0.8480	0.8480	0.8480	0.8480	0.8480	0.8480	0.8480	0.8480	0.8480	0.8480	0.8480
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	2	7	1	1	4	2	4	3	1	1	5	3
Total Analysis Volume [veh/h]	7	27	6	2	14	9	14	12	5	4	20	12
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

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

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.01	0.00	0.00	0.02	0.01
d_M, Delay for Movement [s/veh]	7.27	0.00	0.00	7.28	0.00	0.00	9.27	9.56	8.55	9.19	9.59	8.62
Movement LOS	A	A	A	A	A	A	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.01	0.01	0.01	0.00	0.00	0.00	0.11	0.11	0.11	0.13	0.13	0.13
95th-Percentile Queue Length [ft/ln]	0.28	0.28	0.28	0.10	0.10	0.10	2.75	2.75	2.75	3.16	3.16	3.16
d_A, Approach Delay [s/veh]	1.27			0.58			9.27			9.22		
Approach LOS	A			A			A			A		
d_I, Intersection Delay [s/veh]	5.19											
Intersection LOS	A											

Intersection Level Of Service Report
Intersection 4: S Eleanor St (NS) at E Mission Blvd (EW)

Control Type:	Two-way stop	Delay (sec / veh):	53.4
Analysis Method:	HCM 6th Edition	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.000

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			Yes			No			No		

Volumes

Name												
Base Volume Input [veh/h]	7	1	6	4	0	13	13	467	10	2	989	17
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	0.00	2.00	0.00	0.00	0.00	0.00	2.00	2.00	2.00	2.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	7	1	6	4	0	13	13	467	10	2	989	17
Peak Hour Factor	0.8310	0.8310	0.8310	0.8310	0.8310	0.8310	0.8310	0.8310	0.8310	0.8310	0.8310	0.8310
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	2	0	2	1	0	4	4	140	3	1	298	5
Total Analysis Volume [veh/h]	8	1	7	5	0	16	16	562	12	2	1190	20
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Stop	Stop	Free	Free
Flared Lane	No	No		
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance	Yes	No		
Number of Storage Spaces in Median	1	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.03	0.01	0.01	0.06	0.00	0.04	0.03	0.01	0.00	0.00	0.01	0.00
d_M, Delay for Movement [s/veh]	19.48	25.95	10.58	51.64	53.43	14.90	11.34	0.00	0.00	8.62	0.00	0.00
Movement LOS	C	D	B	F	F	B	B	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.15	0.15	0.15	0.32	0.32	0.32	0.08	0.00	0.00	0.01	0.00	0.00
95th-Percentile Queue Length [ft/ln]	3.65	3.65	3.65	8.05	8.05	8.05	2.11	0.00	0.00	0.15	0.00	0.00
d_A, Approach Delay [s/veh]	15.99			23.65			0.31			0.01		
Approach LOS	C			C			A			A		
d_I, Intersection Delay [s/veh]	0.52											
Intersection LOS	F											

Intersection Level Of Service Report
Intersection 5: S Towne Ave (NS) at E Mission Blvd (EW)

Control Type:	Signalized	Delay (sec / veh):	15.4
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.557

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	1	0	0	1	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	80.00	100.00	100.00	80.00	100.00	100.00
Speed [mph]	40.00			40.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	88	716	62	43	472	112	89	358	30	51	821	95
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	88	716	62	43	472	112	89	358	30	51	821	95
Peak Hour Factor	0.8730	0.8730	0.8730	0.8730	0.8730	0.8730	0.8730	0.8730	0.8730	0.8730	0.8730	0.8730
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	25	205	18	12	135	32	25	103	9	15	235	27
Total Analysis Volume [veh/h]	101	820	71	49	541	128	102	410	34	58	940	109
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	60
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	2	0	0	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	7	0	0	7	0	0	7	0	0	7	0
Maximum Green [s]	0	30	0	0	30	0	0	30	0	0	30	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	29	0	0	29	0	0	31	0	0	31	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall		No			No			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	C	L	C	C
C, Cycle Length [s]	60	60	60	60	60	60	60	60	60	60	60	60
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	22	22	22	22	22	22	30	30	30	30	30	30
g / C, Green / Cycle	0.37	0.37	0.37	0.37	0.37	0.37	0.49	0.49	0.49	0.49	0.49	0.49
(v / s)_i Volume / Saturation Flow Rate	0.13	0.26	0.26	0.08	0.19	0.20	0.19	0.13	0.13	0.06	0.30	0.30
s, saturation flow rate [veh/h]	768	1772	1722	624	1772	1656	538	1772	1724	945	1772	1708
c, Capacity [veh/h]	260	660	641	195	660	617	253	876	852	490	876	844
d1, Uniform Delay [s]	23.07	15.87	15.87	25.22	14.68	14.70	20.97	8.79	8.79	11.85	10.98	10.99
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.50	0.50	0.50	0.50	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.94	1.27	1.31	0.67	0.64	0.70	4.72	0.71	0.73	0.49	3.15	3.27
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, 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
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.39	0.68	0.68	0.25	0.52	0.53	0.40	0.26	0.26	0.12	0.61	0.61
d, Delay for Lane Group [s/veh]	24.01	17.14	17.18	25.88	15.33	15.40	25.68	9.49	9.52	12.35	14.14	14.26
Lane Group LOS	C	B	B	C	B	B	C	A	A	B	B	B
Critical Lane Group	No	No	Yes	No	No	No	No	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	1.26	4.54	4.43	0.64	3.17	2.98	1.52	1.54	1.52	0.50	4.84	4.70
50th-Percentile Queue Length [ft/ln]	31.56	113.62	110.63	15.95	79.13	74.59	38.02	38.56	37.88	12.57	121.08	117.53
95th-Percentile Queue Length [veh/ln]	2.27	8.04	7.88	1.15	5.70	5.37	2.74	2.78	2.73	0.91	8.45	8.26
95th-Percentile Queue Length [ft/ln]	56.81	201.03	196.89	28.71	142.43	134.26	68.44	69.41	68.18	22.63	211.32	206.43

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	24.01	17.16	17.18	25.88	15.35	15.40	25.68	9.51	9.52	12.35	14.19	14.26
Movement LOS	C	B	B	C	B	B	C	A	A	B	B	B
d_A, Approach Delay [s/veh]	17.86			16.08			12.53			14.10		
Approach LOS	B			B			B			B		
d_I, Intersection Delay [s/veh]	15.38											
Intersection LOS	B											
Intersection V/C	0.557											

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0	11.0	11.0	11.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	20.01	20.01	20.01	20.01
l_p,int, Pedestrian LOS Score for Intersection	2.782	2.877	2.899	2.719
Crosswalk LOS	C	C	C	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	833	833	900	900
d_b, Bicycle Delay [s]	10.21	10.21	9.08	9.08
l_b,int, Bicycle LOS Score for Intersection	2.378	2.152	2.010	2.473
Bicycle LOS	B	B	B	B

Sequence

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

TTM 70570

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Scenario 1 Existing
5/17/2019

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	S Linden St (NS) at E 4th St (EW)	Two-way stop	HCM 6th Edition	SB Thru	0.011	9.6	A
2	S Linden St (NS) at E Mission Blvd (EW)	Two-way stop	HCM 6th Edition	SB Thru	0.000	63.2	F
3	S Eleanor St (NS) at E 4th St (EW)	Two-way stop	HCM 6th Edition	EB Thru	0.014	9.6	A
4	S Eleanor St (NS) at E Mission Blvd (EW)	Two-way stop	HCM 6th Edition	SB Thru	0.035	70.1	F
5	S Towne Ave (NS) at E Mission Blvd (EW)	Signalized	HCM 6th Edition	SB Left	0.518	15.1	B

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

Intersection Level Of Service Report
Intersection 1: S Linden St (NS) at E 4th St (EW)

Control Type:	Two-way stop	Delay (sec / veh):	9.6
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.011

Intersection Setup

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

Volumes

Name												
Base Volume Input [veh/h]	2	1	1	0	7	9	6	19	6	5	12	2
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	2	1	1	0	7	9	6	19	6	5	12	2
Peak Hour Factor	0.7610	0.7610	0.7610	0.7610	0.7610	0.7610	0.7610	0.7610	0.7610	0.7610	0.7610	0.7610
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	1	0	0	0	2	3	2	6	2	2	4	1
Total Analysis Volume [veh/h]	3	1	1	0	9	12	8	25	8	7	16	3
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

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

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.01	0.01	0.01	0.00	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	9.14	9.50	8.47	9.07	9.58	8.48	7.26	0.00	0.00	7.29	0.00	0.00
Movement LOS	A	A	A	A	A	A	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.02	0.02	0.02	0.07	0.07	0.07	0.01	0.01	0.01	0.01	0.01	0.01
95th-Percentile Queue Length [ft/ln]	0.42	0.42	0.42	1.73	1.73	1.73	0.28	0.28	0.28	0.24	0.24	0.24
d_A, Approach Delay [s/veh]	9.08			8.95			1.42			1.96		
Approach LOS	A			A			A			A		
d_I, Intersection Delay [s/veh]	3.68											
Intersection LOS	A											

Intersection Level Of Service Report
Intersection 2: S Linden St (NS) at E Mission Blvd (EW)

Control Type:	Two-way stop	Delay (sec / veh):	63.2
Analysis Method:	HCM 6th Edition	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.000

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	1	0	0	1	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	225.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	5	1	10	13	0	5	0	1095	10	11	742	3
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	5	1	10	13	0	5	0	1095	10	11	742	3
Peak Hour Factor	0.9790	0.9790	0.9790	0.9790	0.9790	0.9790	0.9790	0.9790	0.9790	0.9790	0.9790	0.9790
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	1	0	3	3	0	1	0	280	3	3	189	1
Total Analysis Volume [veh/h]	5	1	10	13	0	5	0	1118	10	11	758	3
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

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

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.06	0.02	0.02	0.12	0.00	0.01	0.00	0.01	0.00	0.02	0.01	0.00
d_M, Delay for Movement [s/veh]	52.98	61.51	15.14	43.01	63.24	14.75	9.25	0.00	0.00	10.96	0.00	0.00
Movement LOS	F	F	C	E	F	B	A	A	A	B	A	A
95th-Percentile Queue Length [veh/ln]	0.33	0.33	0.33	0.44	0.44	0.44	0.00	0.00	0.00	0.05	0.00	0.00
95th-Percentile Queue Length [ft/ln]	8.15	8.15	8.15	11.00	11.00	11.00	0.00	0.00	0.00	1.36	0.00	0.00
d_A, Approach Delay [s/veh]	29.86			35.16			0.00			0.16		
Approach LOS	D			E			A			A		
d_I, Intersection Delay [s/veh]	0.64											
Intersection LOS	F											

Intersection Level Of Service Report
Intersection 3: S Eleanor St (NS) at E 4th St (EW)

Control Type:	Two-way stop	Delay (sec / veh):	9.6
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.014

Intersection Setup

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

Volumes

Name												
Base Volume Input [veh/h]	4	15	16	12	1	5	9	9	1	6	12	3
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	4	15	16	12	1	5	9	9	1	6	12	3
Peak Hour Factor	0.8300	0.8300	0.8300	0.8300	0.8300	0.8300	0.8300	0.8300	0.8300	0.8300	0.8300	0.8300
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	1	5	5	4	0	2	3	3	0	2	4	1
Total Analysis Volume [veh/h]	5	18	19	14	1	6	11	11	1	7	14	4
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

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

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.01	0.00	0.00	0.01	0.01	0.00	0.01	0.02	0.00
d_M, Delay for Movement [s/veh]	7.24	0.00	0.00	7.31	0.00	0.00	9.18	9.61	8.45	9.14	9.58	8.56
Movement LOS	A	A	A	A	A	A	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.01	0.01	0.01	0.02	0.02	0.02	0.08	0.08	0.08	0.09	0.09	0.09
95th-Percentile Queue Length [ft/ln]	0.19	0.19	0.19	0.58	0.58	0.58	2.08	2.08	2.08	2.23	2.23	2.23
d_A, Approach Delay [s/veh]	0.86			4.87			9.35			9.29		
Approach LOS	A			A			A			A		
d_I, Intersection Delay [s/veh]	5.28											
Intersection LOS	A											

Intersection Level Of Service Report
Intersection 4: S Eleanor St (NS) at E Mission Blvd (EW)

Control Type:	Two-way stop	Delay (sec / veh):	70.1
Analysis Method:	HCM 6th Edition	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.035

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			Yes			No			No		

Volumes

Name												
Base Volume Input [veh/h]	9	1	18	2	2	6	19	1074	18	10	742	8
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	0.00	2.00	0.00	0.00	0.00	0.00	2.00	2.00	2.00	2.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	9	1	18	2	2	6	19	1074	18	10	742	8
Peak Hour Factor	0.9410	0.9410	0.9410	0.9410	0.9410	0.9410	0.9410	0.9410	0.9410	0.9410	0.9410	0.9410
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	2	0	5	1	1	2	5	285	5	3	197	2
Total Analysis Volume [veh/h]	10	1	19	2	2	6	20	1141	19	11	789	9
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Stop	Stop	Free	Free
Flared Lane	No	No		
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance	Yes	No		
Number of Storage Spaces in Median	1	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.07	0.01	0.04	0.02	0.04	0.01	0.02	0.01	0.00	0.02	0.01	0.00
d_M, Delay for Movement [s/veh]	30.43	28.86	14.60	46.78	70.14	12.68	9.43	0.00	0.00	11.13	0.00	0.00
Movement LOS	D	D	B	E	F	B	A	A	A	B	A	A
95th-Percentile Queue Length [veh/ln]	0.38	0.38	0.38	0.21	0.21	0.21	0.07	0.00	0.00	0.06	0.00	0.00
95th-Percentile Queue Length [ft/ln]	9.48	9.48	9.48	5.35	5.35	5.35	1.84	0.00	0.00	1.40	0.00	0.00
d_A, Approach Delay [s/veh]	20.35			30.99			0.16			0.15		
Approach LOS	C			D			A			A		
d_I, Intersection Delay [s/veh]	0.61											
Intersection LOS	F											

Intersection Level Of Service Report
Intersection 5: S Towne Ave (NS) at E Mission Blvd (EW)

Control Type:	Signalized	Delay (sec / veh):	15.1
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.518

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	1	0	0	1	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	80.00	100.00	100.00	80.00	100.00	100.00
Speed [mph]	40.00			40.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	59	732	65	68	703	81	149	872	95	74	584	81
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	59	732	65	68	703	81	149	872	95	74	584	81
Peak Hour Factor	0.9760	0.9760	0.9760	0.9760	0.9760	0.9760	0.9760	0.9760	0.9760	0.9760	0.9760	0.9760
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	15	188	17	17	180	21	38	223	24	19	150	21
Total Analysis Volume [veh/h]	60	750	67	70	720	83	153	893	97	76	598	83
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	60
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	2	0	0	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	7	0	0	7	0	0	7	0	0	7	0
Maximum Green [s]	0	30	0	0	30	0	0	30	0	0	30	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	29	0	0	29	0	0	31	0	0	31	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall		No			No			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	C	L	C	C
C, Cycle Length [s]	60	60	60	60	60	60	60	60	60	60	60	60
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	23	23	23	23	23	23	29	29	29	29	29	29
g / C, Green / Cycle	0.38	0.38	0.38	0.38	0.38	0.38	0.49	0.49	0.49	0.49	0.49	0.49
(v / s)_i Volume / Saturation Flow Rate	0.09	0.23	0.23	0.10	0.23	0.23	0.20	0.28	0.28	0.13	0.20	0.20
s, saturation flow rate [veh/h]	678	1772	1721	669	1772	1708	759	1772	1711	569	1772	1697
c, Capacity [veh/h]	222	664	645	219	664	641	376	871	842	268	871	835
d1, Uniform Delay [s]	23.73	15.30	15.31	24.35	15.24	15.24	16.49	10.83	10.84	18.95	9.65	9.65
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.50	0.50	0.50	0.50	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.65	0.96	0.99	0.83	0.93	0.97	3.24	2.79	2.89	2.64	1.36	1.43
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, 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
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.27	0.62	0.62	0.32	0.62	0.62	0.41	0.58	0.58	0.28	0.40	0.40
d, Delay for Lane Group [s/veh]	24.37	16.27	16.30	25.18	16.17	16.21	19.73	13.62	13.73	21.59	11.01	11.08
Lane Group LOS	C	B	B	C	B	B	B	B	B	C	B	B
Critical Lane Group	No	No	Yes	No	No	No	No	No	Yes	No	No	No
50th-Percentile Queue Length [veh/ln]	0.75	4.00	3.89	0.90	3.93	3.79	1.86	4.46	4.33	1.01	2.66	2.56
50th-Percentile Queue Length [ft/ln]	18.77	99.98	97.29	22.48	98.15	94.83	46.54	111.41	108.36	25.17	66.38	64.11
95th-Percentile Queue Length [veh/ln]	1.35	7.20	7.01	1.62	7.07	6.83	3.35	7.92	7.75	1.81	4.78	4.62
95th-Percentile Queue Length [ft/ln]	33.78	179.97	175.13	40.47	176.66	170.70	83.78	197.96	193.72	45.30	119.49	115.40

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	24.37	16.28	16.30	25.18	16.19	16.21	19.73	13.66	13.73	21.59	11.04	11.08
Movement LOS	C	B	B	C	B	B	B	B	B	C	B	B
d_A, Approach Delay [s/veh]	16.84			16.91			14.48			12.10		
Approach LOS	B			B			B			B		
d_I, Intersection Delay [s/veh]	15.14											
Intersection LOS	B											
Intersection V/C	0.518											

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0	11.0	11.0	11.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	20.01	20.01	20.01	20.01
l_p,int, Pedestrian LOS Score for Intersection	2.846	2.978	2.873	2.783
Crosswalk LOS	C	C	C	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	833	833	900	900
d_b, Bicycle Delay [s]	10.21	10.21	9.08	9.08
l_b,int, Bicycle LOS Score for Intersection	2.283	2.280	2.503	2.184
Bicycle LOS	B	B	B	B

Sequence

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

EXISTING PLUS PROJECT

TTM 70570

Vistro File: G:\...\AME.vistro
Report File: G:\...\EP AM.pdf

Scenario 2 Existing Plus Project
5/15/2019

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	S Linden St (NS) at E 4th St (EW)	Two-way stop	HCM 6th Edition	SB Thru	0.005	9.6	A
2	S Linden St (NS) at E Mission Blvd (EW)	Two-way stop	HCM 6th Edition	NB Thru	0.014	54.9	F
3	S Eleanor St (NS) at E 4th St (EW)	Two-way stop	HCM 6th Edition	WB Thru	0.025	9.6	A
4	S Eleanor St (NS) at E Mission Blvd (EW)	Two-way stop	HCM 6th Edition	SB Thru	0.013	56.5	F
5	S Towne Ave (NS) at E Mission Blvd (EW)	Signalized	HCM 6th Edition	SB Left	0.557	15.4	B
6	Project West Dwy (NS) at E 4th St (EW)	Two-way stop	HCM 6th Edition	NB Left	0.008	8.8	A
7	Project East Dwy (NS) at E 4th St (EW)	Two-way stop	HCM 6th Edition	NB Left	0.000	8.8	A

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

Intersection Level Of Service Report
Intersection 1: S Linden St (NS) at E 4th St (EW)

Control Type:	Two-way stop	Delay (sec / veh):	9.6
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.005

Intersection Setup

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

Volumes

Name												
Base Volume Input [veh/h]	4	7	3	5	4	13	3	15	4	4	25	3
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	1	0	0	0	0	1	0	5	3	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	4	7	4	5	4	13	3	16	4	9	28	3
Peak Hour Factor	0.9000	0.9000	0.9000	0.9000	0.9000	0.9000	0.9000	0.9000	0.9000	0.9000	0.9000	0.9000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	1	2	1	1	1	4	1	4	1	3	8	1
Total Analysis Volume [veh/h]	4	8	4	6	4	14	3	18	4	10	31	3
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

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

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.01	0.00	0.01	0.00	0.01	0.00	0.00	0.00	0.01	0.00	0.00
d_M, Delay for Movement [s/veh]	9.18	9.56	8.48	9.16	9.58	8.56	7.29	0.00	0.00	7.27	0.00	0.00
Movement LOS	A	A	A	A	A	A	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.06	0.06	0.06	0.08	0.08	0.08	0.01	0.01	0.01	0.02	0.02	0.02
95th-Percentile Queue Length [ft/ln]	1.40	1.40	1.40	1.94	1.94	1.94	0.14	0.14	0.14	0.43	0.43	0.43
d_A, Approach Delay [s/veh]	9.19			8.88			0.87			1.65		
Approach LOS	A			A			A			A		
d_I, Intersection Delay [s/veh]	4.17											
Intersection LOS	A											

Intersection Level Of Service Report
Intersection 2: S Linden St (NS) at E Mission Blvd (EW)

Control Type:	Two-way stop	Delay (sec / veh):	54.9
Analysis Method:	HCM 6th Edition	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.014

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	1	0	0	1	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	225.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	3	1	7	1	1	9	4	496	3	6	997	13
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	1	4	1	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	3	1	7	1	2	13	5	496	3	6	997	13
Peak Hour Factor	0.8320	0.8320	0.8320	0.8320	0.8320	0.8320	0.8320	0.8320	0.8320	0.8320	0.8320	0.8320
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	1	0	2	0	1	4	2	149	1	2	300	4
Total Analysis Volume [veh/h]	4	1	8	1	2	16	6	596	4	7	1198	16
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

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

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.03	0.01	0.01	0.01	0.03	0.04	0.01	0.01	0.00	0.01	0.01	0.00
d_M, Delay for Movement [s/veh]	34.57	54.94	11.12	52.85	54.76	14.39	11.38	0.00	0.00	8.73	0.00	0.00
Movement LOS	D	F	B	F	F	B	B	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.18	0.18	0.18	0.25	0.25	0.25	0.03	0.00	0.00	0.02	0.00	0.00
95th-Percentile Queue Length [ft/ln]	4.49	4.49	4.49	6.15	6.15	6.15	0.80	0.00	0.00	0.54	0.00	0.00
d_A, Approach Delay [s/veh]	21.71			20.66			0.11			0.05		
Approach LOS	C			C			A			A		
d_I, Intersection Delay [s/veh]	0.43											
Intersection LOS	F											

Intersection Level Of Service Report
Intersection 3: S Eleanor St (NS) at E 4th St (EW)

Control Type:	Two-way stop	Delay (sec / veh):	9.6
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.025

Intersection Setup

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

Volumes

Name												
Base Volume Input [veh/h]	6	23	5	2	12	8	12	10	4	3	17	10
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	1	0	0	0	0	0	0	0	5	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	7	23	5	2	12	8	12	10	9	3	17	10
Peak Hour Factor	0.8480	0.8480	0.8480	0.8480	0.8480	0.8480	0.8480	0.8480	0.8480	0.8480	0.8480	0.8480
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	2	7	1	1	4	2	4	3	3	1	5	3
Total Analysis Volume [veh/h]	8	27	6	2	14	9	14	12	11	4	20	12
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

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

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.01	0.00	0.00	0.00	0.00	0.00	0.02	0.01	0.01	0.00	0.02	0.01
d_M, Delay for Movement [s/veh]	7.27	0.00	0.00	7.28	0.00	0.00	9.31	9.60	8.57	9.24	9.60	8.62
Movement LOS	A	A	A	A	A	A	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.01	0.01	0.01	0.00	0.00	0.00	0.13	0.13	0.13	0.13	0.13	0.13
95th-Percentile Queue Length [ft/ln]	0.33	0.33	0.33	0.10	0.10	0.10	3.22	3.22	3.22	3.17	3.17	3.17
d_A, Approach Delay [s/veh]	1.42			0.58			9.18			9.24		
Approach LOS	A			A			A			A		
d_I, Intersection Delay [s/veh]	5.36											
Intersection LOS	A											

Intersection Level Of Service Report
Intersection 4: S Eleanor St (NS) at E Mission Blvd (EW)

Control Type:	Two-way stop	Delay (sec / veh):	56.5
Analysis Method:	HCM 6th Edition	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.013

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			Yes			No			No		

Volumes

Name												
Base Volume Input [veh/h]	7	1	6	4	0	13	13	467	10	2	989	17
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	0.00	2.00	0.00	0.00	0.00	0.00	2.00	2.00	2.00	2.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	4	1	0	0	0	0	0	0	1
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	7	1	6	8	1	13	13	467	10	2	989	18
Peak Hour Factor	0.8310	0.8310	0.8310	0.8310	0.8310	0.8310	0.8310	0.8310	0.8310	0.8310	0.8310	0.8310
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	2	0	2	2	0	4	4	140	3	1	298	5
Total Analysis Volume [veh/h]	8	1	7	10	1	16	16	562	12	2	1190	22
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Stop	Stop	Free	Free
Flared Lane	No	No		
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance	Yes	No		
Number of Storage Spaces in Median	1	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.03	0.01	0.01	0.12	0.01	0.04	0.03	0.01	0.00	0.00	0.01	0.00
d_M, Delay for Movement [s/veh]	19.58	26.00	10.59	54.70	56.48	17.89	11.35	0.00	0.00	8.62	0.00	0.00
Movement LOS	C	D	B	F	F	C	B	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.15	0.15	0.15	0.61	0.61	0.61	0.08	0.00	0.00	0.01	0.00	0.00
95th-Percentile Queue Length [ft/ln]	3.67	3.67	3.67	15.18	15.18	15.18	2.12	0.00	0.00	0.15	0.00	0.00
d_A, Approach Delay [s/veh]	16.05			32.95			0.31			0.01		
Approach LOS	C			D			A			A		
d_I, Intersection Delay [s/veh]	0.73											
Intersection LOS	F											

Intersection Level Of Service Report
Intersection 5: S Towne Ave (NS) at E Mission Blvd (EW)

Control Type:	Signalized	Delay (sec / veh):	15.4
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.557

