Appendix D

Transportation Impact Study

LINSCOTT LAW & GREENSPAN engineers

TRANSPORTATION IMPACT STUDY

LOS LIRIOS MIXED-USE PROJECT

City of Los Angeles, California
July 18, 2018

Prepared for:

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TRANSPORTATION IMPACT STUDY
LOS LIRIOS MIXED-USE PROJECT
City of Los Angeles, California
July 18, 2018

1.0 INTRODUCTION

This traffic analysis has been conducted to identify and evaluate the potential traffic impacts of the proposed Los Lirios Mixed-Use project ("proposed project" herein) on the surrounding street system. The proposed project site is located at 113, 119 and 121 South Soto Street, and 2316, 2322, and 2400 East 1st Street in the Boyle Heights Community Plan area of the City of Los Angeles, California. The proposed Los Lirios Mixed-Use project location and general vicinity are shown in ***Figure 1-1***.

1.1 Traffic Study Overview

The traffic analysis follows City of Los Angeles traffic study guidelines[1] and is consistent with traffic impact assessment guidelines set forth in the Los Angeles County Congestion Management Program[2]. This traffic analysis evaluates potential project-related impacts at five (5) key intersections in the vicinity of the project site. The study intersections were determined in consultation with City of Los Angeles Department of Transportation (LADOT) staff. The Critical Movement Analysis method was used to determine Volume-to-Capacity ratios and corresponding Levels of Service for all five study intersections. A review also was conducted of Los Angeles County Metropolitan Transportation Authority freeway and intersection monitoring stations to determine if a Congestion Management Program transportation impact assessment analysis is required for the proposed project. In addition, a screening analysis was also completed as it relates to the State of California Department of Transportation (Caltrans) highway system.

This study (i) presents existing traffic volumes, (ii) includes existing traffic volumes with the forecast traffic volumes from the proposed project, (iii) determines existing with project-related impacts, (iv) forecasts future cumulative baseline traffic volumes, (v) forecasts future traffic volumes with the proposed project, (vi) determines future forecast with project-related impacts, and (vii) recommends mitigation measures, where necessary.

1.2 Study Area

Upon coordination with LADOT staff, five (5) study intersections have been identified for evaluation during the weekday morning and afternoon peak hours. The five study locations provide local access to the study area and define the extent of the boundaries for this traffic impact analysis. Further discussion of the existing street system and study area is provided in Section 4.0.

[1] *Transportation Impact Study Guidelines*, City of Los Angeles Department of Transportation, December 2016.
[2] *2010 Congestion Management Program*, Los Angeles County Metropolitan Transportation Authority, October 2010.

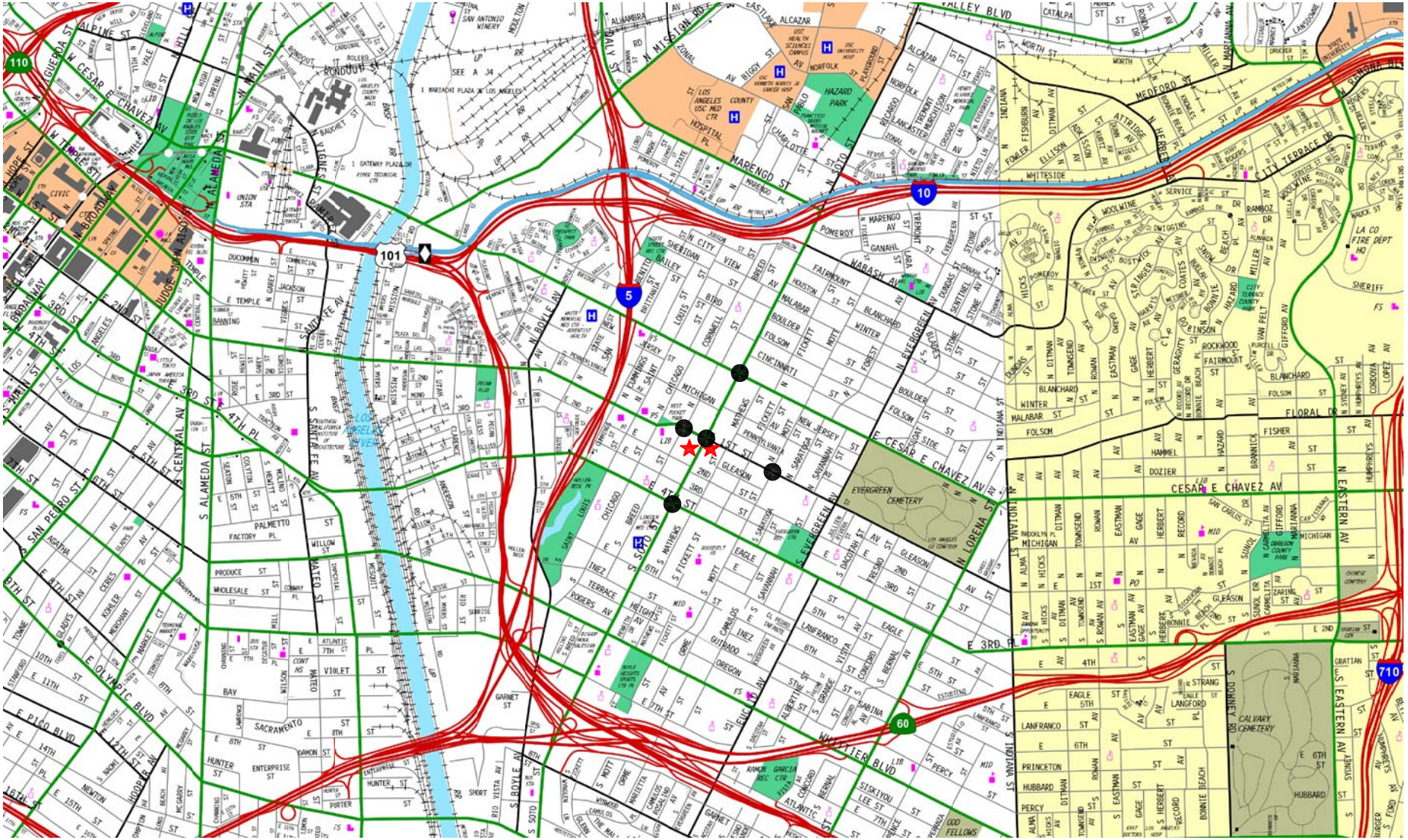

FIGURE 1-1
VICINITY MAP

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LOS LIRIOS MIXED-USE PROJECT

The general location of the project in relation to the study locations and surrounding street system is presented in *Figure 1-1*. The traffic analysis study area is generally comprised of those locations which have the greatest potential to experience significant traffic impacts due to the proposed project as defined by the Lead Agency. In the traffic engineering practice, the study area generally includes those intersections that are:

a. Immediately adjacent or in close proximity to the project site;

b. In the vicinity of the project site that are documented to have current or projected future adverse operational issues; and

c. In the vicinity of the project site that are forecast to experience a relatively greater percentage of project-related vehicular turning movements (e.g., at freeway ramp intersections).

The locations selected for analysis were based on the above criteria, proposed Los Lirios Mixed-Use project peak hour vehicle trip generation, the anticipated distribution of project vehicular trips, and existing intersection/corridor operations.

Following the "Freeway Impact Analysis Procedures" agreement between the State of California Department of Transportation (Caltrans) District 7 and LADOT executed in October 2013 and amended in December 2015, the traffic study Memorandum of Understanding (MOU) was subsequently updated to include a review of the screening filter to determine if a project would be required to prepare a freeway analysis in accordance with Caltrans requirements which are beyond the requirements established in the CMP. ***Appendix A*** includes the approved MOU as part of the formal traffic study scoping process with LADOT staff. As noted in the approved MOU, the amount of project-related traffic did not meet the criteria requiring a focused analysis of State facilities. Therefore, no further review of the Caltrans freeway system is required for the Los Lirios Mixed-Use project.

1.3 Overview of Senate Bill 743

On September 27, 2013, Governor Brown signed Senate Bill (SB) 743 (Steinberg, 2013). Among other things, SB 743 creates a process to change the methodology to analyze transportation impacts under CEQA (Public Resources Code section 21000 and following), which could include analysis based on project vehicle miles traveled (VMT) rather than impacts to intersection Level of Service. On December 30, 2013, the State of California Governor's Office of Planning and Research (OPR) released a preliminary evaluation of alternative methods of transportation analysis. The intent of the original guidance documentation was geared first towards projects located within areas that are designated as transit priority areas, to be followed by other areas of the State. OPR issued other draft discussion documents in March 2015 and January 2016, suggesting some new revisions to the State CEQA Guidelines. In November 2017, OPR submitted the proposed amendments to the CEQA Guidelines to the State's Natural Resources Agency (that include a proposed new Guidelines section 15064.3 which governs how VMT-based analyses of potential traffic impacts should be conducted).

On January 26, 2018, the Natural Resources Agency published a Notice of Rulemaking, commencing the formal rulemaking process for the amendments to the CEQA Guidelines. The Natural Resources Agency's rulemaking process will entail additional public review and comment and may lead to further revisions. OPR updated the technical advisory that accompanies the revised CEQA Guidelines in April 2018 suggesting some new revisions to the state CEQA Guidelines. OPR has therefore not issued any final revisions to the state CEQA Guidelines to implement the CEQA traffic analysis component of SB 743; thus, the analysis in this study utilizes existing, long-established protocols in accordance with CEQA, the existing state CEQA Guidelines, and the City's current significance thresholds.

2.0 PROJECT DESCRIPTION

The proposed project is located in the Boyle Heights Community Plan area of the City of Los Angeles, California. The proposed project includes two separate sites: Site A located at 119, 121, and 113 Soto Street and 2316 and 2322 East 1st Street and the adjacent Site B located at 2400 East 1st Street. Site A is bordered by the Metro Gold Line Soto Street station and 1st Street to the north, existing residential development to the south, Soto Street to the east and an alleyway to the west. The existing project Site A is comprised of six total parcels of vacant land and is located adjacent to the Metro Gold Line Soto Street station at 2330 East 1st Street.

The existing project Site B is bounded by 1st Street to the north, existing residential development to the south, an existing alleyway to the east, and Soto Street to the west. Site B is comprised of two lots, and is currently fenced and occupied by the historic Victorian house (i.e., Peabody Werden Duplex) which was previously relocated to this site in the year 2016. An aerial photograph of the existing project site is contained in ***Figure 2-1***.

2.1 Project Location[3]

Boyle Heights is situated at the eastern boundary of the City of Los Angeles and is surrounded by the City of Vernon to the south, the unincorporated community of East Los Angeles to the east, the communities of Lincoln Heights and El Sereno to the north, and the Los Angeles River and downtown to the west. The Boyle Heights Community Plan area contains 3,807 acres or roughly six square miles. It contains a mix of residential, commercial, industrial, open space and public facility land.

The topography of Boyle Heights is generally flat and the street grid system is oriented for east-west travel. The major east-west arterials are Marengo Avenue, Cesar Chavez Avenue, 1st Street, 4th Street, Whittier Boulevard, Olympic Boulevard and Washington Boulevard. These streets provide through regional access from downtown to the outlying communities beyond East Los Angeles such as Monterey Park, Whittier, Montebello and Santa Fe Springs. The major north-south arterials are Soto Street, Lorena Street and Indiana Street. Evergreen Avenue also provides north-south access but is narrow at the southern portion of Boyle Heights and ends at the northern border of the Community Plan area.

2.2 Proposed Project Description

The project applicant, in partnership with the Los Angeles County Metropolitan Transportation Authority (Metro), seeks to obtain entitlements to construct a mixed-use project with affordable housing apartments and ground floor local community serving retail/restaurant land use components on Site A. The 66 total residential units are expected to comprise of 14 studio units, 19 one-bedroom units, 16 two-bedroom units, and 17 three-bedroom units, all of which are planned to be affordable housing units. Site A will also include an approximate 1,490 square-foot community room as well

[3] Source: *Boyle Heights Community Plan*; A Part of the General Plan-City of Los Angeles; www.lacity.org/PLN (General Plans).

NOT TO SCALE

PROJECT SITES

EXISTING DRIVEWAY

FIGURE 2-1
AERIAL PHOTOGRAPH OF EXISTING PROJECT SITE

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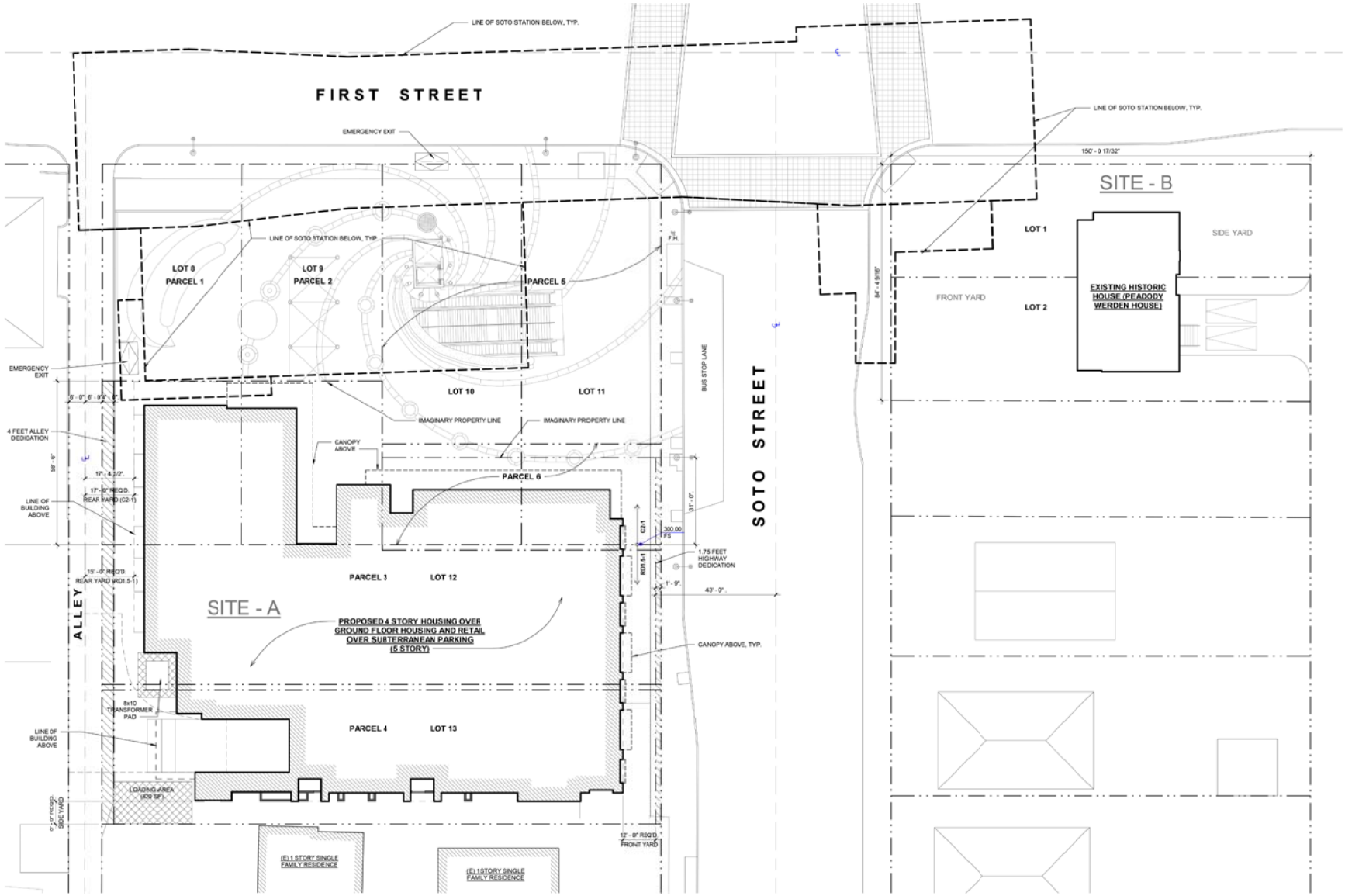
as other amenities provided for the residents including office space, computer/conference room, laundry room, and a landscaped private internal courtyard. Up to 5,000 square feet of local community serving retail/restaurant uses are also planned as part of the project and will predominantly front Soto Street. Site B will primarily consist of the restoration and rehabilitation of the historic Peabody Werden Duplex with landscaping enhancements. As of the preparation of this traffic analysis, the project description for Site B is not yet defined. As such, the traffic analysis contained herein evaluates the potential traffic impacts associated with Site A development only. Should the project description for Site B be determined and is intensified, additional traffic analyses may be required. Construction of the proposed project is expected to commence in year 2020 with occupancy in the year 2021. The site plan for the proposed project is illustrated in ***Figure 2-2***.

Vehicular access to the proposed project (Site A) will be provided via one driveway located on the alleyway along the west side of the building, which will accommodate access to the subterranean parking spaces for the residential and commercial parking. Further discussion of the project's site access and circulation scheme is provided in Section 3.0.

2.3 Roadway Dedication and Widening

The project site (Site A) is adjacent to Soto Street and the alley. Provisions in the Municipal Code require the City to consider half-street dedications and improvements for roadways adjacent to development sites in accordance with adopted standards in the City's General Plan Mobility Element. Soto Street is identified as an Avenue II in the Mobility Element. The standard cross-section for an Avenue II is a 56-foot roadway on an 86-foot right-of-way (or a 28-foot half roadway on a 43-foot half right-of-way as measured from the centerline). The alleyway is identified as an Access Roadway in the Mobility Element. The standard cross-section for an Access Roadway is a 20-foot right-of-way (or 10-foot half right of-way as measured from the centerline).

Review of site plan for Soto Street show an existing half roadway width of 28 feet and a half right-of-way width of 41.25 feet. The City could ultimately require roadway dedication of 1.75 feet adjacent to the project site to comply with the Avenue II half-street standard (i.e., 28-foot half roadway on a 43-foot half right-of-way). Review of the site plan for the alleyway show an existing half right-of-way width of 6 feet. The City could require a roadway dedication of four feet adjacent to the project site to comply with the Access Roadway half-street standard.



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MAP SOURCE: GONZALEZ GOODALE ARCHITECTS

FIGURE 2-2
SITE PLAN

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3.0 SITE ACCESS AND CIRCULATION

The proposed site access and circulation scheme for the project is displayed in *Figure 2-2*. Descriptions of the existing and proposed site access and circulation schemes are provided in the following subsections.

3.1 Vehicular Site Access

3.1.1 *Existing Site Vehicular Access*

As shown in *Figure 2-1*, the existing project Site A currently accommodates vehicular access via an existing driveway on the west side of Soto Street at the southeast corner of the site. No access is currently provided via the existing alleyway adjacent to the site. For Site B, one driveway curb cut is located on the south side of 1st Street along the property frontage.

3.1.2 *Proposed Project Vehicular Site Access*

The planned site access scheme for the Los Lirios Mixed-Use project is displayed in *Figure 2-2*. Direct vehicular access to the proposed Site A project will be provided by a driveway accessed via the existing alleyway. No direct access is provided via Soto Street or 1st Street adjacent to Site A. A description of the planned Site A access point is provided in the following paragraph.

- *Project Driveway*

  The project driveway will be located on the east side of the alleyway along the westerly property frontage, at the southwest corner of the project site. The project driveway will accommodate left-turn and right-turn vehicular ingress and egress turning movements. The project site driveway has been located to provide direct access to and from the subterranean parking level. The project site driveway will be constructed to City of Los Angeles design standards.

3.2 Pedestrian Access

As noted previously, the Los Lirios Mixed-Use project is located within the Boyle Heights Community Plan area of the City of Los Angeles. Based on the existing high level of pedestrian activity in the area due to the proximity of the Metro Gold Line Soto Street station and the Soto Street corridor, it is anticipated that significant pedestrian patronage of the proposed project commercial land use components will occur.

The project is well located to encourage pedestrian activity and walking as a transportation mode.[4] As indicated in *Figure 2-2*, the proposed project is being designed to provide connections to the adjacent public sidewalks and would include site enhancements to promote walkability. Walkability is a term for the extent to which walking is readily available as a safe, connected, accessible and pleasant mode of transport. There are several criteria that are widely accepted as key aspects of the walkability of urban areas that should be satisfied. The underlying principle is that pedestrians should not be delayed, diverted, or placed in danger. The widely accepted characteristics of walkability are as follows:

- Connectivity: People can walk from one place to another without encountering major obstacles, obstructions, or loss of connectivity.

- Convivial: Pedestrian routes are friendly and attractive, and are perceived as such by pedestrians.

- Conspicuous: Suitable levels of lighting, visibility and surveillance over its entire length, with high quality delineation and signage.

- Comfortable: High quality and well-maintained footpaths of suitable widths, attractive landscaping and architecture, shelter and rest spaces, and a suitable allocation of roadspace to pedestrians.

- Convenient: Walking is a realistic travel choice, partly because of the impact of the other criteria set forth above, but also because walking routes are of a suitable length as a result of land use planning with minimal delays.

A review of the project site location and pedestrian walkway network indicates that these five primary characteristics are accommodated as part of the proposed project. The project site is accessible from nearby public bus and rail transit stops as well as other amenities along nearby major corridors. The majority of pedestrian access to the project site is envisioned to occur via the existing public sidewalks provided along every street in the project study area. The project site is accessible to the retail, restaurant, and other commercial businesses located along the Soto Street, Cesar Chavez Avenue, 1st Street and 4th Street corridors for project employees and residents. In addition, the site's internal pedestrian walkways and adjacent sidewalks will be appropriately landscaped and adorned to provide a friendly walking environment.

[4] For example, refer to http://www.walkscore.com/, which generates a walkability score of approximately 92 (Walker's Paradise) out of 100 for the project site. Walk Score calculates the walkability of an address by locating nearby stores, restaurants, schools, parks, etc. Walk Score measures how easy it is to live a car-lite lifestyle—not how pretty the area is for walking.

3.3 Bicycle Access

Bicycle access to the project site is facilitated by the City of Los Angeles bicycle roadway network.[5] Existing or proposed bicycle facilities (e.g., Class I Bicycle Path, Class II Bicycle Lanes, Class III Bicycle Routes, Proposed Bicycle Routes, Bicycle Friendly Streets, etc.) in the City's 2010 Bicycle Plan are located within an approximate one-mile radius from the project site.[6] It is important to note that the 2010 Bicycle Plan goals and policies have been folded into the Mobility 2035 Plan to reflect a commitment to a balanced, multi-modal viewpoint. The location of designated bikeways in close proximity to the project site and in the surrounding area is shown in ***Figure 3-1***. The proposed Citywide Bikeway System in close proximity to the project site and in the surrounding area is illustrated in ***Figure 3-2***. It is noted that the project site is situated in a fairly flat area near downtown Los Angeles. Bicycling as a transportation mode can be accommodated especially when used in combination with transit opportunities in the project site area.

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

Use of bicycles as a transportation mode to and from the project site should be encouraged by the provision of ample and safe parking. The type of spaces and dimensions will be provided based on City Code requirements (refer to Los Angeles Municipal Code Sections 12.21.A.16 and 12.21 A.4(c)), as well as to meet the needs of a variety of bicycles. In accordance with the Municipal Code, the following long-term and short-term bicycle parking requirements applicable to the proposed project are as follows:

- Residential Use (1-25 units): One (1.0) long-term bicycle parking space per each dwelling unit/guestroom.
  One (1.0) short-term bicycle parking space per 10 dwelling units/guestrooms.

- Residential Use (26-100 units): One (1.0) long-term bicycle parking space per each 1.5 dwelling unit/guestroom.
  One (1.0) short-term bicycle parking space per 15 dwelling units/guestrooms.

[5] Walk Score also calculates a bike score based on the topography, number and proximity of bike lanes, etc., near the project site. For example, refer to http://www.walkscore.com/, which generates a bike score of approximately 72 (Very Bikeable) out of 100 for the project site. Walk Score calculates the bike score of an address by locating nearby bicycling facilities as well as connections to bus/rail transit routes and stops. Walk Score measures how easy it is to live a car-lite lifestyle-not how pretty the area is for bicycling.
[6] Source: City of Los Angeles Bicycle Parking Plan; www.labikeplan.org.