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	1	0	0	1	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	80.00	100.00	100.00	80.00	100.00	100.00
Speed [mph]	40.00			40.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	88	716	62	43	472	112	89	358	30	51	821	95
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	1	2	1	0	1	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	88	716	62	43	472	112	90	360	31	51	822	95
Peak Hour Factor	0.8730	0.8730	0.8730	0.8730	0.8730	0.8730	0.8730	0.8730	0.8730	0.8730	0.8730	0.8730
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	25	205	18	12	135	32	26	103	9	15	235	27
Total Analysis Volume [veh/h]	101	820	71	49	541	128	103	412	36	58	942	109
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	60
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	2	0	0	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	7	0	0	7	0	0	7	0	0	7	0
Maximum Green [s]	0	30	0	0	30	0	0	30	0	0	30	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	29	0	0	29	0	0	31	0	0	31	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall		No			No			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	C	L	C	C
C, Cycle Length [s]	60	60	60	60	60	60	60	60	60	60	60	60
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	22	22	22	22	22	22	30	30	30	30	30	30
g / C, Green / Cycle	0.37	0.37	0.37	0.37	0.37	0.37	0.49	0.49	0.49	0.49	0.49	0.49
(v / s)_i Volume / Saturation Flow Rate	0.13	0.26	0.26	0.08	0.19	0.20	0.19	0.13	0.13	0.06	0.30	0.30
s, saturation flow rate [veh/h]	768	1772	1722	624	1772	1656	537	1772	1722	942	1772	1708
c, Capacity [veh/h]	260	660	641	195	660	617	253	876	851	488	876	844
d1, Uniform Delay [s]	23.07	15.87	15.87	25.22	14.68	14.70	21.06	8.80	8.81	11.89	10.99	11.00
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.50	0.50	0.50	0.50	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.94	1.27	1.31	0.67	0.64	0.70	4.82	0.72	0.74	0.50	3.17	3.29
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, 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
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.39	0.68	0.68	0.25	0.52	0.53	0.41	0.26	0.26	0.12	0.61	0.61
d, Delay for Lane Group [s/veh]	24.01	17.14	17.18	25.88	15.33	15.40	25.88	9.52	9.55	12.39	14.16	14.29
Lane Group LOS	C	B	B	C	B	B	C	A	A	B	B	B
Critical Lane Group	No	No	Yes	No	No	No	No	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	1.26	4.54	4.43	0.64	3.17	2.98	1.54	1.56	1.53	0.50	4.86	4.72
50th-Percentile Queue Length [ft/ln]	31.56	113.62	110.63	15.95	79.13	74.59	38.59	38.99	38.26	12.61	121.45	117.89
95th-Percentile Queue Length [veh/ln]	2.27	8.04	7.88	1.15	5.70	5.37	2.78	2.81	2.75	0.91	8.47	8.28
95th-Percentile Queue Length [ft/ln]	56.81	201.03	196.89	28.71	142.43	134.26	69.46	70.19	68.87	22.69	211.81	206.93

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	24.01	17.16	17.18	25.88	15.35	15.40	25.88	9.53	9.55	12.39	14.22	14.29
Movement LOS	C	B	B	C	B	B	C	A	A	B	B	B
d_A, Approach Delay [s/veh]	17.86			16.08			12.59			14.13		
Approach LOS	B			B			B			B		
d_I, Intersection Delay [s/veh]	15.39											
Intersection LOS	B											
Intersection V/C	0.557											

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0	11.0	11.0	11.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	20.01	20.01	20.01	20.01
l_p,int, Pedestrian LOS Score for Intersection	2.783	2.879	2.900	2.720
Crosswalk LOS	C	C	C	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	833	833	900	900
d_b, Bicycle Delay [s]	10.21	10.21	9.08	9.08
l_b,int, Bicycle LOS Score for Intersection	2.378	2.152	2.014	2.475
Bicycle LOS	B	B	B	B

Sequence

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Intersection Level Of Service Report
Intersection 6: Project West Dwy (NS) at E 4th St (EW)

Control Type:	Two-way stop	Delay (sec / veh):	8.8
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.008

Intersection Setup

Name						
Approach	Northbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Thru	Right	Left	Thru
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	0	0	23	0	0	32
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	8	5	2	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	8	5	25	0	0	32
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	2	1	6	0	0	8
Total Analysis Volume [veh/h]	8	5	25	0	0	32
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

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

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.01	0.00	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	8.84	8.47	0.00	0.00	0.00	0.00
Movement LOS	A	A	A			A
95th-Percentile Queue Length [veh/ln]	0.04	0.04	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	1.00	1.00	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	8.70		0.00		0.00	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	1.62					
Intersection LOS	A					

Intersection Level Of Service Report
Intersection 7: Project East Dwy (NS) at E 4th St (EW)

Control Type:	Two-way stop	Delay (sec / veh):	8.8
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.000

Intersection Setup

Name						
Approach	Northbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Thru	Right	Left	Thru
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	0	0	23	0	0	32
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	5	2	1	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	0	28	2	1	32
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	7	1	0	8
Total Analysis Volume [veh/h]	0	0	28	2	1	32
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

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

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	8.82	8.44	0.00	0.00	7.28	0.00
Movement LOS	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	0.00	0.05	0.05
d_A, Approach Delay [s/veh]	8.63		0.00		0.22	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	0.12					
Intersection LOS	A					

TTM 70570

Vistro File: G:\...\PME.vistro
Report File: G:\...\EP PM.pdf

Scenario 2 Existing Plus Project
5/17/2019

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	S Linden St (NS) at E 4th St (EW)	Two-way stop	HCM 6th Edition	SB Thru	0.011	9.7	A
2	S Linden St (NS) at E Mission Blvd (EW)	Two-way stop	HCM 6th Edition	SB Thru	0.000	64.3	F
3	S Eleanor St (NS) at E 4th St (EW)	Two-way stop	HCM 6th Edition	EB Thru	0.014	9.7	A
4	S Eleanor St (NS) at E Mission Blvd (EW)	Two-way stop	HCM 6th Edition	SB Thru	0.035	71.7	F
5	S Towne Ave (NS) at E Mission Blvd (EW)	Signalized	HCM 6th Edition	SB Left	0.519	15.2	B
6	Project West Dwy (NS) at E 4th St (EW)	Two-way stop	HCM 6th Edition	NB Left	0.004	8.8	A
7	Project East Dwy (NS) at E 4th St (EW)	Two-way stop	HCM 6th Edition	NB Left	0.000	8.8	A

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

Intersection Level Of Service Report
Intersection 1: S Linden St (NS) at E 4th St (EW)

Control Type:	Two-way stop	Delay (sec / veh):	9.7
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.011

Intersection Setup

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

Volumes

Name												
Base Volume Input [veh/h]	2	1	1	0	7	9	6	19	6	5	12	2
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	6	0	0	0	0	3	0	3	1	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	2	1	7	0	7	9	6	22	6	8	13	2
Peak Hour Factor	0.7610	0.7610	0.7610	0.7610	0.7610	0.7610	0.7610	0.7610	0.7610	0.7610	0.7610	0.7610
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	1	0	2	0	2	3	2	7	2	3	4	1
Total Analysis Volume [veh/h]	3	1	9	0	9	12	8	29	8	11	17	3
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

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

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.01	0.00	0.01	0.01	0.01	0.00	0.00	0.01	0.00	0.00
d_M, Delay for Movement [s/veh]	9.26	9.61	8.51	9.22	9.67	8.49	7.27	0.00	0.00	7.30	0.00	0.00
Movement LOS	A	A	A	A	A	A	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.04	0.04	0.04	0.07	0.07	0.07	0.01	0.01	0.01	0.02	0.02	0.02
95th-Percentile Queue Length [ft/ln]	1.02	1.02	1.02	1.75	1.75	1.75	0.28	0.28	0.28	0.38	0.38	0.38
d_A, Approach Delay [s/veh]	8.77			8.99			1.29			2.59		
Approach LOS	A			A			A			A		
d_I, Intersection Delay [s/veh]	4.01											
Intersection LOS	A											

Intersection Level Of Service Report
Intersection 2: S Linden St (NS) at E Mission Blvd (EW)

Control Type:	Two-way stop	Delay (sec / veh):	64.3
Analysis Method:	HCM 6th Edition	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.000

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	1	0	0	1	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	225.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	5	1	10	13	0	5	0	1095	10	11	742	3
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	1	0	0	0	3	5	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	5	2	10	13	0	8	5	1095	10	11	742	3
Peak Hour Factor	0.9790	0.9790	0.9790	0.9790	0.9790	0.9790	0.9790	0.9790	0.9790	0.9790	0.9790	0.9790
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	1	1	3	3	0	2	1	280	3	3	189	1
Total Analysis Volume [veh/h]	5	2	10	13	0	8	5	1118	10	11	758	3
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

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

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.06	0.03	0.02	0.13	0.00	0.01	0.01	0.01	0.00	0.02	0.01	0.00
d_M, Delay for Movement [s/veh]	55.00	63.41	15.93	44.18	64.33	14.72	9.28	0.00	0.00	10.96	0.00	0.00
Movement LOS	F	F	C	E	F	B	A	A	A	B	A	A
95th-Percentile Queue Length [veh/ln]	0.39	0.39	0.39	0.48	0.48	0.48	0.02	0.00	0.00	0.05	0.00	0.00
95th-Percentile Queue Length [ft/ln]	9.69	9.69	9.69	11.90	11.90	11.90	0.45	0.00	0.00	1.36	0.00	0.00
d_A, Approach Delay [s/veh]	33.00			32.96			0.04			0.16		
Approach LOS	D			D			A			A		
d_I, Intersection Delay [s/veh]	0.73											
Intersection LOS	F											

Intersection Level Of Service Report
Intersection 3: S Eleanor St (NS) at E 4th St (EW)

Control Type:	Two-way stop	Delay (sec / veh):	9.7
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.014

Intersection Setup

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

Volumes

Name												
Base Volume Input [veh/h]	4	15	16	12	1	5	9	9	1	6	12	3
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	5	0	0	0	0	0	0	0	3	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	9	15	16	12	1	5	9	9	4	6	12	3
Peak Hour Factor	0.8300	0.8300	0.8300	0.8300	0.8300	0.8300	0.8300	0.8300	0.8300	0.8300	0.8300	0.8300
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	3	5	5	4	0	2	3	3	1	2	4	1
Total Analysis Volume [veh/h]	11	18	19	14	1	6	11	11	5	7	14	4
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

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

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.01	0.00	0.00	0.01	0.00	0.00	0.01	0.01	0.00	0.01	0.02	0.00
d_M, Delay for Movement [s/veh]	7.25	0.00	0.00	7.31	0.00	0.00	9.28	9.71	8.47	9.26	9.67	8.56
Movement LOS	A	A	A	A	A	A	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.02	0.02	0.02	0.02	0.02	0.02	0.10	0.10	0.10	0.09	0.09	0.09
95th-Percentile Queue Length [ft/ln]	0.42	0.42	0.42	0.58	0.58	0.58	2.42	2.42	2.42	2.28	2.28	2.28
d_A, Approach Delay [s/veh]	1.66			4.87			9.31			9.38		
Approach LOS	A			A			A			A		
d_I, Intersection Delay [s/veh]	5.52											
Intersection LOS	A											

Intersection Level Of Service Report
Intersection 4: S Eleanor St (NS) at E Mission Blvd (EW)

Control Type:	Two-way stop	Delay (sec / veh):	71.7
Analysis Method:	HCM 6th Edition	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.035

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			Yes			No			No		

Volumes

Name												
Base Volume Input [veh/h]	9	1	18	2	2	6	19	1074	18	10	742	8
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	0.00	2.00	0.00	0.00	0.00	0.00	2.00	2.00	2.00	2.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	1	0	3	0	0	0	0	0	0	0	4
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	9	2	18	5	2	6	19	1074	18	10	742	12
Peak Hour Factor	0.9410	0.9410	0.9410	0.9410	0.9410	0.9410	0.9410	0.9410	0.9410	0.9410	0.9410	0.9410
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	2	1	5	1	1	2	5	285	5	3	197	3
Total Analysis Volume [veh/h]	10	2	19	5	2	6	20	1141	19	11	789	13
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Stop	Stop	Free	Free
Flared Lane	No	No		
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance	Yes	No		
Number of Storage Spaces in Median	1	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.07	0.01	0.04	0.06	0.04	0.01	0.02	0.01	0.00	0.02	0.01	0.00
d_M, Delay for Movement [s/veh]	30.58	29.06	14.75	48.54	71.73	14.10	9.44	0.00	0.00	11.13	0.00	0.00
Movement LOS	D	D	B	E	F	B	A	A	A	B	A	A
95th-Percentile Queue Length [veh/ln]	0.40	0.40	0.40	0.33	0.33	0.33	0.07	0.00	0.00	0.06	0.00	0.00
95th-Percentile Queue Length [ft/ln]	10.05	10.05	10.05	8.27	8.27	8.27	1.85	0.00	0.00	1.40	0.00	0.00
d_A, Approach Delay [s/veh]	20.78			36.21			0.16			0.15		
Approach LOS	C			E			A			A		
d_I, Intersection Delay [s/veh]	0.70											
Intersection LOS	F											

Intersection Level Of Service Report
Intersection 5: S Towne Ave (NS) at E Mission Blvd (EW)

Control Type:	Signalized	Delay (sec / veh):	15.2
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.519

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	1	0	0	1	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	80.00	100.00	100.00	80.00	100.00	100.00
Speed [mph]	40.00			40.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	59	732	65	68	703	81	149	872	95	74	584	81
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	1	0	0	0	0	1	1	1	1	0	2	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	60	732	65	68	703	82	150	873	96	74	586	81
Peak Hour Factor	0.9760	0.9760	0.9760	0.9760	0.9760	0.9760	0.9760	0.9760	0.9760	0.9760	0.9760	0.9760
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	15	188	17	17	180	21	38	224	25	19	150	21
Total Analysis Volume [veh/h]	61	750	67	70	720	84	154	894	98	76	600	83
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	60
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	2	0	0	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	7	0	0	7	0	0	7	0	0	7	0
Maximum Green [s]	0	30	0	0	30	0	0	30	0	0	30	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	29	0	0	29	0	0	31	0	0	31	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall		No			No			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	C	L	C	C
C, Cycle Length [s]	60	60	60	60	60	60	60	60	60	60	60	60
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	23	23	23	23	23	23	29	29	29	29	29	29
g / C, Green / Cycle	0.38	0.38	0.38	0.38	0.38	0.38	0.49	0.49	0.49	0.49	0.49	0.49
(v / s)_i Volume / Saturation Flow Rate	0.09	0.23	0.23	0.10	0.23	0.23	0.20	0.28	0.29	0.13	0.20	0.20
s, saturation flow rate [veh/h]	677	1772	1721	669	1772	1707	758	1772	1711	567	1772	1697
c, Capacity [veh/h]	222	664	645	219	664	640	375	871	841	267	871	835
d1, Uniform Delay [s]	23.79	15.30	15.31	24.35	15.25	15.25	16.55	10.84	10.85	18.99	9.65	9.66
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.50	0.50	0.50	0.50	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.66	0.96	0.99	0.83	0.93	0.97	3.29	2.80	2.91	2.65	1.37	1.44
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, 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
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.27	0.62	0.62	0.32	0.62	0.62	0.41	0.58	0.58	0.28	0.40	0.40
d, Delay for Lane Group [s/veh]	24.45	16.27	16.30	25.18	16.18	16.22	19.84	13.64	13.75	21.64	11.02	11.09
Lane Group LOS	C	B	B	C	B	B	B	B	B	C	B	B
Critical Lane Group	No	No	Yes	No	No	No	No	No	Yes	No	No	No
50th-Percentile Queue Length [veh/ln]	0.77	4.00	3.89	0.90	3.93	3.80	1.88	4.47	4.35	1.01	2.67	2.57
50th-Percentile Queue Length [ft/ln]	19.13	99.98	97.29	22.48	98.33	94.98	47.03	111.78	108.70	25.21	66.64	64.36
95th-Percentile Queue Length [veh/ln]	1.38	7.20	7.00	1.62	7.08	6.84	3.39	7.94	7.77	1.82	4.80	4.63
95th-Percentile Queue Length [ft/ln]	34.43	179.96	175.12	40.47	177.00	170.96	84.66	198.47	194.20	45.38	119.95	115.84

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	24.45	16.28	16.30	25.18	16.20	16.22	19.84	13.69	13.75	21.64	11.05	11.09
Movement LOS	C	B	B	C	B	B	B	B	B	C	B	B
d_A, Approach Delay [s/veh]	16.85			16.92			14.52			12.12		
Approach LOS	B			B			B			B		
d_I, Intersection Delay [s/veh]	15.15											
Intersection LOS	B											
Intersection V/C	0.519											

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0	11.0	11.0	11.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	20.01	20.01	20.01	20.01
l_p,int, Pedestrian LOS Score for Intersection	2.846	2.980	2.876	2.784
Crosswalk LOS	C	C	C	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	833	833	900	900
d_b, Bicycle Delay [s]	10.21	10.21	9.08	9.08
l_b,int, Bicycle LOS Score for Intersection	2.284	2.281	2.505	2.186
Bicycle LOS	B	B	B	B

Sequence

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Intersection Level Of Service Report
Intersection 6: Project West Dwy (NS) at E 4th St (EW)

Control Type:	Two-way stop	Delay (sec / veh):	8.8
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.004

Intersection Setup

Name						
Approach	Northbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Thru	Right	Left	Thru
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	0	0	20	0	0	19
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	4	3	9	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	4	3	29	0	0	19
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	1	1	7	0	0	5
Total Analysis Volume [veh/h]	4	3	29	0	0	19
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

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

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	8.77	8.47	0.00	0.00	0.00	0.00
Movement LOS	A	A	A			A
95th-Percentile Queue Length [veh/ln]	0.02	0.02	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	0.53	0.53	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	8.64		0.00		0.00	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	1.10					
Intersection LOS	A					

Intersection Level Of Service Report
Intersection 7: Project East Dwy (NS) at E 4th St (EW)

Control Type:	Two-way stop	Delay (sec / veh):	8.8
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.000

Intersection Setup

Name						
Approach	Northbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Thru	Right	Left	Thru
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	0	0	20	0	0	19
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	3	9	5	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	0	23	9	5	19
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	6	2	1	5
Total Analysis Volume [veh/h]	0	0	23	9	5	19
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

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

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	8.80	8.44	0.00	0.00	7.29	0.00
Movement LOS	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.00	0.01	0.01
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	0.00	0.24	0.24
d_A, Approach Delay [s/veh]	8.62		0.00		1.52	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	0.65					
Intersection LOS	A					

OPENING YEAR (2022) WITHOUT PROJECT

TTM 70570

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Scenario 3 Opening Year (2022) Without Project
5/15/2019

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	S Linden St (NS) at E 4th St (EW)	Two-way stop	HCM 6th Edition	SB Thru	0.005	9.5	A
2	S Linden St (NS) at E Mission Blvd (EW)	Two-way stop	HCM 6th Edition	NB Thru	0.016	63.3	F
3	S Eleanor St (NS) at E 4th St (EW)	Two-way stop	HCM 6th Edition	WB Thru	0.026	9.6	A
4	S Eleanor St (NS) at E Mission Blvd (EW)	Two-way stop	HCM 6th Edition	SB Thru	0.000	62.0	F
5	S Towne Ave (NS) at E Mission Blvd (EW)	Signalized	HCM 6th Edition	EB Left	0.591	16.1	B

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

Intersection Level Of Service Report
Intersection 1: S Linden St (NS) at E 4th St (EW)

Control Type:	Two-way stop	Delay (sec / veh):	9.5
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.005

Intersection Setup

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

Volumes

Name												
Base Volume Input [veh/h]	4	7	3	5	4	13	3	15	4	4	25	3
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	4	7	3	5	4	14	3	16	4	4	27	3
Peak Hour Factor	0.9000	0.9000	0.9000	0.9000	0.9000	0.9000	0.9000	0.9000	0.9000	0.9000	0.9000	0.9000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	1	2	1	1	1	4	1	4	1	1	8	1
Total Analysis Volume [veh/h]	4	8	3	6	4	16	3	18	4	4	30	3
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

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

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.01	0.00	0.01	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	9.10	9.46	8.47	9.07	9.50	8.56	7.28	0.00	0.00	7.26	0.00	0.00
Movement LOS	A	A	A	A	A	A	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.05	0.05	0.05	0.08	0.08	0.08	0.01	0.01	0.01	0.01	0.01	0.01
95th-Percentile Queue Length [ft/ln]	1.30	1.30	1.30	2.07	2.07	2.07	0.14	0.14	0.14	0.19	0.19	0.19
d_A, Approach Delay [s/veh]	9.17			8.82			0.87			0.79		
Approach LOS	A			A			A			A		
d_I, Intersection Delay [s/veh]	4.06											
Intersection LOS	A											

Intersection Level Of Service Report
Intersection 2: S Linden St (NS) at E Mission Blvd (EW)

Control Type:	Two-way stop	Delay (sec / veh):	63.3
Analysis Method:	HCM 6th Edition	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.016

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	1	0	0	1	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	225.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	3	1	7	1	1	9	4	496	3	6	997	13
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	3	1	7	1	1	10	4	526	3	6	1057	14
Peak Hour Factor	0.8320	0.8320	0.8320	0.8320	0.8320	0.8320	0.8320	0.8320	0.8320	0.8320	0.8320	0.8320
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	1	0	2	0	0	3	1	158	1	2	318	4
Total Analysis Volume [veh/h]	4	1	8	1	1	12	5	632	4	7	1270	17
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

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

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.04	0.02	0.01	0.02	0.02	0.03	0.01	0.01	0.00	0.01	0.01	0.00
d_M, Delay for Movement [s/veh]	37.83	63.27	11.48	60.41	62.55	14.63	11.80	0.00	0.00	8.84	0.00	0.00
Movement LOS	E	F	B	F	F	B	B	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.20	0.20	0.20	0.19	0.19	0.19	0.03	0.00	0.00	0.02	0.00	0.00
95th-Percentile Queue Length [ft/ln]	4.99	4.99	4.99	4.73	4.73	4.73	0.71	0.00	0.00	0.56	0.00	0.00
d_A, Approach Delay [s/veh]	23.57			21.32			0.09			0.05		
Approach LOS	C			C			A			A		
d_I, Intersection Delay [s/veh]	0.37											
Intersection LOS	F											

Intersection Level Of Service Report
Intersection 3: S Eleanor St (NS) at E 4th St (EW)

Control Type:	Two-way stop	Delay (sec / veh):	9.6
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.026

Intersection Setup

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

Volumes

Name												
Base Volume Input [veh/h]	6	23	5	2	12	8	12	10	4	3	17	10
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	6	24	5	2	13	8	13	11	4	3	18	11
Peak Hour Factor	0.8480	0.8480	0.8480	0.8480	0.8480	0.8480	0.8480	0.8480	0.8480	0.8480	0.8480	0.8480
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	2	7	1	1	4	2	4	3	1	1	5	3
Total Analysis Volume [veh/h]	7	28	6	2	15	9	15	13	5	4	21	13
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

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

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.02	0.00	0.00	0.03	0.01
d_M, Delay for Movement [s/veh]	7.27	0.00	0.00	7.28	0.00	0.00	9.31	9.58	8.56	9.22	9.61	8.63
Movement LOS	A	A	A	A	A	A	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.01	0.01	0.01	0.00	0.00	0.00	0.12	0.12	0.12	0.13	0.13	0.13
95th-Percentile Queue Length [ft/ln]	0.28	0.28	0.28	0.10	0.10	0.10	2.96	2.96	2.96	3.35	3.35	3.35
d_A, Approach Delay [s/veh]	1.24			0.56			9.31			9.23		
Approach LOS	A			A			A			A		
d_I, Intersection Delay [s/veh]	5.24											
Intersection LOS	A											

Intersection Level Of Service Report
Intersection 4: S Eleanor St (NS) at E Mission Blvd (EW)

Control Type:	Two-way stop	Delay (sec / veh):	62.0
Analysis Method:	HCM 6th Edition	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.000

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			Yes			No			No		

Volumes

Name												
Base Volume Input [veh/h]	7	1	6	4	0	13	13	467	10	2	989	17
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	0.00	2.00	0.00	0.00	0.00	0.00	2.00	2.00	2.00	2.00	0.00
Growth Rate	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	7	1	6	4	0	14	14	495	11	2	1048	18
Peak Hour Factor	0.8310	0.8310	0.8310	0.8310	0.8310	0.8310	0.8310	0.8310	0.8310	0.8310	0.8310	0.8310
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	2	0	2	1	0	4	4	149	3	1	315	5
Total Analysis Volume [veh/h]	8	1	7	5	0	17	17	596	13	2	1261	22
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Stop	Stop	Free	Free
Flared Lane	No	No		
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance	Yes	No		
Number of Storage Spaces in Median	1	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.03	0.01	0.01	0.07	0.00	0.04	0.03	0.01	0.00	0.00	0.01	0.00
d_M, Delay for Movement [s/veh]	20.61	27.97	10.79	59.93	62.03	15.89	11.78	0.00	0.00	8.74	0.00	0.00
Movement LOS	C	D	B	F	F	C	B	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.16	0.16	0.16	0.38	0.38	0.38	0.10	0.00	0.00	0.01	0.00	0.00
95th-Percentile Queue Length [ft/ln]	3.91	3.91	3.91	9.42	9.42	9.42	2.40	0.00	0.00	0.16	0.00	0.00
d_A, Approach Delay [s/veh]	16.78			25.90			0.32			0.01		
Approach LOS	C			D			A			A		
d_I, Intersection Delay [s/veh]	0.54											
Intersection LOS	F											

Intersection Level Of Service Report
Intersection 5: S Towne Ave (NS) at E Mission Blvd (EW)

Control Type:	Signalized	Delay (sec / veh):	16.1
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.591

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	1	0	0	1	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	80.00	100.00	100.00	80.00	100.00	100.00
Speed [mph]	40.00			40.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	88	716	62	43	472	112	89	358	30	51	821	95
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	93	759	66	46	500	119	94	379	32	54	870	101
Peak Hour Factor	0.8730	0.8730	0.8730	0.8730	0.8730	0.8730	0.8730	0.8730	0.8730	0.8730	0.8730	0.8730
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	27	217	19	13	143	34	27	109	9	15	249	29
Total Analysis Volume [veh/h]	107	869	76	53	573	136	108	434	37	62	997	116
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	60
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	2	0	0	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	7	0	0	7	0	0	7	0	0	7	0
Maximum Green [s]	0	30	0	0	30	0	0	30	0	0	30	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	29	0	0	29	0	0	31	0	0	31	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall		No			No			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	C	L	C	C
C, Cycle Length [s]	60	60	60	60	60	60	60	60	60	60	60	60
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	23	23	23	23	23	23	29	29	29	29	29	29
g / C, Green / Cycle	0.39	0.39	0.39	0.39	0.39	0.39	0.48	0.48	0.48	0.48	0.48	0.48
(v / s)_i Volume / Saturation Flow Rate	0.14	0.27	0.27	0.09	0.21	0.21	0.21	0.13	0.14	0.07	0.32	0.32
s, saturation flow rate [veh/h]	740	1772	1722	593	1772	1656	506	1772	1723	922	1772	1708
c, Capacity [veh/h]	264	690	671	196	690	645	221	845	822	456	845	815
d1, Uniform Delay [s]	22.73	15.34	15.34	25.07	14.10	14.11	24.37	9.48	9.48	13.00	12.06	12.06
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.50	0.50	0.50	0.50	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.00	1.34	1.38	0.74	0.63	0.68	7.51	0.83	0.86	0.62	4.20	4.37
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, 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
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.40	0.69	0.69	0.27	0.53	0.53	0.49	0.28	0.28	0.14	0.67	0.67
d, Delay for Lane Group [s/veh]	23.73	16.67	16.71	25.81	14.74	14.80	31.88	10.31	10.34	13.62	16.26	16.44
Lane Group LOS	C	B	B	C	B	B	C	B	B	B	B	B
Critical Lane Group	No	No	Yes	No	No	No	No	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	1.33	4.74	4.62	0.69	3.27	3.08	1.87	1.74	1.71	0.58	5.66	5.51
50th-Percentile Queue Length [ft/ln]	33.32	118.54	115.43	17.28	81.78	76.93	46.67	43.54	42.71	14.42	141.52	137.65
95th-Percentile Queue Length [veh/ln]	2.40	8.31	8.14	1.24	5.89	5.54	3.36	3.13	3.07	1.04	9.56	9.35
95th-Percentile Queue Length [ft/ln]	59.98	207.81	203.53	31.11	147.20	138.48	84.00	78.36	76.87	25.96	239.07	233.85

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	23.73	16.69	16.71	25.81	14.76	14.80	31.88	10.33	10.34	13.62	16.33	16.44
Movement LOS	C	B	B	C	B	B	C	B	B	B	B	B
d_A, Approach Delay [s/veh]	17.41			15.53			14.35			16.20		
Approach LOS	B			B			B			B		
d_I, Intersection Delay [s/veh]	16.11											
Intersection LOS	B											
Intersection V/C	0.591											

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0	11.0	11.0	11.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	20.01	20.01	20.01	20.01
l_p,int, Pedestrian LOS Score for Intersection	2.814	2.913	2.927	2.748
Crosswalk LOS	C	C	C	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	833	833	900	900
d_b, Bicycle Delay [s]	10.21	10.21	9.08	9.08
l_b,int, Bicycle LOS Score for Intersection	2.428	2.188	2.037	2.529
Bicycle LOS	B	B	B	B

Sequence

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

TTM 70570

Vistro File: G:\...\PME.vistro
Report File: G:\...\OY PM.pdf

Scenario 3 Opening Year (2022) Without Project
5/17/2019

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	S Linden St (NS) at E 4th St (EW)	Two-way stop	HCM 6th Edition	SB Thru	0.011	9.6	A
2	S Linden St (NS) at E Mission Blvd (EW)	Two-way stop	HCM 6th Edition	SB Thru	0.000	75.4	F
3	S Eleanor St (NS) at E 4th St (EW)	Two-way stop	HCM 6th Edition	EB Thru	0.015	9.7	A
4	S Eleanor St (NS) at E Mission Blvd (EW)	Two-way stop	HCM 6th Edition	SB Thru	0.042	83.2	F
5	S Towne Ave (NS) at E Mission Blvd (EW)	Signalized	HCM 6th Edition	WB Left	0.550	15.8	B

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

Intersection Level Of Service Report
Intersection 1: S Linden St (NS) at E 4th St (EW)

Control Type:	Two-way stop	Delay (sec / veh):	9.6
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.011

Intersection Setup

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

Volumes

Name												
Base Volume Input [veh/h]	2	1	1	0	7	9	6	19	6	5	12	2
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	2	1	1	0	7	10	6	20	6	5	13	2
Peak Hour Factor	0.7610	0.7610	0.7610	0.7610	0.7610	0.7610	0.7610	0.7610	0.7610	0.7610	0.7610	0.7610
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	1	0	0	0	2	3	2	7	2	2	4	1
Total Analysis Volume [veh/h]	3	1	1	0	9	13	8	26	8	7	17	3
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

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

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.01	0.01	0.01	0.00	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	9.16	9.51	8.47	9.09	9.59	8.49	7.27	0.00	0.00	7.29	0.00	0.00
Movement LOS	A	A	A	A	A	A	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.02	0.02	0.02	0.07	0.07	0.07	0.01	0.01	0.01	0.01	0.01	0.01
95th-Percentile Queue Length [ft/ln]	0.43	0.43	0.43	1.81	1.81	1.81	0.28	0.28	0.28	0.24	0.24	0.24
d_A, Approach Delay [s/veh]	9.09			8.94			1.38			1.89		
Approach LOS	A			A			A			A		
d_I, Intersection Delay [s/veh]	3.66											
Intersection LOS	A											

Intersection Level Of Service Report
Intersection 2: S Linden St (NS) at E Mission Blvd (EW)

Control Type:	Two-way stop	Delay (sec / veh):	75.4
Analysis Method:	HCM 6th Edition	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.000

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	1	0	0	1	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	225.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	5	1	10	13	0	5	0	1095	10	11	742	3
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	5	1	11	14	0	5	0	1161	11	12	787	3
Peak Hour Factor	0.9790	0.9790	0.9790	0.9790	0.9790	0.9790	0.9790	0.9790	0.9790	0.9790	0.9790	0.9790
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	1	0	3	4	0	1	0	296	3	3	201	1
Total Analysis Volume [veh/h]	5	1	11	14	0	5	0	1186	11	12	804	3
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

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

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.07	0.02	0.02	0.15	0.00	0.01	0.00	0.01	0.00	0.02	0.01	0.00
d_M, Delay for Movement [s/veh]	61.88	72.42	16.35	50.39	75.39	16.89	9.42	0.00	0.00	11.35	0.00	0.00
Movement LOS	F	F	C	F	F	C	A	A	A	B	A	A
95th-Percentile Queue Length [veh/ln]	0.39	0.39	0.39	0.56	0.56	0.56	0.00	0.00	0.00	0.06	0.00	0.00
95th-Percentile Queue Length [ft/ln]	9.70	9.70	9.70	13.88	13.88	13.88	0.00	0.00	0.00	1.59	0.00	0.00
d_A, Approach Delay [s/veh]	33.04			41.57			0.00			0.17		
Approach LOS	D			E			A			A		
d_I, Intersection Delay [s/veh]	0.72											
Intersection LOS	F											

Intersection Level Of Service Report
Intersection 3: S Eleanor St (NS) at E 4th St (EW)

Control Type:	Two-way stop	Delay (sec / veh):	9.7
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.015

Intersection Setup

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

Volumes

Name												
Base Volume Input [veh/h]	4	15	16	12	1	5	9	9	1	6	12	3
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	4	16	17	13	1	5	10	10	1	6	13	3
Peak Hour Factor	0.8300	0.8300	0.8300	0.8300	0.8300	0.8300	0.8300	0.8300	0.8300	0.8300	0.8300	0.8300
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	1	5	5	4	0	2	3	3	0	2	4	1
Total Analysis Volume [veh/h]	5	19	20	16	1	6	12	12	1	7	16	4
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

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

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.01	0.00	0.00	0.01	0.02	0.00	0.01	0.02	0.00
d_M, Delay for Movement [s/veh]	7.24	0.00	0.00	7.32	0.00	0.00	9.24	9.66	8.47	9.20	9.63	8.58
Movement LOS	A	A	A	A	A	A	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.01	0.01	0.01	0.03	0.03	0.03	0.09	0.09	0.09	0.10	0.10	0.10
95th-Percentile Queue Length [ft/ln]	0.19	0.19	0.19	0.63	0.63	0.63	2.30	2.30	2.30	2.45	2.45	2.45
d_A, Approach Delay [s/veh]	0.82			5.09			9.41			9.36		
Approach LOS	A			A			A			A		
d_I, Intersection Delay [s/veh]	5.39											
Intersection LOS	A											

Intersection Level Of Service Report
Intersection 4: S Eleanor St (NS) at E Mission Blvd (EW)

Control Type:	Two-way stop	Delay (sec / veh):	83.2
Analysis Method:	HCM 6th Edition	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.042

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			Yes			No			No		

Volumes

Name												
Base Volume Input [veh/h]	9	1	18	2	2	6	19	1074	18	10	742	8
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	0.00	2.00	0.00	0.00	0.00	0.00	2.00	2.00	2.00	2.00	0.00
Growth Rate	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	10	1	19	2	2	6	20	1138	19	11	787	8
Peak Hour Factor	0.9410	0.9410	0.9410	0.9410	0.9410	0.9410	0.9410	0.9410	0.9410	0.9410	0.9410	0.9410
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	3	0	5	1	1	2	5	302	5	3	209	2
Total Analysis Volume [veh/h]	11	1	20	2	2	6	21	1209	20	12	836	9
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Stop	Stop	Free	Free
Flared Lane	No	No		
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance	Yes	No		
Number of Storage Spaces in Median	1	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.08	0.01	0.05	0.03	0.04	0.01	0.03	0.01	0.00	0.02	0.01	0.00
d_M, Delay for Movement [s/veh]	33.56	31.44	15.57	54.10	83.20	13.53	9.62	0.00	0.00	11.54	0.00	0.00
Movement LOS	D	D	C	F	F	B	A	A	A	B	A	A
95th-Percentile Queue Length [veh/ln]	0.45	0.45	0.45	0.25	0.25	0.25	0.08	0.00	0.00	0.07	0.00	0.00
95th-Percentile Queue Length [ft/ln]	11.31	11.31	11.31	6.27	6.27	6.27	2.02	0.00	0.00	1.63	0.00	0.00
d_A, Approach Delay [s/veh]	22.25			35.58			0.16			0.16		
Approach LOS	C			E			A			A		
d_I, Intersection Delay [s/veh]	0.66											
Intersection LOS	F											

Intersection Level Of Service Report
Intersection 5: S Towne Ave (NS) at E Mission Blvd (EW)

Control Type:	Signalized	Delay (sec / veh):	15.8
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.550

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	1	0	0	1	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	80.00	100.00	100.00	80.00	100.00	100.00
Speed [mph]	40.00			40.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	59	732	65	68	703	81	149	872	95	74	584	81
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	63	776	69	72	745	86	158	924	101	78	619	86
Peak Hour Factor	0.9760	0.9760	0.9760	0.9760	0.9760	0.9760	0.9760	0.9760	0.9760	0.9760	0.9760	0.9760
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	16	199	18	18	191	22	40	237	26	20	159	22
Total Analysis Volume [veh/h]	65	795	71	74	763	88	162	947	103	80	634	88
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	60
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	2	0	0	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	7	0	0	7	0	0	7	0	0	7	0
Maximum Green [s]	0	30	0	0	30	0	0	30	0	0	30	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	29	0	0	29	0	0	31	0	0	31	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall		No			No			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	C	L	C	C
C, Cycle Length [s]	60	60	60	60	60	60	60	60	60	60	60	60
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	24	24	24	24	24	24	29	29	29	29	29	29
g / C, Green / Cycle	0.39	0.39	0.39	0.39	0.39	0.39	0.48	0.48	0.48	0.48	0.48	0.48
(v / s)_i Volume / Saturation Flow Rate	0.10	0.25	0.25	0.12	0.24	0.24	0.22	0.30	0.30	0.15	0.21	0.21
s, saturation flow rate [veh/h]	648	1772	1721	639	1772	1708	731	1772	1711	537	1772	1697
c, Capacity [veh/h]	223	692	673	219	692	668	344	843	814	237	843	808
d1, Uniform Delay [s]	23.60	14.81	14.81	24.22	14.75	14.75	18.54	11.80	11.81	21.56	10.41	10.41
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.50	0.50	0.50	0.50	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.72	0.97	1.00	0.90	0.93	0.97	4.57	3.60	3.74	3.82	1.65	1.72
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, 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
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.29	0.63	0.63	0.34	0.63	0.63	0.47	0.63	0.63	0.34	0.44	0.44
d, Delay for Lane Group [s/veh]	24.31	15.78	15.81	25.12	15.68	15.71	23.11	15.40	15.55	25.38	12.06	12.14
Lane Group LOS	C	B	B	C	B	B	C	B	B	C	B	B
Critical Lane Group	No	No	Yes	No	No	No	No	No	Yes	No	No	No
50th-Percentile Queue Length [veh/ln]	0.82	4.16	4.05	0.95	4.08	3.94	2.20	5.15	5.02	1.19	3.01	2.90
50th-Percentile Queue Length [ft/ln]	20.38	104.02	101.19	23.83	102.05	98.57	54.95	128.73	125.48	29.64	75.25	72.62
95th-Percentile Queue Length [veh/ln]	1.47	7.49	7.29	1.72	7.35	7.10	3.96	8.87	8.69	2.13	5.42	5.23
95th-Percentile Queue Length [ft/ln]	36.69	187.24	182.15	42.89	183.70	177.42	98.92	221.77	217.33	53.36	135.46	130.71

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	24.31	15.79	15.81	25.12	15.69	15.71	23.11	15.46	15.55	25.38	12.09	12.14
Movement LOS	C	B	B	C	B	B	C	B	B	C	B	B
d_A, Approach Delay [s/veh]	16.39			16.45			16.49			13.42		
Approach LOS	B			B			B			B		
d_I, Intersection Delay [s/veh]	15.82											
Intersection LOS	B											
Intersection V/C	0.550											

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0	11.0	11.0	11.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	20.01	20.01	20.01	20.01
l_p,int, Pedestrian LOS Score for Intersection	2.879	3.020	2.902	2.813
Crosswalk LOS	C	C	C	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	833	833	900	900
d_b, Bicycle Delay [s]	10.21	10.21	9.08	9.08
l_b,int, Bicycle LOS Score for Intersection	2.328	2.323	2.560	2.221
Bicycle LOS	B	B	B	B

Sequence

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

OPENING YEAR (2022) WITH PROJECT

TTM 70570

Vistro File: G:\...\AME.vistro
Report File: G:\...\OYP AM.pdf

Scenario 4 Opening Year (2022) With Project
5/15/2019

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	S Linden St (NS) at E 4th St (EW)	Two-way stop	HCM 6th Edition	SB Thru	0.005	9.6	A
2	S Linden St (NS) at E Mission Blvd (EW)	Two-way stop	HCM 6th Edition	NB Thru	0.016	63.6	F
3	S Eleanor St (NS) at E 4th St (EW)	Two-way stop	HCM 6th Edition	WB Thru	0.026	9.6	A
4	S Eleanor St (NS) at E Mission Blvd (EW)	Two-way stop	HCM 6th Edition	SB Thru	0.015	66.2	F
5	S Towne Ave (NS) at E Mission Blvd (EW)	Signalized	HCM 6th Edition	EB Left	0.591	16.1	B
6	Project West Dwy (NS) at E 4th St (EW)	Two-way stop	HCM 6th Edition	NB Left	0.008	8.9	A
7	Project East Dwy (NS) at E 4th St (EW)	Two-way stop	HCM 6th Edition	NB Left	0.000	8.8	A

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

Intersection Level Of Service Report
Intersection 1: S Linden St (NS) at E 4th St (EW)

Control Type:	Two-way stop	Delay (sec / veh):	9.6
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.005

Intersection Setup

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

Volumes

Name												
Base Volume Input [veh/h]	4	7	3	5	4	13	3	15	4	4	25	3
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	1	0	0	0	0	1	0	5	3	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	4	7	4	5	4	14	3	17	4	9	30	3
Peak Hour Factor	0.9000	0.9000	0.9000	0.9000	0.9000	0.9000	0.9000	0.9000	0.9000	0.9000	0.9000	0.9000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	1	2	1	1	1	4	1	5	1	3	8	1
Total Analysis Volume [veh/h]	4	8	4	6	4	16	3	19	4	10	33	3
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

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

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.01	0.00	0.01	0.01	0.02	0.00	0.00	0.00	0.01	0.00	0.00
d_M, Delay for Movement [s/veh]	9.22	9.57	8.48	9.19	9.61	8.57	7.29	0.00	0.00	7.28	0.00	0.00
Movement LOS	A	A	A	A	A	A	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.06	0.06	0.06	0.08	0.08	0.08	0.01	0.01	0.01	0.02	0.02	0.02
95th-Percentile Queue Length [ft/ln]	1.40	1.40	1.40	2.10	2.10	2.10	0.14	0.14	0.14	0.43	0.43	0.43
d_A, Approach Delay [s/veh]	9.21			8.87			0.84			1.58		
Approach LOS	A			A			A			A		
d_I, Intersection Delay [s/veh]	4.15											
Intersection LOS	A											

Intersection Level Of Service Report
Intersection 2: S Linden St (NS) at E Mission Blvd (EW)

Control Type:	Two-way stop	Delay (sec / veh):	63.6
Analysis Method:	HCM 6th Edition	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.016

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	1	0	0	1	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	225.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	3	1	7	1	1	9	4	496	3	6	997	13
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	1	4	1	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	3	1	7	1	2	14	5	526	3	6	1057	14
Peak Hour Factor	0.8320	0.8320	0.8320	0.8320	0.8320	0.8320	0.8320	0.8320	0.8320	0.8320	0.8320	0.8320
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	1	0	2	0	1	4	2	158	1	2	318	4
Total Analysis Volume [veh/h]	4	1	8	1	2	17	6	632	4	7	1270	17
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

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

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.04	0.02	0.01	0.02	0.03	0.04	0.01	0.01	0.00	0.01	0.01	0.00
d_M, Delay for Movement [s/veh]	38.85	63.59	11.52	61.22	63.36	15.17	11.81	0.00	0.00	8.84	0.00	0.00
Movement LOS	E	F	B	F	F	C	B	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.20	0.20	0.20	0.29	0.29	0.29	0.03	0.00	0.00	0.02	0.00	0.00
95th-Percentile Queue Length [ft/ln]	5.09	5.09	5.09	7.13	7.13	7.13	0.85	0.00	0.00	0.56	0.00	0.00
d_A, Approach Delay [s/veh]	23.94			22.29			0.11			0.05		
Approach LOS	C			C			A			A		
d_I, Intersection Delay [s/veh]	0.45											
Intersection LOS	F											

Intersection Level Of Service Report
Intersection 3: S Eleanor St (NS) at E 4th St (EW)

Control Type:	Two-way stop	Delay (sec / veh):	9.6
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.026

Intersection Setup

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

Volumes

Name												
Base Volume Input [veh/h]	6	23	5	2	12	8	12	10	4	3	17	10
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	1	0	0	0	0	0	0	0	5	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	7	24	5	2	13	8	13	11	9	3	18	11
Peak Hour Factor	0.8480	0.8480	0.8480	0.8480	0.8480	0.8480	0.8480	0.8480	0.8480	0.8480	0.8480	0.8480
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	2	7	1	1	4	2	4	3	3	1	5	3
Total Analysis Volume [veh/h]	8	28	6	2	15	9	15	13	11	4	21	13
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

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

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.01	0.00	0.00	0.00	0.00	0.00	0.02	0.02	0.01	0.00	0.03	0.01
d_M, Delay for Movement [s/veh]	7.27	0.00	0.00	7.28	0.00	0.00	9.35	9.62	8.59	9.27	9.63	8.63
Movement LOS	A	A	A	A	A	A	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.01	0.01	0.01	0.00	0.00	0.00	0.14	0.14	0.14	0.13	0.13	0.13
95th-Percentile Queue Length [ft/ln]	0.33	0.33	0.33	0.10	0.10	0.10	3.43	3.43	3.43	3.36	3.36	3.36
d_A, Approach Delay [s/veh]	1.39			0.56			9.22			9.25		
Approach LOS	A			A			A			A		
d_I, Intersection Delay [s/veh]	5.41											
Intersection LOS	A											

Intersection Level Of Service Report
Intersection 4: S Eleanor St (NS) at E Mission Blvd (EW)

Control Type:	Two-way stop	Delay (sec / veh):	66.2
Analysis Method:	HCM 6th Edition	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.015

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			Yes			No			No		

Volumes

Name												
Base Volume Input [veh/h]	7	1	6	4	0	13	13	467	10	2	989	17
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	0.00	2.00	0.00	0.00	0.00	0.00	2.00	2.00	2.00	2.00	0.00
Growth Rate	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	4	1	0	0	0	0	0	0	1
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	7	1	6	8	1	14	14	495	11	2	1048	19
Peak Hour Factor	0.8310	0.8310	0.8310	0.8310	0.8310	0.8310	0.8310	0.8310	0.8310	0.8310	0.8310	0.8310
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	2	0	2	2	0	4	4	149	3	1	315	6
Total Analysis Volume [veh/h]	8	1	7	10	1	17	17	596	13	2	1261	23
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Stop	Stop	Free	Free
Flared Lane	No	No		
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance	Yes	No		
Number of Storage Spaces in Median	1	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.03	0.01	0.01	0.15	0.02	0.04	0.03	0.01	0.00	0.00	0.01	0.00
d_M, Delay for Movement [s/veh]	20.74	28.00	10.80	64.06	66.15	19.97	11.79	0.00	0.00	8.74	0.00	0.00
Movement LOS	C	D	B	F	F	C	B	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.16	0.16	0.16	0.72	0.72	0.72	0.10	0.00	0.00	0.01	0.00	0.00
95th-Percentile Queue Length [ft/ln]	3.93	3.93	3.93	18.01	18.01	18.01	2.40	0.00	0.00	0.16	0.00	0.00
d_A, Approach Delay [s/veh]	16.84			37.37			0.32			0.01		
Approach LOS	C			E			A			A		
d_I, Intersection Delay [s/veh]	0.78											
Intersection LOS	F											

Intersection Level Of Service Report
Intersection 5: S Towne Ave (NS) at E Mission Blvd (EW)

Control Type:	Signalized	Delay (sec / veh):	16.1
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.591

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	1	0	0	1	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	80.00	100.00	100.00	80.00	100.00	100.00
Speed [mph]	40.00			40.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	88	716	62	43	472	112	89	358	30	51	821	95
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	1	2	1	0	1	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	93	759	66	46	500	119	95	381	33	54	871	101
Peak Hour Factor	0.8730	0.8730	0.8730	0.8730	0.8730	0.8730	0.8730	0.8730	0.8730	0.8730	0.8730	0.8730
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	27	217	19	13	143	34	27	109	9	15	249	29
Total Analysis Volume [veh/h]	107	869	76	53	573	136	109	436	38	62	998	116
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	60
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	2	0	0	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	7	0	0	7	0	0	7	0	0	7	0
Maximum Green [s]	0	30	0	0	30	0	0	30	0	0	30	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	29	0	0	29	0	0	31	0	0	31	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall		No			No			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	C	L	C	C
C, Cycle Length [s]	60	60	60	60	60	60	60	60	60	60	60	60
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	23	23	23	23	23	23	29	29	29	29	29	29
g / C, Green / Cycle	0.39	0.39	0.39	0.39	0.39	0.39	0.48	0.48	0.48	0.48	0.48	0.48
(v / s)_i Volume / Saturation Flow Rate	0.14	0.27	0.27	0.09	0.21	0.21	0.22	0.14	0.14	0.07	0.32	0.32
s, saturation flow rate [veh/h]	740	1772	1722	593	1772	1656	506	1772	1722	920	1772	1708
c, Capacity [veh/h]	264	690	671	196	690	645	221	845	822	455	845	815
d1, Uniform Delay [s]	22.73	15.34	15.34	25.07	14.10	14.11	24.45	9.49	9.49	13.02	12.06	12.07
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.50	0.50	0.50	0.50	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.00	1.34	1.38	0.74	0.63	0.68	7.66	0.84	0.87	0.62	4.21	4.38
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, 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
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.40	0.69	0.69	0.27	0.53	0.53	0.49	0.28	0.28	0.14	0.67	0.67
d, Delay for Lane Group [s/veh]	23.73	16.67	16.71	25.81	14.74	14.80	32.11	10.33	10.36	13.65	16.27	16.45
Lane Group LOS	C	B	B	C	B	B	C	B	B	B	B	B
Critical Lane Group	No	No	Yes	No	No	No	No	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	1.33	4.74	4.62	0.69	3.27	3.08	1.89	1.76	1.72	0.58	5.67	5.51
50th-Percentile Queue Length [ft/ln]	33.32	118.54	115.43	17.28	81.78	76.93	47.33	43.88	43.02	14.45	141.73	137.86
95th-Percentile Queue Length [veh/ln]	2.40	8.31	8.14	1.24	5.89	5.54	3.41	3.16	3.10	1.04	9.57	9.37
95th-Percentile Queue Length [ft/ln]	59.98	207.81	203.53	31.11	147.20	138.48	85.20	78.98	77.44	26.01	239.36	234.14

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	23.73	16.69	16.71	25.81	14.76	14.80	32.11	10.34	10.36	13.65	16.35	16.45
Movement LOS	C	B	B	C	B	B	C	B	B	B	B	B
d_A, Approach Delay [s/veh]	17.41			15.53			14.41			16.22		
Approach LOS	B			B			B			B		
d_I, Intersection Delay [s/veh]	16.13											
Intersection LOS	B											
Intersection V/C	0.591											

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0	11.0	11.0	11.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	20.01	20.01	20.01	20.01
l_p,int, Pedestrian LOS Score for Intersection	2.814	2.915	2.928	2.749
Crosswalk LOS	C	C	C	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	833	833	900	900
d_b, Bicycle Delay [s]	10.21	10.21	9.08	9.08
l_b,int, Bicycle LOS Score for Intersection	2.428	2.188	2.041	2.530
Bicycle LOS	B	B	B	B

Sequence

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Intersection Level Of Service Report
Intersection 6: Project West Dwy (NS) at E 4th St (EW)

Control Type:	Two-way stop	Delay (sec / veh):	8.9
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.008

Intersection Setup

Name						
Approach	Northbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Thru	Right	Left	Thru
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	0	0	23	0	0	32
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.06	1.06	1.06	1.00	1.00	1.06
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	8	5	2	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	8	5	26	0	0	34
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	2	1	7	0	0	9
Total Analysis Volume [veh/h]	8	5	26	0	0	34
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

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

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.01	0.00	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	8.85	8.48	0.00	0.00	0.00	0.00
Movement LOS	A	A	A			A
95th-Percentile Queue Length [veh/ln]	0.04	0.04	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	1.00	1.00	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	8.71		0.00		0.00	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	1.55					
Intersection LOS	A					

Intersection Level Of Service Report
Intersection 7: Project East Dwy (NS) at E 4th St (EW)

Control Type:	Two-way stop	Delay (sec / veh):	8.8
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.000

Intersection Setup

Name						
Approach	Northbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Thru	Right	Left	Thru
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	0	0	23	0	0	32
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.06	1.06	1.06	1.06	1.06	1.06
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	5	2	1	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	0	29	2	1	34
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	7	1	0	9
Total Analysis Volume [veh/h]	0	0	29	2	1	34
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

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

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	8.83	8.45	0.00	0.00	7.28	0.00
Movement LOS	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	0.00	0.05	0.05
d_A, Approach Delay [s/veh]	8.64		0.00		0.21	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	0.11					
Intersection LOS	A					

TTM 70570

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Scenario 4 Opening Year (2022) With Project
5/17/2019

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	S Linden St (NS) at E 4th St (EW)	Two-way stop	HCM 6th Edition	SB Thru	0.011	9.7	A
2	S Linden St (NS) at E Mission Blvd (EW)	Two-way stop	HCM 6th Edition	SB Thru	0.000	76.7	F
3	S Eleanor St (NS) at E 4th St (EW)	Two-way stop	HCM 6th Edition	EB Thru	0.015	9.8	A
4	S Eleanor St (NS) at E Mission Blvd (EW)	Two-way stop	HCM 6th Edition	SB Thru	0.042	85.4	F
5	S Towne Ave (NS) at E Mission Blvd (EW)	Signalized	HCM 6th Edition	WB Left	0.551	15.9	B
6	Project West Dwy (NS) at E 4th St (EW)	Two-way stop	HCM 6th Edition	NB Left	0.004	8.8	A
7	Project East Dwy (NS) at E 4th St (EW)	Two-way stop	HCM 6th Edition	NB Left	0.000	8.8	A