NOT TO SCALE

MAP SOURCE: CITY OF LOS ANGELES MOBILITY PLAN 2035

★ PROJECT SITES

FIGURE 3-1
CITY OF LOS ANGELES BICYCLE ENHANCED NETWORK (LOW STRESS NETWORK)

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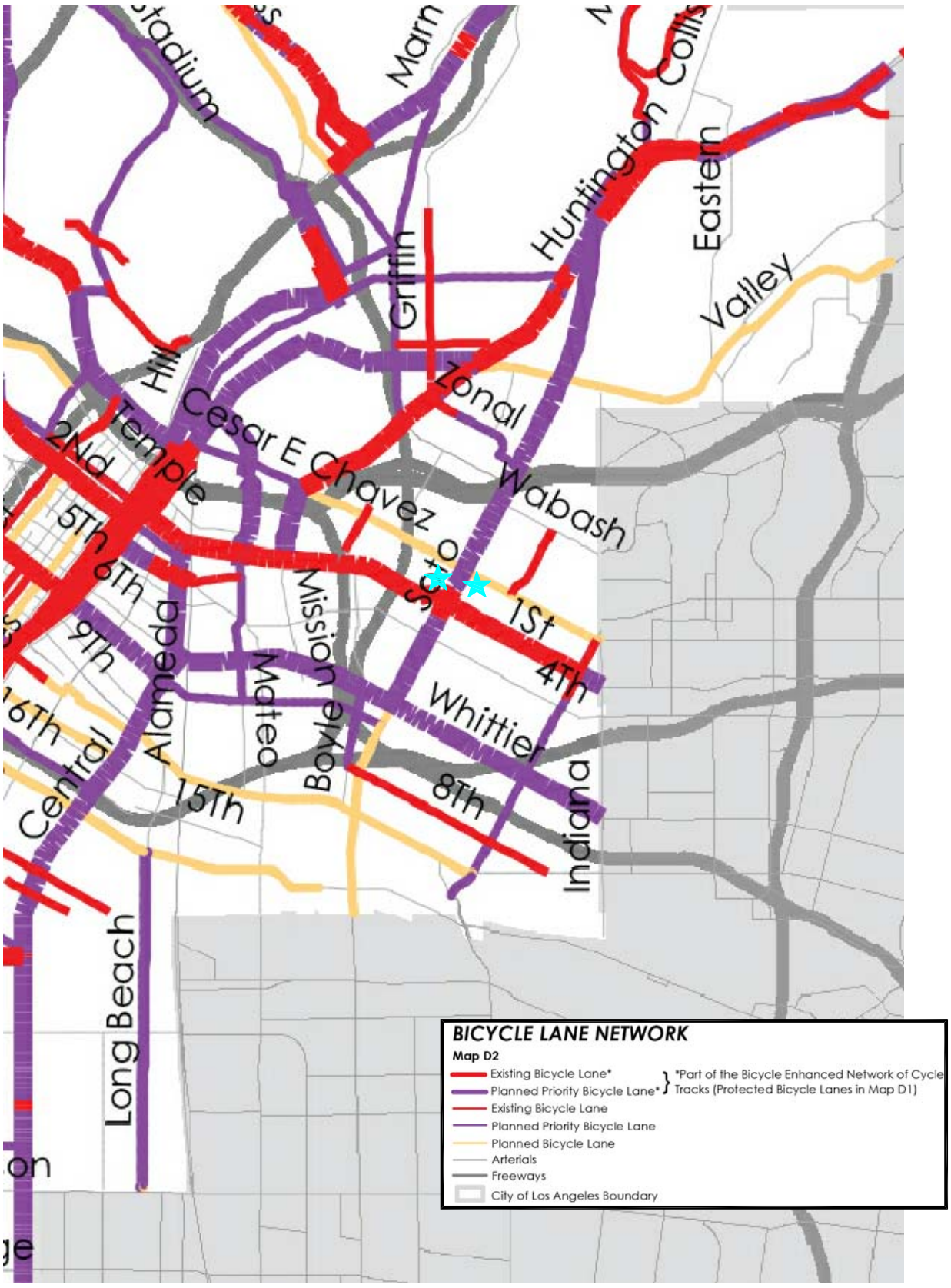

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MAP SOURCE: CITY OF LOS ANGELES MOBILITY PLAN 2035

PROJECT SITES

FIGURE 3-2
CITY OF LOS ANGELES
PROPOSED BICYCLE LANE NETWORK

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- Commercial Use: One (1.0) long-term bicycle parking space per 2,000 square feet.
  One (1.0) short-term bicycle parking space per 2,000 square feet.

Through application of the Municipal Code regulations, the following bicycle parking requirement would be calculated for the proposed project:

- Residential Use: 25 DU x 1.0 space/DU = 25 long-term bicycle spaces
  25 DU x 1.0 space/10 DU = 3 short-term bicycle spaces
  41 DU x 1.0 space/1.5 DU = 27 long-term bicycle spaces
  41 DU x 1.0 space/15 DU = 3 short-term bicycle spaces

- Commercial Use: 5,000 GSF x 1.0 space/2,000 GSF = 3 long-term bicycle spaces
  5,000 GSF x 1.0 space/2,000 GSF = 3 short-term bicycle spaces

Based on the above calculations, the Code bicycle parking requirement for the proposed project totals 55 long-term bicycle spaces and 9 short-term bicycle spaces. The proposed Los Lirios Mixed-Use project is planned to provide 70 long-term bicycle spaces and 10 short-term bicycle spaces which satisfies the Code bicycle parking requirement. The bicycle spaces should be provided in a readily accessible location(s). The selected location(s) will encourage use and maintain visibility for personal safety and theft protection. Appropriate lighting will be provided to increase safety and provide theft protection during night-time parking.

4.0 EXISTING STREET SYSTEM

4.1 Local Street System

Immediate access to the Los Lirios Mixed-Use project and associated parking facility will be provided via the proposed driveway located on the east side of the alleyway along the westerly property frontage which can be accessed from 1st Street. The following five (5) study intersections were selected for analysis in consultation with LADOT staff in order to determine potential impacts related to the proposed project:

1. Breed Street/1st Street
2. Soto Street/Cesar E. Chavez Avenue
3. Soto Street/1st Street
4. Soto Street/4th Street
5. Mott Street/1st Street

The study intersections selected for analysis in the traffic study also are noted in *Figure 1-1*. All of the existing study intersections are presently controlled by traffic signals. The existing roadway configurations and intersection controls at the study intersections are displayed in ***Figure 4-1***.

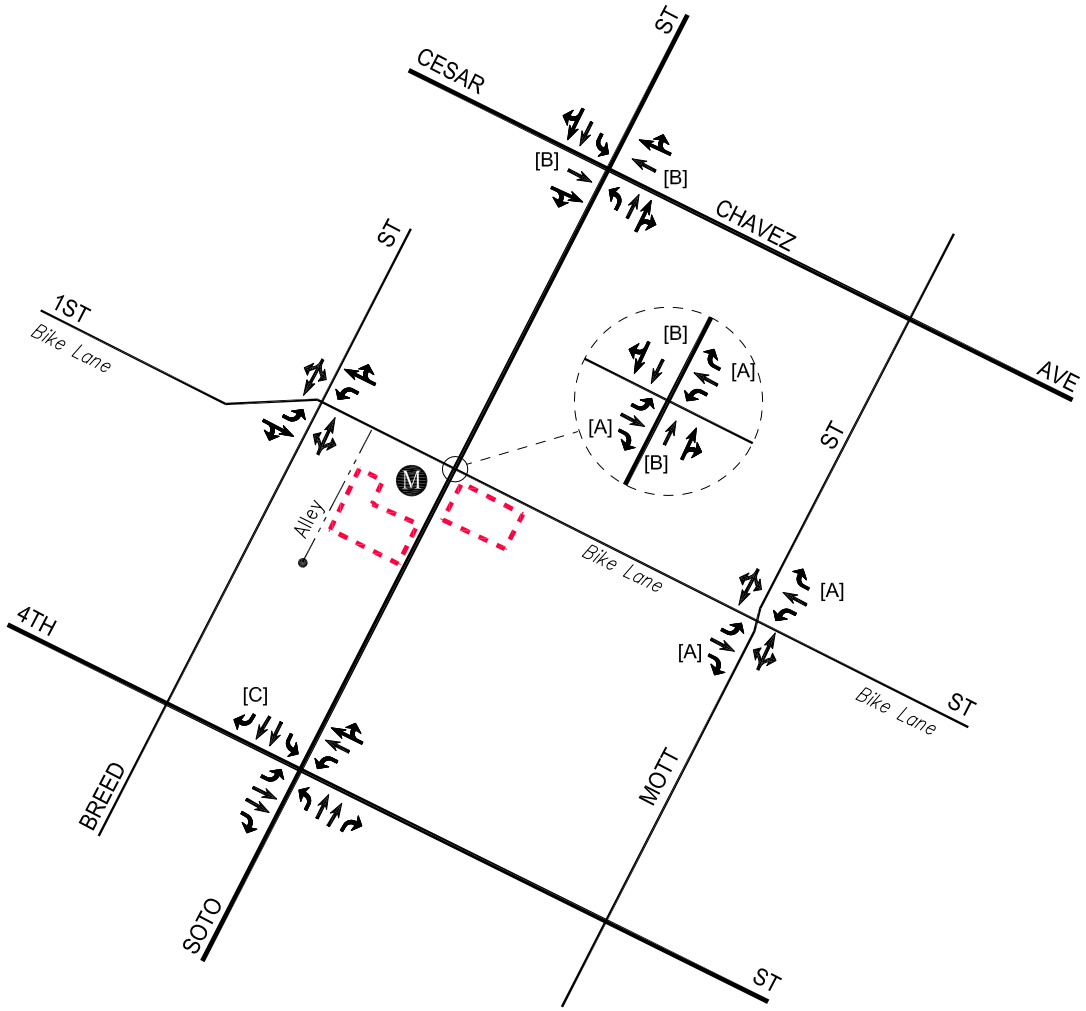
4.2 Roadway Classifications

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

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

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

- *Collector* roadways are streets that provide access and traffic circulation within residential and non-residential (e.g., commercial and industrial) areas. Collector roadways connect local streets to arterials and are typically designed with two through travel lanes (i.e., one through travel lane



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NOT TO SCALE

[A] DE-FACTO LANE

[B] NO LEFT-TURNS 7-9 AM/4-6 PM
LEFT-TURNS ALLOWED DURING OFF PEAK HOURS

[C] OVERLAP PHASE

FIGURE 4-1
EXISTING LANE CONFIGURATIONS

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in each direction) that may accommodate on-street parking. They may also provide access to abutting properties.

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

4.3 Roadway Descriptions

A review of the important roadways in the project site vicinity and study area is summarized in ***Table 4-1***. As indicated in *Table 4-1*, the important roadways within the project study area were reviewed in terms of the number of lanes provided, median types, and posted speed limits, etc. Additionally, the roadway classifications of key roads in the project study area also are presented in *Table 4-1*.

4.4 Existing Transit Services[7]

Extensive public bus and rail transit service is provided within the Los Lirios Mixed-Use project study area. Public bus transit service is currently provided by Los Angeles County Metropolitan Transit Authority (Metro) and Montebello Transit Service. The Metro Gold Line light rail line is located in close proximity to the project site with the nearest station at Soto Street immediately adjacent to the site. A summary of the existing transit service, including the transit route, destinations and peak hour headways is presented in ***Table 4-2***. The existing public transit routes in the Los Lirios Mixed-Use project site vicinity are illustrated in ***Figure 4-2***.

[7] Walk Score also calculates a transit score based on the number and proximity of bus and rail routes near the project site. For example, refer to http://www.walkscore.com/, which generates a transit score of approximately 67 (Good Transit) out of 100 for the project site. Walk Score calculates the transit score of an address by locating nearby bus/rail transit routes and stops. Walk Score measures how easy it is to live a car-lite lifestyle—not how pretty the area is for using transit service.

Table 4-1
EXISTING ROADWAY DESCRIPTIONS

Roadway	Classification [1]	Travel Lanes		Median Types [4]	Speed Limit
		Direction [2]	No. Lanes [3]		
Breed Street	Local Street	N-S	2 [5]	N/A	25
Soto Street (Wabash Ave. to 60 Fwy.)	Avenue II	N-S	4	N/A	35
Mott Street (Wabash Ave. to Whittier Blvd.)	Collector Street	N-S	2 [5]	N/A	25
Cesar E Chavez Avenue (St. Louis St. to Mott St.) (Mott St. to Lorena St.)	Avenue II (Modified) Avenue II	E-W E-W	4 4	N/A N/A	30 30
1st Street	Avenue II	E-W	2 [6]	NA/2WLT	30
4th Street	Avenue II	E-W	4	N/A	35

Notes:
[1] Roadway classifications obtained from the City of Los Angeles General Plan, September 2016.
[2] Direction of roadways in the project area: N/S - North/South; and E/W - East/West.
[3] Number of lanes in both directions of the roadway.
[4] Median type of the road: RMI - Raised Median Island; 2WLT - 2-Way Left-Turn Lane; and N/A-Not Applicable.
[5] Bike Route (Class III)
[6] Bike Lane (Class II)

Table 4-2
EXISTING TRANSIT ROUTES [1]

ROUTE	DESTINATIONS	ROADWAY(S) NEAR SITE	NO. OF BUSES/TRAINS DURING PEAK HOUR		
			DIR	AM	PM
Metro 30/330	West Hollywood to East Los Angeles via Beverly Hills, Los Angeles and Downtown Los Angeles	Soto Street, Mott Street, 1st Street	EB WB	3 2	2 3
Metro 68	Los Angeles to Montebello via East Los Angeles and Monterey Park	Soto Street, Cesar E Chavez Avenue	EB WB	4 4	4 4
Metro 106	East Los Angeles to Boyle Heights	Soto Street, 4th Street	EB WB	1 1	2 2
Metro 251	Cypress Park to Lynwood via Lincoln Heights, Boyle Heights, Huntington Park and South Gate	Soto Street, Cesar E Chavez Avenue, 1st Street, 4th Street	NB SB	4 3	5 5
Metro 252	Boyle Heights to Montecito Heights via Lincoln Heights and El Sereno	Soto Street, Cesar E Chavez Avenue, 1st Street, 4th Street	NB SB	3 3	3 3
Metro 605	Boyle Heights	Soto Street, Cesar E Chavez Avenue, 1st Street, 4th Street	NB SB	4 4	4 4
Metro 751	Huntington Park to Cypress Park via Boyle Heights and Lincoln Heights	Soto Street, Cesar E Chavez Avenue, 1st Street, 4th Street	NB SB	4 5	4 4
Metro 770	El Monte to Downtown Los Angeles via South El Monte, Monterey Park and East Los Angeles	Soto Street, Cesar E Chavez Avenue	EB WB	4 5	6 5

[1] Sources: Los Angeles County Metropolitan Transportation Authority (Metro) and City of Montebello Bus Lines websites, 2018.

Table 4-2 (Continued)
EXISTING TRANSIT ROUTES [1]

ROUTE	DESTINATIONS	ROADWAY(S) NEAR SITE	NO. OF BUSES/TRAINS DURING PEAK HOUR		
			DIR	AM	PM
Metro Gold Line	East Los Angeles to Azusa via Los Angeles, Highland Park, South Pasadena, Pasadena, Arcadia, Monrovia, Duarte and Irwindale	Soto Street, 1st Street	EB WB	8 8	8 8
Montebello Line 40	Whittier to Downtown Los Angeles via Montebello, East Los Angeles and Boyle Heights	Soto Street, 4th Street	EB WB	6 5	5 5
			Total	**81**	**86**

[1] Sources: Los Angeles County Metropolitan Transportation Authority (Metro) and City of Montebello Bus Lines websites, 2018.

MAP SOURCE: METROPOLITAN TRANSPORTATION AUTHORITY (METRO) WEBSITE

★ PROJECT SITES

N

NOT TO SCALE

FIGURE 4-2
EXISTING PUBLIC TRANSIT ROUTES

LINSCOTT, LAW & GREENSPAN, engineers

LOS LIRIOS MIXED-USE PROJECT

5.0 TRAFFIC COUNTS

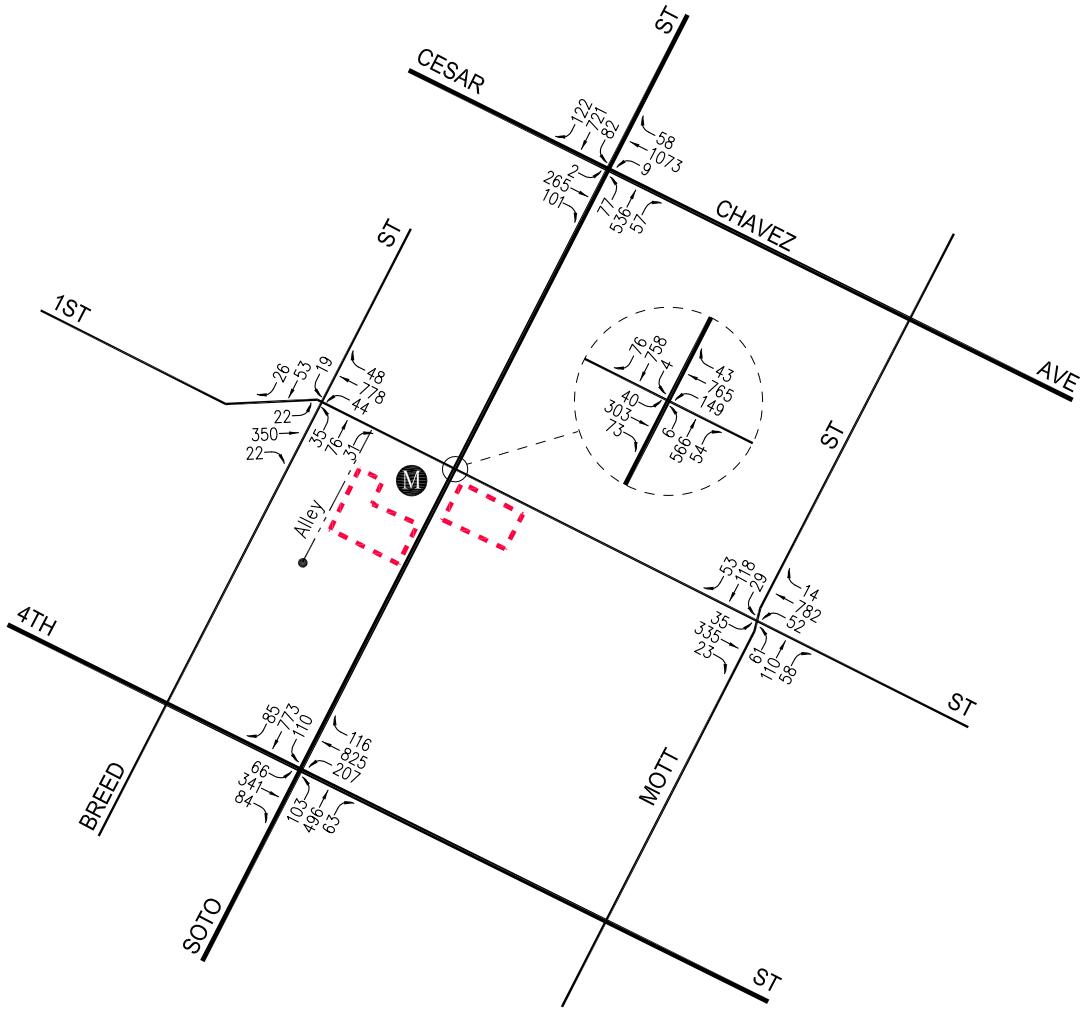
Manual counts of vehicular turning movements were conducted at each of the five study intersections during the weekday morning (AM) and afternoon (PM) commute periods to determine the peak hour traffic volumes. The manual counts were conducted by an independent traffic count subconsultant (NDS Services) at the five study intersections from 7:00 to 10:00 AM to determine the weekday AM peak commute hour and from 3:00 to 6:00 PM to determine the weekday PM peak commute hour. In conjunction with the manual turning movement vehicle counts, a count of bicycle and pedestrian volumes were also collected during the peak periods. It is noted that all of the traffic counts were conducted when local schools were in session. Traffic volumes at the study intersections show the typical peak periods between 7:00 to 10:00 AM and 3:00 to 6:00 PM generally associated with metropolitan Los Angeles weekday peak commute hours.

The weekday AM and PM peak hour manual counts of vehicle movements at the study intersections are summarized in ***Table 5-1***. The existing traffic volumes at the study intersections during the weekday AM and PM peak hours are shown in ***Figures 5-1*** and ***5-2***, respectively. Summary data worksheets of the manual traffic counts at the study intersections are contained in ***Appendix B***.

Table 5-1
EXISTING TRAFFIC VOLUMES [1]
WEEKDAY AM AND PM PEAK HOURS

NO.	INTERSECTION	DATE	DIR	AM PEAK HOUR		PM PEAK HOUR	
				BEGAN	VOLUME	BEGAN	VOLUME
1	Breed Street/ 1st Street	05/24/2018	NB SB EB WB	7:15	142 98 394 870	5:00	136 91 695 517
2	Soto Street/ Cesar E. Chavez Avenue	05/24/2018	NB SB EB WB	7:00	670 925 368 1,140	5:00	1,029 735 821 623
3	Soto Street/ 1st Street	05/24/2018	NB SB EB WB	7:15	626 838 416 957	5:00	1,062 608 701 537
4	Soto Street/ 4th Street	05/24/2018	NB SB EB WB	7:15	662 968 491 1,148	5:00	1,101 651 1,155 583
5	Mott Street/ 1st Street	05/24/2018	NB SB EB WB	7:15	229 200 393 848	5:00	264 143 679 454

[1] Counts conducted by National Data & Surveying Services



NOT TO SCALE

PROJECT SITES

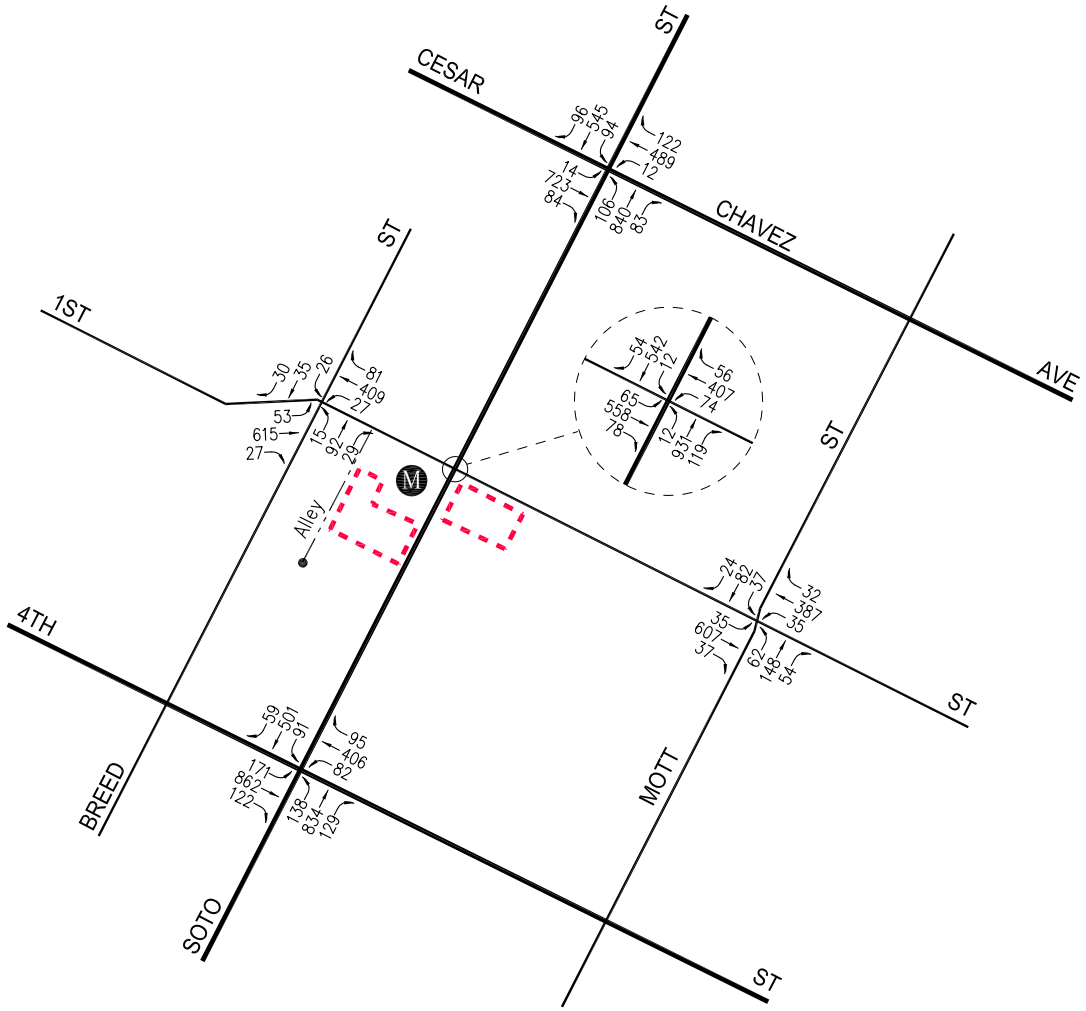
METRO GOLD LINE STATION

LINSCOTT, LAW & GREENSPAN, engineers

FIGURE 5-1
EXISTING TRAFFIC VOLUMES

WEEKDAY AM PEAK HOUR

LOS LIRIOS MIXED-USE PROJECT



NOT TO SCALE

PROJECT SITES

METRO GOLD LINE STATION

FIGURE 5-2
EXISTING TRAFFIC VOLUMES

WEEKDAY PM PEAK HOUR

LOS LIRIOS MIXED-USE PROJECT

LINSCOTT, LAW & GREENSPAN, engineers

6.0 CUMULATIVE DEVELOPMENT PROJECTS

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

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

Accordingly, the traffic analysis provides a highly conservative estimate of future pre-project traffic volumes as it incorporates both the "A" and "B" options outlined in the CEQA Guidelines for purposes of developing the forecast.

6.1 Related Projects

A forecast of on-street traffic conditions prior to occupancy of the proposed project was prepared by incorporating the potential trips associated with other known development projects (related projects) in the area. With this information, the potential impact of the proposed project can be evaluated within the context of the cumulative impact of all ongoing development. The related projects research was based on information on file at the City of Los Angeles Departments of Transportation and Planning. The list of related projects in the project site area is presented in ***Table 6-1***. The location of the related projects is shown in ***Figure 6-1***.

Traffic volumes expected to be generated by the related projects were calculated using rates provided in the Institute of Transportation Engineers' (ITE) *Trip Generation Manual*[8] and trip data as provided by LADOT. The related projects' respective traffic generation for the weekday AM and PM peak hours, as well as on a daily basis for a typical weekday, is summarized in *Table 6-1*. The distribution of the related projects traffic volumes to the study intersections during the weekday AM and PM peak hours are displayed in ***Figures 6-2*** and ***6-3***, respectively.

[8] Institute of Transportation Engineers, *Trip Generation Manual*, 9th Edition, 2012, Washington, D.C.

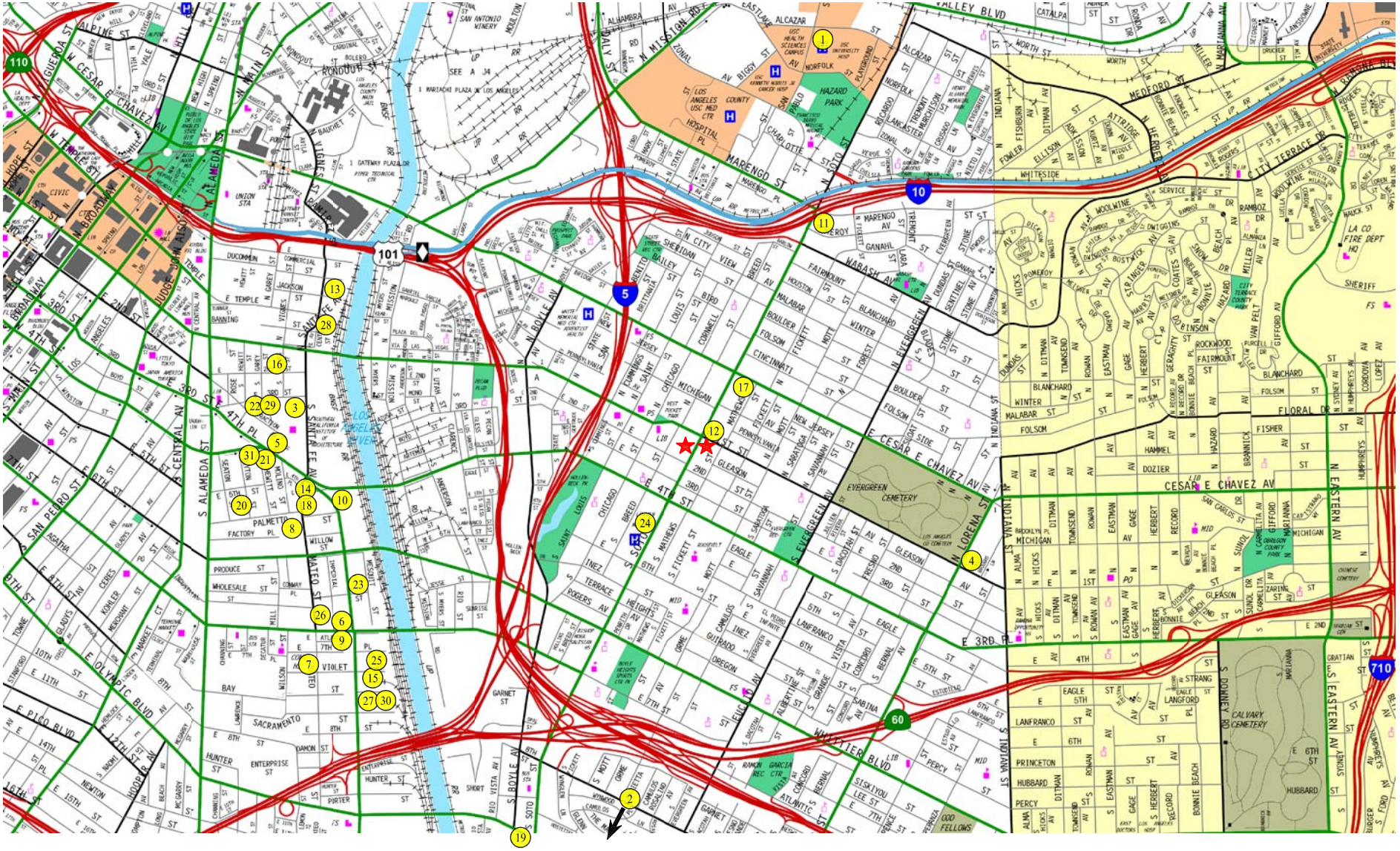
Table-6-1
RELATED PROJECTS LIST AND TRIP GENERATION [1]

MAP NO.	PROJECT STATUS	PROJECT NAME/NUMBER ADDRESS/LOCATION	LAND USE DATA		PROJECT DATA SOURCE	DAILY TRIP ENDS [2] VOLUMES	AM PEAK HOUR VOLUMES [2]			PM PEAK HOUR VOLUMES [2]		
			LAND-USE	SIZE			IN	OUT	TOTAL	IN	OUT	TOTAL
1	Proposed	USC Health Science Campus 1510 N. San Pablo Street	Medical Office Research & Development	120,000 GSF 465,000 GSF	[1]	7,715	613	140	753	161	613	774
2	Proposed	Boyle Heights MU Specific Plan 2901 E. Olympic Boulevard	Apartment Retail Office Medical Office Daycare Center Library	4,400 DU 185,000 GLSF 125,000 GSF 25,000 GSF 15,000 GSF 15,000 GSF	[1]	19,382	463	1,044	1,507	1,123	804	1,927
3	Proposed	Santa Fe Freight Yard Redevelopment 950 East 3rd Street	Apartment Retail/Restaurant School	635 DU 30,062 GLSF 532 Students	[1]	6,372	162	177	339	245	213	458
4	Proposed	Lorena Plaza Mixed-Use 3401 E. 1st Street	Apartment Retail	49 DU 10,000 GLSF	[1]	458	6	18	24	25	17	42
5	Proposed	Coca Cola Mixed-Use 963 E. 4th Street	Office Retail Restaurant	78,600 GSF 25,000 GLSF 20,000 GSF	[1]	2,512	106	22	128	113	138	251
6	Proposed	2051 E. 7th Street	Apartment Restaurant Retail	320 DU 5,000 GSF 15,000 GLSF	[1]	2,310	17	127	144	145	64	209
7	Proposed	826 S. Mateo Street	Condominium Retail Restaurant	90 DU 11,000 GLSF 5,600 GSF	[1]	1,267	11	34	45	62	39	101
8	Proposed	555 S. Mateo Street	Retail	153,000 GLSF	[1]	4,300	5	30	35	220	205	425
9	Proposed	2030 E. 7th Street	Office Retail	243,583 GSF 40,000 GLSF	[1]	2,306	274	34	308	69	249	318
10	Proposed	540 S. Santa Fe Avenue	Office	89,825 GSF	[1]	726	90	12	102	17	81	98
11	Proposed	1030 N. Soto Street	Hotel	81 Rooms	[1]	662	25	18	43	25	23	48
12	Proposed	2407 E. 1st Street	Apartment Retail	81 DU 5,000 GLSF	[1]	450	2	18	20	22	14	36
13	Proposed	Metro Emergency Security Operations Center 410 N. Center Street	Office	110,000 GSF	[1]	1,165	87	0	87	0	79	79
14	Proposed	500 S. Mateo Street	Restaurant	12,882 GSF	[1]	1,052	48	41	89	50	31	81
15	Proposed	2130 E. Violet Street	Office Retail	94,000 GSF 7,500 GLSF	[1]	1,351	137	30	167	39	122	161
16	Proposed	929 E. 2nd Street	Retail Other	37,974 GLSF 71,078 GSF	[1]	2,153	68	12	80	105	96	201
17	Proposed	La Veranda Mixed-Use 2420 E. Cesar Chavez Avenue	Apartment Bank Health Club	77 DU 4,000 GSF 4,000 GSF	[1]	1,087	25	36	61	54	44	98
18	Proposed	520 S. Mateo Street CPC-2016-3853	Apartment Office	600 DU 30,000 GSF	[1]	4,995	157	220	377	274	223	497

Table-6-1 (Continued)
RELATED PROJECTS LIST AND TRIP GENERATION [1]

MAP NO.	PROJECT STATUS	PROJECT NAME/NUMBER ADDRESS/LOCATION	LAND USE DATA		PROJECT DATA SOURCE	DAILY TRIP ENDS [2] VOLUMES	AM PEAK HOUR VOLUMES [2]			PM PEAK HOUR VOLUMES [2]		
			LAND-USE	SIZE			IN	OUT	TOTAL	IN	OUT	TOTAL
18			Retail Restaurant	15,000 GLSF 15,000 GSF								
19	Proposed	2650 E. Olympic Boulevard	Apartment Office Supermarket High-Turnover Restaurant Drinking Place Retail Coffee Shop Bank	1,030 DU 219,258 GSF 31,285 GSF 26,070 GSF 15,642 GSF 15,642 GLSF 2,607 GSF 2,607 GSF	[1]	12,247	498	447	945	599	539	1,138
20	Proposed	527 S. Colyton Street ENV-2016-3400-EIR	Apartment Retail Office	310 DU 11,375 GLSF 11,736 GSF	[1]	2,095	36	116	152	121	74	195
21	Proposed	940 E. 4th Street ENV-2017-611-EAF	Apartment Retail Office	93 DU 14,248 GLSF 6,000 GSF	[1]	788	14	37	51	44	31	75
22	Proposed	806 E. 3rd Street	Restaurant	18,327 GSF	[1]	253	1	(1)	0	13	7	20
23	Proposed	640 S. Santa Fe Avenue	Office Retail Restaurant	91,185 GSF 9,430 GLSF 6,550 GSF	[1]	1,330	90	8	98	43	114	157
24	Proposed	443 S. Soto Street	Elementary School	625 Students	[1]	277	131	112	243	32	25	57
25	Proposed	2143 E. Violet Street	Apartment Office Retail	320 DU 224,292 GSF 46,670 GLSF	[1]	4,477	329	122	451	130	330	460
26	Proposed	676 S. Mateo Street	Apartment Retail	185 DU 27,280 GLSF	[1]	1,990	50	95	145	106	51	157
27	Proposed	Soho House 1000 S. Santa Fe Avenue	Market Health Club Restaurant	14,193 GSF 6,793 GSF 10,065 GSF	[1]	2,029	194	30	224	57	192	249
28	Proposed	220 N. Center Street 2017-CEN-46412	Apartment Retail	430 DU 8,742 GLSF	[1]	2,166	33	119	152	121	79	200
29	Proposed	810 E. 3rd Street	Apartment Restaurant Retail	4 DU 3,541 GSF 6,171 GLSF	[1]	1,487	37	32	69	87	48	135
30	Proposed	2110 Bay Street 2016-CEN-44566	Apartment Affordable Housing Office Retail	99 DU 11 DU 113,350 GSF 43,657 GLSF	[1]	2,394	180	63	243	89	192	281
31	Proposed	401 S. Hewitt Street COC-2017-469-GPA	Office Retail Restaurant	255,500 GSF 4,970 GLSF 9,940 GSF	[1]	3,493	365	76	441	100	324	424
TOTAL						**95,289**	**4,254**	**3,269**	**7,523**	**4,291**	**5,061**	**9,352**

[1] Sources: City of Los Angeles Department of Transportation (LADOT) and Department of City Planning (LADCP). The peak hour traffic volumes were forecast based on trip data provided by LADOT and by applying trip rates as provided in the ITE "Trip Generation Manual", 9th Edition, 2012.
[2] Trips are one-way traffic movements, entering or leaving.



NOT TO SCALE

MAP SOURCE: RAND MCNALLY & COMPANY

★ PROJECT SITES

FIGURE 6-1
LOCATION OF RELATED PROJECTS

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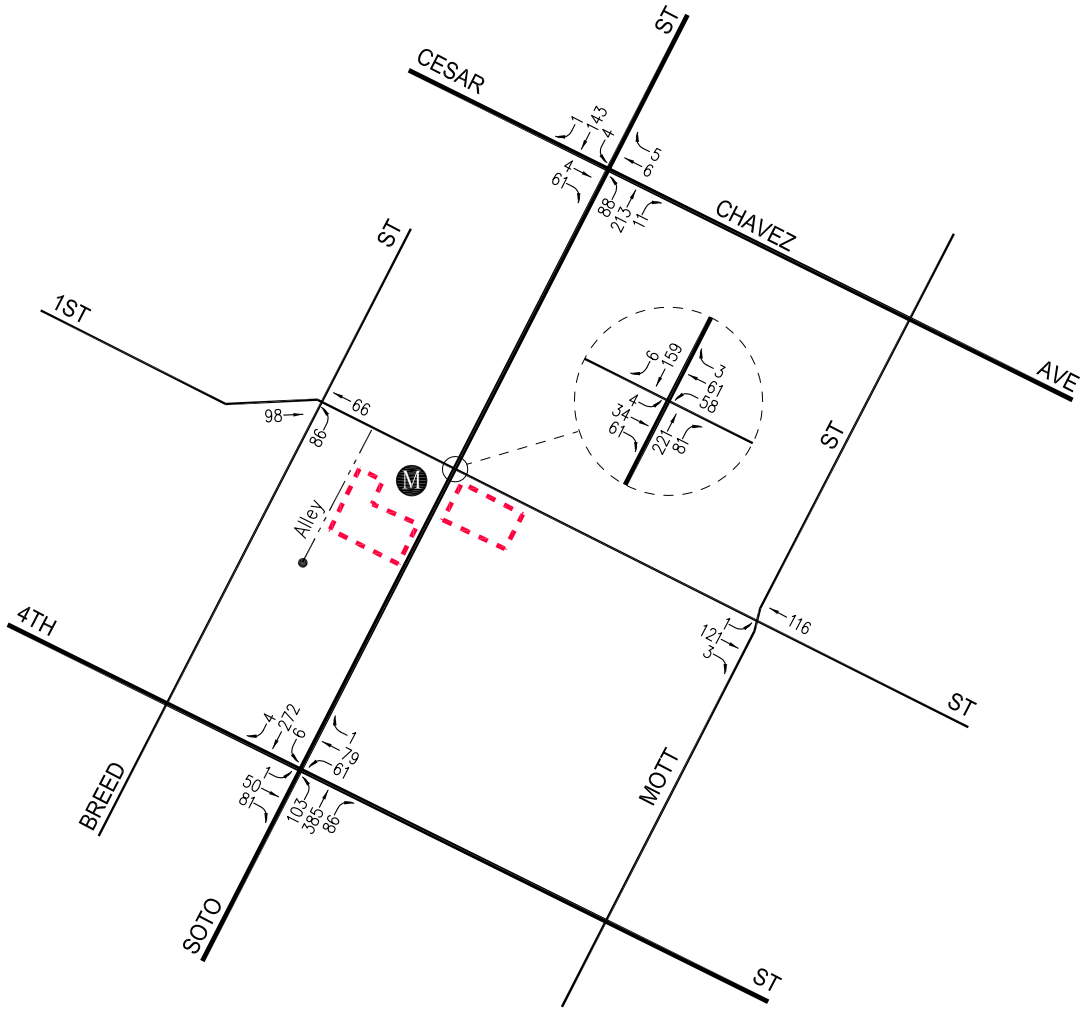
LOS LIRIOS MIXED-USE PROJECT



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PROJECT SITES

METRO GOLD LINE STATION

FIGURE 6-2
RELATED PROJECTS TRAFFIC VOLUMES

WEEKDAY AM PEAK HOUR

LOS LIRIOS MIXED-USE PROJECT

LINSCOTT, LAW & GREENSPAN, engineers

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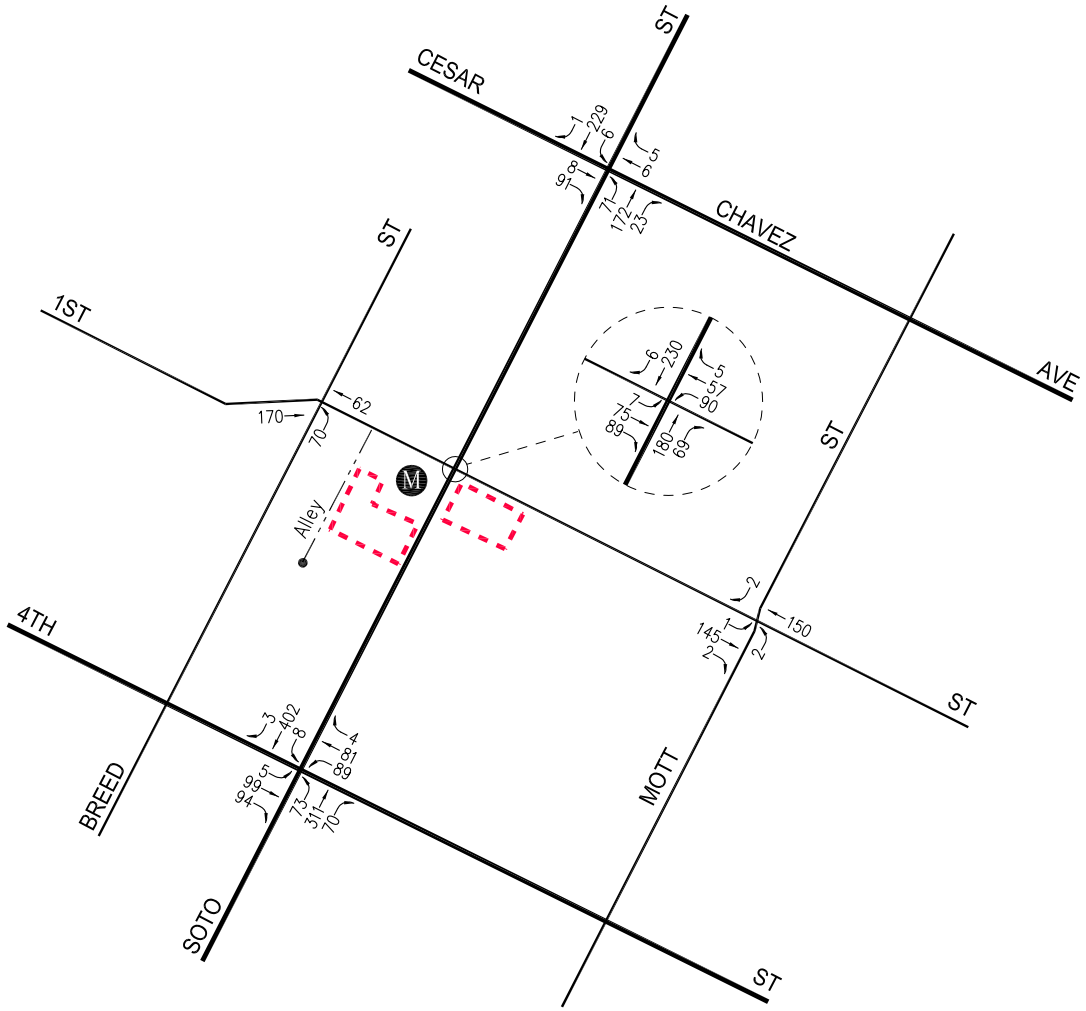

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PROJECT SITES

METRO GOLD LINE STATION

FIGURE 6-3
RELATED PROJECTS TRAFFIC VOLUMES

WEEKDAY PM PEAK HOUR

LOS LIRIOS MIXED-USE PROJECT

LINSCOTT, LAW & GREENSPAN, engineers

6.2 Ambient Traffic Growth Factor

Horizon year background traffic growth estimates have been calculated using an ambient traffic growth factor. The ambient traffic growth factor is intended to include unknown related projects in the study area as well as account for typical growth in traffic volumes due to the development of projects outside the study area. Ambient traffic growth in the Los Angeles area is presented in the *2010 Congestion Management Program for Los Angeles County* (the "CMP manual") and determined in consultation with LADOT staff. It is noted that based on review of the general traffic growth factors provided in the CMP manual for the Central/Southeast area (RSA 23 – Downtown Los Angeles, Exposition Park, MacArthur Park), it is anticipated that the existing traffic volumes are expected to increase at an annual rate of less than 1.0% per year between the years 2010 and 2020. An annual growth rate of one percent (1.0%) to the buildout year 2021 was used for analysis purposes. Thus, application of this annual growth factor allows for a conservative, worst case forecast of future traffic volumes in the area. Further, it is noted that the CMP manual's traffic growth rate is intended to anticipate future traffic generated by development projects in the project vicinity. Thus, the inclusion in this traffic analysis of both a forecast of traffic generated by known related projects plus the use of an ambient growth traffic factor based on CMP traffic model data results in a conservative estimate of future traffic volumes at the study intersections.

7.0 TRAFFIC FORECASTING METHODOLOGY

In order to estimate the traffic impact characteristics of the Los Lirios Mixed-Use project, a multi-step process has been utilized. The first step is trip generation, which estimates the total arriving and departing traffic volumes on a peak hour and daily basis. The traffic generation potential is forecast by applying the appropriate vehicle trip generation equations or rates to the project development tabulation.

The second step of the forecasting process is trip distribution, which identifies the origins and destinations of inbound and outbound project traffic volumes. These origins and destinations are typically based on demographics and existing/anticipated travel patterns in the study area.

The third step is traffic assignment, which involves the allocation of project traffic to study area streets and intersections. Traffic assignment is typically based on minimization of travel time, which may or may not involve the shortest route, depending on prevailing operating conditions and travel speeds. Traffic distribution patterns are indicated by general percentage orientation, while traffic assignment allocates specific volume forecasts to individual roadway links and intersection turning movements throughout the study area.

With the forecasting process complete and project traffic assignments developed, the impact of the proposed project is isolated by comparing operational (i.e., Levels of Service) conditions at the selected key intersections using existing and expected future traffic volumes without and with forecast project traffic. The significance of the project's impacts can then be identified based on the current City traffic impact analysis guidelines and the need for site-specific and/or cumulative local area traffic improvements can then be evaluated.