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

Intersection Level Of Service Report
Intersection 1: S Linden St (NS) at E 4th St (EW)

Control Type:	Two-way stop	Delay (sec / veh):	9.7
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.011

Intersection Setup

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

Volumes

Name												
Base Volume Input [veh/h]	2	1	1	0	7	9	6	19	6	5	12	2
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	6	0	0	0	0	3	0	3	1	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	2	1	7	0	7	10	6	23	6	8	14	2
Peak Hour Factor	0.7610	0.7610	0.7610	0.7610	0.7610	0.7610	0.7610	0.7610	0.7610	0.7610	0.7610	0.7610
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	1	0	2	0	2	3	2	8	2	3	5	1
Total Analysis Volume [veh/h]	3	1	9	0	9	13	8	30	8	11	18	3
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

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

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.01	0.00	0.01	0.01	0.01	0.00	0.00	0.01	0.00	0.00
d_M, Delay for Movement [s/veh]	9.28	9.62	8.51	9.24	9.68	8.50	7.27	0.00	0.00	7.31	0.00	0.00
Movement LOS	A	A	A	A	A	A	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.04	0.04	0.04	0.07	0.07	0.07	0.01	0.01	0.01	0.02	0.02	0.02
95th-Percentile Queue Length [ft/ln]	1.02	1.02	1.02	1.82	1.82	1.82	0.28	0.28	0.28	0.38	0.38	0.38
d_A, Approach Delay [s/veh]	8.78			8.98			1.26			2.51		
Approach LOS	A			A			A			A		
d_I, Intersection Delay [s/veh]	3.98											
Intersection LOS	A											

Intersection Level Of Service Report
Intersection 2: S Linden St (NS) at E Mission Blvd (EW)

Control Type:	Two-way stop	Delay (sec / veh):	76.7
Analysis Method:	HCM 6th Edition	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.000

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	1	0	0	1	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	225.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	5	1	10	13	0	5	0	1095	10	11	742	3
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	1	0	0	0	3	5	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	5	2	11	14	0	8	5	1161	11	12	787	3
Peak Hour Factor	0.9790	0.9790	0.9790	0.9790	0.9790	0.9790	0.9790	0.9790	0.9790	0.9790	0.9790	0.9790
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	1	1	3	4	0	2	1	296	3	3	201	1
Total Analysis Volume [veh/h]	5	2	11	14	0	8	5	1186	11	12	804	3
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

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

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.08	0.04	0.02	0.16	0.00	0.01	0.01	0.01	0.00	0.02	0.01	0.00
d_M, Delay for Movement [s/veh]	64.44	74.84	17.43	51.86	76.71	16.86	9.45	0.00	0.00	11.35	0.00	0.00
Movement LOS	F	F	C	F	F	C	A	A	A	B	A	A
95th-Percentile Queue Length [veh/ln]	0.46	0.46	0.46	0.60	0.60	0.60	0.02	0.00	0.00	0.06	0.00	0.00
95th-Percentile Queue Length [ft/ln]	11.59	11.59	11.59	15.00	15.00	15.00	0.46	0.00	0.00	1.59	0.00	0.00
d_A, Approach Delay [s/veh]	36.87			39.13			0.04			0.17		
Approach LOS	E			E			A			A		
d_I, Intersection Delay [s/veh]	0.83											
Intersection LOS	F											

Intersection Level Of Service Report
Intersection 3: S Eleanor St (NS) at E 4th St (EW)

Control Type:	Two-way stop	Delay (sec / veh):	9.8
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.015

Intersection Setup

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

Volumes

Name												
Base Volume Input [veh/h]	4	15	16	12	1	5	9	9	1	6	12	3
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	5	0	0	0	0	0	0	0	3	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	9	16	17	13	1	5	10	10	4	6	13	3
Peak Hour Factor	0.8300	0.8300	0.8300	0.8300	0.8300	0.8300	0.8300	0.8300	0.8300	0.8300	0.8300	0.8300
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	3	5	5	4	0	2	3	3	1	2	4	1
Total Analysis Volume [veh/h]	11	19	20	16	1	6	12	12	5	7	16	4
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

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

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.01	0.00	0.00	0.01	0.00	0.00	0.01	0.02	0.00	0.01	0.02	0.00
d_M, Delay for Movement [s/veh]	7.25	0.00	0.00	7.32	0.00	0.00	9.35	9.77	8.48	9.32	9.72	8.59
Movement LOS	A	A	A	A	A	A	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.02	0.02	0.02	0.03	0.03	0.03	0.11	0.11	0.11	0.10	0.10	0.10
95th-Percentile Queue Length [ft/ln]	0.42	0.42	0.42	0.63	0.63	0.63	2.64	2.64	2.64	2.50	2.50	2.50
d_A, Approach Delay [s/veh]	1.59			5.09			9.37			9.45		
Approach LOS	A			A			A			A		
d_I, Intersection Delay [s/veh]	5.61											
Intersection LOS	A											

Intersection Level Of Service Report
Intersection 4: S Eleanor St (NS) at E Mission Blvd (EW)

Control Type:	Two-way stop	Delay (sec / veh):	85.4
Analysis Method:	HCM 6th Edition	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.042

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			Yes			No			No		

Volumes

Name												
Base Volume Input [veh/h]	9	1	18	2	2	6	19	1074	18	10	742	8
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	0.00	2.00	0.00	0.00	0.00	0.00	2.00	2.00	2.00	2.00	0.00
Growth Rate	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	1	0	3	0	0	0	0	0	0	0	4
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	10	2	19	5	2	6	20	1138	19	11	787	12
Peak Hour Factor	0.9410	0.9410	0.9410	0.9410	0.9410	0.9410	0.9410	0.9410	0.9410	0.9410	0.9410	0.9410
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	3	1	5	1	1	2	5	302	5	3	209	3
Total Analysis Volume [veh/h]	11	2	20	5	2	6	21	1209	20	12	836	13
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Stop	Stop	Free	Free
Flared Lane	No	No		
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance	Yes	No		
Number of Storage Spaces in Median	1	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.08	0.01	0.05	0.07	0.04	0.01	0.03	0.01	0.00	0.02	0.01	0.00
d_M, Delay for Movement [s/veh]	33.74	31.68	15.75	56.49	85.37	15.49	9.64	0.00	0.00	11.54	0.00	0.00
Movement LOS	D	D	C	F	F	C	A	A	A	B	A	A
95th-Percentile Queue Length [veh/ln]	0.48	0.48	0.48	0.39	0.39	0.39	0.08	0.00	0.00	0.07	0.00	0.00
95th-Percentile Queue Length [ft/ln]	11.96	11.96	11.96	9.73	9.73	9.73	2.03	0.00	0.00	1.63	0.00	0.00
d_A, Approach Delay [s/veh]	22.71			42.01			0.16			0.16		
Approach LOS	C			E			A			A		
d_I, Intersection Delay [s/veh]	0.76											
Intersection LOS	F											

Intersection Level Of Service Report
Intersection 5: S Towne Ave (NS) at E Mission Blvd (EW)

Control Type:	Signalized	Delay (sec / veh):	15.9
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.551

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	1	0	0	1	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	80.00	100.00	100.00	80.00	100.00	100.00
Speed [mph]	40.00			40.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	59	732	65	68	703	81	149	872	95	74	584	81
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	1	0	0	0	0	1	1	1	1	0	2	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	64	776	69	72	745	87	159	925	102	78	621	86
Peak Hour Factor	0.9760	0.9760	0.9760	0.9760	0.9760	0.9760	0.9760	0.9760	0.9760	0.9760	0.9760	0.9760
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	16	199	18	18	191	22	41	237	26	20	159	22
Total Analysis Volume [veh/h]	66	795	71	74	763	89	163	948	105	80	636	88
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	60
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	2	0	0	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	7	0	0	7	0	0	7	0	0	7	0
Maximum Green [s]	0	30	0	0	30	0	0	30	0	0	30	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	29	0	0	29	0	0	31	0	0	31	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall		No			No			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	C	L	C	C
C, Cycle Length [s]	60	60	60	60	60	60	60	60	60	60	60	60
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	24	24	24	24	24	24	29	29	29	29	29	29
g / C, Green / Cycle	0.39	0.39	0.39	0.39	0.39	0.39	0.48	0.48	0.48	0.48	0.48	0.48
(v / s)_i Volume / Saturation Flow Rate	0.10	0.25	0.25	0.12	0.24	0.24	0.22	0.30	0.30	0.15	0.21	0.21
s, saturation flow rate [veh/h]	647	1772	1721	639	1772	1707	729	1772	1710	536	1772	1697
c, Capacity [veh/h]	223	692	673	219	692	667	343	843	814	236	843	808
d1, Uniform Delay [s]	23.66	14.81	14.81	24.22	14.75	14.75	18.61	11.81	11.82	21.63	10.42	10.42
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.50	0.50	0.50	0.50	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.73	0.97	1.00	0.90	0.94	0.97	4.65	3.63	3.78	3.85	1.66	1.73
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, 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
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.30	0.63	0.63	0.34	0.63	0.63	0.47	0.63	0.64	0.34	0.44	0.44
d, Delay for Lane Group [s/veh]	24.39	15.78	15.81	25.12	15.69	15.72	23.26	15.44	15.60	25.49	12.07	12.15
Lane Group LOS	C	B	B	C	B	B	C	B	B	C	B	B
Critical Lane Group	No	No	Yes	No	No	No	No	No	Yes	No	No	No
50th-Percentile Queue Length [veh/ln]	0.83	4.16	4.05	0.95	4.09	3.95	2.22	5.18	5.04	1.19	3.02	2.92
50th-Percentile Queue Length [ft/ln]	20.75	104.02	101.19	23.83	102.24	98.71	55.54	129.39	126.08	29.73	75.53	72.89
95th-Percentile Queue Length [veh/ln]	1.49	7.49	7.29	1.72	7.36	7.11	4.00	8.91	8.73	2.14	5.44	5.25
95th-Percentile Queue Length [ft/ln]	37.35	187.23	182.14	42.89	184.04	177.69	99.97	222.66	218.15	53.52	135.95	131.20

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	24.39	15.79	15.81	25.12	15.70	15.72	23.26	15.51	15.60	25.49	12.11	12.15
Movement LOS	C	B	B	C	B	B	C	B	B	C	B	B
d_A, Approach Delay [s/veh]	16.40			16.46			16.56			13.44		
Approach LOS	B			B			B			B		
d_I, Intersection Delay [s/veh]	15.85											
Intersection LOS	B											
Intersection V/C	0.551											

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0	11.0	11.0	11.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	20.01	20.01	20.01	20.01
l_p,int, Pedestrian LOS Score for Intersection	2.880	3.022	2.905	2.814
Crosswalk LOS	C	C	C	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	833	833	900	900
d_b, Bicycle Delay [s]	10.21	10.21	9.08	9.08
l_b,int, Bicycle LOS Score for Intersection	2.329	2.324	2.563	2.223
Bicycle LOS	B	B	B	B

Sequence

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Intersection Level Of Service Report
Intersection 6: Project West Dwy (NS) at E 4th St (EW)

Control Type:	Two-way stop	Delay (sec / veh):	8.8
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.004

Intersection Setup

Name						
Approach	Northbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Thru	Right	Left	Thru
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	0	0	20	0	0	19
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.06	1.06	1.06	1.00	1.00	1.06
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	4	3	9	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	4	3	30	0	0	20
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	1	1	8	0	0	5
Total Analysis Volume [veh/h]	4	3	30	0	0	20
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

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

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	8.78	8.47	0.00	0.00	0.00	0.00
Movement LOS	A	A	A			A
95th-Percentile Queue Length [veh/ln]	0.02	0.02	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	0.53	0.53	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	8.65		0.00		0.00	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	1.06					
Intersection LOS	A					

Intersection Level Of Service Report
Intersection 7: Project East Dwy (NS) at E 4th St (EW)

Control Type:	Two-way stop	Delay (sec / veh):	8.8
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.000

Intersection Setup

Name						
Approach	Northbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Thru	Right	Left	Thru
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	0	0	20	0	0	19
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.06	1.06	1.06	1.06	1.06	1.06
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	3	9	5	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	0	24	9	5	20
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	6	2	1	5
Total Analysis Volume [veh/h]	0	0	24	9	5	20
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

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

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	8.81	8.44	0.00	0.00	7.29	0.00
Movement LOS	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.00	0.01	0.01
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	0.00	0.24	0.24
d_A, Approach Delay [s/veh]	8.62		0.00		1.46	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	0.63					
Intersection LOS	A					

APPENDIX E

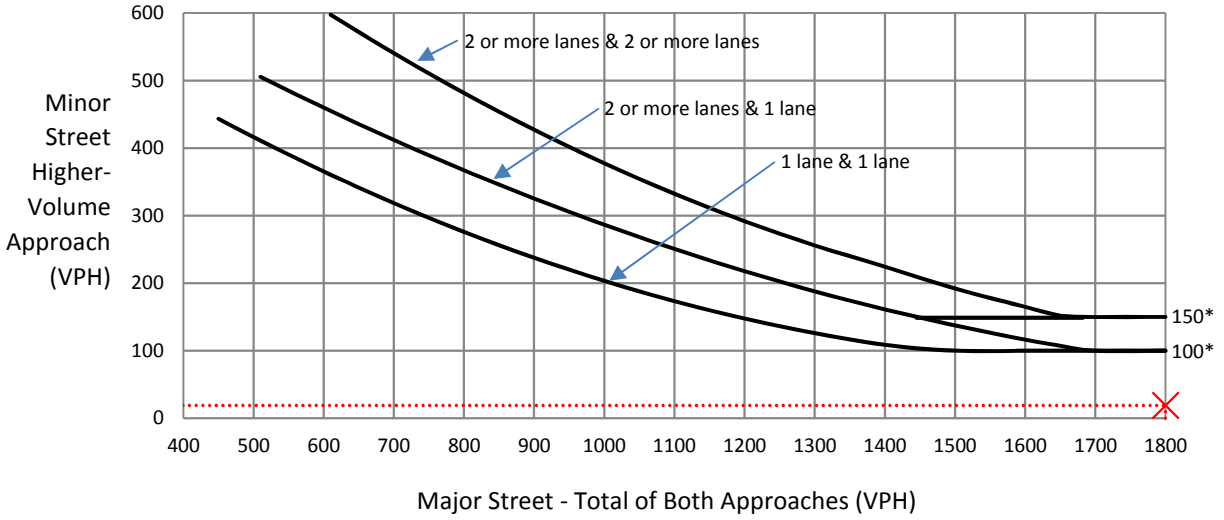
TRAFFIC SIGNAL WARRANT WORKSHEETS

Figure E-1

South Linden Street (NS) / East Mission Boulevard (EW) - #2
Existing Plus Project
Morning Peak Hour

Major Street:	East Mission Boulevard	Volume:	1827
Minor Street:	South Linden Street	Volume:	19

Warrant 3, Peak Hour Vehicular Volume (100% Factor)



Traffic Signal Warrant Is NOT Satisfied

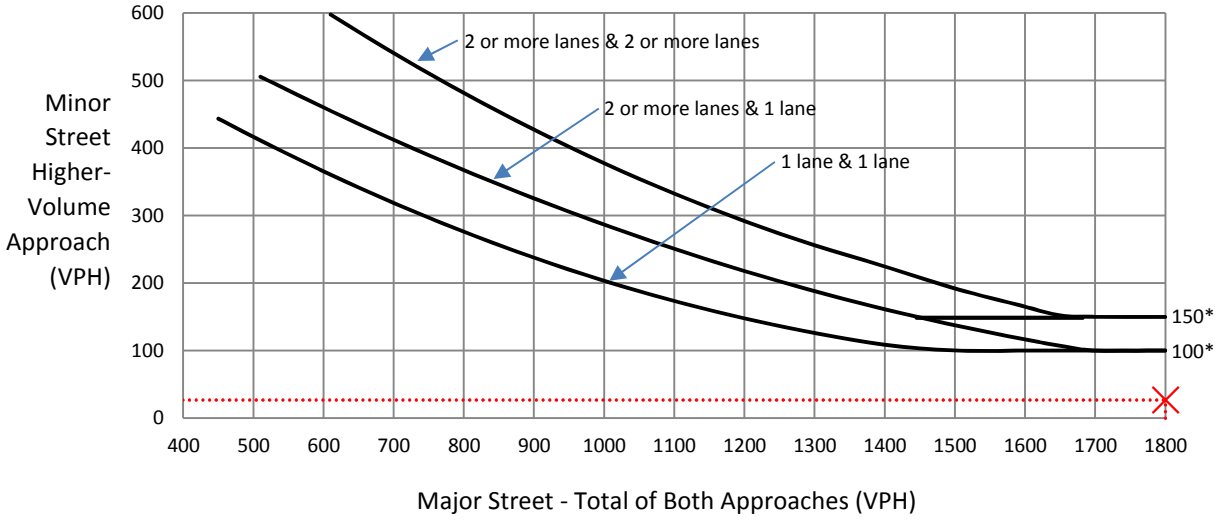
*Note: 150 vph applies as the lower threshold volume for a minor street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor street approach with one lane.

Figure E-2

South Eleanor Street (NS) / East Mission Boulevard (EW) - #4
Existing Plus Project
Morning Peak Hour

Major Street:	East Mission Boulevard	Volume:	1804
Minor Street:	South Eleanor Street	Volume:	27

Warrant 3, Peak Hour Vehicular Volume (100% Factor)



Traffic Signal Warrant Is NOT Satisfied

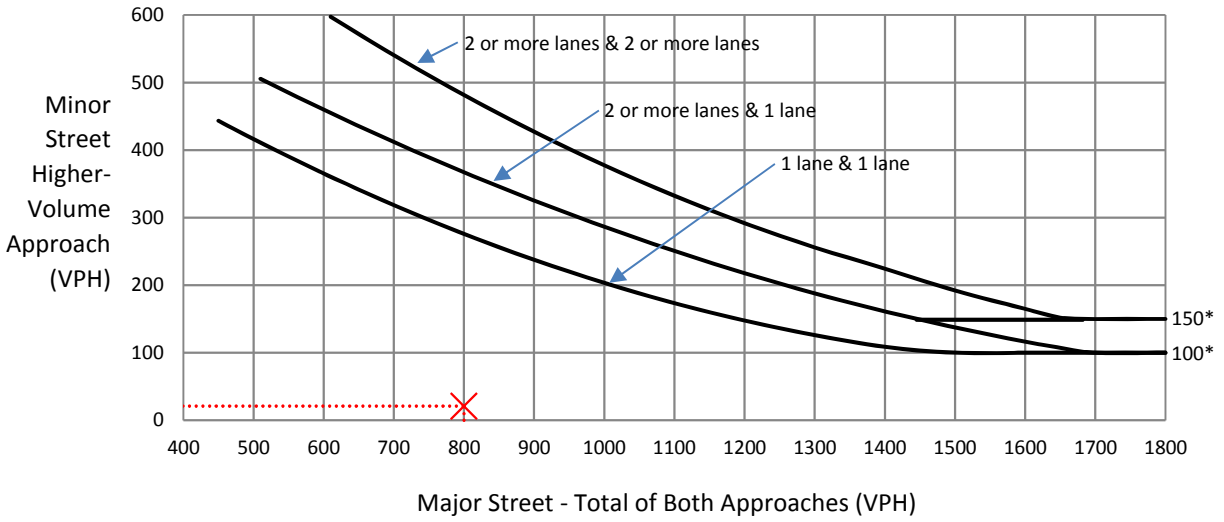
*Note: 150 vph applies as the lower threshold volume for a minor street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor street approach with one lane.

Figure E-3

South Linden Street (NS) / East Mission Boulevard (EW) - #2
Existing Plus Project
Evening Peak Hour

Major Street:	East Mission Boulevard	Volume:	800
Minor Street:	South Linden Street	Volume:	21

Warrant 3, Peak Hour Vehicular Volume (100% Factor)



Traffic Signal Warrant Is NOT Satisfied

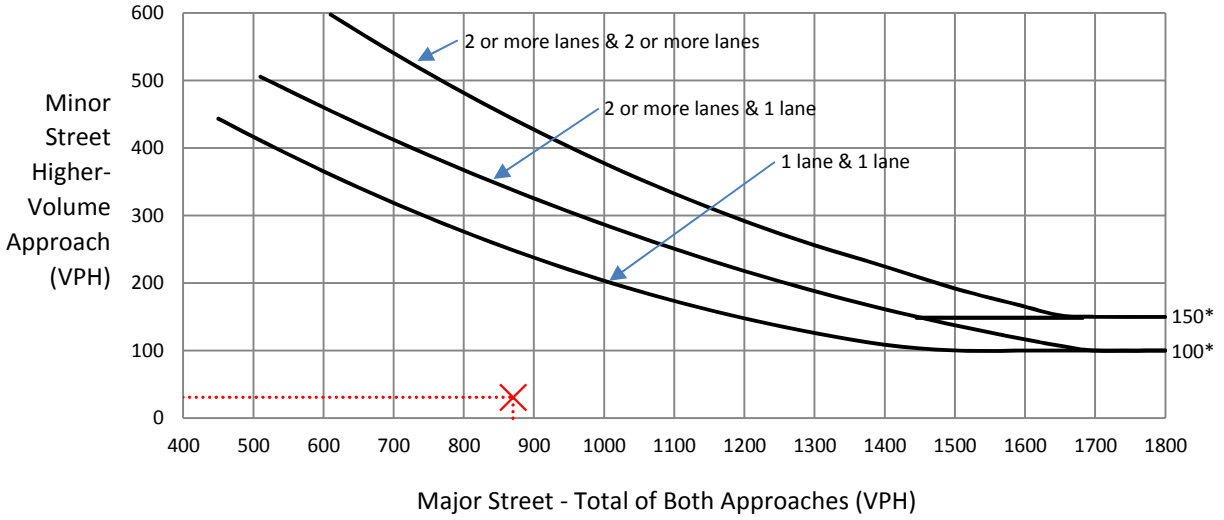
*Note: 150 vph applies as the lower threshold volume for a minor street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor street approach with one lane.

Figure E-4

South Eleanor Street (NS) / East Mission Boulevard (EW) - #4
Existing Plus Project
Evening Peak Hour

Major Street:	East Mission Boulevard	Volume:	870
Minor Street:	South Eleanor Street	Volume:	31

Warrant 3, Peak Hour Vehicular Volume (100% Factor)



Traffic Signal Warrant Is NOT Satisfied

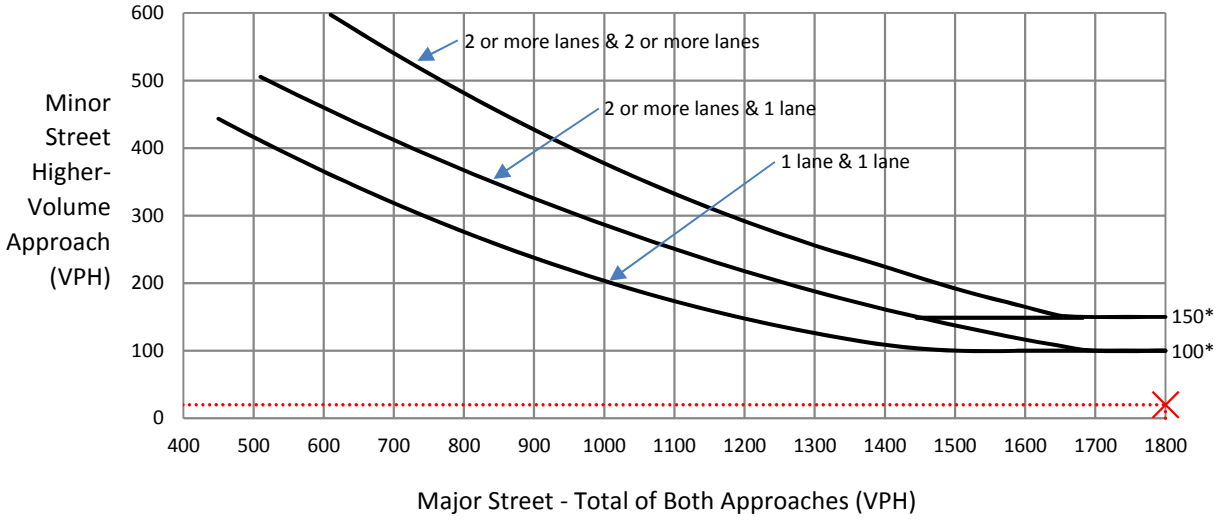
*Note: 150 vph applies as the lower threshold volume for a minor street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor street approach with one lane.

Figure E-5

South Linden Street (NS) / East Mission Boulevard (EW) - #2
Opening Year (2022) With Project
Morning Peak Hour

Major Street:	East Mission Boulevard	Volume:	1936
Minor Street:	South Linden Street	Volume:	20

Warrant 3, Peak Hour Vehicular Volume (100% Factor)



Traffic Signal Warrant Is NOT Satisfied

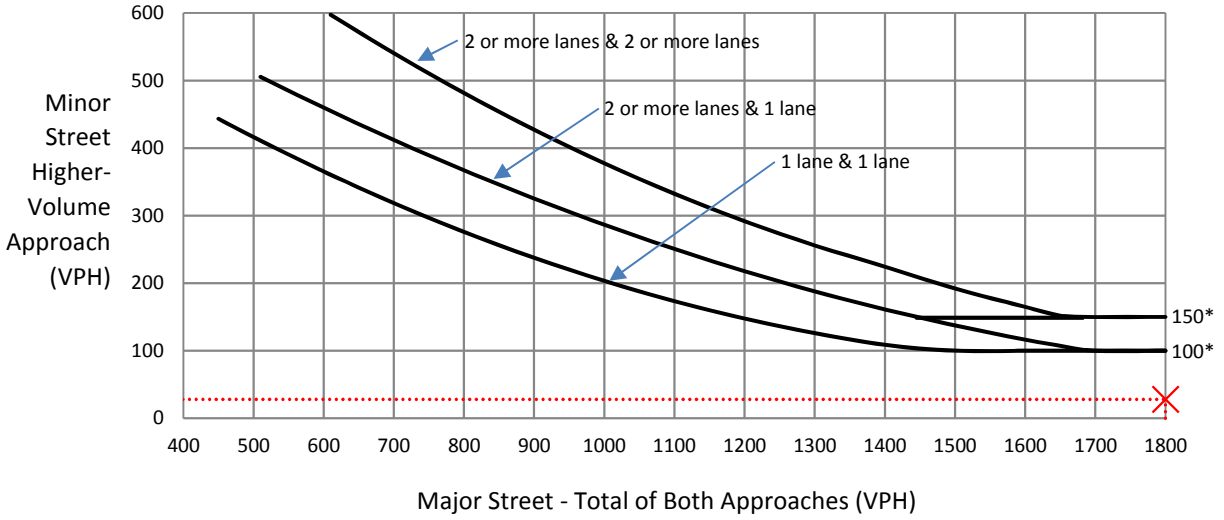
*Note: 150 vph applies as the lower threshold volume for a minor street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor street approach with one lane.