7.1 Project Traffic Generation

Traffic volumes expected to be generated by the proposed project during the weekday AM and PM peak hours, as well as on a daily basis, were estimated using rates as published in the ITE *Trip Generation Manual*[9] or provided by LADOT. As published in the *City of Los Angeles Transportation Impact Study Guidelines*, affordable housing trip rates for family and senior units derived from the independent study conducted in 2016 of affordable housing sites in the City of Los Angeles were used to forecast the weekday AM and PM peak hour traffic volumes expected to be generated by the affordable housing residential component. Traffic volumes expected to be generated by the community room, retail, and restaurant land use components of the proposed project were based upon rates per 1,000 gross square feet. The following ITE trip generation rates were used in the trip generation forecasts:

- ITE Land Use Code 495 – Recreational Community Room
- ITE Land Use Code 820 – Shopping Center

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

- ITE Land Use Code 932 – High-Turnover [Sit-Down] Restaurant

The ITE manual contains trip rates for a variety of land uses (including office buildings, shopping centers, condominiums, apartments, etc.), which have been derived based on traffic counts conducted at existing sites. However, the traffic count data submitted to ITE is for free-standing sites generally located in suburban locations, which likely do not reflect the trip generation characteristics for projects located in urban areas such as where the proposed project is situated. Thus, the trip rates provided in the ITE *Trip Generation Manual* (derived from traffic counts at suburban projects) would be expected to overstate the trip generation potential of projects located in the Boyle Heights area of the City of Los Angeles, including the proposed Los Lirios Mixed-Use project.

In addition to the trip generation forecast for the proposed project, a forecast was made of the likely pass-by trips that could be anticipated at the site. Pass-by trips are made as intermediate stops on the way from an origin to a primary trip destination without a route diversion. Pass-by trips are attracted from traffic passing the site on an adjacent street or roadway that offers direct access to the generator. Pass-by trip adjustments of 50 percent and 20 percent were applied to the traffic volume forecast for the retail and restaurant components, respectively, pursuant to the LADOT policy.

A trip reduction adjustment was also employed in the project trip generation forecast to account for the proximity to the existing adjacent Metro transit station at Soto Street, as well as the high level of bus transit opportunities and pedestrian activity in the project study area. Based on LADOT traffic study guidelines and discussions with LADOT staff, a transit trip reduction factor of 15 percent (15%) would be applicable to the proposed project based on the project's proximity to the Metro Gold Line Soto Street station and public bus transit routes in the area. However, no other adjustments were made to the project trip generation forecasts to account for trips made internal to the project site (i.e., internal capture).

The weekday trip generation rates and forecast of the vehicular trips anticipated to be generated by the proposed project are presented in ***Table 7-1***. The trip generation forecast for the proposed project was submitted for review and approval by LADOT staff. As presented in *Table 7-1*, the proposed project is expected to generate 48 vehicle trips (22 inbound trips and 26 outbound trips) during the weekday AM peak hour. During the weekday PM peak hour, the proposed project is expected to generate 41 vehicle trips (23 inbound trips and 18 outbound trips). Over a 24-hour period, the proposed project is forecast to generate 496 daily trip ends during a typical weekday (248 inbound trips and 248 outbound trips).

Table 7-1
PROJECT TRIP GENERATION [1]

LAND USE	SIZE	DAILY TRIP ENDS [2] VOLUMES	AM PEAK HOUR VOLUMES [2] IN	AM PEAK HOUR VOLUMES [2] OUT	AM PEAK HOUR VOLUMES [2] TOTAL	PM PEAK HOUR VOLUMES [2] IN	PM PEAK HOUR VOLUMES [2] OUT	PM PEAK HOUR VOLUMES [2] TOTAL
Proposed Uses								
Apartment [3]	66 DU	270	13	20	33	12	10	22
Less Transit Adjustment (15%) [4]		(41)	(2)	(3)	(5)	(2)	(2)	(4)
Community Room [5]	1,490 GSF	43	2	1	3	1	2	3
Less Transit Adjustment (15%) [4]		(6)	nom.	nom.	nom.	nom.	nom.	nom.
Retail [6]	2,500 GLSF	94	1	1	2	5	5	10
Less Pass-by Adjustment (50%) [7]		(47)	(1)	(1)	(2)	(3)	(3)	(6)
Less Transit Adjustment (15%) [4]		(7)	nom.	nom.	nom.	nom.	nom.	nom.
High-Turnover (Sit-Down) Restaurant [8]	2,500 GSF	280	14	11	25	15	9	24
Less Pass-by Adjustment (20%) [7]		(56)	(3)	(2)	(5)	(3)	(2)	(5)
Less Transit Adjustment (15%) [4]		(34)	(2)	(1)	(3)	(2)	(1)	(3)
NET TOTAL PROJECT TRIPS		**496**	**22**	**26**	**48**	**23**	**18**	**41**

[1] Source: ITE "Trip Generation Manual", 10th Edition, 2017.

[2] Trips are one-way traffic movements, entering or leaving.

[3] Affordable housing (family) trip generation average rates based on vehicle trip count data collected at affordable housing sites in the City of Los Angeles in 2016 as provided in the *Transportation Impact Study Guidelines*, December 2016.
- Daily Trip Rate: 4.08 trips/dwelling unit; 50% inbound/50% outbound
- AM Peak Hour Trip Rate: 0.50 trips/dwelling unit; 40% inbound/60% outbound
- PM Peak Hour Trip Rate: 0.34 trips/dwelling unit; 55% inbound/45% outbound

[4] A transit adjustment of 15 percent was applied to all the land use components due to the proximity to the Metro Gold Line Soto station located at 2330 E. 1st Street. The transit adjustments were applied after the pass-by adjustments were applied.

[5] ITE Land Use Code 495 (Recreational Community Room) trip generation average rates.
- Daily Trip Rate: 28.82 trips/1,000 SF of floor area; 50% inbound/50% outbound
- AM Peak Hour Trip Rate: 1.76 trips/1,000 SF of floor area; 66% inbound/34% outbound
- PM Peak Hour Trip Rate: 2.31 trips/1,000 SF of floor area; 47% inbound/53% outbound

[6] ITE Land Use Code 820 (Shopping Center) trip generation average rates.
- Daily Trip Rate: 37.75 trips/1,000 SF of leasable floor area; 50% inbound/50% outbound
- AM Peak Hour Trip Rate: 0.94 trips/1,000 SF of leasable floor area; 62% inbound/38% outbound
- PM Peak Hour Trip Rate: 3.81 trips/1,000 SF of leasable floor area; 48% inbound/52% outbound

[7] Pass-by trips are made as intermediate stops on the way from an origin to a primary destination without a route diversion. Pass-by trips are attracted from the traffic passing the site on an adjacent street or roadway that offers direct access to the site. The pass-by adjustment factors of 50 percent and 20 percent were applied to the retail and restaurant land use components, respectively, pursuant to the *Transportation Impact Study Guidelines*, December 2016.

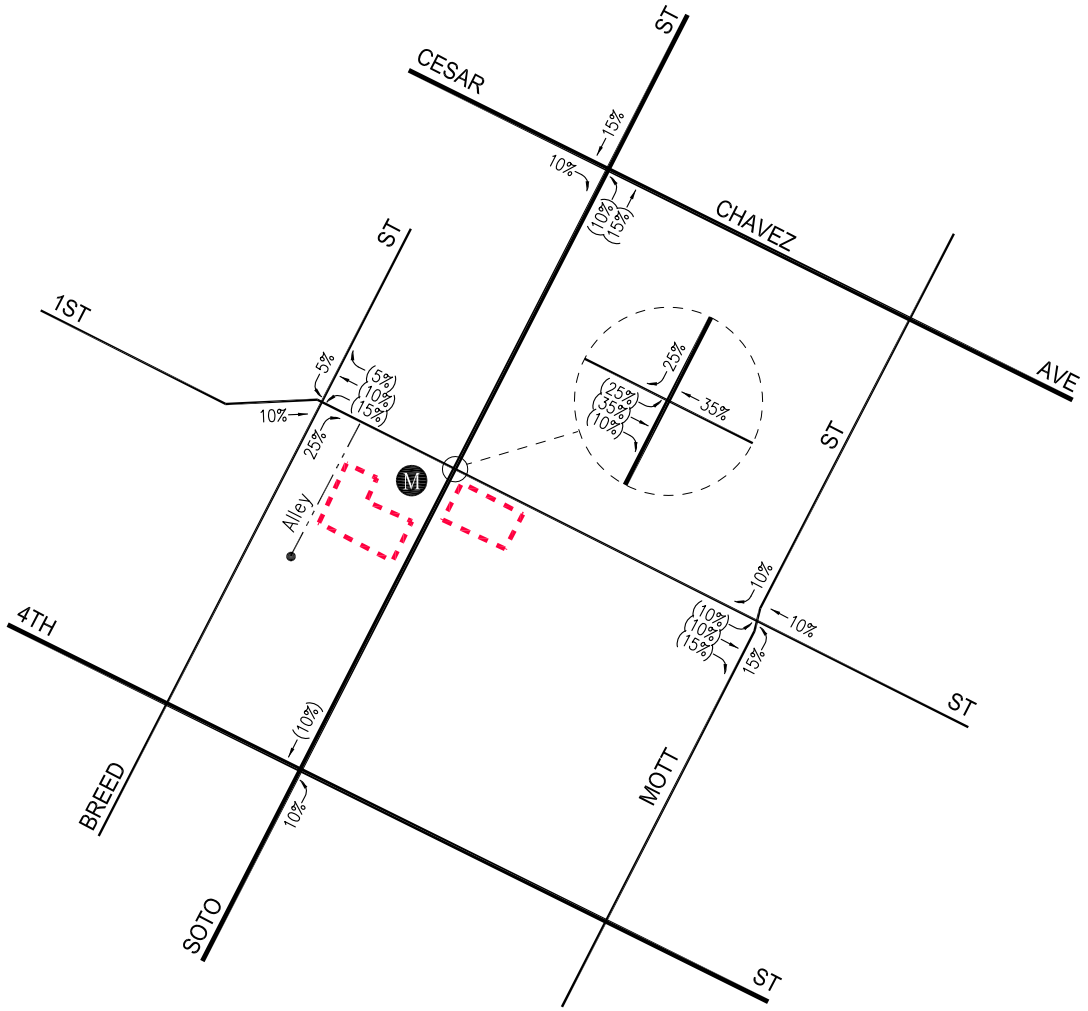
[8] ITE Land Use Code 932 (High-Turnover [Sit-Down] Restaurant) trip generation average rates.
- Daily Trip Rate: 112.18 trips/1,000 SF of floor area; 50% inbound/50% outbound
- AM Peak Hour Trip Rate: 9.94 trips/1,000 SF of floor area; 55% inbound/45% outbound
- PM Peak Hour Trip Rate: 9.77 trips/1,000 SF of floor area; 62% inbound/38% outbound

7.2 Project Traffic Distribution and Assignment

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

- The site's proximity to major traffic corridors (i.e., Soto Street, Cesar Chavez Avenue, 1st Street, etc.).
- The location and spatial proximity of nearby commercial centers and similar type uses;
- Expected localized traffic flow patterns based on adjacent roadway channelization and presence of traffic signals;
- Existing intersection traffic volumes;
- Existing site parcel access ingress/egress schemes;
- Ingress/egress scheme planned for the proposed project;
- Nearby population and employment centers; and
- Input from LADOT staff.

The project traffic distribution percentages during weekday AM and PM peak hours at the study intersections are illustrated in ***Figure 7-1***. The forecast project traffic volumes at the study intersections for the weekday AM and PM peak hours are displayed in ***Figures 7-2*** and ***7-3***, respectively. The traffic volume assignments presented in *Figures 7-2* and 7-*3* reflect the traffic distribution characteristics shown in *Figure 7-1* and the project traffic generation forecasts presented in *Table 7-1*. It should be noted that in accordance with the City of Los Angeles traffic study guidelines, no pass-by trip adjustments were applied to the intersections adjacent to the project site (i.e., Breed Street/1st Street and Soto Street/1st Street).



NOT TO SCALE

PROJECT SITES

METRO GOLD LINE STATION

XX = INBOUND PERCENTAGE

(XX) = OUTBOUND PERCENTAGE

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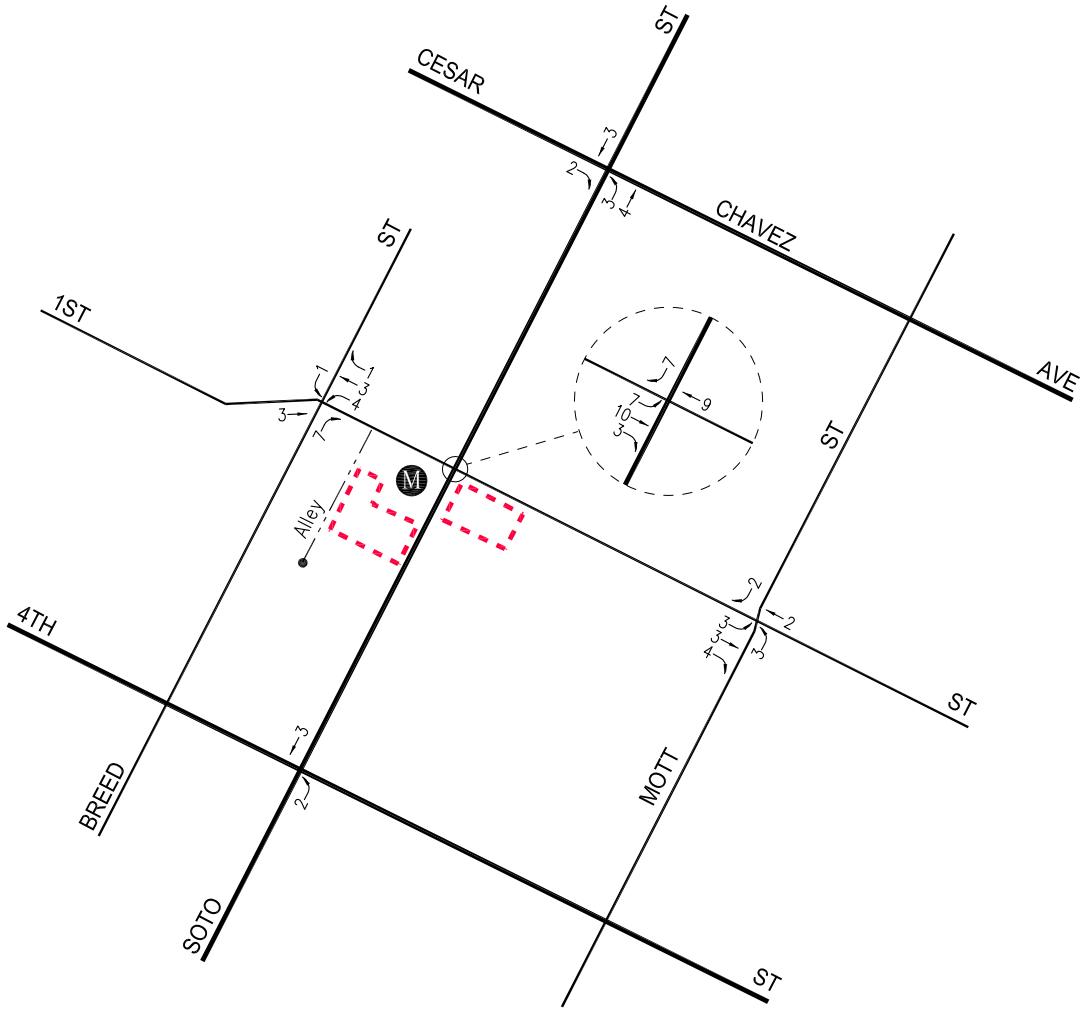
FIGURE 7-1
PROJECT TRIP DISTRIBUTION

LOS LIRIOS MIXED-USE PROJECT



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PROJECT SITES

METRO GOLD LINE STATION

FIGURE 7-2
PROJECT TRAFFIC VOLUMES

WEEKDAY AM PEAK HOUR

LOS LIRIOS MIXED-USE PROJECT

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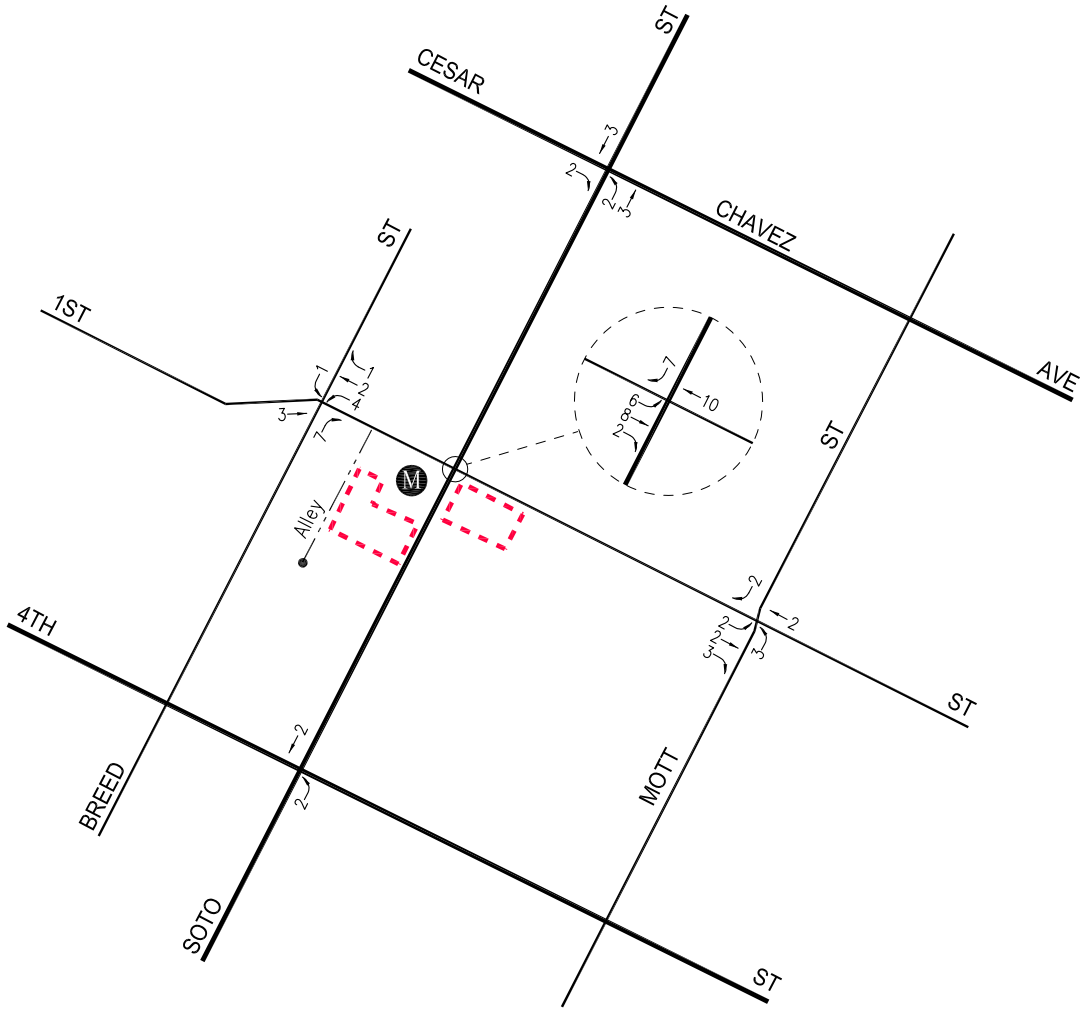

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PROJECT SITES

M METRO GOLD LINE STATION

FIGURE 7-3
PROJECT TRAFFIC VOLUMES

WEEKDAY PM PEAK HOUR

LOS LIRIOS MIXED-USE PROJECT

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8.0 TRAFFIC IMPACT ANALYSIS METHODOLOGY

The study intersections were evaluated using the Critical Movement Analysis (CMA) method of analysis which determines Volume-to-Capacity (*v/c*) ratios on a critical lane basis. The overall intersection *v/c* ratio is subsequently assigned a Level of Service (LOS) value to describe intersection operations. Level of Service varies from LOS A (free flow) to LOS F (jammed condition). A description of the CMA method and corresponding Level of Service is provided in ***Appendix C***.

8.1 Intersection Impact Criteria and Thresholds

The relative impact of the added project traffic volumes to be generated by the proposed project during the weekday AM and PM peak hours was evaluated based on analysis of existing and future operating conditions at the study intersections, without and with the proposed project. The previously discussed capacity analysis procedures were utilized to evaluate the future *v/c* relationships and service level characteristics at each study intersection.

The significance of the potential impacts of project generated traffic was identified using the traffic impact criteria set forth in LADOT's *Transportation Impact Study Guidelines*, December 2016. According to the City's published traffic study guidelines, the impact is considered significant if the project-related increase in the *v/c* ratio equals or exceeds the thresholds presented in ***Table 8-1***.

Table 8-1
CITY OF LOS ANGELES
INTERSECTION IMPACT THRESHOLD CRITERIA

Final *v/c*	**Level of Service**	**Project Related Increase in *v/c***
> 0.700 - 0.800	C	equal to or greater than 0.040
> 0.800 - 0.900	D	equal to or greater than 0.020
>0.900	E or F	equal to or greater than 0.010

The City's Sliding Scale Method requires mitigation of project traffic impacts whenever traffic generated by the proposed development causes an increase of the analyzed intersection *v/c* ratio by an amount equal to or greater than the values shown above.

8.2 Intersection Traffic Impact Analysis Scenarios

Traffic impacts at the study intersections were analyzed for the following conditions:

[a] Existing conditions.

[b] Existing with project conditions.

[c] Condition [a] plus one percent (1.0%) annual ambient traffic growth through year 2021 and with completion and occupancy of the related projects (i.e., future without project conditions).

[d] Condition [c] with completion and occupancy of the proposed project.

[e] Condition [d] with implementation of project mitigation measures, where necessary.

The traffic volumes for each new condition were added to the volumes in the prior condition to determine the change in capacity utilization at the study intersections. It should be noted that Condition [b] above is a hypothetical scenario in that it calculates the traffic due to the occupancy of the proposed project in addition to the existing traffic volumes, but changes to existing volumes are expected to occur throughout the project's construction period due to other area projects and regional growth. However, this condition has been prepared to be consistent with the general rule under CEQA that the potential impacts of a development project are to be measured against existing conditions. Condition [d] above analyzes future conditions upon completion and full occupancy of the proposed project, which is expected to occur in 2021.

9.0 TRAFFIC ANALYSIS

The traffic impact analysis prepared for the study intersections using the CMA methodology and application of the City of Los Angeles significant traffic impact criteria is summarized in ***Table 9-1***. The CMA data worksheets for the analyzed intersections are contained in *Appendix C.*

9.1 Existing Conditions

9.1.1 *Existing Conditions*

As indicated in column [1] of *Table 9-1*, all of the five study intersections are presently operating at LOS C or better during the weekday AM and PM peak hours. The existing traffic volumes at the study intersections during the weekday AM and PM peak hours are displayed in *Figures 5-1* and *5-2*, respectively.

9.1.2 *Existing With Project Conditions*

As shown in column [2] of *Table 9-1,* application of the City's threshold criteria to the "Existing With Project" scenario indicates that the proposed project is not expected to create significant impacts at any of the five study intersections. Incremental, but not significant, impacts are noted at the study intersections. Because there are no significant impacts, no traffic mitigation measures are required or recommended for the study intersections under the "Existing With Project" conditions. The existing with project traffic volumes at the study intersections during the weekday AM and PM peak hours are illustrated in ***Figures 9-1*** and ***9-2***, respectively.

9.2 Future Conditions

9.2.1 *Future Without Project Conditions*

The future cumulative baseline conditions were forecast based on the addition of traffic generated by the completion and occupancy of related projects, as well as the growth in traffic due to the combined effects of continuing development, intensification of existing developments and other factors (i.e., ambient growth). The *v/c* ratios at all of the study intersections are incrementally increased with the addition of ambient traffic and traffic generated by the related projects listed in *Table 6-1*. As presented in column [3] of *Table 9-1*, four of the five study intersections are expected to continue operating at LOS D or better during the weekday AM and PM peak hours with the addition of growth in ambient traffic and related projects traffic under the future without project conditions. The following study intersection is expected to operate at LOS E during the peak hour as shown below with the addition of ambient growth traffic and traffic due to the related projects:

Int. No. 3: Soto Street/1st Street PM Peak Hour: *v/c*=0.912, LOS E

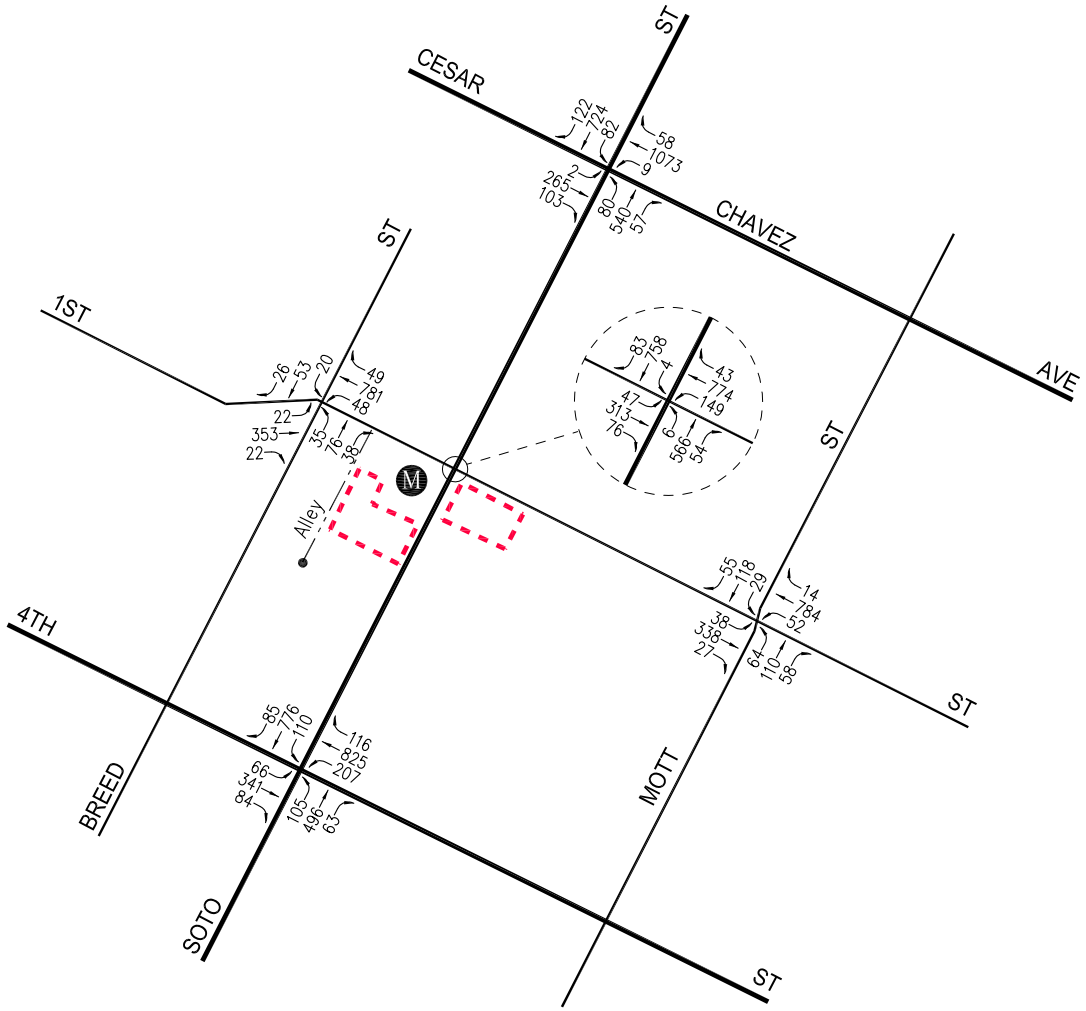
The future without project (existing, ambient growth and related projects) traffic volumes at the study intersections during the weekday AM and PM peak hours are presented in ***Figures 9-3*** and ***9-4***, respectively.

Table 9-1
SUMMARY OF VOLUME TO CAPACITY RATIOS
AND LEVELS OF SERVICE
WEEKDAY AM AND PM PEAK HOURS

NO.	INTERSECTION	PEAK HOUR	[1] YEAR 2018 EXISTING V/C	[1] LOS	[2] YEAR 2018 EXISTING WITH PROJECT V/C	[2] LOS	[2] CHANGE V/C [(2)-(1)]	[2] SIGNIF. IMPACT [a]	[3] YEAR 2021 FUTURE W/O PROJECT V/C	[3] LOS	[4] YEAR 2021 FUTURE WITH PROJECT V/C	[4] LOS	[4] CHANGE V/C [(4)-(3)]	[4] SIGNIF. IMPACT [a]
1	Breed Street/	AM	0.573	A	0.581	A	0.008	No	0.695	B	0.703	C	0.008	No
	1st Street	PM	0.454	A	0.464	A	0.010	No	0.631	B	0.641	B	0.010	No
2	Soto Street/	AM	0.617	B	0.620	B	0.003	No	0.749	C	0.752	C	0.003	No
	Cesar E. Chavez Avenue	PM	0.567	A	0.568	A	0.001	No	0.688	B	0.690	B	0.002	No
3	Soto Street/	AM	0.724	C	0.737	C	0.013	No	0.847	D	0.860	D	0.013	No
	1st Street	PM	0.687	B	0.701	C	0.014	No	0.912	E	0.917	E	0.005	No
4	Soto Street/	AM	0.621	B	0.623	B	0.002	No	0.838	D	0.841	D	0.003	No
	4th Street	PM	0.616	B	0.616	B	0.000	No	0.850	D	0.850	D	0.000	No
5	Mott Street/	AM	0.619	B	0.625	B	0.006	No	0.719	C	0.726	C	0.007	No
	1st Street	PM	0.529	A	0.532	A	0.003	No	0.645	B	0.649	B	0.004	No

[a] According to LADOT's "Transportation Impact Study Guidelines," December 2016, a transportation impact on an intersection shall be deemed significant in accordance with the following table:

Final v/c	LOS	Project Related Increase in v/c
>0.701 - 0.800	C	equal to or greater than 0.040
>0.801 - 0.900	D	equal to or greater than 0.020
>0.901	E/F	equal to or greater than 0.010



N

NOT TO SCALE

PROJECT SITES

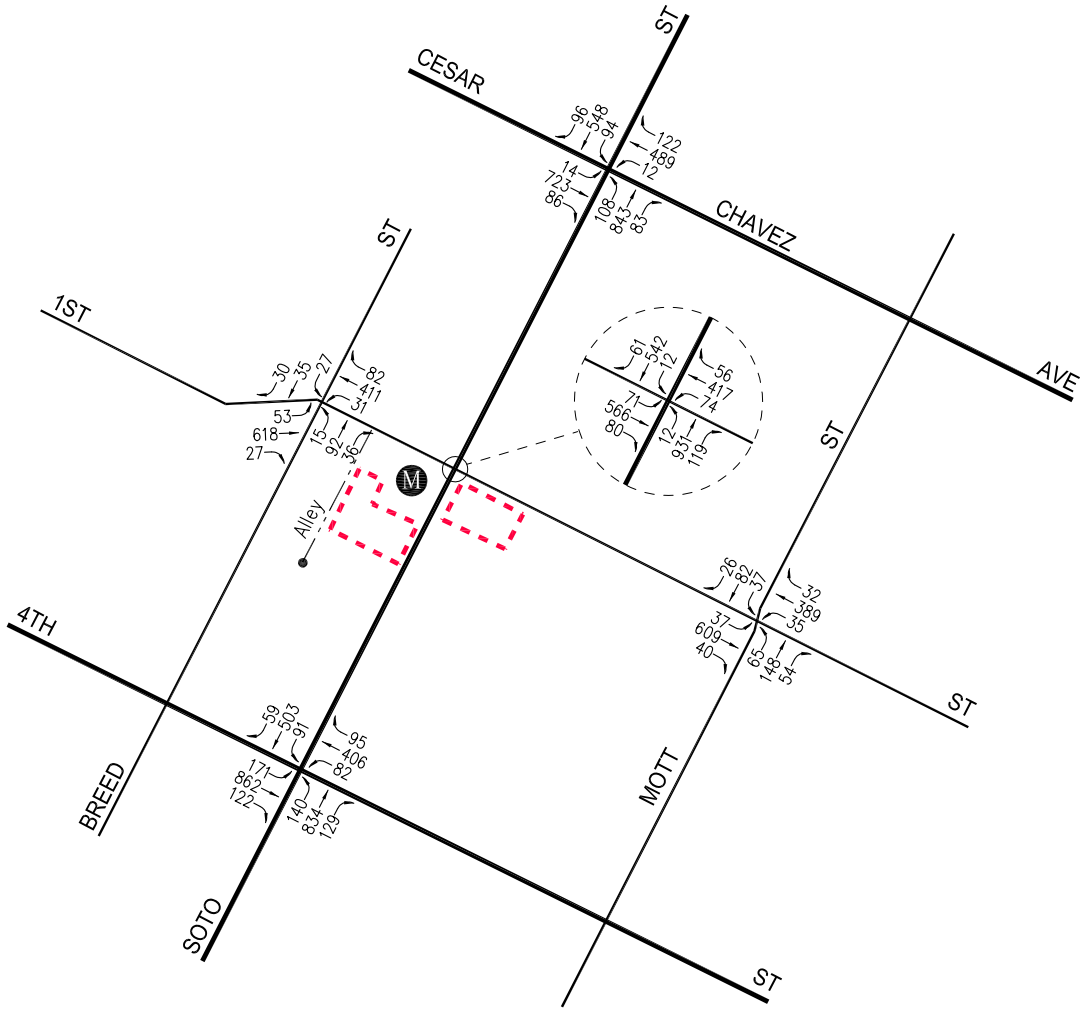
METRO GOLD LINE STATION

FIGURE 9-1
EXISTING WITH PROJECT TRAFFIC VOLUMES

WEEKDAY AM PEAK HOUR

LOS LIRIOS MIXED-USE PROJECT

LINSCOTT, LAW & GREENSPAN, engineers



N

NOT TO SCALE

PROJECT SITES

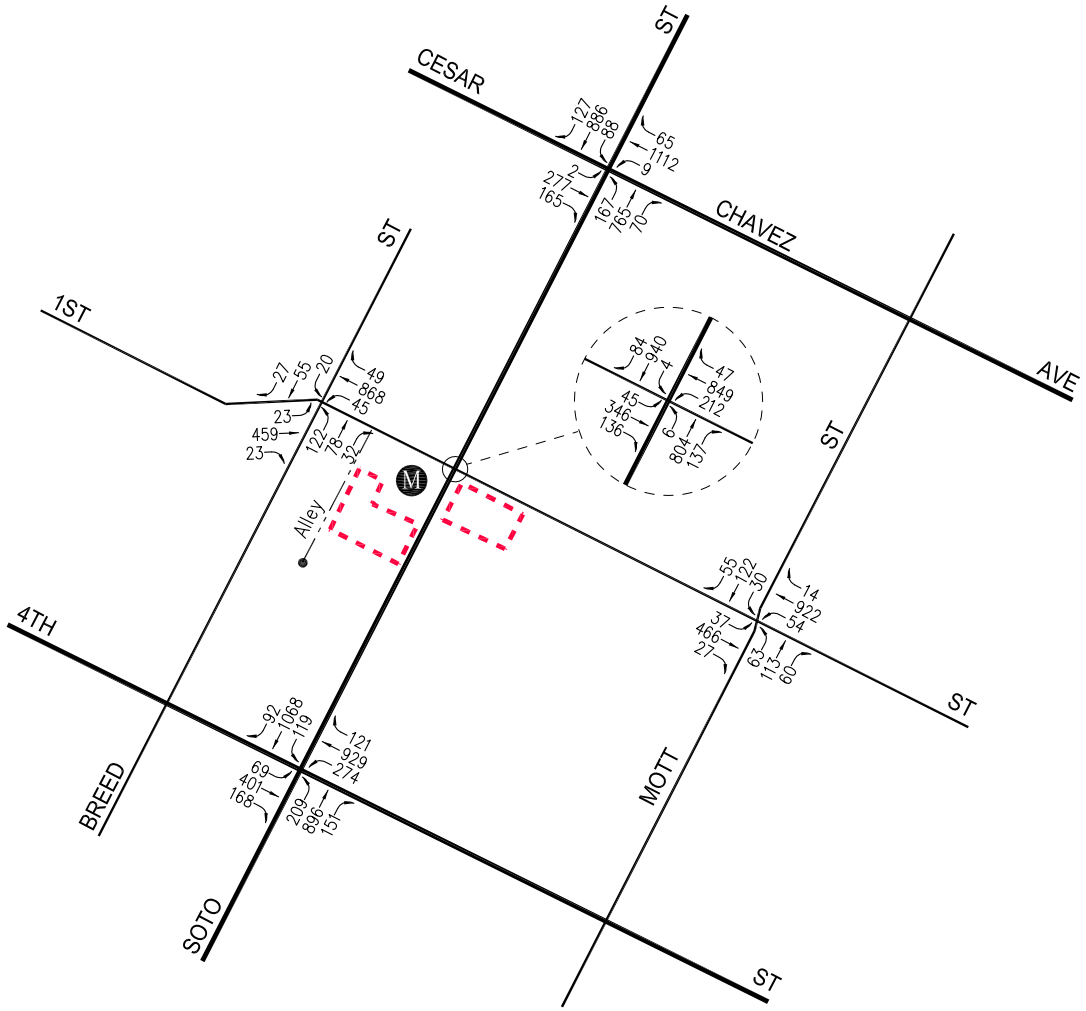
METRO GOLD LINE STATION

FIGURE 9-2
EXISTING WITH PROJECT TRAFFIC VOLUMES

WEEKDAY PM PEAK HOUR

LOS LIRIOS MIXED-USE PROJECT

LINSCOTT, LAW & GREENSPAN, engineers



PROJECT SITES

METRO GOLD LINE STATION

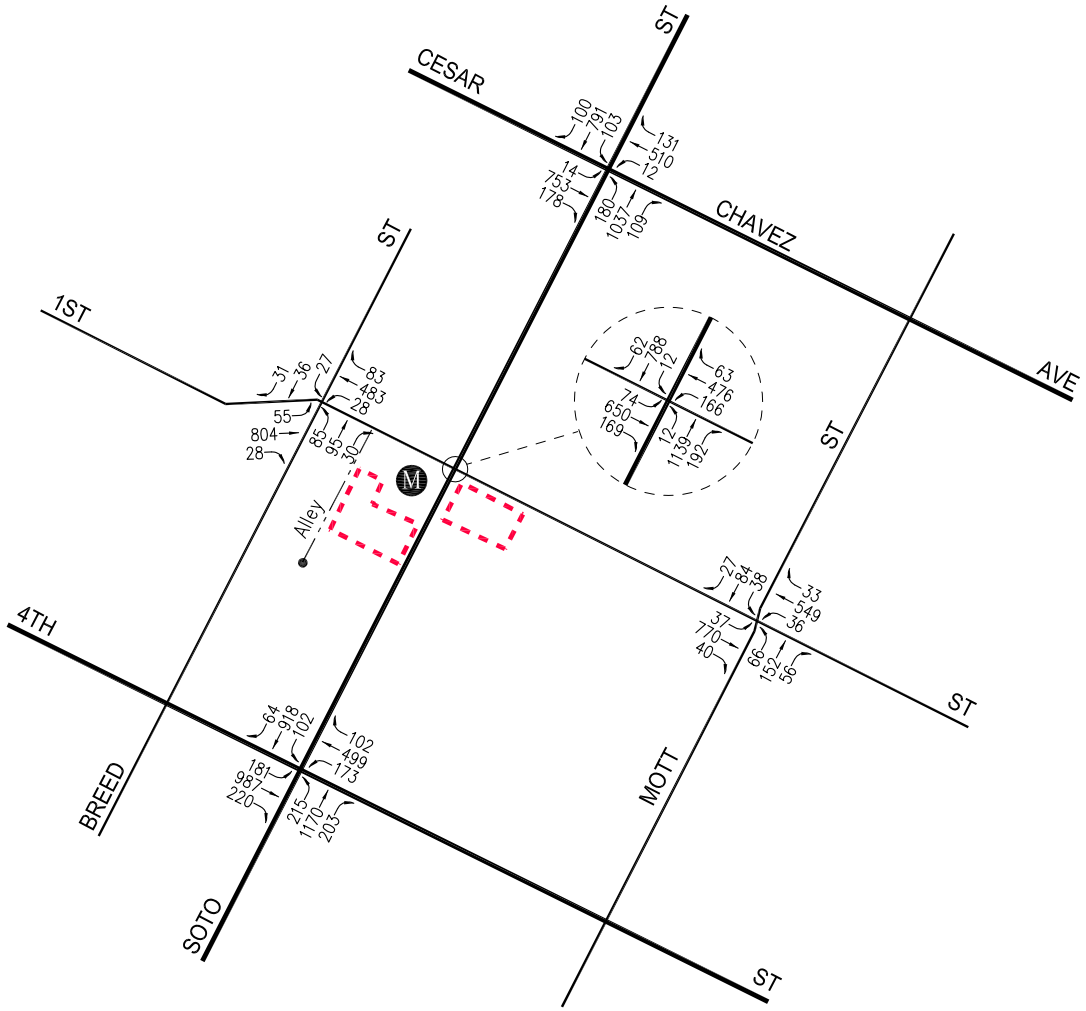
NOT TO SCALE

FIGURE 9-3
FUTURE WITHOUT PROJECT TRAFFIC VOLUMES

WEEKDAY AM PEAK HOUR

LOS LIRIOS MIXED-USE PROJECT

LINSCOTT, LAW & GREENSPAN, engineers



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NOT TO SCALE

PROJECT SITES

METRO GOLD LINE STATION

FIGURE 9-4
FUTURE WITHOUT PROJECT TRAFFIC VOLUMES

WEEKDAY PM PEAK HOUR

LOS LIRIOS MIXED-USE PROJECT

LINSCOTT, LAW & GREENSPAN, engineers

9.2.2 *Future With Project Conditions*

As shown in column [4] of *Table 9-1*, application of the City's threshold criteria to the "With Proposed Project" scenario indicates that the proposed project is not expected to create significant impacts at the five study intersections. Incremental, but not significant, impacts are noted at the study intersections. Because there are no significant impacts, no traffic mitigation measures are required or recommended for the study intersections. The future with project (existing, ambient growth, related projects and project) traffic volumes at the study intersections during the weekday AM and PM peak hours are provided in ***Figures 9-5*** and ***9-6***, respectively.

9.3 Freeway Impact Analysis Screening Criteria Review

Pursuant to the "Freeway Impact Analysis Procedures" agreement executed in October 2013 and amended in December 2015 between LADOT and Caltrans District 7, traffic studies may be required to conduct a focused freeway impact analysis in addition to the CMP analysis. If projects meet any of the following criteria, applicants are directed to the Caltrans' Intergovernmental Review (IGR) section for a determination on the need for analysis and, if necessary, the methodology to be utilized for a freeway impact analysis:

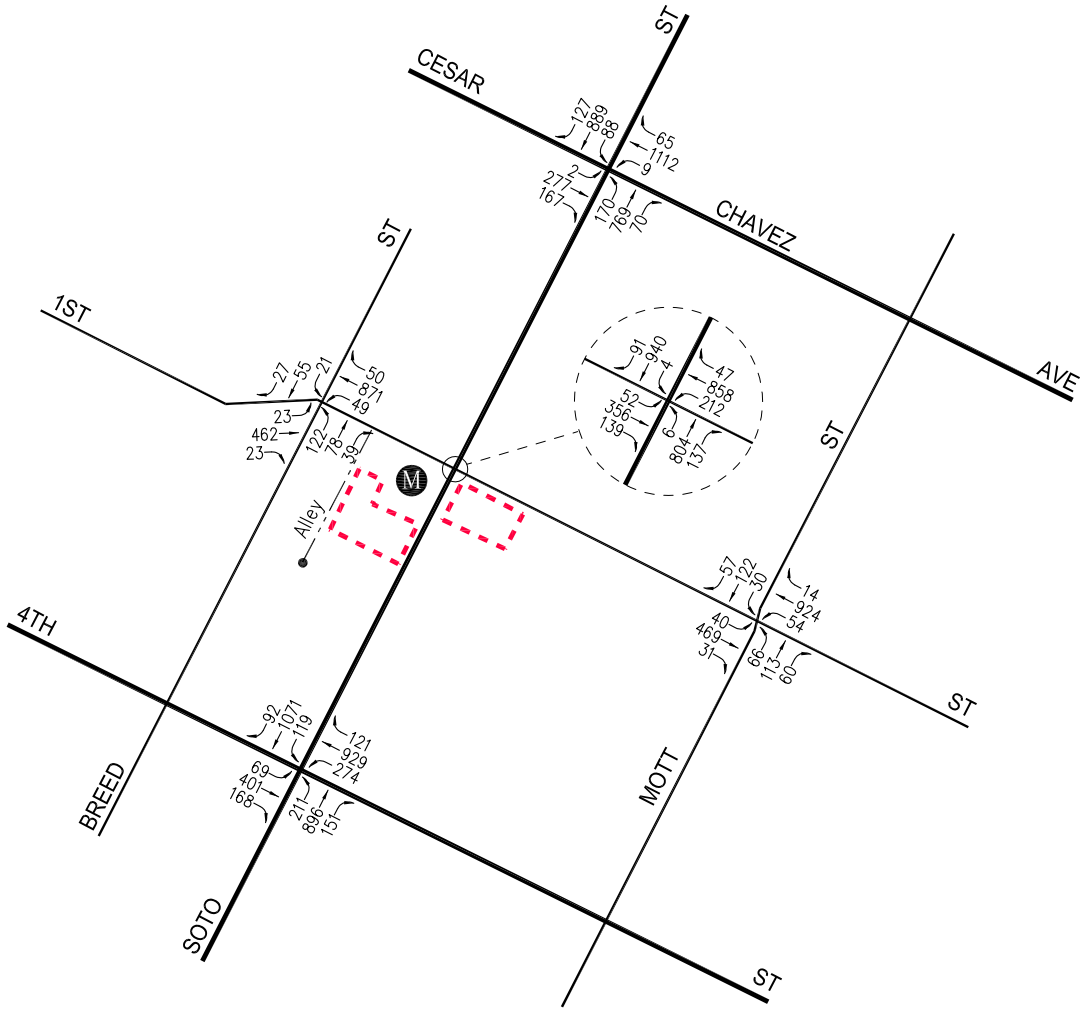
- The project's peak hour trips would result in a 1% or more increase to the freeway mainline capacity of a freeway segment operating at LOS E or F (based on an assumed capacity of 2,000 vehicles per hour per lane); or

- The project's peak hour trips would result in a 2% or more increase to the freeway mainline capacity of a freeway segment operating at LOS D (based on an assumed capacity of 2,000 vehicles per hour per lane); or

- The project's peak hour trips would result in a 1% or more increase to the capacity of a freeway off-ramp operating at LOS E or F (based on an assumed ramp capacity of 850 vehicles per hour per lane); or

- The project's peak hour trips would result in a 2% or more increase to the capacity of a freeway off-ramp operating at LOS D (based on an assumed ramp capacity of 850 vehicles per hour per lane).

The traffic study MOU as contained in *Appendix A* was subsequently updated to include a review of the screening filter in order to determine if this project would be required to prepare a freeway analysis in accordance with the Caltrans freeway impact analysis requirements which are beyond the requirements established in the CMP. As presented in ***Table 9-2***, based on the project trip generation and trip distribution to the highway system, the proposed project would not be subject to the Caltrans freeway impact analysis beyond the CMP requirements.