Figure E-6

South Eleanor Street (NS) / East Mission Boulevard (EW) - #4
Opening Year (2022) With Project
Morning Peak Hour

Major Street:	East Mission Boulevard	Volume:	1912
Minor Street:	South Eleanor Street	Volume:	28

Warrant 3, Peak Hour Vehicular Volume (100% Factor)



Traffic Signal Warrant Is NOT Satisfied

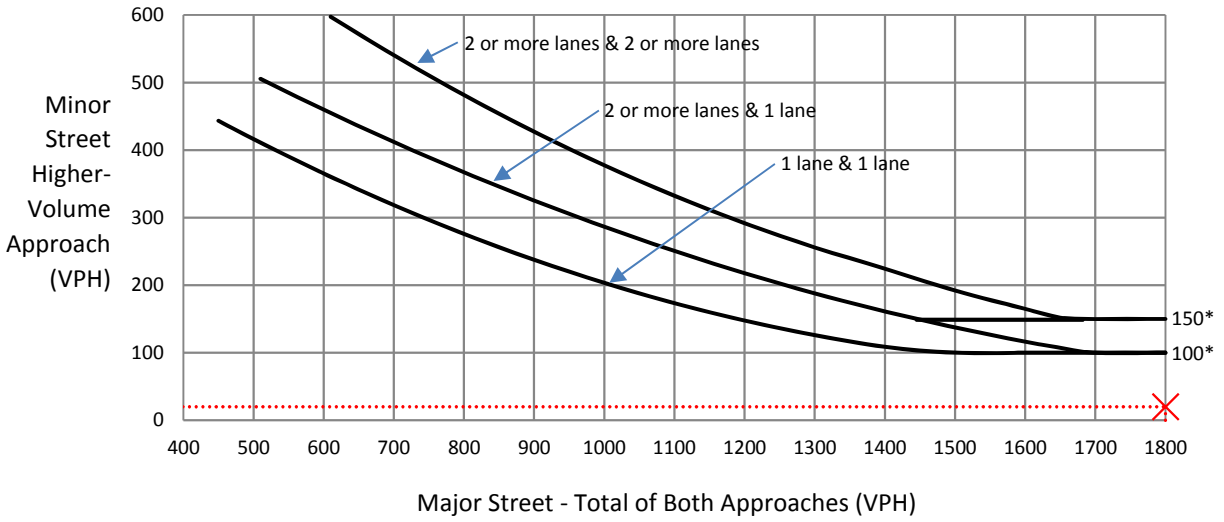
*Note: 150 vph applies as the lower threshold volume for a minor street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor street approach with one lane.

Figure E-7

South Linden Street (NS) / East Mission Boulevard (EW) - #2
Opening Year (2022) With Project
Evening Peak Hour

Major Street:	East Mission Boulevard	Volume:	1936
Minor Street:	South Linden Street	Volume:	20

Warrant 3, Peak Hour Vehicular Volume (100% Factor)



Traffic Signal Warrant Is NOT Satisfied

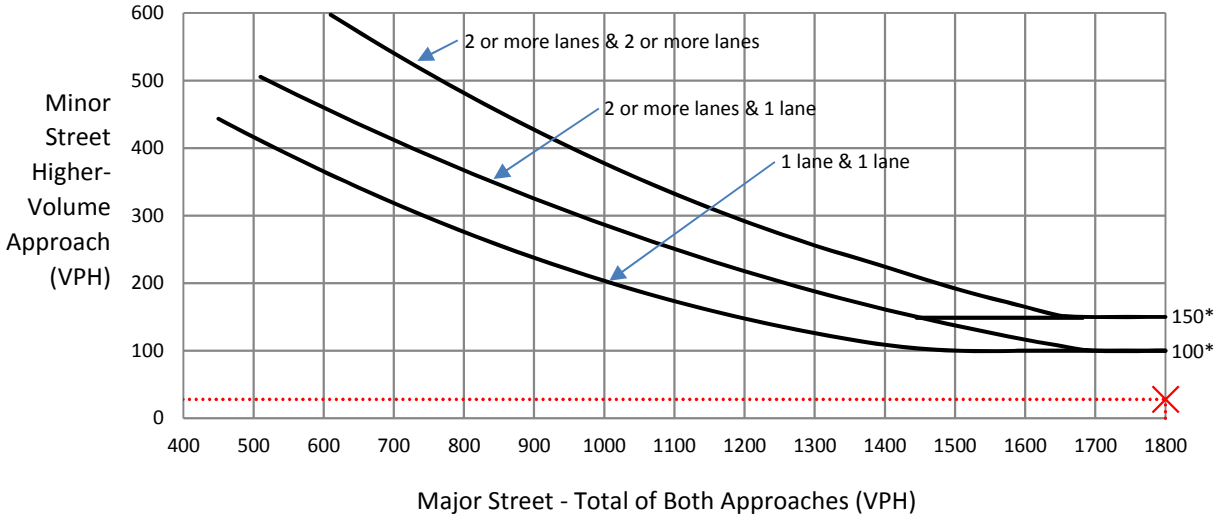
*Note: 150 vph applies as the lower threshold volume for a minor street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor street approach with one lane.

Figure E-8

South Eleanor Street (NS) / East Mission Boulevard (EW) - #4
Opening Year (2022) With Project
Evening Peak Hour

Major Street:	East Mission Boulevard	Volume:	1912
Minor Street:	South Eleanor Street	Volume:	28

Warrant 3, Peak Hour Vehicular Volume (100% Factor)



Traffic Signal Warrant Is NOT Satisfied

*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.

APPENDIX F

INFORMATION BRIEF:
TREATMENTS FOR UNCONTROLLED MARKED CROSSWALKS

Informational Brief: Treatments for Uncontrolled Marked Crosswalks

Federal Highway Administration • Office of Operations • December 2017

The FHWA provides this information to practitioners about acceptable methods of enhancing pedestrian safety that can be implemented at uncontrolled marked crosswalks. The FHWA continues to be committed to helping practitioners reduce the number of pedestrian injuries and fatalities that occur at uncontrolled marked crosswalks each year.

There are numerous treatments that comply with the current edition of the *Manual on Uniform Traffic Control Devices for Streets and Highways* (MUTCD, see https://mutcd.fhwa.dot.gov/) that can be employed either individually or in varying combinations to enhance safety at uncontrolled marked crosswalks. These treatments range from various types of crosswalk markings to enhancing the edge of a standard Pedestrian Crossing warning sign with light-emitting diodes that can be activated by pedestrians. In addition to traffic control devices, roadway treatments, such as lighting or roadway narrowing, can enhance the safety of pedestrians using the crosswalk. The most appropriate treatment, or combination of treatments, will depend on the specific conditions of each site. Conducting a Road Safety Audit (see https://safety.fhwa.dot.gov/rsa/) is one way to identify potential treatments based on the roadway and user characteristics. Additional information to help in the selection of treatments for varying site conditions can be found in the following FHWA resources:

- **Pedestrian & Bicycle Safety Web site (http://safety.fhwa.dot.gov/ped_bike/)**
- **PEDSAFE Web site (http://www.pedbikesafe.org/PEDSAFE/)**
- **Safe Transportation for Every Pedestrian (STEP), an Every Day Counts initiative (https://www.fhwa.dot.gov/innovation/everydaycounts/edc_4/step.cfm)**

The following traffic control devices comply with the provisions of the 2009 Edition of the MUTCD and can be implemented for a particular crossing if their use would be appropriate based on the specific conditions at the site, such as roadway geometrics and traffic volumes and speeds:

Pedestrian-activated Flashing LEDs in the Border of a Warning Sign – Section 2A.07 describes the use of flashing white or yellow LEDs in the border of a pedestrian crossing warning sign. The flashing LEDs may be pedestrian activated to increase their effectiveness in making the crossing sign more conspicuous when a pedestrian desires to cross the roadway.

Enhanced Conspicuity of Pedestrian Crossing Signs – Section 2A.15 describes numerous methods that may be used to improve the conspicuity of regulatory or warning signs that are associated with pedestrian crossings.

Yield Here to (or Stop Here for) Pedestrians signs – Section 2B.11 describes pedestrian crossing signs that may be placed upstream from a crosswalk to inform drivers on multi-lane roadways that they are legally required to stop a specified distance in advance of the crosswalk if a pedestrian is crossing the roadway.

Overhead Pedestrian Crossing Signs – Section 2B.12 describes pedestrian crossing signs that may be mounted over the roadway to make it easier for drivers to notice that a crosswalk is present, especially from a greater distance than they would for post-mounted signs, and to inform them of their legal obligation to stop if a pedestrian is waiting to cross or in the process of crossing the roadway.

In-street Pedestrian Crossing Signs – Section 2B.12 describes pedestrian crossing signs that may be placed in the street to notify drivers that a crosswalk is present and to inform them of their legal obligation to stop if a pedestrian is waiting to cross or in the process of crossing the roadway.

High-visibility Crosswalk Markings – Section 3B.18 describes the various types of crosswalk markings that may be used, including those that include diagonal or longitudinal lines to increase the visibility of the crosswalk to approaching drivers.

Additional information on crosswalk marking patterns is available in a recent study, *Crosswalk Marking Field Visibility Study* (Report No. FHWA-HRT-10-068).

Midblock Pedestrian Signals – Sections 4C.05 and 4C.06 describe warrant criteria that can be used in a signal needs study of a marked crosswalk location to determine if the installation of a midblock pedestrian signal is justified to assist pedestrians or schoolchildren in safely crossing the major street.

Pedestrian Hybrid Beacons – Section 4F.01 describes warrant criteria that can be used to determine if the installation of a pedestrian hybrid beacon is justified to assist pedestrians in safely crossing the major street.

Pedestrian-activated Warning Beacons – Section 4L.03 describes the use of a flashing yellow warning beacon to supplement a pedestrian crossing warning sign. The warning beacon may be pedestrian activated to increase its effectiveness in making the crossing sign more conspicuous when a pedestrian desires to cross the roadway.

In-roadway Warning Lights – Section 4N.02 describes pedestrian-activated yellow lights that may be installed in the roadway surface at an uncontrolled marked crosswalk location to warn drivers that a pedestrian is waiting to cross or in the process of crossing the roadway.

The following roadway features, which are not considered to be traffic control devices, can be implemented for a particular crossing if their use would be appropriate based on the specific conditions at the site, such as roadway geometrics and traffic volumes and speeds:

Curb Extensions (bulb-outs, neckdowns) – This feature, which is particularly beneficial in urban settings where on-street parking (either parallel or diagonal) is present, shortens the crossing distance and allows the pedestrian waiting to cross to be more visible to the approaching driver. Where physical construction is not immediately feasible, neckdown of the street width at the crosswalk can be accomplished on an interim basis using markings and flexible delineator posts to achieve a traffic calming effect similar to that of a curb extension.

Pedestrian Refuge Islands (median islands) – This feature, which is particularly beneficial on wide multi-lane roadways, allows pedestrians to cross a two-way street in two stages by finding a gap in one direction, and then stopping on a median island of sufficient width to wait while searching for a gap in the other direction of traffic.

Raised Crosswalks – This feature improves pedestrian safety by forcing drivers to slow down when traversing the crosswalk location.

Crosswalk Lighting – This feature improves pedestrian safety by allowing the pedestrian waiting to cross or in the process of crossing to be more visible to the approaching driver during nighttime conditions.

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Riverside, CA 92505
951 710 3212

PALO ALTO
2100 Geng Road, Suite 210
Palo Alto, CA 94303
650 460 3400

SGVCOG VMT Evaluation Tool Report

Project Details

Timestamp of Analysis: October 01, 2020, 06:04:47 PM

Project Name: 675 E. Mission Blvd.

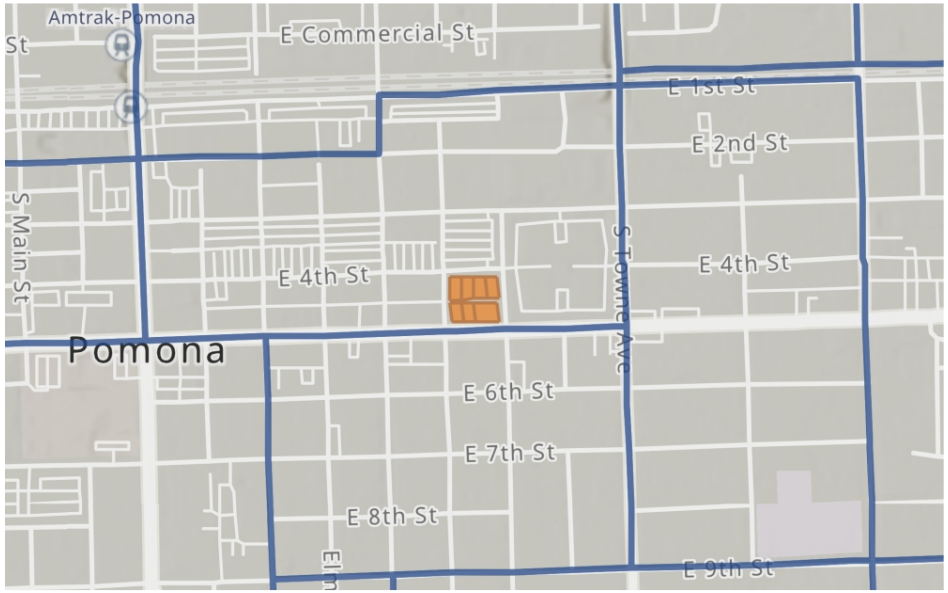
Project Description: 36 condominium units including 7 moderate income units

Project Location

Jurisdiction: Pomona

APN	TAZ	APN	TAZ	APN	TAZ
8335-014-911	22434300	8335-014-912	22434300	8335-014-913	22434300
8335-014-914	22434300	8335-014-917	22434300		

Inside a TPA? Yes (Pass)



Analysis Details

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

Analysis Methodology: TAZ

Baseline Year: 2020

Project Land Use

Residential:

Single Family DU:	
Multifamily DU:	36
Total DUs:	36

Non-Residential:

Office KSF:

Local Serving Retail KSF:

Industrial KSF:

Residential Affordability (percent of all units):

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

Parking:

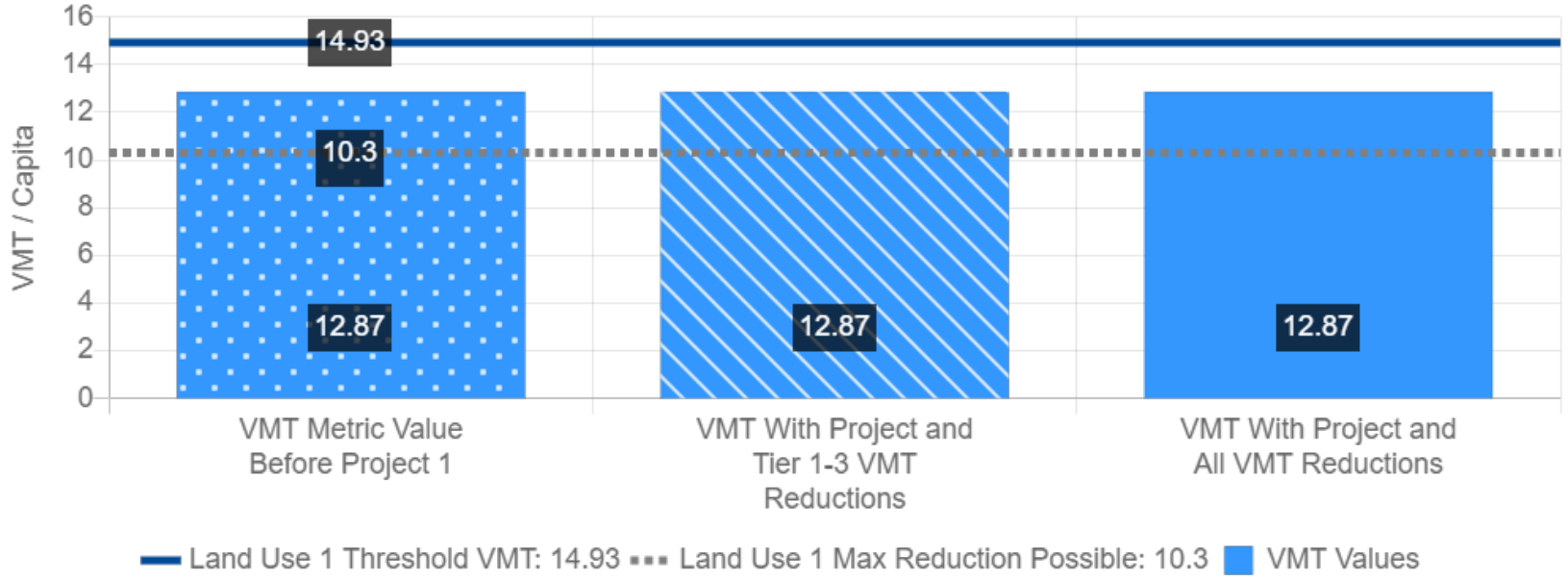
Motor Vehicle Parking:

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:	17.56
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	12.87	12.87	12.87
Low VMT Screening Analysis	Yes (Pass)	Yes (Pass)	Yes (Pass)



Appendix C

Noise Measurement and Analyses Data

Measurement 1		Measurement 2	
Location:	Center of frontage along E. Mission Boulevard	**Location:**	Northeast corner of project site, on S. Eleanor Street
Start:	12:34 PM	**Start:**	12:14 PM
Stop:	12:49 PM	**Stop:**	12:29 PM
Weather:	Daytime 1 - Overcast >80%	**Weather:**	Daytime 1 - Overcast >80%
Temp:	64 F	**Temp:**	64 F
Wind:	2 mph	**Wind:**	2 mph
Primary Noise Source:	Mission Boulevard	**Primary Noise Source:**	Mission Boulevard
Distance:	40 ft from centerline	**Distance:**	Approx. 240 ft from centerline
Secondary Noise Source:		**Secondary Noise Source:**	Eleanor Street & 4th Street
Notes:		**Notes:**	Man walking w/ radio (2 min)
Leq:	67.6	**Leq:**	53.8
Lmin:	46.6	**Lmin:**	42.4
Lmax:	79.4	**Lmax:**	68.3
Peak:	96.1	**Peak:**	87.2
L(10):	71.3	**L(10):**	56.3
L(50):	65.3	**L(50):**	52.2
L(90):	55.2	**L(90):**	47.0
L(95):	51.8	**L(95):**	45.6
Cars:	284	**Cars:**	Eleanor 9; 4th 6
Light Trucks:	8	**Light Trucks:**	0
Heavy Trucks:	7	**Heavy Trucks:**	0
Response:	Slow	**Response:**	Slow
Weighting:	A	**Weighting:**	A
Calibrated Start:	94.0	**Calibrated Start:**	94.0
Calibrated Stop:	94.3	**Calibrated Stop:**	94.0

Measurement 3

Location:	Northwest corner of project site, on E. 4th Street
Start:	11:54 AM
Stop:	12:09 PM
Weather:	Daytime 1 - Overcast >80%
Temp:	64 F
Wind:	2 mph
Primary Noise Source:	Mission Boulevard
Distance:	Approx. 285 ft from centerline
Secondary Noise Source:	Linden Street & 4th Steet
Notes:	
Leq:	52.8
Lmin:	43.7
Lmax:	62.9
Peak:	97.1
L(10):	55.8
L(50):	51.3
L(90):	46.5
L(95):	45.5
Cars:	Linden 8; 4th 8
Light Trucks:	0
Heavy Trucks:	0
Response:	Slow
Weighting:	A
Calibrated Start:	94.0
Calibrated Stop:	94.3

675 E. Mission, Pomona
CalEEMod, v. 2016.3.2

Default Equipment List

Phase	Equipment Type	Amount
Site Preparation	Grader	1
	Rubber Tired Dozer	1
	Tractor/Loader/Backhoe	1
Grading	Grader	1
	Rubber Tired Dozer	1
	Tractor/Loader/Backhoe	1
Building Construction	Crane	1
	Forklift	1
	Generator Set	1
	Tractor/Loader/Backhoe	1
	Welders	3
Paving	Cement and Mortar Mixer	1
	Paver	1
	Paving Equipment	1
	Roller	1
	Tractor/Loader/Backhoe	1
Architectural Coating	Air Compressor	1

Roadway Construction Noise Model (RCNM),Version 1.1

Report date: 5/16/2019
Case Description: Site Preparation

---- Receptor #1 ----

Description	Land Use	Baselines (dBA) Daytime	Evening	Night
Residential South	Residential	67.6	67.6	67.6

Description	Impact Device	Usage(%)	Equipment Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Grader	No	40	85		230	0
Dozer	No	40		81.7	230	0
Tractor	No	40	84		230	0

		Results Calculated (dBA)		Noise Limits (dBA) Day		Evening		Night		Noise Limit Exceedance (dBA) Day		Evening		Night	
Equipment		*Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq
Grader		71.7	67.8	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Dozer		68.4	64.4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Tractor		70.7	66.8	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Total	71.7	71.3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

---- Receptor #2 ----

Description	Land Use	Baselines (dBA) Daytime	Evening	Night
Residnetial North	Residential	53.8	53.8	53.8

Description	Impact Device	Usage(%)	Equipment Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Grader	No	40	85		400	0
Dozer	No	40		81.7	400	0
Tractor	No	40	84		400	0

		Results Calculated (dBA)		Noise Limits (dBA) Day		Evening		Night		Noise Limit Exceedance (dBA) Day		Evening		Night	
Equipment		*Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq
Grader		66.9	63	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Dozer		63.6	59.6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Tractor		65.9	62	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Total	66.9	66.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

---- Receptor #3 ----

Description	Land Use	Baselines (dBA) Daytime	Evening	Night
Residential East	Residential	52.8	52.8	52.8

Description	Impact Device	Usage(%)	Equipment Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Grader	No	40	85		200	0
Dozer	No	40		81.7	200	0
Tractor	No	40	84		200	0

		Results Calculated (dBA)		Noise Limits (dBA) Day		Evening		Night		Noise Limit Exceedance (dBA) Day		Evening		Night	
Equipment		*Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq
Grader		73	69	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Dozer		69.6	65.6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Tractor		72	68	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Total	73	72.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

Roadway Construction Noise Model (RCNM),Version 1.1

Report date: 5/16/2019
Case Description: Grading

---- Receptor #1 ----

Description	Land Use	Baselines (dBA) Daytime	Evening	Night
Residential South	Residential	67.6	67.6	67.6

Description	Impact Device	Usage(%)	Equipment Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Grader	No	40	85		230	0
Dozer	No	40		81.7	230	0
Tractor	No	40	84		230	0

Results

	Calculated (dBA)		Noise Limits (dBA)						Noise Limit Exceedance (dBA)					
			Day		Evening		Night		Day		Evening		Night	
Equipment	*Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq
Grader	71.7	67.8	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Dozer	68.4	64.4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Tractor	70.7	66.8	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total	71.7	71.3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

---- Receptor #2 ----

Description	Land Use	Baselines (dBA) Daytime	Evening	Night
Residnetial North	Residential	53.8	53.8	53.8

Description	Impact Device	Usage(%)	Equipment Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Grader	No	40	85		400	0
Dozer	No	40		81.7	400	0
Tractor	No	40	84		400	0

Results

	Calculated (dBA)		Noise Limits (dBA)						Noise Limit Exceedance (dBA)					
			Day		Evening		Night		Day		Evening		Night	
Equipment	*Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq
Grader	66.9	63	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Dozer	63.6	59.6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Tractor	65.9	62	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total	66.9	66.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

---- Receptor #3 ----

Description	Land Use	Baselines (dBA) Daytime	Evening	Night
Residential East	Residential	52.8	52.8	52.8

Description	Impact Device	Usage(%)	Equipment Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Grader	No	40	85		200	0
Dozer	No	40		81.7	200	0
Tractor	No	40	84		200	0

Results

	Calculated (dBA)		Noise Limits (dBA)						Noise Limit Exceedance (dBA)					
			Day		Evening		Night		Day		Evening		Night	
Equipment	*Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq
Grader	73	69	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Dozer	69.6	65.6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Tractor	72	68	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total	73	72.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

Roadway Construction Noise Model (RCNM),Version 1.1

Report date: 5/16/2019
Case Description: Building Construction

---- Receptor #1 ----

Description	Land Use	Baselines (dBA) Daytime	Evening	Night
Residential South	Residential	67.6	67.6	67.6

Description	Impact Device	Usage(%)	Equipment Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Crane	No	16		80.6	230	0
Man Lift	No	20		74.7	230	0
Tractor	No	40	84		230	0
Generator	No	50		80.6	230	0
Welder / Torch	No	40		74	230	0
Welder / Torch	No	40		74	230	0
Welder / Torch	No	40		74	230	0

Results

Equipment	Calculated (dBA) *Lmax	Leq	Noise Limits (dBA) Day Lmax	Day Leq	Evening Lmax	Evening Leq	Night Lmax	Night Leq	Noise Limit Exceedance (dBA) Day Lmax	Day Leq	Evening Lmax	Evening Leq	Night Lmax	Night Leq
Crane	67.3	59.3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Man Lift	61.4	54.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Tractor	70.7	66.8	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Generator	67.4	64.4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Welder / Torch	60.7	56.8	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Welder / Torch	60.7	56.8	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Welder / Torch	60.7	56.8	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total	70.7	70	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

---- Receptor #2 ----

Description	Land Use	Baselines (dBA) Daytime	Evening	Night
Residnetial North	Residential	53.8	53.8	53.8

Description	Impact Device	Usage(%)	Equipment Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Crane	No	16		80.6	400	0
Man Lift	No	20		74.7	400	0
Tractor	No	40	84		400	0
Generator	No	50		80.6	400	0
Welder / Torch	No	40		74	400	0
Welder / Torch	No	40		74	400	0
Welder / Torch	No	40		74	400	0

Results

Equipment	Calculated (dBA) *Lmax	Leq	Noise Limits (dBA) Day Lmax	Day Leq	Evening Lmax	Evening Leq	Night Lmax	Night Leq	Noise Limit Exceedance (dBA) Day Lmax	Day Leq	Evening Lmax	Evening Leq	Night Lmax	Night Leq
Crane	62.5	54.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Man Lift	56.6	49.6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Tractor	65.9	62	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Generator	62.6	59.6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Welder / Torch	55.9	52	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Welder / Torch	55.9	52	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Welder / Torch	55.9	52	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total	65.9	65.2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

---- Receptor #3 ----

Description	Land Use	Baselines (dBA) Daytime	Evening	Night
Residential East	Residential	52.8	52.8	52.8

Description	Impact Device	Usage(%)	Equipment Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Crane	No	16		80.6	200	0
Man Lift	No	20		74.7	200	0
Tractor	No	40	84		200	0
Generator	No	50		80.6	200	0
Welder / Torch	No	40		74	200	0
Welder / Torch	No	40		74	200	0
Welder / Torch	No	40		74	200	0

		Results													
		Calculated (dBA)		Noise Limits (dBA)						Noise Limit Exceedance (dBA)					
				Day		Evening		Night		Day		Evening		Night	
Equipment		*Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq
Crane		68.5	60.6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Man Lift		62.7	55.7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Tractor		72	68	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Generator		68.6	65.6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Welder / Torch		62	58	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Welder / Torch		62	58	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Welder / Torch		62	58	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Total	72	71.2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

Roadway Construction Noise Model (RCNM),Version 1.1

Report date: 5/16/2019
Case Description: Paving

---- Receptor #1 ----

Description	Land Use	Baselines (dBA) Daytime	Evening	Night
Residential South	Residential	67.6	67.6	67.6

Description	Impact Device	Usage(%)	Equipment Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Concrete Mixer Truck	No	40		78.8	230	0
Paver	No	50		77.2	230	0
Roller	No	20		80	230	0
Tractor	No	40	84		230	0
Paver	No	50		77.2	230	0

Results

	Calculated (dBA)		Noise Limits (dBA)						Noise Limit Exceedance (dBA)					
			Day		Evening		Night		Day		Evening		Night	
Equipment	*Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq
Concrete Mixer Truck	65.5	61.6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Paver	64	61	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Roller	66.7	59.8	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Tractor	70.7	66.8	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Paver	64	61	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total	70.7	69.8	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

---- Receptor #2 ----

Description	Land Use	Baselines (dBA) Daytime	Evening	Night
Residnetial North	Residential	53.8	53.8	53.8

Description	Impact Device	Usage(%)	Equipment Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Concrete Mixer Truck	No	40		78.8	400	0
Paver	No	50		77.2	400	0
Roller	No	20		80	400	0
Tractor	No	40	84		400	0
Paver	No	50		77.2	400	0

Results

	Calculated (dBA)		Noise Limits (dBA)						Noise Limit Exceedance (dBA)					
			Day		Evening		Night		Day		Evening		Night	
Equipment	*Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq
Concrete Mixer Truck	60.7	56.8	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Paver	59.2	56.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Roller	61.9	54.9	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Tractor	65.9	62	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Paver	59.2	56.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total	65.9	65	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

---- Receptor #3 ----

Description	Land Use	Baselines (dBA) Daytime	Evening	Night
Residential East	Residential	52.8	52.8	52.8

Description	Impact Device	Usage(%)	Equipment Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Concrete Mixer Truck	No	40		78.8	200	0
Paver	No	50		77.2	200	0
Roller	No	20		80	200	0
Tractor	No	40	84		200	0
Paver	No	50		77.2	200	0

Results

	Calculated (dBA)		Noise Limits (dBA)						Noise Limit Exceedance (dBA)					
			Day		Evening		Night		Day		Evening		Night	
Equipment	*Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq
Concrete Mixer Truck	66.8	62.8	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Paver	65.2	62.2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Roller	68	61	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Tractor	72	68	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Paver	65.2	62.2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Total	72	71	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

Roadway Construction Noise Model (RCNM),Version 1.1

Report date: 5/20/2019
Case Description: Arch Coating

---- Receptor #1 ----

Description	Land Use	Baselines (dBA) Daytime	Evening	Night
Residential South	Residential	67.6	67.6	67.6

Description	Impact Device	Usage(%)	Equipment Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Compressor (air)	No	40		77.7	230	0

		Results Calculated (dBA)		Noise Limits (dBA) Day		Evening		Night		Noise Limit Exceedance (dBA) Day		Evening		Night	
Equipment		*Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq
Compressor (air)		64.4	60.4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Total	64.4	60.4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

---- Receptor #2 ----

Description	Land Use	Baselines (dBA) Daytime	Evening	Night
Residnetial North	Residential	53.8	53.8	53.8

Description	Impact Device	Usage(%)	Equipment Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Compressor (air)	No	40		77.7	400	0

		Results Calculated (dBA)		Noise Limits (dBA) Day		Evening		Night		Noise Limit Exceedance (dBA) Day		Evening		Night	
Equipment		*Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq
Compressor (air)		59.6	55.6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Total	59.6	55.6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

---- Receptor #3 ----

Description	Land Use	Baselines (dBA) Daytime	Evening	Night
Residential East	Residential	52.8	52.8	52.8

Description	Impact Device	Usage(%)	Equipment Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Compressor (air)	No	40		77.7	200	0

		Results Calculated (dBA)		Noise Limits (dBA) Day		Evening		Night		Noise Limit Exceedance (dBA) Day		Evening		Night	
Equipment		*Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq
Compressor (air)		65.6	61.6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Total	65.6	61.6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

Appendix D

Air Quality and Greenhouse Gas Emissions Analysis Data

675 E Mission Pomona CE

South Coast AQMD Air District, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Condo/Townhouse	36.00	Dwelling Unit	1.46	63,598.00	103

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	31
Climate Zone	9			**Operational Year**	2022
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	702.44	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Per project site plans

Construction Phase - Estimated based on client info

Grading - Per project site plans

Woodstoves - No fireplaces or woodstoves for proposed units

Construction Off-road Equipment Mitigation -

Mobile Land Use Mitigation -

Area Mitigation -

Water Mitigation -

Vehicle Trips - Per project TIA by Gandini Group, Inc May 2019

Table Name	Column Name	Default Value	New Value
tblAreaMitigation	UseLowVOCPaintParkingCheck	False	True
tblFireplaces	FireplaceDayYear	25.00	0.00
tblFireplaces	FireplaceHourDay	3.00	0.00
tblFireplaces	FireplaceWoodMass	1,019.20	0.00
tblFireplaces	NumberGas	30.60	0.00
tblFireplaces	NumberNoFireplace	3.60	0.00
tblFireplaces	NumberWood	1.80	0.00
tblGrading	AcresOfGrading	1.50	1.46
tblGrading	AcresOfGrading	1.00	1.46
tblLandUse	LandUseSquareFeet	36,000.00	63,598.00
tblLandUse	LotAcreage	2.25	1.46
tblVehicleTrips	ST_TR	5.67	7.32
tblVehicleTrips	SU_TR	4.84	7.32
tblVehicleTrips	WD_TR	5.81	7.32
tblWoodstoves	NumberCatalytic	1.80	0.00
tblWoodstoves	NumberNoncatalytic	1.80	0.00
tblWoodstoves	WoodstoveDayYear	25.00	0.00
tblWoodstoves	WoodstoveWoodMass	999.60	0.00

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2020	0.1580	1.1923	1.0117	1.8700e-003	0.0881	0.0609	0.1490	0.0395	0.0584	0.0978	0.0000	157.8465	157.8465	0.0281	0.0000	158.5492
2021	0.4427	1.0642	1.0648	1.9600e-003	0.0234	0.0523	0.0757	6.2500e-003	0.0504	0.0566	0.0000	164.4221	164.4221	0.0267	0.0000	165.0900
Maximum	**0.4427**	**1.1923**	**1.0648**	**1.9600e-003**	**0.0881**	**0.0609**	**0.1490**	**0.0395**	**0.0584**	**0.0978**	**0.0000**	**164.4221**	**164.4221**	**0.0281**	**0.0000**	**165.0900**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2020	0.1580	1.1923	1.0117	1.8700e-003	0.0513	0.0609	0.1121	0.0209	0.0584	0.0792	0.0000	157.8464	157.8464	0.0281	0.0000	158.5491
2021	0.4427	1.0642	1.0648	1.9600e-003	0.0234	0.0523	0.0757	6.2500e-003	0.0504	0.0566	0.0000	164.4219	164.4219	0.0267	0.0000	165.0899
Maximum	**0.4427**	**1.1923**	**1.0648**	**1.9600e-003**	**0.0513**	**0.0609**	**0.1121**	**0.0209**	**0.0584**	**0.0792**	**0.0000**	**164.4219**	**164.4219**	**0.0281**	**0.0000**	**165.0899**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**33.05**	**0.00**	**16.40**	**40.70**	**0.00**	**12.05**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	6-1-2020	8-31-2020	0.5530	0.5530
2	9-1-2020	11-30-2020	0.5675	0.5675
3	12-1-2020	2-28-2021	0.5313	0.5313
4	3-1-2021	5-31-2021	0.5266	0.5266
5	6-1-2021	8-31-2021	0.6037	0.6037
		Highest	0.6037	0.6037

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.2609	4.2900e-003	0.3717	2.0000e-005		2.0500e-003	2.0500e-003		2.0500e-003	2.0500e-003	0.0000	0.6064	0.6064	5.9000e-004	0.0000	0.6211
Energy	3.3300e-003	0.0285	0.0121	1.8000e-004		2.3000e-003	2.3000e-003		2.3000e-003	2.3000e-003	0.0000	90.8078	90.8078	3.0200e-003	1.1000e-003	91.2107
Mobile	0.0777	0.4435	1.0592	4.0800e-003	0.3422	3.2300e-003	0.3454	0.0917	3.0100e-003	0.0947	0.0000	376.7052	376.7052	0.0179	0.0000	377.1526
Waste						0.0000	0.0000		0.0000	0.0000	3.3615	0.0000	3.3615	0.1987	0.0000	8.3281
Water						0.0000	0.0000		0.0000	0.0000	0.7441	14.9656	15.7097	0.0771	1.9300e-003	18.2118
Total	**0.3420**	**0.4763**	**1.4430**	**4.2800e-003**	**0.3422**	**7.5800e-003**	**0.3497**	**0.0917**	**7.3600e-003**	**0.0991**	**4.1057**	**483.0851**	**487.1908**	**0.2972**	**3.0300e-003**	**495.5243**

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.2609	4.2900e-003	0.3717	2.0000e-005		2.0500e-003	2.0500e-003		2.0500e-003	2.0500e-003	0.0000	0.6064	0.6064	5.9000e-004	0.0000	0.6211
Energy	3.3300e-003	0.0285	0.0121	1.8000e-004		2.3000e-003	2.3000e-003		2.3000e-003	2.3000e-003	0.0000	90.8078	90.8078	3.0200e-003	1.1000e-003	91.2107
Mobile	0.0723	0.4035	0.9217	3.4700e-003	0.2883	2.7600e-003	0.2910	0.0773	2.5800e-003	0.0798	0.0000	320.9602	320.9602	0.0156	0.0000	321.3511
Waste						0.0000	0.0000		0.0000	0.0000	3.3615	0.0000	3.3615	0.1987	0.0000	8.3281
Water						0.0000	0.0000		0.0000	0.0000	0.7441	14.9656	15.7097	0.0771	1.9300e-003	18.2118
Total	**0.3365**	**0.4363**	**1.3055**	**3.6700e-003**	**0.2883**	**7.1100e-003**	**0.2954**	**0.0773**	**6.9300e-003**	**0.0842**	**4.1057**	**427.3401**	**431.4457**	**0.2950**	**3.0300e-003**	**439.7227**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**1.59**	**8.40**	**9.53**	**14.25**	**15.75**	**6.20**	**15.54**	**15.75**	**5.84**	**15.01**	**0.00**	**11.54**	**11.44**	**0.76**	**0.00**	**11.26**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	6/1/2020	6/12/2020	5	2	
2	Grading	Grading	6/15/2020	7/3/2020	5	4	
3	Building Construction	Building Construction	7/6/2020	7/16/2021	5	200	
4	Paving	Paving	7/19/2021	8/6/2021	5	10	
5	Architectural Coating	Architectural Coating	7/26/2021	8/13/2021	5	10	

Acres of Grading (Site Preparation Phase): 1.46

Acres of Grading (Grading Phase): 1.46

Acres of Paving: 0

Residential Indoor: 128,786; Residential Outdoor: 42,929; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Graders	1	8.00	187	0.41
Site Preparation	Rubber Tired Dozers	1	7.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Grading	Graders	1	6.00	187	0.41
Grading	Rubber Tired Dozers	1	6.00	247	0.40
Grading	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Building Construction	Cranes	1	6.00	231	0.29
Building Construction	Forklifts	1	6.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	1	6.00	97	0.37
Building Construction	Welders	3	8.00	46	0.45
Paving	Cement and Mortar Mixers	1	6.00	9	0.56
Paving	Pavers	1	6.00	130	0.42
Paving	Paving Equipment	1	8.00	132	0.36
Paving	Rollers	1	7.00	80	0.38
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	3	8.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	3	8.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	7	26.00	4.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	5	13.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	5.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

3.2 Site Preparation - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0302	0.0000	0.0302	0.0149	0.0000	0.0149	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	8.1500e-003	0.0917	0.0386	9.0000e-005		4.1000e-003	4.1000e-003		3.7800e-003	3.7800e-003	0.0000	7.5633	7.5633	2.4500e-003	0.0000	7.6244
Total	**8.1500e-003**	**0.0917**	**0.0386**	**9.0000e-005**	**0.0302**	**4.1000e-003**	**0.0343**	**0.0149**	**3.7800e-003**	**0.0187**	**0.0000**	**7.5633**	**7.5633**	**2.4500e-003**	**0.0000**	**7.6244**

3.2 Site Preparation - 2020

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.8000e-004	1.4000e-004	1.5100e-003	0.0000	4.4000e-004	0.0000	4.4000e-004	1.2000e-004	0.0000	1.2000e-004	0.0000	0.3951	0.3951	1.0000e-005	0.0000	0.3954
Total	**1.8000e-004**	**1.4000e-004**	**1.5100e-003**	**0.0000**	**4.4000e-004**	**0.0000**	**4.4000e-004**	**1.2000e-004**	**0.0000**	**1.2000e-004**	**0.0000**	**0.3951**	**0.3951**	**1.0000e-005**	**0.0000**	**0.3954**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0136	0.0000	0.0136	6.7100e-003	0.0000	6.7100e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	8.1500e-003	0.0917	0.0386	9.0000e-005		4.1000e-003	4.1000e-003		3.7800e-003	3.7800e-003	0.0000	7.5632	7.5632	2.4500e-003	0.0000	7.6244
Total	**8.1500e-003**	**0.0917**	**0.0386**	**9.0000e-005**	**0.0136**	**4.1000e-003**	**0.0177**	**6.7100e-003**	**3.7800e-003**	**0.0105**	**0.0000**	**7.5632**	**7.5632**	**2.4500e-003**	**0.0000**	**7.6244**

3.2 Site Preparation - 2020

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.8000e-004	1.4000e-004	1.5100e-003	0.0000	4.4000e-004	0.0000	4.4000e-004	1.2000e-004	0.0000	1.2000e-004	0.0000	0.3951	0.3951	1.0000e-005	0.0000	0.3954
Total	**1.8000e-004**	**1.4000e-004**	**1.5100e-003**	**0.0000**	**4.4000e-004**	**0.0000**	**4.4000e-004**	**1.2000e-004**	**0.0000**	**1.2000e-004**	**0.0000**	**0.3951**	**0.3951**	**1.0000e-005**	**0.0000**	**0.3954**

3.3 Grading - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0368	0.0000	0.0368	0.0189	0.0000	0.0189	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0101	0.1131	0.0484	1.1000e-004		5.1300e-003	5.1300e-003		4.7200e-003	4.7200e-003	0.0000	9.2922	9.2922	3.0100e-003	0.0000	9.3673
Total	**0.0101**	**0.1131**	**0.0484**	**1.1000e-004**	**0.0368**	**5.1300e-003**	**0.0419**	**0.0189**	**4.7200e-003**	**0.0237**	**0.0000**	**9.2922**	**9.2922**	**3.0100e-003**	**0.0000**	**9.3673**

3.3 Grading - 2020

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.7000e-004	2.1000e-004	2.2700e-003	1.0000e-005	6.6000e-004	1.0000e-005	6.6000e-004	1.7000e-004	0.0000	1.8000e-004	0.0000	0.5926	0.5926	2.0000e-005	0.0000	0.5930
Total	**2.7000e-004**	**2.1000e-004**	**2.2700e-003**	**1.0000e-005**	**6.6000e-004**	**1.0000e-005**	**6.6000e-004**	**1.7000e-004**	**0.0000**	**1.8000e-004**	**0.0000**	**0.5926**	**0.5926**	**2.0000e-005**	**0.0000**	**0.5930**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0166	0.0000	0.0166	8.5200e-003	0.0000	8.5200e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0101	0.1131	0.0484	1.1000e-004		5.1300e-003	5.1300e-003		4.7200e-003	4.7200e-003	0.0000	9.2922	9.2922	3.0100e-003	0.0000	9.3673
Total	**0.0101**	**0.1131**	**0.0484**	**1.1000e-004**	**0.0166**	**5.1300e-003**	**0.0217**	**8.5200e-003**	**4.7200e-003**	**0.0132**	**0.0000**	**9.2922**	**9.2922**	**3.0100e-003**	**0.0000**	**9.3673**

3.3 Grading - 2020

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.7000e-004	2.1000e-004	2.2700e-003	1.0000e-005	6.6000e-004	1.0000e-005	6.6000e-004	1.7000e-004	0.0000	1.8000e-004	0.0000	0.5926	0.5926	2.0000e-005	0.0000	0.5930
Total	**2.7000e-004**	**2.1000e-004**	**2.2700e-003**	**1.0000e-005**	**6.6000e-004**	**1.0000e-005**	**6.6000e-004**	**1.7000e-004**	**0.0000**	**1.8000e-004**	**0.0000**	**0.5926**	**0.5926**	**2.0000e-005**	**0.0000**	**0.5930**

3.4 Building Construction - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1310	0.9538	0.8506	1.4200e-003		0.0513	0.0513		0.0496	0.0496	0.0000	117.0947	117.0947	0.0217	0.0000	117.6381
Total	**0.1310**	**0.9538**	**0.8506**	**1.4200e-003**		**0.0513**	**0.0513**		**0.0496**	**0.0496**	**0.0000**	**117.0947**	**117.0947**	**0.0217**	**0.0000**	**117.6381**

3.4 Building Construction - 2020

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	8.6000e-004	0.0275	6.8200e-003	7.0000e-005	1.6300e-003	1.3000e-004	1.7600e-003	4.7000e-004	1.3000e-004	6.0000e-004	0.0000	6.3456	6.3456	4.2000e-004	0.0000	6.3560
Worker	7.4900e-003	5.7400e-003	0.0635	1.8000e-004	0.0184	1.4000e-004	0.0185	4.8900e-003	1.3000e-004	5.0200e-003	0.0000	16.5632	16.5632	4.8000e-004	0.0000	16.5750
Total	**8.3500e-003**	**0.0333**	**0.0703**	**2.5000e-004**	**0.0200**	**2.7000e-004**	**0.0203**	**5.3600e-003**	**2.6000e-004**	**5.6200e-003**	**0.0000**	**22.9087**	**22.9087**	**9.0000e-004**	**0.0000**	**22.9310**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1310	0.9538	0.8506	1.4200e-003		0.0513	0.0513		0.0496	0.0496	0.0000	117.0945	117.0945	0.0217	0.0000	117.6380
Total	**0.1310**	**0.9538**	**0.8506**	**1.4200e-003**		**0.0513**	**0.0513**		**0.0496**	**0.0496**	**0.0000**	**117.0945**	**117.0945**	**0.0217**	**0.0000**	**117.6380**

3.4 Building Construction - 2020

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	8.6000e-004	0.0275	6.8200e-003	7.0000e-005	1.6300e-003	1.3000e-004	1.7600e-003	4.7000e-004	1.3000e-004	6.0000e-004	0.0000	6.3456	6.3456	4.2000e-004	0.0000	6.3560
Worker	7.4900e-003	5.7400e-003	0.0635	1.8000e-004	0.0184	1.4000e-004	0.0185	4.8900e-003	1.3000e-004	5.0200e-003	0.0000	16.5632	16.5632	4.8000e-004	0.0000	16.5750
Total	**8.3500e-003**	**0.0333**	**0.0703**	**2.5000e-004**	**0.0200**	**2.7000e-004**	**0.0203**	**5.3600e-003**	**2.6000e-004**	**5.6200e-003**	**0.0000**	**22.9087**	**22.9087**	**9.0000e-004**	**0.0000**	**22.9310**

3.4 Building Construction - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1278	0.9613	0.9094	1.5500e-003		0.0483	0.0483		0.0466	0.0466	0.0000	127.9911	127.9911	0.0229	0.0000	128.5623
Total	**0.1278**	**0.9613**	**0.9094**	**1.5500e-003**		**0.0483**	**0.0483**		**0.0466**	**0.0466**	**0.0000**	**127.9911**	**127.9911**	**0.0229**	**0.0000**	**128.5623**

3.4 Building Construction - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	8.0000e-004	0.0273	6.7700e-003	7.0000e-005	1.7800e-003	5.0000e-005	1.8300e-003	5.1000e-004	5.0000e-005	5.7000e-004	0.0000	6.8849	6.8849	4.4000e-004	0.0000	6.8958
Worker	7.6400e-003	5.6500e-003	0.0639	1.9000e-004	0.0201	1.5000e-004	0.0203	5.3400e-003	1.4000e-004	5.4800e-003	0.0000	17.5173	17.5173	4.7000e-004	0.0000	17.5290
Total	**8.4400e-003**	**0.0329**	**0.0707**	**2.6000e-004**	**0.0219**	**2.0000e-004**	**0.0221**	**5.8500e-003**	**1.9000e-004**	**6.0500e-003**	**0.0000**	**24.4022**	**24.4022**	**9.1000e-004**	**0.0000**	**24.4248**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1278	0.9613	0.9094	1.5500e-003		0.0483	0.0483		0.0466	0.0466	0.0000	127.9909	127.9909	0.0229	0.0000	128.5622
Total	**0.1278**	**0.9613**	**0.9094**	**1.5500e-003**		**0.0483**	**0.0483**		**0.0466**	**0.0466**	**0.0000**	**127.9909**	**127.9909**	**0.0229**	**0.0000**	**128.5622**

3.4 Building Construction - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	8.0000e-004	0.0273	6.7700e-003	7.0000e-005	1.7800e-003	5.0000e-005	1.8300e-003	5.1000e-004	5.0000e-005	5.7000e-004	0.0000	6.8849	6.8849	4.4000e-004	0.0000	6.8958
Worker	7.6400e-003	5.6500e-003	0.0639	1.9000e-004	0.0201	1.5000e-004	0.0203	5.3400e-003	1.4000e-004	5.4800e-003	0.0000	17.5173	17.5173	4.7000e-004	0.0000	17.5290
Total	**8.4400e-003**	**0.0329**	**0.0707**	**2.6000e-004**	**0.0219**	**2.0000e-004**	**0.0221**	**5.8500e-003**	**1.9000e-004**	**6.0500e-003**	**0.0000**	**24.4022**	**24.4022**	**9.1000e-004**	**0.0000**	**24.4248**

3.5 Paving - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	5.8000e-003	0.0581	0.0664	1.0000e-004		3.1100e-003	3.1100e-003		2.8700e-003	2.8700e-003	0.0000	8.8237	8.8237	2.8000e-003	0.0000	8.8937
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**5.8000e-003**	**0.0581**	**0.0664**	**1.0000e-004**		**3.1100e-003**	**3.1100e-003**		**2.8700e-003**	**2.8700e-003**	**0.0000**	**8.8237**	**8.8237**	**2.8000e-003**	**0.0000**	**8.8937**

3.5 Paving - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.1000e-004	3.0000e-004	3.4000e-003	1.0000e-005	1.0700e-003	1.0000e-005	1.0800e-003	2.8000e-004	1.0000e-005	2.9000e-004	0.0000	0.9318	0.9318	2.0000e-005	0.0000	0.9324
Total	**4.1000e-004**	**3.0000e-004**	**3.4000e-003**	**1.0000e-005**	**1.0700e-003**	**1.0000e-005**	**1.0800e-003**	**2.8000e-004**	**1.0000e-005**	**2.9000e-004**	**0.0000**	**0.9318**	**0.9318**	**2.0000e-005**	**0.0000**	**0.9324**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	5.8000e-003	0.0581	0.0664	1.0000e-004		3.1100e-003	3.1100e-003		2.8700e-003	2.8700e-003	0.0000	8.8237	8.8237	2.8000e-003	0.0000	8.8937
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**5.8000e-003**	**0.0581**	**0.0664**	**1.0000e-004**		**3.1100e-003**	**3.1100e-003**		**2.8700e-003**	**2.8700e-003**	**0.0000**	**8.8237**	**8.8237**	**2.8000e-003**	**0.0000**	**8.8937**

3.5 Paving - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.1000e-004	3.0000e-004	3.4000e-003	1.0000e-005	1.0700e-003	1.0000e-005	1.0800e-003	2.8000e-004	1.0000e-005	2.9000e-004	0.0000	0.9318	0.9318	2.0000e-005	0.0000	0.9324
Total	**4.1000e-004**	**3.0000e-004**	**3.4000e-003**	**1.0000e-005**	**1.0700e-003**	**1.0000e-005**	**1.0800e-003**	**2.8000e-004**	**1.0000e-005**	**2.9000e-004**	**0.0000**	**0.9318**	**0.9318**	**2.0000e-005**	**0.0000**	**0.9324**

3.6 Architectural Coating - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.2985					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.6400e-003	0.0115	0.0136	2.0000e-005		7.1000e-004	7.1000e-004		7.1000e-004	7.1000e-004	0.0000	1.9149	1.9149	1.3000e-004	0.0000	1.9182
Total	**0.3001**	**0.0115**	**0.0136**	**2.0000e-005**		**7.1000e-004**	**7.1000e-004**		**7.1000e-004**	**7.1000e-004**	**0.0000**	**1.9149**	**1.9149**	**1.3000e-004**	**0.0000**	**1.9182**

3.6 Architectural Coating - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.6000e-004	1.2000e-004	1.3100e-003	0.0000	4.1000e-004	0.0000	4.1000e-004	1.1000e-004	0.0000	1.1000e-004	0.0000	0.3584	0.3584	1.0000e-005	0.0000	0.3586
Total	**1.6000e-004**	**1.2000e-004**	**1.3100e-003**	**0.0000**	**4.1000e-004**	**0.0000**	**4.1000e-004**	**1.1000e-004**	**0.0000**	**1.1000e-004**	**0.0000**	**0.3584**	**0.3584**	**1.0000e-005**	**0.0000**	**0.3586**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.2985					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.6400e-003	0.0115	0.0136	2.0000e-005		7.1000e-004	7.1000e-004		7.1000e-004	7.1000e-004	0.0000	1.9149	1.9149	1.3000e-004	0.0000	1.9182
Total	**0.3001**	**0.0115**	**0.0136**	**2.0000e-005**		**7.1000e-004**	**7.1000e-004**		**7.1000e-004**	**7.1000e-004**	**0.0000**	**1.9149**	**1.9149**	**1.3000e-004**	**0.0000**	**1.9182**

3.6 Architectural Coating - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.6000e-004	1.2000e-004	1.3100e-003	0.0000	4.1000e-004	0.0000	4.1000e-004	1.1000e-004	0.0000	1.1000e-004	0.0000	0.3584	0.3584	1.0000e-005	0.0000	0.3586
Total	**1.6000e-004**	**1.2000e-004**	**1.3100e-003**	**0.0000**	**4.1000e-004**	**0.0000**	**4.1000e-004**	**1.1000e-004**	**0.0000**	**1.1000e-004**	**0.0000**	**0.3584**	**0.3584**	**1.0000e-005**	**0.0000**	**0.3586**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