N
NOT TO SCALE

PROJECT SITES

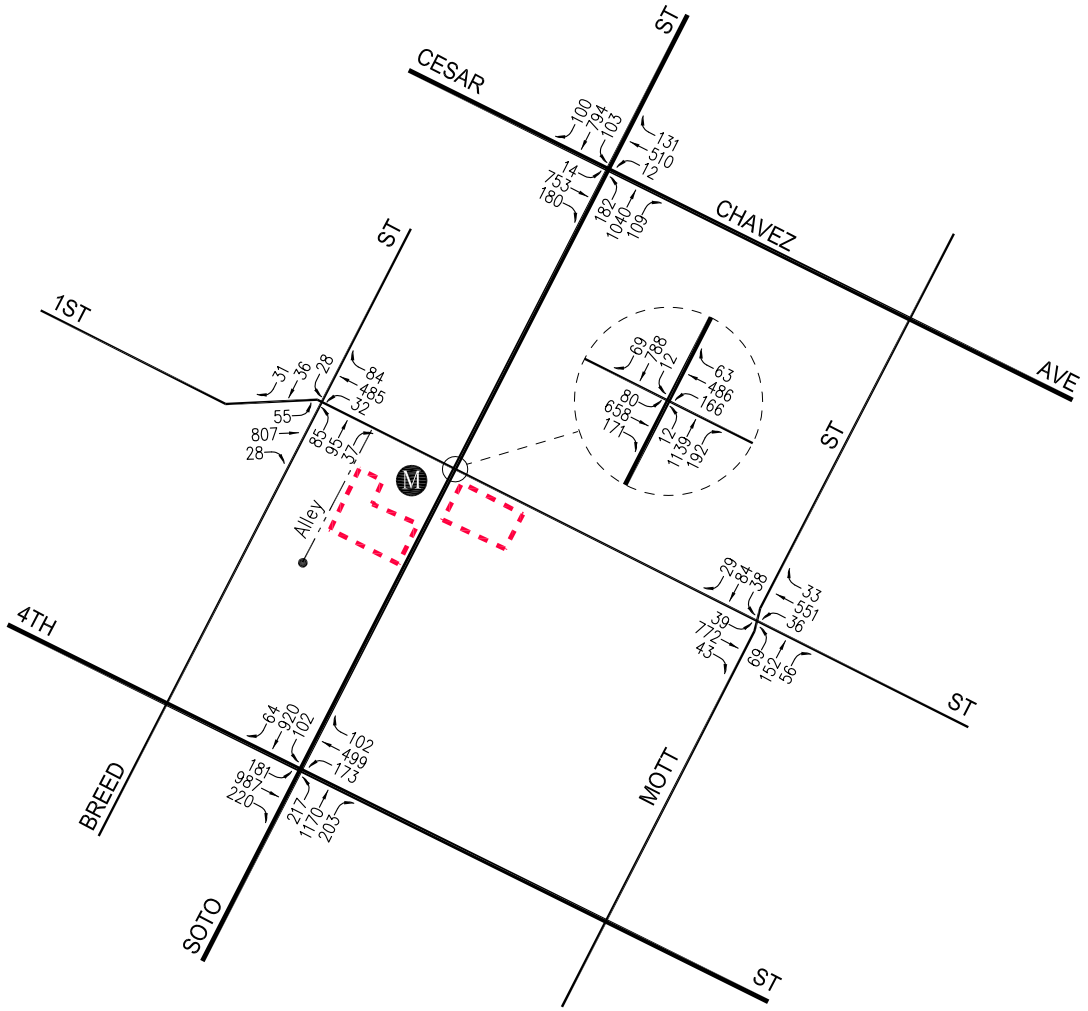
M METRO GOLD LINE STATION

FIGURE 9-5
FUTURE WITH PROJECT TRAFFIC VOLUMES

WEEKDAY AM PEAK HOUR

LOS LIRIOS MIXED-USE PROJECT

LINSCOTT, LAW & GREENSPAN, engineers



N

NOT TO SCALE

PROJECT SITES

METRO GOLD LINE STATION

FIGURE 9-6
FUTURE WITH PROJECT TRAFFIC VOLUMES

WEEKDAY PM PEAK HOUR

LOS LIRIOS MIXED-USE PROJECT

LINSCOTT, LAW & GREENSPAN, engineers

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Table 9-2
FREEWAY IMPACT ANALYSIS SCREENING [1]
Weekday AM and PM Peak Hours

PROJECT TRIP GENERATION	TOTAL PROJECT	
	AM	PM
Inbound	22	23
Outbound	26	18

FREEWAY LOCATION	DIR.	PROJECT TRIP DIRECTION	TOTAL PROJECT TRIPS DIST.	AM	PM	NO. OF LANES	TOTAL CAPACITY [2]	PERCENT OF CAPACITY AM	PM	FREEWAY ANALYSIS REQUIRED? (YES/NO) [3]
Mainline Segment										
I-5 Freeway north of	NB	Outbound	5%	1	1	5	10,000	0.0%	0.0%	No
I-10 Freeway	SB	Inbound	5%	1	1	4	8,000	0.0%	0.0%	No
US-101 Freeway north of	NB	Outbound	10%	3	2	4	8,000	0.0%	0.0%	No
Alameda Street	SB	Inbound	10%	2	2	4	8,000	0.0%	0.0%	No
I-10 Freeway west of	EB	Inbound	5%	1	1	5	10,000	0.0%	0.0%	No
Alameda Street	WB	Outbound	5%	1	1	5	10,000	0.0%	0.0%	No
I-10 Freeway east of	EB	Outbound	10%	3	2	6	12,000	0.0%	0.0%	No
Soto Street	WB	Inbound	10%	2	2	6	12,000	0.0%	0.0%	No
SR-60 Freeway east of	EB	Outbound	5%	1	1	5	10,000	0.0%	0.0%	No
Lorena Street	WB	Inbound	5%	1	1	5	10,000	0.0%	0.0%	No
Off-Ramp										
I-5 Freeway NB at 4th Street	NB	Inbound	5%	1	1	2	1,700	0.1%	0.1%	No
I-5 Freeway SB at 4th Street	SB	Inbound	5%	1	1	2	1,700	0.1%	0.1%	No
US-101 Freeway SB at 4th Street	SB	Inbound	5%	1	1	2	1,700	0.1%	0.1%	No
I-10 Freeway EB at Soto Street	EB	Inbound	5%	1	1	3	2,550	0.0%	0.0%	No
I-10 Freeway WB at Soto Street	WB	Inbound	10%	2	2	4	3,400	0.1%	0.1%	No

[1] Pursuant to the *Transportation Impact Study Guidelines,* City of Los Angeles Department of Transportation, December 2016, *Agreement Between City of Los Angeles and Caltrans District 7 on Freeway Impact Analysis Procedures* , October 2013, and per *First Amendment to the Agreement between LADOT and Caltrans District 7 on Freeway Impact Analysis Procedures* , December 15, 2015.

[2] Total Capacity derived from the assumed free-flow capacities shown below: (in vehicles per hour per lane)

Facility Type	Capacity
Mainline Segment	2,000 vphpl
Off-Ramp	850 vphpl

[3] Freeway impact analysis is required if the project would result in an increase of ≥2% of capacity for facilities operating at LOS D, or in an increase of ≥1% of capacity for facilities operating at LOS E/F. For a more conservative screening analysis, all facilities are assumed to be operating at LOS E/F.

9.4 City of Los Angeles High Injury Network Review

Vision Zero is a citywide initiative which prioritizes the safety of pedestrians and bicyclists on public streets, with the understanding that roads which are safe for vulnerable users will be safer for all users, in an effort to eliminate traffic fatalities. Key elements of the policy, such as reducing traffic speeds, are founded on the principles of engineering, education, enforcement, evaluation, and equity. Originating in Sweden, the policy has been adopted in numerous other North American cities, including California cities such as San Francisco and San Diego.

Mayor Eric Garcetti issued Executive Directive No. 10 in August 2015, formally launching the Vision Zero initiative in Los Angeles. Vision Zero is also a stated safety objective in the Mobility Plan 2035, which sets the goal of zero traffic deaths by 2035. Jointly directed by the Department of Transportation and the Police Department, Vision Zero takes a multi-disciplinary approach to identifying safety risk factors and implementing solutions on a citywide scale. Using a methodology originally developed by the San Francisco Public Health Department, the Vision Zero Task Force has identified streets where investments in safety will have the most impact in reducing severe injuries and traffic fatalities in the City[10]. These roads are collectively known as the High Injury Network (HIN). The HIN will be reviewed for potential engineering re-design as well as educational and enforcement campaigns.

The proposed project is located at 113, 119, 121 South Soto Street and 2316, 2322, and 2400 East 1st Street in the Boyle Heights Community Plan area of the City of Los Angeles. The roadways in the study area of the proposed project which have been identified on the City's HIN are noted below:

- Soto Street, between Wabash Avenue and Olympic Boulevard,
- Cesar E. Chavez Avenue, between Boyle Avenue and Fresno Street,
- 1st Street, between Soto Street and Mott Street,
- 4th Street, between Gless Street and Soto Street.

If a proposed project results in significant traffic impacts at intersections located along a designated HIN, LADOT's Vision Zero group will review those specific locations and immediate vicinity for potential safety enhancements that are consistent with the City's Vision Zero initiative.

[10] Vision Zero Los Angeles 2015-2025, August 2015.

10.0 CONGESTION MANAGEMENT PROGRAM TRAFFIC IMPACT ASSESSMENT

The Congestion Management Program (CMP) is a state-mandated program that was enacted by the California State Legislature with the passage of Proposition 111 in 1990. The program is intended to address the impact of local growth on the regional transportation system.

As required by the 2010 Congestion Management Program, a Traffic Impact Assessment (TIA) has been prepared to determine the potential impacts on designated monitoring locations on the CMP highway system. The analysis has been prepared in accordance with procedures outlined in the *2010 Congestion Management Program*, Los Angeles County Metropolitan Transportation Authority, October 2010.

According to Section D.9.1 (Appendix D, page D-6) of the 2010 CMP manual, the criteria for determining a significant transportation impact is listed below:

> "A significant transportation impact occurs when the proposed project increases traffic demand on a CMP facility by 2% of capacity (V/C $\geq$ 0.02), causing or worsening LOS F (V/C > 1.00); if the facility is already at LOS F, a significant impact occurs when the proposed project increases traffic demand on a CMP facility by 2% of capacity (V/C $\geq$ 0.02)."

The CMP impact criteria apply for analysis of both intersection and freeway monitoring locations.

10.1 Intersections

There are no CMP intersection monitoring locations in the vicinity of the proposed project. The CMP TIA guidelines require that intersection monitoring locations must be examined if the proposed project will add 50 or more trips during either the weekday AM or PM peak hours. The proposed project will not add 50 or more trips during either the weekday AM or PM peak hours (i.e., of adjacent street traffic) at CMP monitoring intersections, as stated in the CMP manual as the threshold criteria for a traffic impact assessment. Therefore, no further review of potential impacts to intersection monitoring locations that are part of the CMP highway system is required.

10.2 Freeways

The following CMP freeway monitoring locations in the project vicinity have been identified:

- CMP Station — Location

  Seg. No. 1004 — I-5 Freeway at Stadium Way

  Seg. No. 1014 — I-10 Freeway at East Los Angeles City Limit

  Seg. No. 1036 — U.S. 101 Freeway north of Vignes Street

The CMP TIA guidelines require that freeway monitoring locations must be examined if the proposed project will add 150 or more trips (in either direction) during either the weekday AM or PM peak hours. The proposed project will not add 150 or more trips (in either direction) during either the weekday AM or PM peak hours to CMP freeway monitoring locations which is the threshold for preparing a traffic impact assessment, as stated in the CMP manual. As summarized in *Table 7-1*, the proposed project is anticipated to generate at most 26 outbound vehicle trips during the weekday AM peak hour and 23 inbound vehicle trips during the weekday PM peak hour, which is well below the 150 trip threshold. Therefore, no further review of potential impacts to freeway monitoring locations that are part of the CMP highway system is required.

10.3 Transit Impact Review

As required by the *2010 Congestion Management Program*, a review has been made of the potential impacts of the project on transit service. As discussed in Subsection 4.4 herein, existing transit service is provided in the vicinity of the proposed Los Lirios Mixed-Use project.

The project trip generation, as shown in *Table 7-1*, was adjusted by values set forth in the CMP (i.e., person trips equal 1.4 times vehicle trips, and transit trips equal 3.5 percent of the total person trips) to estimate transit trip generation. Pursuant to LADOT approval, assuming 15 percent (15%) transit trips, the proposed project is forecast to generate demand for ten transit trips during the weekday AM peak hour and nine transit trips during the PM peak hour. Over a 24-hour period, the proposed project is forecast to generate demand for 104 daily transit trips. The calculations are as follows:

- Weekday AM Peak Hour = $48 \times 1.4 \times 0.15 = 10$ Transit Trip
- Weekday PM Peak Hour = $41 \times 1.4 \times 0.15 = 9$ Transit Trips
- Weekday Daily Trips = $496 \times 1.4 \times 0.15 = 104$ Transit Trips

As shown in *Table 4-2*, ten bus/rail lines and routes are provided in close proximity to the project site. As outlined in *Table 4-2*, under the "No. of Buses/Trains During Peak Hour" column, these transit lines provide services for an average of (i.e., average of the directional number of buses/trains during the peak hours) roughly 81 and 86 buses/trains during the weekday AM and PM peak hours, respectively. Therefore, based on the above calculated weekday AM and PM peak hour trips, this would correspond to less than one additional transit rider per bus/train. It is anticipated that the existing transit service in the project area will adequately accommodate the increase of project-generated transit trips. Thus, given the number of project-generated transit trips per bus/train, no project impacts on existing or future transit services in the project area are expected to occur as a result of the proposed project.

11.0 CONCLUSIONS

- ***Project Description*** – The project applicant in partnership with the Los Angeles County Metropolitan Transportation Authority seeks to obtain entitlements to construct a mixed-use project with 66 affordable housing apartment units and up to 5,000 square feet of ground floor local community serving retail/restaurant uses for Site A. Site B will primarily consist of the restoration and rehabilitation of the historic Peabody Werden Duplex with landscaping enhancements. Construction of the proposed project is expected to commence in year 2020 with occupancy in the year 2021. Vehicular access will be provided via a single driveway located on the east side of the alleyway along the westerly property frontage, at the southwest corner of the project site

- ***Study Scope –*** The following five (5) study intersections were selected for analysis in consultation with LADOT staff in order to determine potential impacts related to the proposed project:

  1. Breed Street/1st Street
  2. Soto Street/Cesar E. Chavez Avenue
  3. Soto Street/1st Street
  4. Soto Street/4th Street
  5. Mott Street/1st Street

- ***Project Trip Generation*** – The proposed project is expected to generate an increase of 48 vehicle trips (22 inbound trips and 26 outbound trips) during the weekday AM peak hour. During the weekday PM peak hour, the proposed project is expected to generate an increase of 41 vehicle trips (23 inbound trips and 18 outbound trips). Over a 24-hour period, the proposed project is forecast to generate an increase of 496 daily trip ends during a typical weekday (248 inbound trips and 248 outbound trips).

- ***Related Projects*** – The City of Los Angeles Departments of Transportation and Planning were consulted to obtain the list of development projects (related projects) in the area. A total of 31 related projects was identified and considered as part of the cumulative traffic analysis.

- ***Traffic Impact Analysis*** – It is concluded that the proposed project is not expected to create a significant traffic impact at any of the five study intersections based on the City of Los Angeles thresholds of significance used for evaluating traffic impacts. Incremental, but not significant, impacts are noted at the study intersections with completion of the proposed project. Because there are no significant impacts, no direct traffic mitigation measures are required or recommended for the study locations.

- ***CMP Traffic Assessment*** – The results of the Los Angeles CMP traffic assessment indicate that the proposed project will not adversely affect any CMP arterial monitoring intersections or freeway monitoring locations. Therefore, no improvements/mitigation measures are required.

APPENDIX A

TRAFFIC STUDY MEMORANDUM OF UNDERSTANDING

LADOT

Transportation Impact Study Memorandum of Understanding (MOU)

This MOU acknowledges that the Transportation Impact Study for the following Project will be prepared in accordance with the latest version of LADOT's Transportation Impact Study Guidelines:

I. PROJECT INFORMATION

Project Name: Los Lirios Mixed-Use Project

Project Address: 113, 119, 121 South Soto Street and 2316, 2322, and 2400 East 1st Street in the Boyle Heights area

Project Description: Transit-oriented development consisting of a five-story, 66-unit affordable housing project with a 1,490 square foot community room and approximately 5,000 square feet of retail/restaurant uses.

LADOT Project Case Number: _____ Project Site Plan attached? *(Required)* ■ Yes ☐ No

II. TRIP GENERATION

Geographic Distribution: N 25.00 % S 25.00 % E 25.00 % W 25.00 %

Illustration of Project trip distribution percentages at Study intersections attached? *(Required)* ■ Yes ☐ No

Trip Generation Adjustments *(Exact amount of credit subject to approval by LADOT)*

	Yes	No
Transit Usage	■	☐
Transportation Demand Management	☐	■
Existing Active Land Use	☐	■
Previous Land Use	☐	■
Internal Trip	☐	■
Pass-By Trip	■	☐

Source of Trip Generation Rate(s)? ☐ ITE 9th Edition ■ Other: ITE 10th Edition

Trip generation table including a description of the proposed land uses, ITE rates, estimated morning and afternoon peak hour volumes (ins/outs/totals), proposed trip credits, etc. attached? *(Required)* ■ Yes ☐ No

	IN	OUT	TOTAL
AM Trips	22	26	48
PM Trips	23	18	41

III. STUDY AREA AND ASSUMPTIONS

Project Buildout Year: 2021 Ambient or CMP Growth Rate: 1.0 % Per Yr.

Related Projects List, researched by the consultant and approved by LADOT, attached? *(Required)* ■ Yes ☐ No

Subject to Freeway Impact Analysis, in addition to CMP Analysis? *(Freeway analysis screening filter must be included in this MOU; selecting "yes" implies that at least one criteria was satisfied)* ☐ Yes ■ No

Map of Study Intersections attached? *(May be subject to LADOT revision after initial impact analysis)* ■ Yes ☐ No

Is this Project located on a street within the High Injury Network? ■ Yes ☐ No

IV. CONTACT INFORMATION

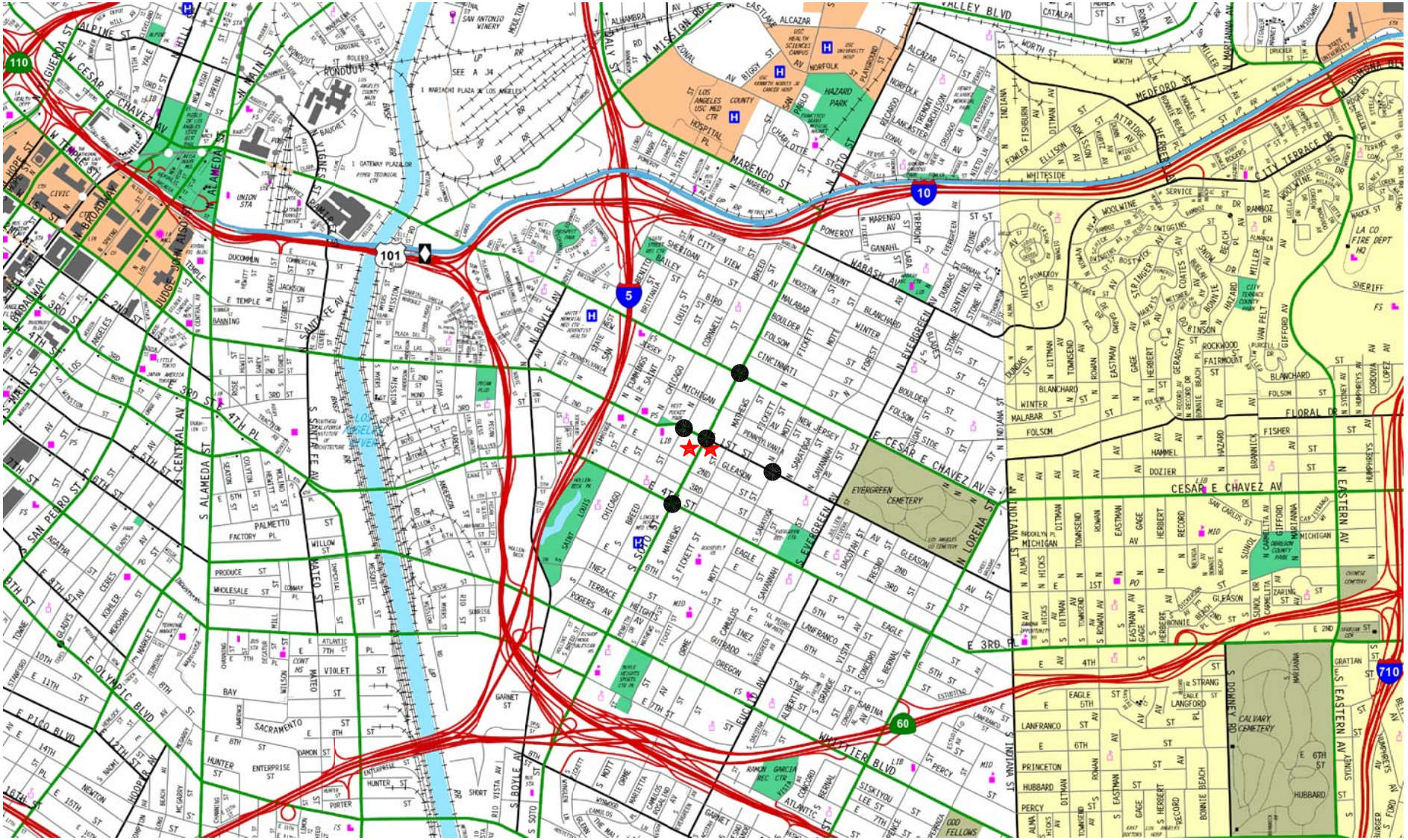
	CONSULTANT	DEVELOPER
Name:	Linscott, Law & Greenspan, Engineers	East LA Community Corporation
Address:	600 S. Lake Avenue, Suite 500, Pasadena, CA 91106	2917 E. 1st Street, Suite 101
Phone Number:	626.796.2322	Los Angeles, CA 90033
E-Mail:	taing@llgengineers.com	

Approved by:					
x	Chin Taing (Digitally signed by Chin Taing DN: cn=Chin Taing, o=LLG Engineers, ou=Linscott Law & Greenspan Engineers, email=taing@llgengineers.com, c=US Date: 2018.07.03 17:06:45 -07'00')	7/3/18	x	[signature]	7/3/18
	Consultant's Representative	Date		LADOT Representative	Date

List of Study Intersections *(refer to Figure 1-1)*

CEN18-46417

1. Breed Street/1st Street
2. Soto Street/Cesar E. Chavez Avenue
3. Soto Street/1st Street
4. Soto Street/4th Street
5. Mott Street/1st Street