Increase Density

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.0723	0.4035	0.9217	3.4700e-003	0.2883	2.7600e-003	0.2910	0.0773	2.5800e-003	0.0798	0.0000	320.9602	320.9602	0.0156	0.0000	321.3511
Unmitigated	0.0777	0.4435	1.0592	4.0800e-003	0.3422	3.2300e-003	0.3454	0.0917	3.0100e-003	0.0947	0.0000	376.7052	376.7052	0.0179	0.0000	377.1526

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Condo/Townhouse	263.52	263.52	263.52	900,488	758,661
Total	263.52	263.52	263.52	900,488	758,661

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Condo/Townhouse	14.70	5.90	8.70	40.20	19.20	40.60	86	11	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Condo/Townhouse	0.549559	0.042893	0.201564	0.118533	0.015569	0.005846	0.021394	0.034255	0.002099	0.001828	0.004855	0.000709	0.000896

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	57.8100	57.8100	2.3900e-003	4.9000e-004	58.0168
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	57.8100	57.8100	2.3900e-003	4.9000e-004	58.0168
NaturalGas Mitigated	3.3300e-003	0.0285	0.0121	1.8000e-004		2.3000e-003	2.3000e-003		2.3000e-003	2.3000e-003	0.0000	32.9978	32.9978	6.3000e-004	6.0000e-004	33.1939
NaturalGas Unmitigated	3.3300e-003	0.0285	0.0121	1.8000e-004		2.3000e-003	2.3000e-003		2.3000e-003	2.3000e-003	0.0000	32.9978	32.9978	6.3000e-004	6.0000e-004	33.1939

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Condo/Townhouse	618356	3.3300e-003	0.0285	0.0121	1.8000e-004		2.3000e-003	2.3000e-003		2.3000e-003	2.3000e-003	0.0000	32.9978	32.9978	6.3000e-004	6.0000e-004	33.1939
Total		**3.3300e-003**	**0.0285**	**0.0121**	**1.8000e-004**		**2.3000e-003**	**2.3000e-003**		**2.3000e-003**	**2.3000e-003**	**0.0000**	**32.9978**	**32.9978**	**6.3000e-004**	**6.0000e-004**	**33.1939**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Condo/Townhouse	618356	3.3300e-003	0.0285	0.0121	1.8000e-004		2.3000e-003	2.3000e-003		2.3000e-003	2.3000e-003	0.0000	32.9978	32.9978	6.3000e-004	6.0000e-004	33.1939
Total		**3.3300e-003**	**0.0285**	**0.0121**	**1.8000e-004**		**2.3000e-003**	**2.3000e-003**		**2.3000e-003**	**2.3000e-003**	**0.0000**	**32.9978**	**32.9978**	**6.3000e-004**	**6.0000e-004**	**33.1939**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Condo/Townhouse	181438	57.8100	2.3900e-003	4.9000e-004	58.0168
Total		**57.8100**	**2.3900e-003**	**4.9000e-004**	**58.0168**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Condo/Townhouse	181438	57.8100	2.3900e-003	4.9000e-004	58.0168
Total		**57.8100**	**2.3900e-003**	**4.9000e-004**	**58.0168**

6.0 Area Detail

6.1 Mitigation Measures Area

Use Low VOC Paint - Residential Interior

Use Low VOC Paint - Residential Exterior

No Hearths Installed

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.2609	4.2900e-003	0.3717	2.0000e-005		2.0500e-003	2.0500e-003		2.0500e-003	2.0500e-003	0.0000	0.6064	0.6064	5.9000e-004	0.0000	0.6211
Unmitigated	0.2609	4.2900e-003	0.3717	2.0000e-005		2.0500e-003	2.0500e-003		2.0500e-003	2.0500e-003	0.0000	0.6064	0.6064	5.9000e-004	0.0000	0.6211

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0199					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.2298					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0112	4.2900e-003	0.3717	2.0000e-005		2.0500e-003	2.0500e-003		2.0500e-003	2.0500e-003	0.0000	0.6064	0.6064	5.9000e-004	0.0000	0.6211
Total	**0.2609**	**4.2900e-003**	**0.3717**	**2.0000e-005**		**2.0500e-003**	**2.0500e-003**		**2.0500e-003**	**2.0500e-003**	**0.0000**	**0.6064**	**0.6064**	**5.9000e-004**	**0.0000**	**0.6211**

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0199					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.2298					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0112	4.2900e-003	0.3717	2.0000e-005		2.0500e-003	2.0500e-003		2.0500e-003	2.0500e-003	0.0000	0.6064	0.6064	5.9000e-004	0.0000	0.6211
Total	**0.2609**	**4.2900e-003**	**0.3717**	**2.0000e-005**		**2.0500e-003**	**2.0500e-003**		**2.0500e-003**	**2.0500e-003**	**0.0000**	**0.6064**	**0.6064**	**5.9000e-004**	**0.0000**	**0.6211**

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	15.7097	0.0771	1.9300e-003	18.2118
Unmitigated	15.7097	0.0771	1.9300e-003	18.2118

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Condo/Townhouse	2.34554 / 1.47871	15.7097	0.0771	1.9300e-003	18.2118
Total		**15.7097**	**0.0771**	**1.9300e-003**	**18.2118**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Condo/Townhouse	2.34554 / 1.47871	15.7097	0.0771	1.9300e-003	18.2118
Total		**15.7097**	**0.0771**	**1.9300e-003**	**18.2118**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	3.3615	0.1987	0.0000	8.3281
Unmitigated	3.3615	0.1987	0.0000	8.3281

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Condo/Townhouse	16.56	3.3615	0.1987	0.0000	8.3281
Total		**3.3615**	**0.1987**	**0.0000**	**8.3281**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Condo/Townhouse	16.56	3.3615	0.1987	0.0000	8.3281
Total		**3.3615**	**0.1987**	**0.0000**	**8.3281**

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

675 E Mission Pomona CE

South Coast AQMD Air District, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Condo/Townhouse	36.00	Dwelling Unit	1.46	63,598.00	103

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	31
Climate Zone	9			**Operational Year**	2022
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	702.44	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Per project site plans

Construction Phase - Estimated based on client info

Grading - Per project site plans

Woodstoves - No fireplaces or woodstoves for proposed units

Construction Off-road Equipment Mitigation -

Mobile Land Use Mitigation -

Area Mitigation -

Water Mitigation -

Vehicle Trips - Per project TIA by Gandini Group, Inc May 2019

Table Name	Column Name	Default Value	New Value
tblAreaMitigation	UseLowVOCPaintParkingCheck	False	True
tblFireplaces	FireplaceDayYear	25.00	0.00
tblFireplaces	FireplaceHourDay	3.00	0.00
tblFireplaces	FireplaceWoodMass	1,019.20	0.00
tblFireplaces	NumberGas	30.60	0.00
tblFireplaces	NumberNoFireplace	3.60	0.00
tblFireplaces	NumberWood	1.80	0.00
tblGrading	AcresOfGrading	1.50	1.46
tblGrading	AcresOfGrading	1.00	1.46
tblLandUse	LandUseSquareFeet	36,000.00	63,598.00
tblLandUse	LotAcreage	2.25	1.46
tblVehicleTrips	ST_TR	5.67	7.32
tblVehicleTrips	SU_TR	4.84	7.32
tblVehicleTrips	WD_TR	5.81	7.32
tblWoodstoves	NumberCatalytic	1.80	0.00
tblWoodstoves	NumberNoncatalytic	1.80	0.00
tblWoodstoves	WoodstoveDayYear	25.00	0.00
tblWoodstoves	WoodstoveWoodMass	999.60	0.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2020	2.1613	18.3707	14.3510	0.0261	6.1329	0.8216	6.9545	3.0038	0.7729	3.7597	0.0000	2,408.4874	2,408.4874	0.5419	0.0000	2,418.1608
2021	40.8637	14.0887	13.9694	0.0260	0.3162	0.6873	1.0035	0.0844	0.6635	0.7479	0.0000	2,398.1203	2,398.1203	0.4358	0.0000	2,407.4103
Maximum	**40.8637**	**18.3707**	**14.3510**	**0.0261**	**6.1329**	**0.8216**	**6.9545**	**3.0038**	**0.7729**	**3.7597**	**0.0000**	**2,408.4874**	**2,408.4874**	**0.5419**	**0.0000**	**2,418.1608**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2020	2.1613	18.3707	14.3510	0.0261	2.8090	0.8216	3.6306	1.3647	0.7729	2.1206	0.0000	2,408.4874	2,408.4874	0.5419	0.0000	2,418.1608
2021	40.8637	14.0887	13.9694	0.0260	0.3162	0.6873	1.0035	0.0844	0.6635	0.7479	0.0000	2,398.1203	2,398.1203	0.4358	0.0000	2,407.4103
Maximum	**40.8637**	**18.3707**	**14.3510**	**0.0261**	**2.8090**	**0.8216**	**3.6306**	**1.3647**	**0.7729**	**2.1206**	**0.0000**	**2,408.4874**	**2,408.4874**	**0.5419**	**0.0000**	**2,418.1608**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**51.54**	**0.00**	**41.77**	**53.07**	**0.00**	**36.36**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	1.4581	0.0343	2.9732	1.6000e-004		0.0164	0.0164		0.0164	0.0164	0.0000	5.3479	5.3479	5.1600e-003	0.0000	5.4769
Energy	0.0183	0.1561	0.0664	1.0000e-003		0.0126	0.0126		0.0126	0.0126		199.3090	199.3090	3.8200e-003	3.6500e-003	200.4934
Mobile	0.4587	2.3479	6.1330	0.0233	1.9148	0.0177	1.9325	0.5123	0.0165	0.5288		2,373.9746	2,373.9746	0.1092		2,376.7043
Total	**1.9351**	**2.5383**	**9.1726**	**0.0245**	**1.9148**	**0.0468**	**1.9615**	**0.5123**	**0.0456**	**0.5579**	**0.0000**	**2,578.6315**	**2,578.6315**	**0.1182**	**3.6500e-003**	**2,582.6746**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	1.4581	0.0343	2.9732	1.6000e-004		0.0164	0.0164		0.0164	0.0164	0.0000	5.3479	5.3479	5.1600e-003	0.0000	5.4769
Energy	0.0183	0.1561	0.0664	1.0000e-003		0.0126	0.0126		0.0126	0.0126		199.3090	199.3090	3.8200e-003	3.6500e-003	200.4934
Mobile	0.4281	2.1435	5.3068	0.0199	1.6132	0.0152	1.6283	0.4316	0.0141	0.4458		2,022.7525	2,022.7525	0.0952		2,025.1316
Total	**1.9045**	**2.3339**	**8.3465**	**0.0210**	**1.6132**	**0.0442**	**1.6574**	**0.4316**	**0.0432**	**0.4748**	**0.0000**	**2,227.4094**	**2,227.4094**	**0.1041**	**3.6500e-003**	**2,231.1018**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	1.58	8.05	9.01	14.13	15.75	5.43	15.50	15.75	5.22	14.89	0.00	13.62	13.62	11.87	0.00	13.61

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	6/1/2020	6/12/2020	5	2	
2	Grading	Grading	6/15/2020	7/3/2020	5	4	
3	Building Construction	Building Construction	7/6/2020	7/16/2021	5	200	
4	Paving	Paving	7/19/2021	8/6/2021	5	10	
5	Architectural Coating	Architectural Coating	7/26/2021	8/13/2021	5	10	

Acres of Grading (Site Preparation Phase): 1.46

Acres of Grading (Grading Phase): 1.46

Acres of Paving: 0

Residential Indoor: 128,786; Residential Outdoor: 42,929; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

675 E Mission Pomona CE - South Coast AQMD Air District, Summer

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Graders	1	8.00	187	0.41
Site Preparation	Rubber Tired Dozers	1	7.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Grading	Graders	1	6.00	187	0.41
Grading	Rubber Tired Dozers	1	6.00	247	0.40
Grading	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Building Construction	Cranes	1	6.00	231	0.29
Building Construction	Forklifts	1	6.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	1	6.00	97	0.37
Building Construction	Welders	3	8.00	46	0.45
Paving	Cement and Mortar Mixers	1	6.00	9	0.56
Paving	Pavers	1	6.00	130	0.42
Paving	Paving Equipment	1	8.00	132	0.36
Paving	Rollers	1	7.00	80	0.38
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	3	8.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	3	8.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	7	26.00	4.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	5	13.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	5.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

3.2 Site Preparation - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.0435	0.0000	6.0435	2.9800	0.0000	2.9800			0.0000			0.0000
Off-Road	1.6299	18.3464	7.7093	0.0172		0.8210	0.8210		0.7553	0.7553		1,667.4119	1,667.4119	0.5393		1,680.8937
Total	**1.6299**	**18.3464**	**7.7093**	**0.0172**	**6.0435**	**0.8210**	**6.8644**	**2.9800**	**0.7553**	**3.7353**		**1,667.4119**	**1,667.4119**	**0.5393**		**1,680.8937**

3.2 Site Preparation - 2020

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0362	0.0243	0.3271	9.2000e-004	0.0894	6.8000e-004	0.0901	0.0237	6.2000e-004	0.0243		91.5534	91.5534	2.6300e-003		91.6192
Total	**0.0362**	**0.0243**	**0.3271**	**9.2000e-004**	**0.0894**	**6.8000e-004**	**0.0901**	**0.0237**	**6.2000e-004**	**0.0243**		**91.5534**	**91.5534**	**2.6300e-003**		**91.6192**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					2.7196	0.0000	2.7196	1.3410	0.0000	1.3410			0.0000			0.0000
Off-Road	1.6299	18.3464	7.7093	0.0172		0.8210	0.8210		0.7553	0.7553	0.0000	1,667.4119	1,667.4119	0.5393		1,680.8937
Total	**1.6299**	**18.3464**	**7.7093**	**0.0172**	**2.7196**	**0.8210**	**3.5405**	**1.3410**	**0.7553**	**2.0963**	**0.0000**	**1,667.4119**	**1,667.4119**	**0.5393**		**1,680.8937**

3.2 Site Preparation - 2020

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0362	0.0243	0.3271	9.2000e-004	0.0894	6.8000e-004	0.0901	0.0237	6.2000e-004	0.0243		91.5534	91.5534	2.6300e-003		91.6192
Total	**0.0362**	**0.0243**	**0.3271**	**9.2000e-004**	**0.0894**	**6.8000e-004**	**0.0901**	**0.0237**	**6.2000e-004**	**0.0243**		**91.5534**	**91.5534**	**2.6300e-003**		**91.6192**

3.3 Grading - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					4.9037	0.0000	4.9037	2.5245	0.0000	2.5245			0.0000			0.0000
Off-Road	1.3498	15.0854	6.4543	0.0141		0.6844	0.6844		0.6296	0.6296		1,365.7183	1,365.7183	0.4417		1,376.7609
Total	**1.3498**	**15.0854**	**6.4543**	**0.0141**	**4.9037**	**0.6844**	**5.5880**	**2.5245**	**0.6296**	**3.1541**		**1,365.7183**	**1,365.7183**	**0.4417**		**1,376.7609**

3.3 Grading - 2020

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0362	0.0243	0.3271	9.2000e-004	0.0894	6.8000e-004	0.0901	0.0237	6.2000e-004	0.0243		91.5534	91.5534	2.6300e-003		91.6192
Total	**0.0362**	**0.0243**	**0.3271**	**9.2000e-004**	**0.0894**	**6.8000e-004**	**0.0901**	**0.0237**	**6.2000e-004**	**0.0243**		**91.5534**	**91.5534**	**2.6300e-003**		**91.6192**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					2.2066	0.0000	2.2066	1.1360	0.0000	1.1360			0.0000			0.0000
Off-Road	1.3498	15.0854	6.4543	0.0141		0.6844	0.6844		0.6296	0.6296	0.0000	1,365.7183	1,365.7183	0.4417		1,376.7609
Total	**1.3498**	**15.0854**	**6.4543**	**0.0141**	**2.2066**	**0.6844**	**2.8910**	**1.1360**	**0.6296**	**1.7656**	**0.0000**	**1,365.7183**	**1,365.7183**	**0.4417**		**1,376.7609**

3.3 Grading - 2020

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0362	0.0243	0.3271	9.2000e-004	0.0894	6.8000e-004	0.0901	0.0237	6.2000e-004	0.0243		91.5534	91.5534	2.6300e-003		91.6192
Total	**0.0362**	**0.0243**	**0.3271**	**9.2000e-004**	**0.0894**	**6.8000e-004**	**0.0901**	**0.0237**	**6.2000e-004**	**0.0243**		**91.5534**	**91.5534**	**2.6300e-003**		**91.6192**

3.4 Building Construction - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.0305	14.7882	13.1881	0.0220		0.7960	0.7960		0.7688	0.7688		2,001.1595	2,001.1595	0.3715		2,010.4467
Total	**2.0305**	**14.7882**	**13.1881**	**0.0220**		**0.7960**	**0.7960**		**0.7688**	**0.7688**		**2,001.1595**	**2,001.1595**	**0.3715**		**2,010.4467**

3.4 Building Construction - 2020

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0131	0.4197	0.1000	1.0300e-003	0.0256	2.0800e-003	0.0277	7.3700e-003	1.9900e-003	9.3600e-003		109.7794	109.7794	6.8900e-003		109.9517
Worker	0.1176	0.0791	1.0629	2.9900e-003	0.2906	2.2000e-003	0.2928	0.0771	2.0300e-003	0.0791		297.5485	297.5485	8.5500e-003		297.7624
Total	**0.1308**	**0.4988**	**1.1629**	**4.0200e-003**	**0.3162**	**4.2800e-003**	**0.3205**	**0.0844**	**4.0200e-003**	**0.0885**		**407.3279**	**407.3279**	**0.0154**		**407.7141**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.0305	14.7882	13.1881	0.0220		0.7960	0.7960		0.7688	0.7688	0.0000	2,001.1595	2,001.1595	0.3715		2,010.4467
Total	**2.0305**	**14.7882**	**13.1881**	**0.0220**		**0.7960**	**0.7960**		**0.7688**	**0.7688**	**0.0000**	**2,001.1595**	**2,001.1595**	**0.3715**		**2,010.4467**

3.4 Building Construction - 2020

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0131	0.4197	0.1000	1.0300e-003	0.0256	2.0800e-003	0.0277	7.3700e-003	1.9900e-003	9.3600e-003		109.7794	109.7794	6.8900e-003		109.9517
Worker	0.1176	0.0791	1.0629	2.9900e-003	0.2906	2.2000e-003	0.2928	0.0771	2.0300e-003	0.0791		297.5485	297.5485	8.5500e-003		297.7624
Total	**0.1308**	**0.4988**	**1.1629**	**4.0200e-003**	**0.3162**	**4.2800e-003**	**0.3205**	**0.0844**	**4.0200e-003**	**0.0885**		**407.3279**	**407.3279**	**0.0154**		**407.7141**

3.4 Building Construction - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.8125	13.6361	12.8994	0.0221		0.6843	0.6843		0.6608	0.6608		2,001.2200	2,001.2200	0.3573		2,010.1517
Total	**1.8125**	**13.6361**	**12.8994**	**0.0221**		**0.6843**	**0.6843**		**0.6608**	**0.6608**		**2,001.2200**	**2,001.2200**	**0.3573**		**2,010.1517**

3.4 Building Construction - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0111	0.3815	0.0905	1.0200e-003	0.0256	7.7000e-004	0.0264	7.3700e-003	7.3000e-004	8.1000e-003		108.9754	108.9754	6.5900e-003		109.1402
Worker	0.1098	0.0712	0.9795	2.8900e-003	0.2906	2.1400e-003	0.2928	0.0771	1.9700e-003	0.0790		287.9249	287.9249	7.7400e-003		288.1184
Total	**0.1209**	**0.4527**	**1.0700**	**3.9100e-003**	**0.3162**	**2.9100e-003**	**0.3191**	**0.0844**	**2.7000e-003**	**0.0871**		**396.9003**	**396.9003**	**0.0143**		**397.2586**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.8125	13.6361	12.8994	0.0221		0.6843	0.6843		0.6608	0.6608	0.0000	2,001.2200	2,001.2200	0.3573		2,010.1517
Total	**1.8125**	**13.6361**	**12.8994**	**0.0221**		**0.6843**	**0.6843**		**0.6608**	**0.6608**	**0.0000**	**2,001.2200**	**2,001.2200**	**0.3573**		**2,010.1517**

3.4 Building Construction - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0111	0.3815	0.0905	1.0200e-003	0.0256	7.7000e-004	0.0264	7.3700e-003	7.3000e-004	8.1000e-003		108.9754	108.9754	6.5900e-003		109.1402
Worker	0.1098	0.0712	0.9795	2.8900e-003	0.2906	2.1400e-003	0.2928	0.0771	1.9700e-003	0.0790		287.9249	287.9249	7.7400e-003		288.1184
Total	**0.1209**	**0.4527**	**1.0700**	**3.9100e-003**	**0.3162**	**2.9100e-003**	**0.3191**	**0.0844**	**2.7000e-003**	**0.0871**		**396.9003**	**396.9003**	**0.0143**		**397.2586**

3.5 Paving - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.7739	7.7422	8.8569	0.0135		0.4153	0.4153		0.3830	0.3830		1,296.8664	1,296.8664	0.4111		1,307.1442
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.7739**	**7.7422**	**8.8569**	**0.0135**		**0.4153**	**0.4153**		**0.3830**	**0.3830**		**1,296.8664**	**1,296.8664**	**0.4111**		**1,307.1442**

3.5 Paving - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0549	0.0356	0.4897	1.4400e-003	0.1453	1.0700e-003	0.1464	0.0385	9.9000e-004	0.0395		143.9624	143.9624	3.8700e-003		144.0592
Total	**0.0549**	**0.0356**	**0.4897**	**1.4400e-003**	**0.1453**	**1.0700e-003**	**0.1464**	**0.0385**	**9.9000e-004**	**0.0395**		**143.9624**	**143.9624**	**3.8700e-003**		**144.0592**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.7739	7.7422	8.8569	0.0135		0.4153	0.4153		0.3830	0.3830	0.0000	1,296.8664	1,296.8664	0.4111		1,307.1442
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.7739**	**7.7422**	**8.8569**	**0.0135**		**0.4153**	**0.4153**		**0.3830**	**0.3830**	**0.0000**	**1,296.8664**	**1,296.8664**	**0.4111**		**1,307.1442**

3.5 Paving - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0549	0.0356	0.4897	1.4400e-003	0.1453	1.0700e-003	0.1464	0.0385	9.9000e-004	0.0395		143.9624	143.9624	3.8700e-003		144.0592
Total	**0.0549**	**0.0356**	**0.4897**	**1.4400e-003**	**0.1453**	**1.0700e-003**	**0.1464**	**0.0385**	**9.9000e-004**	**0.0395**		**143.9624**	**143.9624**	**3.8700e-003**		**144.0592**

3.6 Architectural Coating - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	39.7950					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2189	1.5268	1.8176	2.9700e-003		0.0941	0.0941		0.0941	0.0941		281.4481	281.4481	0.0193		281.9309
Total	**40.0139**	**1.5268**	**1.8176**	**2.9700e-003**		**0.0941**	**0.0941**		**0.0941**	**0.0941**		**281.4481**	**281.4481**	**0.0193**		**281.9309**

3.6 Architectural Coating - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0211	0.0137	0.1884	5.6000e-004	0.0559	4.1000e-004	0.0563	0.0148	3.8000e-004	0.0152		55.3702	55.3702	1.4900e-003		55.4074
Total	**0.0211**	**0.0137**	**0.1884**	**5.6000e-004**	**0.0559**	**4.1000e-004**	**0.0563**	**0.0148**	**3.8000e-004**	**0.0152**		**55.3702**	**55.3702**	**1.4900e-003**		**55.4074**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	39.7950					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2189	1.5268	1.8176	2.9700e-003		0.0941	0.0941		0.0941	0.0941	0.0000	281.4481	281.4481	0.0193		281.9309
Total	**40.0139**	**1.5268**	**1.8176**	**2.9700e-003**		**0.0941**	**0.0941**		**0.0941**	**0.0941**	**0.0000**	**281.4481**	**281.4481**	**0.0193**		**281.9309**

3.6 Architectural Coating - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0211	0.0137	0.1884	5.6000e-004	0.0559	4.1000e-004	0.0563	0.0148	3.8000e-004	0.0152		55.3702	55.3702	1.4900e-003		55.4074
Total	**0.0211**	**0.0137**	**0.1884**	**5.6000e-004**	**0.0559**	**4.1000e-004**	**0.0563**	**0.0148**	**3.8000e-004**	**0.0152**		**55.3702**	**55.3702**	**1.4900e-003**		**55.4074**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

Increase Density

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.4281	2.1435	5.3068	0.0199	1.6132	0.0152	1.6283	0.4316	0.0141	0.4458		2,022.7525	2,022.7525	0.0952		2,025.1316
Unmitigated	0.4587	2.3479	6.1330	0.0233	1.9148	0.0177	1.9325	0.5123	0.0165	0.5288		2,373.9746	2,373.9746	0.1092		2,376.7043

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Condo/Townhouse	263.52	263.52	263.52	900,488	758,661
Total	263.52	263.52	263.52	900,488	758,661

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Condo/Townhouse	14.70	5.90	8.70	40.20	19.20	40.60	86	11	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Condo/Townhouse	0.549559	0.042893	0.201564	0.118533	0.015569	0.005846	0.021394	0.034255	0.002099	0.001828	0.004855	0.000709	0.000896

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0183	0.1561	0.0664	1.0000e-003		0.0126	0.0126		0.0126	0.0126		199.3090	199.3090	3.8200e-003	3.6500e-003	200.4934
NaturalGas Unmitigated	0.0183	0.1561	0.0664	1.0000e-003		0.0126	0.0126		0.0126	0.0126		199.3090	199.3090	3.8200e-003	3.6500e-003	200.4934

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Condo/Townhouse	1694.13	0.0183	0.1561	0.0664	1.0000e-003		0.0126	0.0126		0.0126	0.0126		199.3090	199.3090	3.8200e-003	3.6500e-003	200.4934
Total		**0.0183**	**0.1561**	**0.0664**	**1.0000e-003**		**0.0126**	**0.0126**		**0.0126**	**0.0126**		**199.3090**	**199.3090**	**3.8200e-003**	**3.6500e-003**	**200.4934**

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Condo/Townhouse	1.69413	0.0183	0.1561	0.0664	1.0000e-003		0.0126	0.0126		0.0126	0.0126		199.3090	199.3090	3.8200e-003	3.6500e-003	200.4934
Total		**0.0183**	**0.1561**	**0.0664**	**1.0000e-003**		**0.0126**	**0.0126**		**0.0126**	**0.0126**		**199.3090**	**199.3090**	**3.8200e-003**	**3.6500e-003**	**200.4934**