MAP SOURCE: RAND MCNALLY & COMPANY

PROJECT SITES

STUDY INTERSECTION

NOT TO SCALE

FIGURE 1-1
VICINITY MAP

LINSCOTT, LAW & GREENSPAN, engineers

LOS LIRIOS MIXED-USE PROJECT

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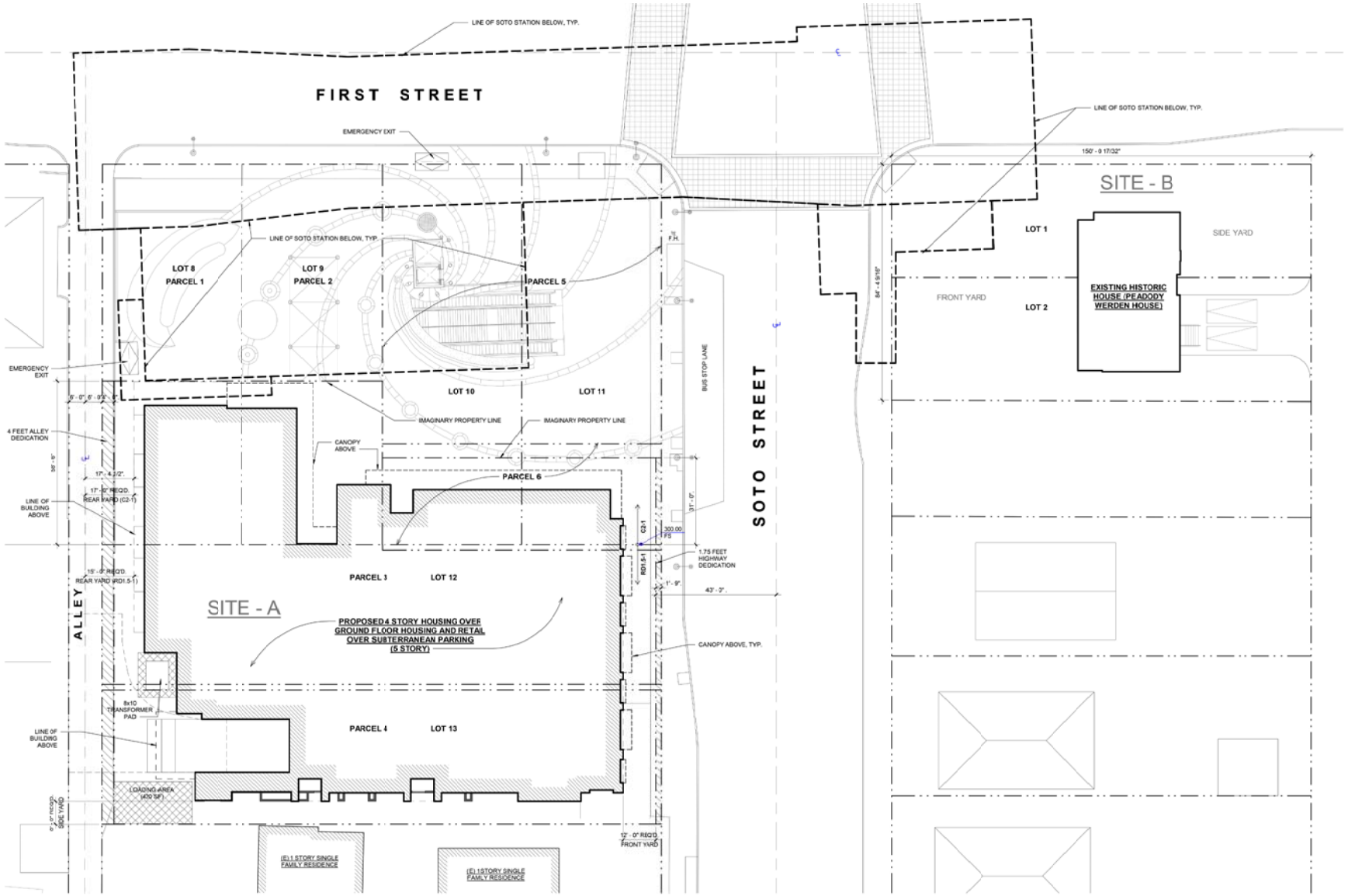

NOT TO SCALE

MAP SOURCE: GONZALEZ GOODALE ARCHITECTS

FIGURE 2-2
SITE PLAN

LINSCOTT, LAW & GREENSPAN, engineers

LOS LIRIOS MIXED-USE PROJECT

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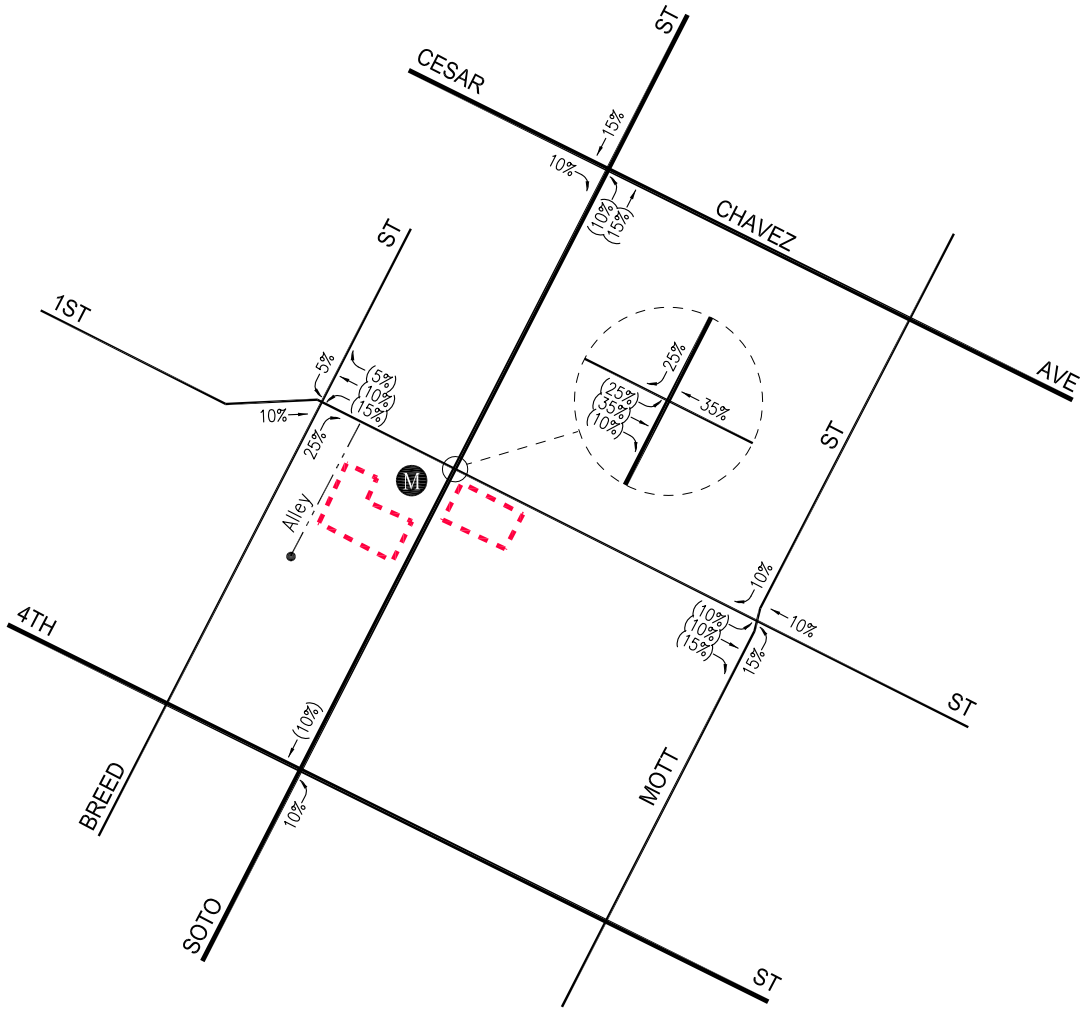

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PROJECT SITES

METRO GOLD LINE STATION

XX = INBOUND PERCENTAGE

(XX) = OUTBOUND PERCENTAGE

LINSCOTT, LAW & GREENSPAN, engineers

FIGURE 7-1
PROJECT TRIP DISTRIBUTION

LOS LIRIOS MIXED-USE PROJECT

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Table 8-1
PROJECT TRIP GENERATION [1]

LAND USE	SIZE	DAILY TRIP ENDS [2] VOLUMES	AM PEAK HOUR VOLUMES [2] IN	AM PEAK HOUR VOLUMES [2] OUT	AM PEAK HOUR VOLUMES [2] TOTAL	PM PEAK HOUR VOLUMES [2] IN	PM PEAK HOUR VOLUMES [2] OUT	PM PEAK HOUR VOLUMES [2] TOTAL
Proposed Uses								
Apartment [3]	66 DU	270	13	20	33	12	10	22
Less Transit Adjustment (15%) [4]		(41)	(2)	(3)	(5)	(2)	(2)	(4)
Community Room [5]	1,490 GSF	43	2	1	3	1	2	3
Less Transit Adjustment (15%) [4]		(6)	nom.	nom.	nom.	nom.	nom.	nom.
Retail [6]	2,500 GLSF	94	1	1	2	5	5	10
Less Pass-by Adjustment (50%) [7]		(47)	(1)	(1)	(2)	(3)	(3)	(6)
Less Transit Adjustment (15%) [4]		(7)	nom.	nom.	nom.	nom.	nom.	nom.
High-Turnover (Sit-Down) Restaurant [8]	2,500 GSF	280	14	11	25	15	9	24
Less Pass-by Adjustment (20%) [7]		(56)	(3)	(2)	(5)	(3)	(2)	(5)
Less Transit Adjustment (15%) [4]		(34)	(2)	(1)	(3)	(2)	(1)	(3)
NET TOTAL PROJECT TRIPS		**496**	**22**	**26**	**48**	**23**	**18**	**41**

[1] Source: ITE "Trip Generation Manual", 10th Edition, 2017.

[2] Trips are one-way traffic movements, entering or leaving.

[3] Affordable housing (family) trip generation average rates based on vehicle trip count data collected at affordable housing sites in the City of Los Angeles in 2016 as provided in the *Transportation Impact Study Guidelines* , December 2016.
- Daily Trip Rate: 4.08 trips/dwelling unit; 50% inbound/50% outbound
- AM Peak Hour Trip Rate: 0.50 trips/dwelling unit; 40% inbound/60% outbound
- PM Peak Hour Trip Rate: 0.34 trips/dwelling unit; 55% inbound/45% outbound

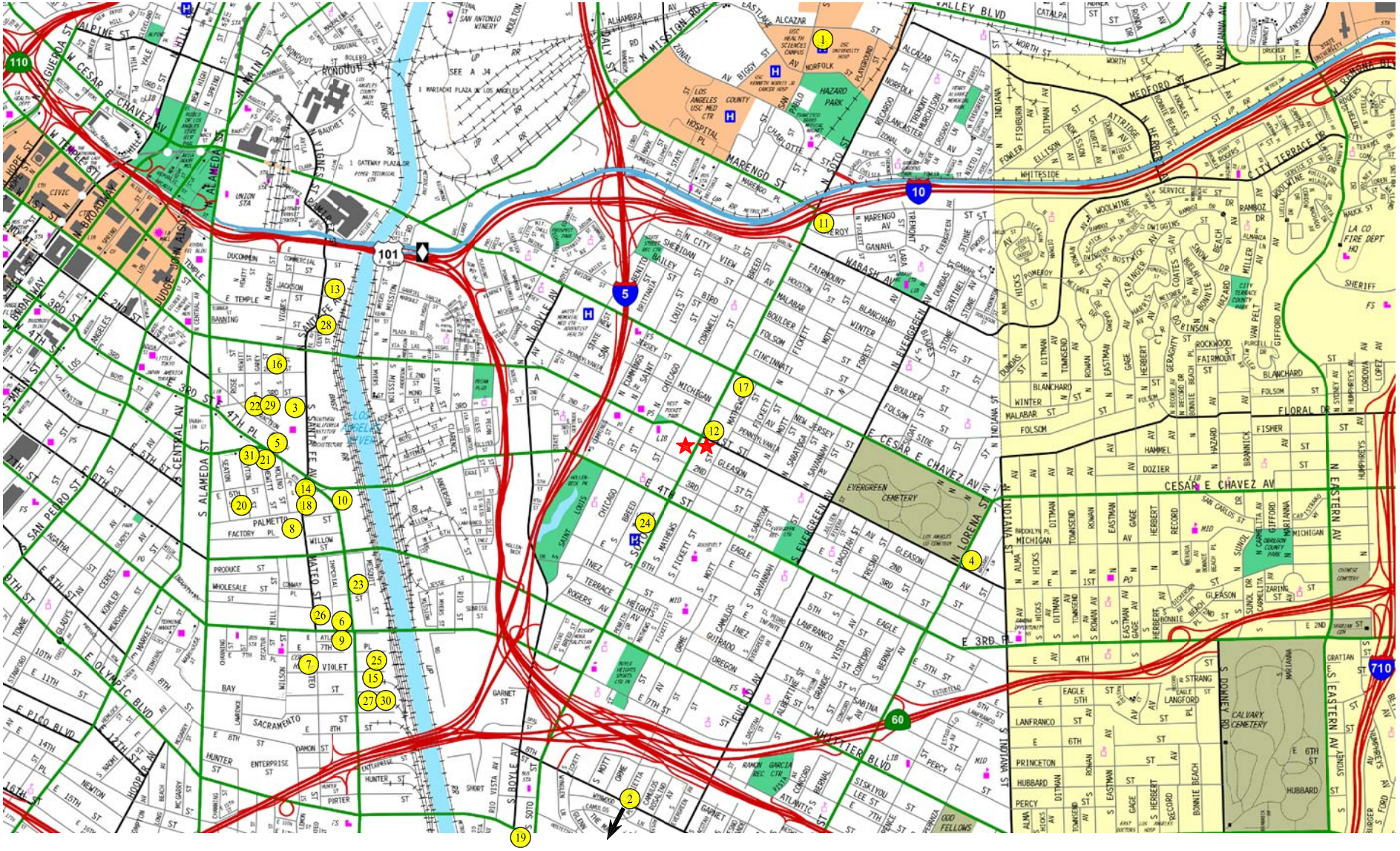
[4] A transit adjustment of 15 percent was applied to all the land use components due to the proximity to the Metro Gold Line Soto station located at 2330 E. 1st Street. The transit adjustments were applied after the pass-by adjustments were applied.

[5] ITE Land Use Code 495 (Recreational Community Room) trip generation average rates.
- Daily Trip Rate: 28.82 trips/1,000 SF of floor area; 50% inbound/50% outbound
- AM Peak Hour Trip Rate: 1.76 trips/1,000 SF of floor area; 66% inbound/34% outbound
- PM Peak Hour Trip Rate: 2.31 trips/1,000 SF of floor area; 47% inbound/53% outbound

[6] ITE Land Use Code 820 (Shopping Center) trip generation average rates.
- Daily Trip Rate: 37.75 trips/1,000 SF of leasable floor area; 50% inbound/50% outbound
- AM Peak Hour Trip Rate: 0.94 trips/1,000 SF of leasable floor area; 62% inbound/38% outbound
- PM Peak Hour Trip Rate: 3.81 trips/1,000 SF of leasable floor area; 48% inbound/52% outbound

[7] Pass-by trips are made as intermediate stops on the way from an origin to a primary destination without a route diversion. Pass-by trips are attracted from the traffic passing the site on an adjacent street or roadway that offers direct access to the site. The pass-by adjustment factors of 50 percent and 20 percent were applied to the retail and restaurant land use components, respectively, pursuant to the *Transportation Impact Study Guidelines* , December 2016.

[8] ITE Land Use Code 932 (High-Turnover [Sit-Down] Restaurant) trip generation average rates.
- Daily Trip Rate: 112.18 trips/1,000 SF of floor area; 50% inbound/50% outbound
- AM Peak Hour Trip Rate: 9.94 trips/1,000 SF of floor area; 55% inbound/45% outbound
- PM Peak Hour Trip Rate: 9.77 trips/1,000 SF of floor area; 62% inbound/38% outbound



MAP SOURCE: RAND MCNALLY & COMPANY

★ PROJECT SITES

N

NOT TO SCALE

FIGURE 6-1
LOCATION OF RELATED PROJECTS

LINSCOTT, LAW & GREENSPAN, engineers

LOS LIRIOS MIXED-USE PROJECT

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Table-6-1
RELATED PROJECTS LIST AND TRIP GENERATION [1]

MAP NO.	PROJECT STATUS	PROJECT NAME/NUMBER ADDRESS/LOCATION	LAND USE DATA		PROJECT DATA SOURCE	DAILY TRIP ENDS [2] VOLUMES	AM PEAK HOUR VOLUMES [2]			PM PEAK HOUR VOLUMES [2]		
			LAND-USE	SIZE			IN	OUT	TOTAL	IN	OUT	TOTAL
1	Proposed	USC Health Science Campus 1510 N. San Pablo Street	Medical Office Research & Development	120,000 GSF 465,000 GSF	[1]	7,715	613	140	753	161	613	774
2	Proposed	Boyle Heights MU Specific Plan 2901 E. Olympic Boulevard	Apartment Retail Office Medical Office Daycare Center Library	4,400 DU 185,000 GLSF 125,000 GSF 25,000 GSF 15,000 GSF 15,000 GSF	[1]	19,382	463	1,044	1,507	1,123	804	1,927
3	Proposed	Santa Fe Freight Yard Redevelopment 950 East 3rd Street	Apartment Retail/Restaurant School	635 DU 30,062 GLSF 532 Students	[1]	6,372	162	177	339	245	213	458
4	Proposed	Lorena Plaza Mixed-Use 3401 E. 1st Street	Apartment Retail	49 DU 10,000 GLSF	[1]	458	6	18	24	25	17	42
5	Proposed	Coca Cola Mixed-Use 963 E. 4th Street	Office Retail Restaurant	78,600 GSF 25,000 GLSF 20,000 GSF	[1]	2,512	106	22	128	113	138	251
6	Proposed	2051 E. 7th Street	Apartment Restaurant Retail	320 DU 5,000 GSF 15,000 GLSF	[1]	2,310	17	127	144	145	64	209
7	Proposed	826 S. Mateo Street	Condominium Retail Restaurant	90 DU 11,000 GLSF 5,600 GSF	[1]	1,267	11	34	45	62	39	101
8	Proposed	555 S. Mateo Street	Retail	153,000 GLSF	[1]	4,300	5	30	35	220	205	425
9	Proposed	2030 E. 7th Street	Office Retail	243,583 GSF 40,000 GLSF	[1]	2,306	274	34	308	69	249	318
10	Proposed	540 S. Santa Fe Avenue	Office	89,825 GSF	[1]	726	90	12	102	17	81	98
11	Proposed	1030 N. Soto Street	Hotel	81 Rooms	[1]	662	25	18	43	25	23	48
12	Proposed	2407 E. 1st Street	Apartment Retail	81 DU 5,000 GLSF	[1]	450	2	18	20	22	14	36
13	Proposed	Metro Emergency Security Operations Center 410 N. Center Street	Office	110,000 GSF	[1]	1,165	87	0	87	0	79	79
14	Proposed	500 S. Mateo Street	Restaurant	12,882 GSF	[1]	1,052	48	41	89	50	31	81
15	Proposed	2130 E. Violet Street	Office Retail	94,000 GSF 7,500 GLSF	[1]	1,351	137	30	167	39	122	161
16	Proposed	929 E. 2nd Street	Retail Other	37,974 GLSF 71,078 GSF	[1]	2,153	68	12	80	105	96	201
17	Proposed	La Veranda Mixed-Use 2420 E. Cesar Chavez Avenue	Apartment Bank Health Club	77 DU 4,000 GSF 4,000 GSF	[1]	1,087	25	36	61	54	44	98
18	Proposed	520 S. Mateo Street CPC-2016-3853	Apartment Office	600 DU 30,000 GSF	[1]	4,995	157	220	377	274	223	497

Table-6-1 (Continued)
RELATED PROJECTS LIST AND TRIP GENERATION [1]

MAP NO.	PROJECT STATUS	PROJECT NAME/NUMBER ADDRESS/LOCATION	LAND USE DATA		PROJECT DATA SOURCE	DAILY TRIP ENDS [2] VOLUMES	AM PEAK HOUR VOLUMES [2]			PM PEAK HOUR VOLUMES [2]		
			LAND-USE	SIZE			IN	OUT	TOTAL	IN	OUT	TOTAL
18			Retail Restaurant	15,000 GLSF 15,000 GSF								
19	Proposed	2650 E. Olympic Boulevard	Apartment Office Supermarket High-Turnover Restaurant Drinking Place Retail Coffee Shop Bank	1,030 DU 219,258 GSF 31,285 GSF 26,070 GSF 15,642 GSF 15,642 GLSF 2,607 GSF 2,607 GSF	[1]	12,247	498	447	945	599	539	1,138
20	Proposed	527 S. Colyton Street ENV-2016-3400-EIR	Apartment Retail Office	310 DU 11,375 GLSF 11,736 GSF	[1]	2,095	36	116	152	121	74	195
21	Proposed	940 E. 4th Street ENV-2017-611-EAF	Apartment Retail Office	93 DU 14,248 GLSF 6,000 GSF	[1]	788	14	37	51	44	31	75
22	Proposed	806 E. 3rd Street	Restaurant	18,327 GSF	[1]	253	1	(1)	0	13	7	20
23	Proposed	640 S. Santa Fe Avenue	Office Retail Restaurant	91,185 GSF 9,430 GLSF 6,550 GSF	[1]	1,330	90	8	98	43	114	157
24	Proposed	443 S. Soto Street	Elementary School	625 Students	[1]	277	131	112	243	32	25	57
25	Proposed	2143 E. Violet Street	Apartment Office Retail	320 DU 224,292 GSF 46,670 GLSF	[1]	4,477	329	122	451	130	330	460
26	Proposed	676 S. Mateo Street	Apartment Retail	185 DU 27,280 GLSF	[1]	1,990	50	95	145	106	51	157
27	Proposed	Soho House 1000 S. Santa Fe Avenue	Market Health Club Restaurant	14,193 GSF 6,793 GSF 10,065 GSF	[1]	2,029	194	30	224	57	192	249
28	Proposed	220 N. Center Street 2017-CEN-46412	Apartment Retail	430 DU 8,742 GLSF	[1]	2,166	33	119	152	121	79	200
29	Proposed	810 E. 3rd Street	Apartment Restaurant Retail	4 DU 3,541 GSF 6,171 GLSF	[1]	1,487	37	32	69	87	48	135
30	Proposed	2110 Bay Street 2016-CEN-44566	Apartment Affordable Housing Office Retail	99 DU 11 DU 113,350 GSF 43,657 GLSF	[1]	2,394	180	63	243	89	192	281
31	Proposed	401 S. Hewitt Street COC-2017-469-GPA	Office Retail Restaurant	255,500 GSF 4,970 GLSF 9,940 GSF	[1]	3,493	365	76	441	100	324	424
TOTAL						**95,289**	**4,254**	**3,269**	**7,523**	**4,291**	**5,061**	**9,352**

[1] Sources: City of Los Angeles Department of Transportation (LADOT) and Department of City Planning (LADCP). The peak hour traffic volumes were forecast based on trip data provided by LADOT and by applying trip rates as provided in the ITE "Trip Generation Manual", 9th Edition, 2012.
[2] Trips are one-way traffic movements, entering or leaving.

Table 9-2
FREEWAY IMPACT ANALYSIS SCREENING [1]
Weekday AM and PM Peak Hours

PROJECT TRIP GENERATION	TOTAL PROJECT	
	AM	PM
Inbound	22	23
Outbound	26	18

FREEWAY LOCATION	DIR.	PROJECT TRIP DIRECTION	TOTAL PROJECT TRIPS DIST.	AM	PM	NO. OF LANES	TOTAL CAPACITY [2]	PERCENT OF CAPACITY AM	PM	FREEWAY ANALYSIS REQUIRED? (YES/NO) [3]
Mainline Segment										
I-5 Freeway north of	NB	Outbound	5%	1	1	5	10,000	0.0%	0.0%	No
I-10 Freeway	SB	Inbound	5%	1	1	4	8,000	0.0%	0.0%	No
US-101 Freeway north of	NB	Outbound	10%	3	2	4	8,000	0.0%	0.0%	No
Alameda Street	SB	Inbound	10%	2	2	4	8,000	0.0%	0.0%	No
I-10 Freeway west of	EB	Inbound	5%	1	1	5	10,000	0.0%	0.0%	No
Alameda Street	WB	Outbound	5%	1	1	5	10,000	0.0%	0.0%	No
I-10 Freeway east of	EB	Outbound	10%	3	2	6	12,000	0.0%	0.0%	No
Soto Street	WB	Inbound	10%	2	2	6	12,000	0.0%	0.0%	No
SR-60 Freeway east of	EB	Outbound	5%	1	1	5	10,000	0.0%	0.0%	No
Lorena Street	WB	Inbound	5%	1	1	5	10,000	0.0%	0.0%	No
Off-Ramp										
I-5 Freeway NB at 4th Street	NB	Inbound	5%	1	1	2	1,700	0.1%	0.1%	No
I-5 Freeway SB at 4th Street	SB	Inbound	5%	1	1	2	1,700	0.1%	0.1%	No
US-101 Freeway SB at 4th Street	SB	Inbound	5%	1	1	2	1,700	0.1%	0.1%	No
I-10 Freeway EB at Soto Street	EB	Inbound	5%	1	1	3	2,550	0.0%	0.0%	No
I-10 Freeway WB at Soto Street	WB	Inbound	10%	2	2	4	3,400	0.1%	0.1%	No

[1] Pursuant to *Traffic Study Policies and Procedures* , City of Los Angeles Department of Transportation, August 2014, *Agreement Between City of Los Angeles and Caltrans District 7 on Freeway Impact Analysis Procedures* , October 2013, and per *First Amendment to the Agreement between LADOT and Caltrans District 7 on Freeway Impact Analysis Procedures* , December 15, 2015.