6.0 Area Detail

6.1 Mitigation Measures Area

Use Low VOC Paint - Residential Interior

Use Low VOC Paint - Residential Exterior

No Hearths Installed

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	1.4581	0.0343	2.9732	1.6000e-004		0.0164	0.0164		0.0164	0.0164	0.0000	5.3479	5.3479	5.1600e-003	0.0000	5.4769
Unmitigated	1.4581	0.0343	2.9732	1.6000e-004		0.0164	0.0164		0.0164	0.0164	0.0000	5.3479	5.3479	5.1600e-003	0.0000	5.4769

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.1090					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	1.2592					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0898	0.0343	2.9732	1.6000e-004		0.0164	0.0164		0.0164	0.0164		5.3479	5.3479	5.1600e-003		5.4769
Total	**1.4581**	**0.0343**	**2.9732**	**1.6000e-004**		**0.0164**	**0.0164**		**0.0164**	**0.0164**	**0.0000**	**5.3479**	**5.3479**	**5.1600e-003**	**0.0000**	**5.4769**

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.1090					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	1.2592					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0898	0.0343	2.9732	1.6000e-004		0.0164	0.0164		0.0164	0.0164		5.3479	5.3479	5.1600e-003		5.4769
Total	**1.4581**	**0.0343**	**2.9732**	**1.6000e-004**		**0.0164**	**0.0164**		**0.0164**	**0.0164**	**0.0000**	**5.3479**	**5.3479**	**5.1600e-003**	**0.0000**	**5.4769**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

675 E Mission Pomona CE

South Coast AQMD Air District, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Condo/Townhouse	36.00	Dwelling Unit	1.46	63,598.00	103

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	31
Climate Zone	9			**Operational Year**	2022
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	702.44	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Per project site plans

Construction Phase - Estimated based on client info

Grading - Per project site plans

Woodstoves - No fireplaces or woodstoves for proposed units

Construction Off-road Equipment Mitigation -

Mobile Land Use Mitigation -

Area Mitigation -

Water Mitigation -

Vehicle Trips - Per project TIA by Gandini Group, Inc May 2019

Table Name	Column Name	Default Value	New Value
tblAreaMitigation	UseLowVOCPaintParkingCheck	False	True
tblFireplaces	FireplaceDayYear	25.00	0.00
tblFireplaces	FireplaceHourDay	3.00	0.00
tblFireplaces	FireplaceWoodMass	1,019.20	0.00
tblFireplaces	NumberGas	30.60	0.00
tblFireplaces	NumberNoFireplace	3.60	0.00
tblFireplaces	NumberWood	1.80	0.00
tblGrading	AcresOfGrading	1.50	1.46
tblGrading	AcresOfGrading	1.00	1.46
tblLandUse	LandUseSquareFeet	36,000.00	63,598.00
tblLandUse	LotAcreage	2.25	1.46
tblVehicleTrips	ST_TR	5.67	7.32
tblVehicleTrips	SU_TR	4.84	7.32
tblVehicleTrips	WD_TR	5.81	7.32
tblWoodstoves	NumberCatalytic	1.80	0.00
tblWoodstoves	NumberNoncatalytic	1.80	0.00
tblWoodstoves	WoodstoveDayYear	25.00	0.00
tblWoodstoves	WoodstoveWoodMass	999.60	0.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2020	2.1726	18.3731	14.2565	0.0258	6.1329	0.8216	6.9545	3.0038	0.7729	3.7597	0.0000	2,386.0595	2,386.0595	0.5417	0.0000	2,395.7313
2021	40.8707	14.0943	13.8809	0.0257	0.3162	0.6873	1.0035	0.0844	0.6635	0.7480	0.0000	2,376.3137	2,376.3137	0.4354	0.0000	2,385.6028
Maximum	**40.8707**	**18.3731**	**14.2565**	**0.0258**	**6.1329**	**0.8216**	**6.9545**	**3.0038**	**0.7729**	**3.7597**	**0.0000**	**2,386.0595**	**2,386.0595**	**0.5417**	**0.0000**	**2,395.7313**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2020	2.1726	18.3731	14.2565	0.0258	2.8090	0.8216	3.6306	1.3647	0.7729	2.1206	0.0000	2,386.0595	2,386.0595	0.5417	0.0000	2,395.7313
2021	40.8707	14.0943	13.8809	0.0257	0.3162	0.6873	1.0035	0.0844	0.6635	0.7480	0.0000	2,376.3137	2,376.3137	0.4354	0.0000	2,385.6028
Maximum	**40.8707**	**18.3731**	**14.2565**	**0.0258**	**2.8090**	**0.8216**	**3.6306**	**1.3647**	**0.7729**	**2.1206**	**0.0000**	**2,386.0595**	**2,386.0595**	**0.5417**	**0.0000**	**2,395.7313**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**51.54**	**0.00**	**41.77**	**53.07**	**0.00**	**36.36**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	1.4581	0.0343	2.9732	1.6000e-004		0.0164	0.0164		0.0164	0.0164	0.0000	5.3479	5.3479	5.1600e-003	0.0000	5.4769
Energy	0.0183	0.1561	0.0664	1.0000e-003		0.0126	0.0126		0.0126	0.0126		199.3090	199.3090	3.8200e-003	3.6500e-003	200.4934
Mobile	0.4358	2.3939	5.7255	0.0221	1.9148	0.0178	1.9326	0.5123	0.0166	0.5289		2,248.6809	2,248.6809	0.1091		2,251.4085
Total	**1.9122**	**2.5843**	**8.7652**	**0.0232**	**1.9148**	**0.0469**	**1.9616**	**0.5123**	**0.0457**	**0.5580**	**0.0000**	**2,453.3378**	**2,453.3378**	**0.1181**	**3.6500e-003**	**2,457.3788**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	1.4581	0.0343	2.9732	1.6000e-004		0.0164	0.0164		0.0164	0.0164	0.0000	5.3479	5.3479	5.1600e-003	0.0000	5.4769
Energy	0.0183	0.1561	0.0664	1.0000e-003		0.0126	0.0126		0.0126	0.0126		199.3090	199.3090	3.8200e-003	3.6500e-003	200.4934
Mobile	0.4062	2.1781	4.9917	0.0188	1.6132	0.0153	1.6284	0.4316	0.0142	0.4459		1,914.9694	1,914.9694	0.0955		1,917.3571
Total	**1.8825**	**2.3685**	**8.0314**	**0.0200**	**1.6132**	**0.0443**	**1.6575**	**0.4316**	**0.0433**	**0.4749**	**0.0000**	**2,119.6263**	**2,119.6263**	**0.1045**	**3.6500e-003**	**2,123.3273**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	1.55	8.35	8.37	14.12	15.75	5.44	15.50	15.75	5.21	14.89	0.00	13.60	13.60	11.51	0.00	13.59

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	6/1/2020	6/12/2020	5	2	
2	Grading	Grading	6/15/2020	7/3/2020	5	4	
3	Building Construction	Building Construction	7/6/2020	7/16/2021	5	200	
4	Paving	Paving	7/19/2021	8/6/2021	5	10	
5	Architectural Coating	Architectural Coating	7/26/2021	8/13/2021	5	10	

Acres of Grading (Site Preparation Phase): 1.46

Acres of Grading (Grading Phase): 1.46

Acres of Paving: 0

Residential Indoor: 128,786; Residential Outdoor: 42,929; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Graders	1	8.00	187	0.41
Site Preparation	Rubber Tired Dozers	1	7.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Grading	Graders	1	6.00	187	0.41
Grading	Rubber Tired Dozers	1	6.00	247	0.40
Grading	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Building Construction	Cranes	1	6.00	231	0.29
Building Construction	Forklifts	1	6.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	1	6.00	97	0.37
Building Construction	Welders	3	8.00	46	0.45
Paving	Cement and Mortar Mixers	1	6.00	9	0.56
Paving	Pavers	1	6.00	130	0.42
Paving	Paving Equipment	1	8.00	132	0.36
Paving	Rollers	1	7.00	80	0.38
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	3	8.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	3	8.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	7	26.00	4.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	5	13.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	5.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

3.2 Site Preparation - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.0435	0.0000	6.0435	2.9800	0.0000	2.9800			0.0000			0.0000
Off-Road	1.6299	18.3464	7.7093	0.0172		0.8210	0.8210		0.7553	0.7553		1,667.4119	1,667.4119	0.5393		1,680.8937
Total	**1.6299**	**18.3464**	**7.7093**	**0.0172**	**6.0435**	**0.8210**	**6.8644**	**2.9800**	**0.7553**	**3.7353**		**1,667.4119**	**1,667.4119**	**0.5393**		**1,680.8937**

3.2 Site Preparation - 2020

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0395	0.0266	0.2945	8.6000e-004	0.0894	6.8000e-004	0.0901	0.0237	6.2000e-004	0.0243		85.6292	85.6292	2.4600e-003		85.6906
Total	**0.0395**	**0.0266**	**0.2945**	**8.6000e-004**	**0.0894**	**6.8000e-004**	**0.0901**	**0.0237**	**6.2000e-004**	**0.0243**		**85.6292**	**85.6292**	**2.4600e-003**		**85.6906**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					2.7196	0.0000	2.7196	1.3410	0.0000	1.3410			0.0000			0.0000
Off-Road	1.6299	18.3464	7.7093	0.0172		0.8210	0.8210		0.7553	0.7553	0.0000	1,667.4119	1,667.4119	0.5393		1,680.8937
Total	**1.6299**	**18.3464**	**7.7093**	**0.0172**	**2.7196**	**0.8210**	**3.5405**	**1.3410**	**0.7553**	**2.0963**	**0.0000**	**1,667.4119**	**1,667.4119**	**0.5393**		**1,680.8937**

3.2 Site Preparation - 2020

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0395	0.0266	0.2945	8.6000e-004	0.0894	6.8000e-004	0.0901	0.0237	6.2000e-004	0.0243		85.6292	85.6292	2.4600e-003		85.6906
Total	**0.0395**	**0.0266**	**0.2945**	**8.6000e-004**	**0.0894**	**6.8000e-004**	**0.0901**	**0.0237**	**6.2000e-004**	**0.0243**		**85.6292**	**85.6292**	**2.4600e-003**		**85.6906**

3.3 Grading - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					4.9037	0.0000	4.9037	2.5245	0.0000	2.5245			0.0000			0.0000
Off-Road	1.3498	15.0854	6.4543	0.0141		0.6844	0.6844		0.6296	0.6296		1,365.7183	1,365.7183	0.4417		1,376.7609
Total	**1.3498**	**15.0854**	**6.4543**	**0.0141**	**4.9037**	**0.6844**	**5.5880**	**2.5245**	**0.6296**	**3.1541**		**1,365.7183**	**1,365.7183**	**0.4417**		**1,376.7609**

3.3 Grading - 2020

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0395	0.0266	0.2945	8.6000e-004	0.0894	6.8000e-004	0.0901	0.0237	6.2000e-004	0.0243		85.6292	85.6292	2.4600e-003		85.6906
Total	**0.0395**	**0.0266**	**0.2945**	**8.6000e-004**	**0.0894**	**6.8000e-004**	**0.0901**	**0.0237**	**6.2000e-004**	**0.0243**		**85.6292**	**85.6292**	**2.4600e-003**		**85.6906**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					2.2066	0.0000	2.2066	1.1360	0.0000	1.1360			0.0000			0.0000
Off-Road	1.3498	15.0854	6.4543	0.0141		0.6844	0.6844		0.6296	0.6296	0.0000	1,365.7183	1,365.7183	0.4417		1,376.7609
Total	**1.3498**	**15.0854**	**6.4543**	**0.0141**	**2.2066**	**0.6844**	**2.8910**	**1.1360**	**0.6296**	**1.7656**	**0.0000**	**1,365.7183**	**1,365.7183**	**0.4417**		**1,376.7609**

3.3 Grading - 2020

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0395	0.0266	0.2945	8.6000e-004	0.0894	6.8000e-004	0.0901	0.0237	6.2000e-004	0.0243		85.6292	85.6292	2.4600e-003		85.6906
Total	**0.0395**	**0.0266**	**0.2945**	**8.6000e-004**	**0.0894**	**6.8000e-004**	**0.0901**	**0.0237**	**6.2000e-004**	**0.0243**		**85.6292**	**85.6292**	**2.4600e-003**		**85.6906**

3.4 Building Construction - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.0305	14.7882	13.1881	0.0220		0.7960	0.7960		0.7688	0.7688		2,001.1595	2,001.1595	0.3715		2,010.4467
Total	**2.0305**	**14.7882**	**13.1881**	**0.0220**		**0.7960**	**0.7960**		**0.7688**	**0.7688**		**2,001.1595**	**2,001.1595**	**0.3715**		**2,010.4467**

3.4 Building Construction - 2020

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0138	0.4193	0.1114	1.0000e-003	0.0256	2.1100e-003	0.0277	7.3700e-003	2.0200e-003	9.3900e-003		106.6051	106.6051	7.4000e-003		106.7902
Worker	0.1283	0.0866	0.9570	2.7900e-003	0.2906	2.2000e-003	0.2928	0.0771	2.0300e-003	0.0791		278.2949	278.2949	7.9800e-003		278.4944
Total	**0.1421**	**0.5059**	**1.0685**	**3.7900e-003**	**0.3162**	**4.3100e-003**	**0.3205**	**0.0844**	**4.0500e-003**	**0.0885**		**384.9000**	**384.9000**	**0.0154**		**385.2846**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.0305	14.7882	13.1881	0.0220		0.7960	0.7960		0.7688	0.7688	0.0000	2,001.1595	2,001.1595	0.3715		2,010.4467
Total	**2.0305**	**14.7882**	**13.1881**	**0.0220**		**0.7960**	**0.7960**		**0.7688**	**0.7688**	**0.0000**	**2,001.1595**	**2,001.1595**	**0.3715**		**2,010.4467**

3.4 Building Construction - 2020

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0138	0.4193	0.1114	1.0000e-003	0.0256	2.1100e-003	0.0277	7.3700e-003	2.0200e-003	9.3900e-003		106.6051	106.6051	7.4000e-003		106.7902
Worker	0.1283	0.0866	0.9570	2.7900e-003	0.2906	2.2000e-003	0.2928	0.0771	2.0300e-003	0.0791		278.2949	278.2949	7.9800e-003		278.4944
Total	**0.1421**	**0.5059**	**1.0685**	**3.7900e-003**	**0.3162**	**4.3100e-003**	**0.3205**	**0.0844**	**4.0500e-003**	**0.0885**		**384.9000**	**384.9000**	**0.0154**		**385.2846**

3.4 Building Construction - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.8125	13.6361	12.8994	0.0221		0.6843	0.6843		0.6608	0.6608		2,001.2200	2,001.2200	0.3573		2,010.1517
Total	**1.8125**	**13.6361**	**12.8994**	**0.0221**		**0.6843**	**0.6843**		**0.6608**	**0.6608**		**2,001.2200**	**2,001.2200**	**0.3573**		**2,010.1517**

3.4 Building Construction - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0117	0.3803	0.1013	9.9000e-004	0.0256	7.9000e-004	0.0264	7.3700e-003	7.6000e-004	8.1300e-003		105.8201	105.8201	7.0800e-003		105.9971
Worker	0.1199	0.0779	0.8802	2.7000e-003	0.2906	2.1400e-003	0.2928	0.0771	1.9700e-003	0.0790		269.2737	269.2737	7.2200e-003		269.4541
Total	**0.1316**	**0.4582**	**0.9815**	**3.6900e-003**	**0.3162**	**2.9300e-003**	**0.3192**	**0.0844**	**2.7300e-003**	**0.0872**		**375.0937**	**375.0937**	**0.0143**		**375.4511**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.8125	13.6361	12.8994	0.0221		0.6843	0.6843		0.6608	0.6608	0.0000	2,001.2200	2,001.2200	0.3573		2,010.1517
Total	**1.8125**	**13.6361**	**12.8994**	**0.0221**		**0.6843**	**0.6843**		**0.6608**	**0.6608**	**0.0000**	**2,001.2200**	**2,001.2200**	**0.3573**		**2,010.1517**

3.4 Building Construction - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0117	0.3803	0.1013	9.9000e-004	0.0256	7.9000e-004	0.0264	7.3700e-003	7.6000e-004	8.1300e-003		105.8201	105.8201	7.0800e-003		105.9971
Worker	0.1199	0.0779	0.8802	2.7000e-003	0.2906	2.1400e-003	0.2928	0.0771	1.9700e-003	0.0790		269.2737	269.2737	7.2200e-003		269.4541
Total	**0.1316**	**0.4582**	**0.9815**	**3.6900e-003**	**0.3162**	**2.9300e-003**	**0.3192**	**0.0844**	**2.7300e-003**	**0.0872**		**375.0937**	**375.0937**	**0.0143**		**375.4511**

3.5 Paving - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.7739	7.7422	8.8569	0.0135		0.4153	0.4153		0.3830	0.3830		1,296.8664	1,296.8664	0.4111		1,307.1442
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.7739**	**7.7422**	**8.8569**	**0.0135**		**0.4153**	**0.4153**		**0.3830**	**0.3830**		**1,296.8664**	**1,296.8664**	**0.4111**		**1,307.1442**

3.5 Paving - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0600	0.0390	0.4401	1.3500e-003	0.1453	1.0700e-003	0.1464	0.0385	9.9000e-004	0.0395		134.6368	134.6368	3.6100e-003		134.7270
Total	**0.0600**	**0.0390**	**0.4401**	**1.3500e-003**	**0.1453**	**1.0700e-003**	**0.1464**	**0.0385**	**9.9000e-004**	**0.0395**		**134.6368**	**134.6368**	**3.6100e-003**		**134.7270**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.7739	7.7422	8.8569	0.0135		0.4153	0.4153		0.3830	0.3830	0.0000	1,296.8664	1,296.8664	0.4111		1,307.1442
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.7739**	**7.7422**	**8.8569**	**0.0135**		**0.4153**	**0.4153**		**0.3830**	**0.3830**	**0.0000**	**1,296.8664**	**1,296.8664**	**0.4111**		**1,307.1442**

3.5 Paving - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0600	0.0390	0.4401	1.3500e-003	0.1453	1.0700e-003	0.1464	0.0385	9.9000e-004	0.0395		134.6368	134.6368	3.6100e-003		134.7270
Total	**0.0600**	**0.0390**	**0.4401**	**1.3500e-003**	**0.1453**	**1.0700e-003**	**0.1464**	**0.0385**	**9.9000e-004**	**0.0395**		**134.6368**	**134.6368**	**3.6100e-003**		**134.7270**

3.6 Architectural Coating - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	39.7950					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2189	1.5268	1.8176	2.9700e-003		0.0941	0.0941		0.0941	0.0941		281.4481	281.4481	0.0193		281.9309
Total	**40.0139**	**1.5268**	**1.8176**	**2.9700e-003**		**0.0941**	**0.0941**		**0.0941**	**0.0941**		**281.4481**	**281.4481**	**0.0193**		**281.9309**

3.6 Architectural Coating - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0231	0.0150	0.1693	5.2000e-004	0.0559	4.1000e-004	0.0563	0.0148	3.8000e-004	0.0152		51.7834	51.7834	1.3900e-003		51.8181
Total	**0.0231**	**0.0150**	**0.1693**	**5.2000e-004**	**0.0559**	**4.1000e-004**	**0.0563**	**0.0148**	**3.8000e-004**	**0.0152**		**51.7834**	**51.7834**	**1.3900e-003**		**51.8181**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	39.7950					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2189	1.5268	1.8176	2.9700e-003		0.0941	0.0941		0.0941	0.0941	0.0000	281.4481	281.4481	0.0193		281.9309
Total	**40.0139**	**1.5268**	**1.8176**	**2.9700e-003**		**0.0941**	**0.0941**		**0.0941**	**0.0941**	**0.0000**	**281.4481**	**281.4481**	**0.0193**		**281.9309**

3.6 Architectural Coating - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0231	0.0150	0.1693	5.2000e-004	0.0559	4.1000e-004	0.0563	0.0148	3.8000e-004	0.0152		51.7834	51.7834	1.3900e-003		51.8181
Total	**0.0231**	**0.0150**	**0.1693**	**5.2000e-004**	**0.0559**	**4.1000e-004**	**0.0563**	**0.0148**	**3.8000e-004**	**0.0152**		**51.7834**	**51.7834**	**1.3900e-003**		**51.8181**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

Increase Density

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.4062	2.1781	4.9917	0.0188	1.6132	0.0153	1.6284	0.4316	0.0142	0.4459		1,914.9694	1,914.9694	0.0955		1,917.3571
Unmitigated	0.4358	2.3939	5.7255	0.0221	1.9148	0.0178	1.9326	0.5123	0.0166	0.5289		2,248.6809	2,248.6809	0.1091		2,251.4085

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Condo/Townhouse	263.52	263.52	263.52	900,488	758,661
Total	263.52	263.52	263.52	900,488	758,661

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Condo/Townhouse	14.70	5.90	8.70	40.20	19.20	40.60	86	11	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Condo/Townhouse	0.549559	0.042893	0.201564	0.118533	0.015569	0.005846	0.021394	0.034255	0.002099	0.001828	0.004855	0.000709	0.000896

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0183	0.1561	0.0664	1.0000e-003		0.0126	0.0126		0.0126	0.0126		199.3090	199.3090	3.8200e-003	3.6500e-003	200.4934
NaturalGas Unmitigated	0.0183	0.1561	0.0664	1.0000e-003		0.0126	0.0126		0.0126	0.0126		199.3090	199.3090	3.8200e-003	3.6500e-003	200.4934

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Condo/Townhouse	1694.13	0.0183	0.1561	0.0664	1.0000e-003		0.0126	0.0126		0.0126	0.0126		199.3090	199.3090	3.8200e-003	3.6500e-003	200.4934
Total		**0.0183**	**0.1561**	**0.0664**	**1.0000e-003**		**0.0126**	**0.0126**		**0.0126**	**0.0126**		**199.3090**	**199.3090**	**3.8200e-003**	**3.6500e-003**	**200.4934**

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Condo/Townhouse	1.69413	0.0183	0.1561	0.0664	1.0000e-003		0.0126	0.0126		0.0126	0.0126		199.3090	199.3090	3.8200e-003	3.6500e-003	200.4934
Total		**0.0183**	**0.1561**	**0.0664**	**1.0000e-003**		**0.0126**	**0.0126**		**0.0126**	**0.0126**		**199.3090**	**199.3090**	**3.8200e-003**	**3.6500e-003**	**200.4934**

6.0 Area Detail

6.1 Mitigation Measures Area

Use Low VOC Paint - Residential Interior

Use Low VOC Paint - Residential Exterior

No Hearths Installed

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	1.4581	0.0343	2.9732	1.6000e-004		0.0164	0.0164		0.0164	0.0164	0.0000	5.3479	5.3479	5.1600e-003	0.0000	5.4769
Unmitigated	1.4581	0.0343	2.9732	1.6000e-004		0.0164	0.0164		0.0164	0.0164	0.0000	5.3479	5.3479	5.1600e-003	0.0000	5.4769

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.1090					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	1.2592					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0898	0.0343	2.9732	1.6000e-004		0.0164	0.0164		0.0164	0.0164		5.3479	5.3479	5.1600e-003		5.4769
Total	**1.4581**	**0.0343**	**2.9732**	**1.6000e-004**		**0.0164**	**0.0164**		**0.0164**	**0.0164**	**0.0000**	**5.3479**	**5.3479**	**5.1600e-003**	**0.0000**	**5.4769**

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.1090					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	1.2592					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0898	0.0343	2.9732	1.6000e-004		0.0164	0.0164		0.0164	0.0164		5.3479	5.3479	5.1600e-003		5.4769
Total	**1.4581**	**0.0343**	**2.9732**	**1.6000e-004**		**0.0164**	**0.0164**		**0.0164**	**0.0164**	**0.0000**	**5.3479**	**5.3479**	**5.1600e-003**	**0.0000**	**5.4769**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Greenhouse Gas Emission Worksheet
Construction Emissions

675 E. Mission Blvd

Annual Mobile Emissions:

Project Total:	***324***	***metric tons CO2e***
Amortarized (30 years)	**10.79**	

References

CalEEMod Output

Greenhouse Gas Emission Worksheet

N20 Mobile Emissions

675 E. Mission Blvd

Annual VMT*: 758,661

From CalEEMod 2016 Vehicle Fleet Mix Output:

Vehicle Type	Percent Type	CH4 Emission Factor (g/mile)**	CH4 Emission (g/mile)***	N2O Emission Factor (g/mile)**	N2O Emission (g/mile)***
Light Auto	54.9%	0.04	0.02196	0.04	0.02196
Light Truck < 3750 lbs	4.3%	0.05	0.00215	0.06	0.00258
Light Truck 3751-5750 lbs	20.1%	0.05	0.01005	0.06	0.01206
Med Truck 5751-8500 lbs	11.9%	0.12	0.01428	0.2	0.0238
Lite-Heavy Truck 8501-10,000 lbs	1.6%	0.12	0.00192	0.2	0.0032
Lite-Heavy Truck 10,001-14,000 lbs	0.6%	0.09	0.00054	0.125	0.00075
Med-Heavy Truck 14,001-33,000 lbs	2.1%	0.06	0.00126	0.05	0.00105
Heavy-Heavy Truck 33,001-60,000 lbs	3.4%	0.06	0.00204	0.05	0.0017
Other Bus	0.2%	0.06	0.00012	0.05	0.0001
Urban Bus	0.2%	0.06	0.00012	0.05	0.0001
Motorcycle	0.5%	0.09	0.00045	0.01	0.00005
School Bus	0.1%	0.06	0.00006	0.05	0.00005
Motor Home	0.1%	0.09	0.00009	0.125	0.000125
Total	**100.0%**		**0.05504**		**0.067525**

Total Emissions (metric tons) =
Emission Factor by Vehicle Mix (g/mi) x Annual VMT(mi) x 0.000001 metric tons/g

Conversion to Carbon Dioxide Equivalency (CO2e) Units based on Global Warming Potential (GWP)***

CH4	25	GWP
N2O	298	GWP
1 ton (short, US) =	0.90718474	metric ton

Annual Mobile Emissions:

	Total Emissions		Total CO2e units	
N20 Emissions:	0.0512	metric tons N2O	**15.27**	metric tons CO2e
	Project Total:		***15.27 metric tons CO2e***	

References

* From CalEEMod 2016 results for mobile sources

** Table C.4: Methane and Nitrous Oxide Emission Factors for Mobile Sources by Vehicle and Fuel Type (g/mile).
in California Climate Action Registry General Reporting Protocol, Reporting Entity-Wide Greenhouse Gas Emissions, Version 3.1, January 2009.
Assume Model year 2000-present, gasoline fueled.

*** California Climate Action Registry General Reporting Protocol, Reporting Entity-Wide Greenhouse Gas Emissions, Version 3.1, January 2009.

**** Global warming potentials from IPCC Fourth Assessment Report