[2] Total Capacity derived from the assumed free-flow capacities shown below: (in vehicles per hour per lane)

Facility Type	Capacity
Mainline Segment	2,000 vphpl
Off-Ramp	850 vphpl

[3] Freeway impact analysis is required if the project would result in an increase of ≥2% of capacity for facilities operating at LOS D, or in an increase of ≥1% of capacity for facilities operating at LOS E/F. For a more conservative screening analysis, all facilities are assumed to be operating at LOS E/F.

APPENDIX B

TRAFFIC COUNT DATA

Prepared by National Data & Surveying Services

Breed St & 1st St

Peak Hour Turning Movement Count

ID: 18-05384-001
City: Boyle Heights

Day: Thursday
Date: 05/24/2018

PEAK HOURS	COUNT PERIODS
07:15 AM - 08:15 AM	07:00 AM - 10:00 AM
NONE	NONE
05:00 PM - 06:00 PM	03:00 PM - 06:00 PM

Breed St — SOUTHBOUND

AM	26	53	19	0	146	AM
NOON	0	0	0	0	0	NOON
PM	30	35	26	0	226	PM

1st St — EASTBOUND

AM	NOON	PM	
839	0	454	⇦
0	0	0	0
22	0	53	1
350	0	615	1
22	0	27	0
AM	NOON	PM	

1st St — WESTBOUND

PM	NOON	AM	
81	0	48	0
409	0	778	1
27	0	44	1
0	0	0	0
670	0	400	⇨
PM	NOON	AM	

CONTROL

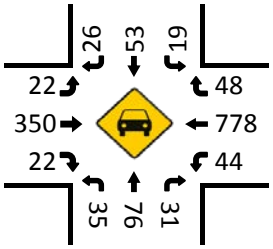
Signalized

TEV	1504 AM	0 NOON	1439 PM
PHF	0.88		0.94

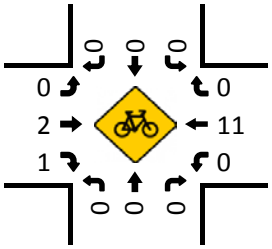
Breed St — NORTHBOUND

PM	89	0	15	92	29	PM
NOON	0	0	0	0	0	NOON
AM	119	0	35	76	31	AM

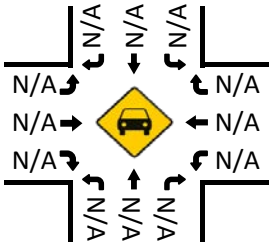
Total Vehicles (AM)



Bikes (AM)



Total Vehicles (Noon)



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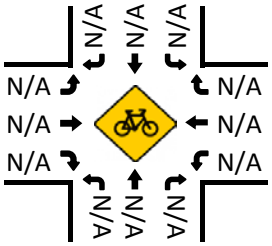
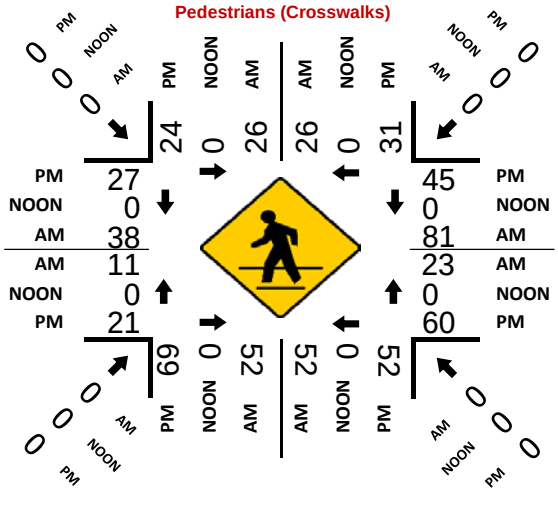


Pedestrians (Crosswalks)



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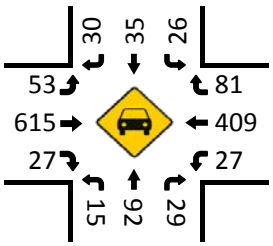
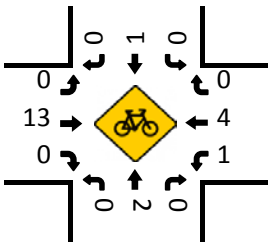


Bikes (PM)



Prepared by National Data & Surveying Services

Soto St & Cesar/Chavez Ave

Peak Hour Turning Movement Count

ID: 18-05384-002
City: Boyle Heights

Day: Thursday
Date: 05/24/2018

PEAK HOURS

AM	07:00 AM - 08:00 AM
NOON	NONE
PM	05:00 PM - 06:00 PM

COUNT PERIODS

AM	07:00 AM - 10:00 AM
NOON	NONE
PM	03:00 PM - 06:00 PM

Soto St — SOUTHBOUND

AM	122	721	82	0	596 AM
NOON	0	0	0	0	0 NOON
PM	96	545	94	0	976 PM

Cesar/ Chavez Ave — EASTBOUND

AM	NOON	PM	
1272	0	690	⇦
0	0	0	0 ↶
2	0	14	0 ↱
265	0	723	2 →
101	0	84	0 ↳

Cesar/ Chavez Ave — WESTBOUND

PM	NOON	AM	
122	0	58	0 ↰
489	0	1073	2 ←
12	0	9	0 ↶
0	0	0	0 ↩
900	0	404	⇨

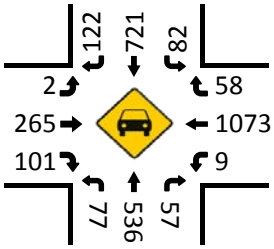
Soto St — NORTHBOUND

PM	642	1	105	840	83 PM
NOON	0	0	0	0	0 NOON
AM	831	0	77	536	57 AM

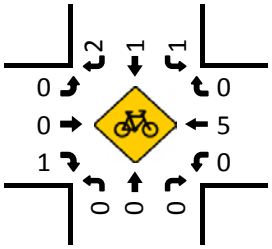
0 ↰	1 ↰	2 ↑	0 ↱

CONTROL			
Signalized			
TEV	3103 AM	0 NOON	3208 PM
PHF	0.95		0.96

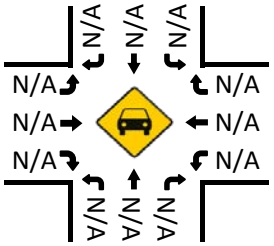
Total Vehicles (AM)



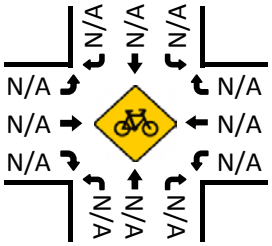
Bikes (AM)



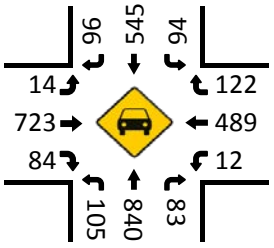
Total Vehicles (Noon)



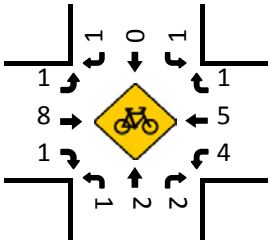
Bikes (NOON)



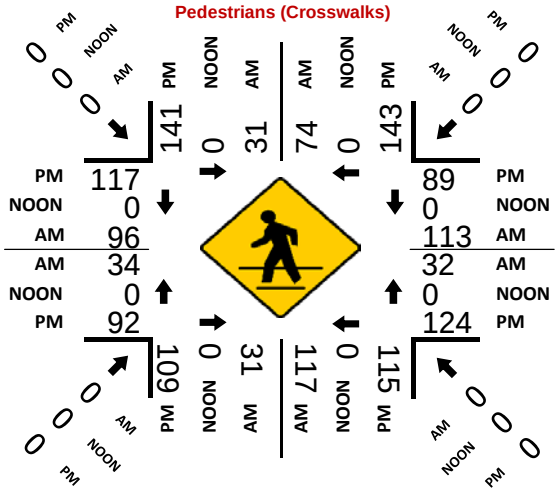
Total Vehicles (PM)



Bikes (PM)



Pedestrians (Crosswalks)



Prepared by National Data & Surveying Services

Soto St & 1st St

Peak Hour Turning Movement Count

ID: 18-05384-003
City: Boyle Heights

Day: Thursday
Date: 05/24/2018

PEAK HOURS	COUNT PERIODS
07:15 AM - 08:15 AM	07:00 AM - 10:00 AM
NONE	NONE
05:00 PM - 06:00 PM	03:00 PM - 06:00 PM

SOUTHBOUND (Soto St)

AM	76	758	4	0	649	AM
NOON	0	0	0	0	0	NOON
PM	54	542	12	0	1052	PM

EASTBOUND (1st St)

AM	NOON	PM		
847	0	473	⇦	
0	0	0	↶	0
40	0	65	↱	1
303	0	558	→	2
73	0	78	↷	0

WESTBOUND (1st St)

	PM	NOON	AM
0	56	0	43
1	407	0	765
1	74	0	149
0	0	0	0
⇨	689	0	361

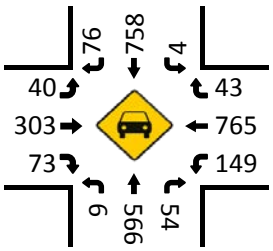
NORTHBOUND (Soto St)

PM	694	0	12	931	119	PM
NOON	0	0	0	0	0	NOON
AM	980	0	6	566	54	AM

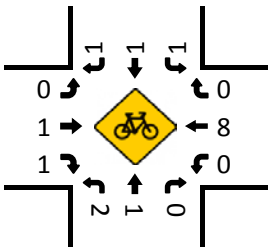
⇩	0	0	2	0

CONTROL			
Signalized			
TEV	2837 AM	0 NOON	2908 PM
PHF	0.94		0.95

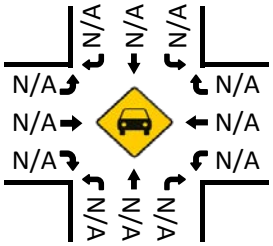
Total Vehicles (AM)



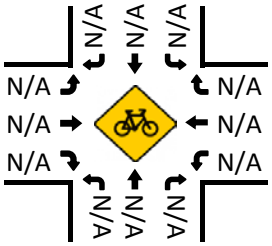
Bikes (AM)



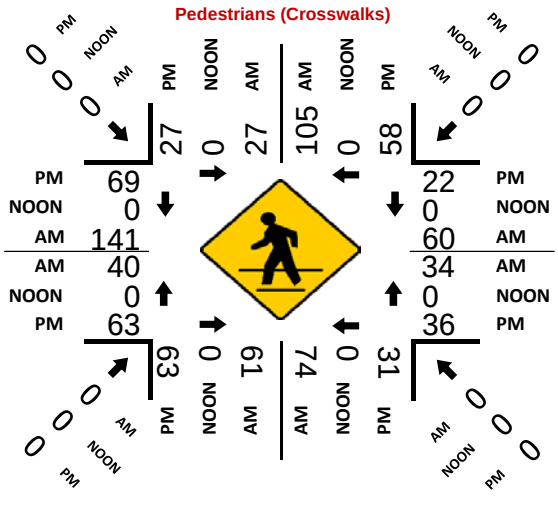
Total Vehicles (Noon)



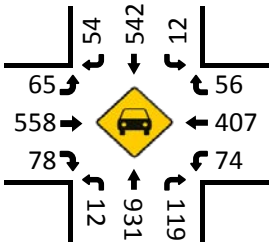
Bikes (NOON)



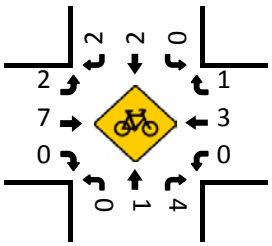
Pedestrians (Crosswalks)



Total Vehicles (PM)



Bikes (PM)



Prepared by National Data & Surveying Services

Soto St & 4th St

Peak Hour Turning Movement Count

ID: 18-05384-004
City: Boyle Heights

Day: Thursday
Date: 05/24/2018

PEAK HOURS	COUNT PERIODS
07:15 AM - 08:15 AM	07:00 AM - 10:00 AM
NONE	NONE
05:00 PM - 06:00 PM	03:00 PM - 06:00 PM

SOUTHBOUND (Soto St)

AM	85	773	110	0	678	AM
NOON	0	0	0	0	0	NOON
PM	59	501	91	0	1100	PM
	1	2	1	0		

EASTBOUND (4th St)

AM	NOON	PM	
1013	0	603	
0	0	0	0
66	0	171	1
341	0	862	2
84	0	122	1
AM	NOON	PM	

WESTBOUND (4th St)

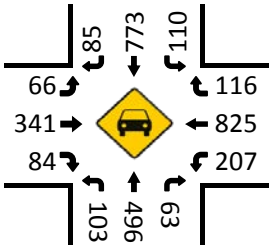
	PM	NOON	AM
0	95	0	116
2	406	0	825
1	82	0	207
0	0	0	0
	1082	0	514
	PM	NOON	AM

NORTHBOUND (Soto St)

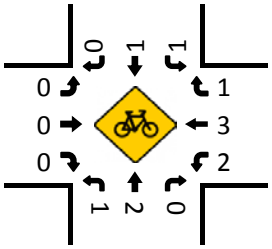
	0	1	2	1		
PM	705	0	138	834	129	PM
NOON	0	0	0	0	0	NOON
AM	1064	0	103	496	63	AM

CONTROL			
Signalized			
TEV	3269 AM	0 NOON	3490 PM
PHF	0.96		0.97

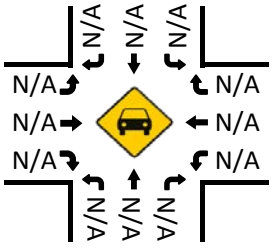
Total Vehicles (AM)



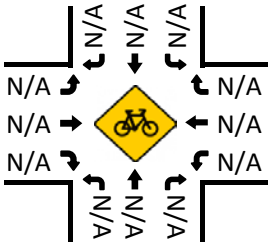
Bikes (AM)



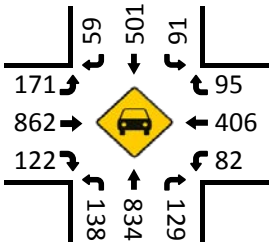
Total Vehicles (Noon)



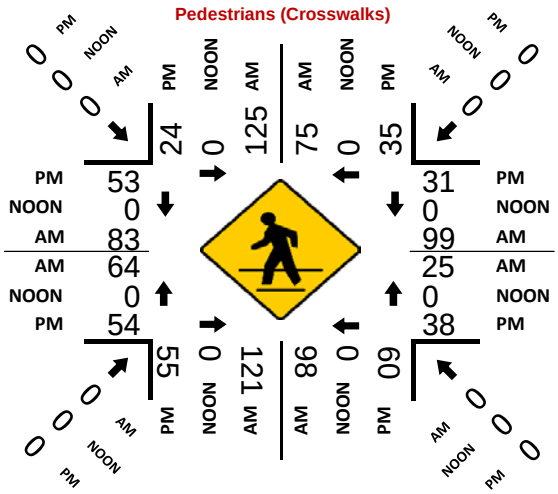
Bikes (NOON)



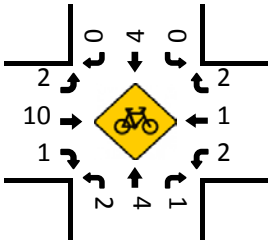
Total Vehicles (PM)



Pedestrians (Crosswalks)



Bikes (PM)



Prepared by National Data & Surveying Services

Mott St & 1st St

Peak Hour Turning Movement Count

ID: 18-05384-005
City: Boyle Heights

Day: Thursday
Date: 05/24/2018

PEAK HOURS	COUNT PERIODS
07:15 AM - 08:15 AM	07:00 AM - 10:00 AM
NONE	NONE
05:00 PM - 06:00 PM	03:00 PM - 06:00 PM

SOUTHBOUND (Mott St)

AM	53	118	29	0	159	AM
NOON	0	0	0	0	0	NOON
PM	24	82	37	0	215	PM

EASTBOUND (1st St)

AM	NOON	PM	
896	0	473	
0	0	0	0
35	0	35	1
335	0	607	1
23	0	37	0
AM	NOON	PM	

WESTBOUND (1st St)

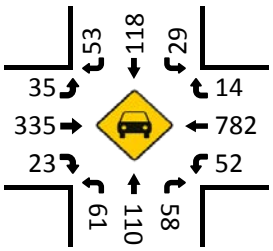
PM	NOON	AM	
32	0	14	0
387	0	782	1
35	0	52	1
1	0	0	0
699	0	422	
PM	NOON	AM	

NORTHBOUND (Mott St)

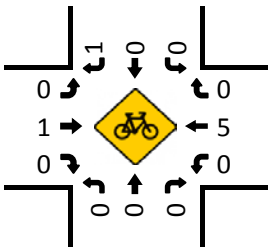
PM	154	0	62	148	54	PM
NOON	0	0	0	0	0	NOON
AM	193	0	61	110	58	AM

CONTROL			
Signalized			
TEV	1670 AM	0 NOON	1541 PM
PHF	0.88		0.96

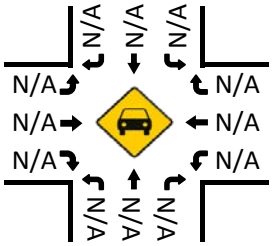
Total Vehicles (AM)



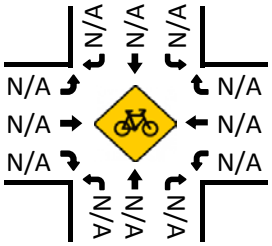
Bikes (AM)



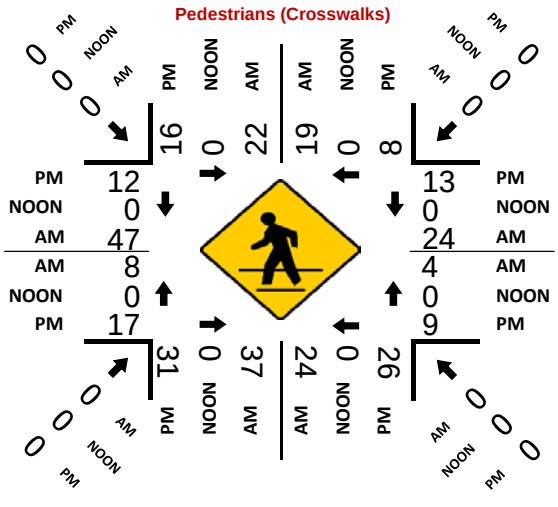
Total Vehicles (Noon)



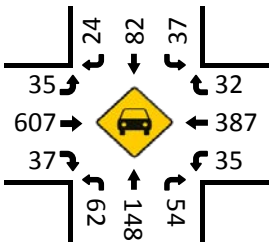
Bikes (NOON)



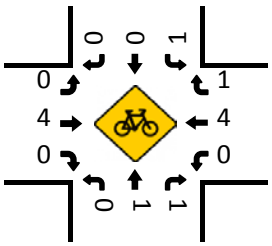
Pedestrians (Crosswalks)



Total Vehicles (PM)



Bikes (PM)



APPENDIX C

CMA AND LEVELS OF SERVICE EXPLANATION

CMA DATA WORKSHEETS: WEEKDAY AM AND PM PEAK HOURS

CRITICAL MOVEMENT ANALYSIS (CMA) DESCRIPTION

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

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

Critical Movement Analysis (CMA) is a procedure which provides a capacity and level of service geometry and traffic signal operation and results in a level of service determination for the intersection as a whole operating unit.

The per lane volume for each movement in the intersection is determined and the per lane intersection capacity based on the Transportation Research Board (TRB) Report 212 (*Interim Materials on Highway Capacity*). The resulting CMA represents the ratio of the intersection's cumulative volume over its respective capacity (V/C ratio). Critical Movement Analysis takes into account lane widths, bus and truck operations, pedestrian activity and parking activity, as well as number of lanes and geometrics.

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

Critical Movement Analysis Characteristics

Level of Service	Load Factor	Equivalent CMA
A (free flow)	0.0	0.00 - 0.60
B (rural design)	0.0 - 0.1	0.61 - 0.70
C (urban design)	0.1 - 0.3	0.71 - 0.80
D (maximum urban design)	0.3 - 0.7	0.81 - 0.90
E (capacity)	0.7 - 1.0	0.91 - 1.00
F (force flow)	Not Applicable	Not Applicable

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

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

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

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

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

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

Level of Service Worksheet
(Circular 212 Method)

I/S #:	North-South Street:	Breed Street	Year of Count:	2018	Ambient Growth (%):	1.0	Conducted by:	LLG Engineers	Date:	7/5/2018
1	East-West Street:	1st Street	Projection Year:	2021	Peak Hour:	AM	Reviewed by:		Project:	Los Lirios Mixed-Use Project/1-18

		EXISTING CONDITION			EXISTING PLUS PROJECT			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT				FUTURE W/ PROJECT W/ MITIGATION			
MOVEMENT		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
	No. of Phases			2			2			2				2				2	
	Opposed Ø'ing: N/S-1, E/W-2 or Both-3?			0			0			0				0				0	
	Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0 SB-- EB-- 0 WB--		0	NB-- 0 SB-- EB-- 0 WB--		0	NB-- 0 SB-- EB-- 0 WB--		0		NB-- 0 SB-- EB-- 0 WB--		0		NB-- 0 SB-- EB-- 0 WB--		0	
	ATSAC-1 or ATSAC+ATCS-2?			2			2			2				2				2	
	Override Capacity			0			0			0				0				0	
NORTHBOUND	Left	35	0	35	0	35	35	86	122	0	122	0	122	0	122	0	122	0	122
	Left-Through		0							0				0				0	
	Through	76	0	**142**	0	76	**149**	0	78	0	**232**	0	78	0	**239**	0	78	0	**239**
	Through-Right		0							0				0				0	
	Right	31	0	0	7	38	0	0	32	0	0	7	39	0	0	0	39	0	0
	Left-Through-Right		1							1				1				1	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	19	0	**19**	1	20	**20**	0	20	0	**20**	1	21	0	**21**	0	21	0	**21**
	Left-Through		0							0				0				0	
	Through	53	0	98	0	53	99	0	55	0	102	0	55	0	103	0	55	0	103
	Through-Right		0							0				0				0	
	Right	26	0	0	0	26	0	0	27	0	0	0	27	0	0	0	27	0	0
	Left-Through-Right		1							1				1				1	
	Left-Right		0							0				0				0	
EASTBOUND	Left	22	1	**22**	0	22	**22**	0	23	1	**23**	0	23	1	**23**	0	23	1	**23**
	Left-Through		0							0				0				0	
	Through	350	0	372	3	353	375	98	459	0	482	3	462	0	485	0	462	0	485
	Through-Right		1							1				1				1	
	Right	22	0	0	0	22	0	0	23	0	0	0	23	0	0	0	23	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	44	1	44	4	48	48	0	45	1	45	4	49	1	49	0	49	1	49
	Left-Through		0							0				0				0	
	Through	778	0	**826**	3	781	**830**	66	868	0	**917**	3	871	0	**921**	0	871	0	**921**
	Through-Right		1							1				1				1	
	Right	48	0	0	1	49	0	0	49	0	0	1	50	0	0	0	50	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
	CRITICAL VOLUMES	*North-South:*		161	*North-South:*		169	*North-South:*			252	*North-South:*			260	*North-South:*			260
		East-West:		848	*East-West:*		852	*East-West:*			940	*East-West:*			944	*East-West:*			944
		SUM:		1009	*SUM:*		1021	*SUM:*			1192	*SUM:*			1204	*SUM:*			1204
	VOLUME/CAPACITY *(V/C)* RATIO:			0.673			0.681				0.795				0.803				0.803
	V/C LESS ATSAC/ATCS ADJUSTMENT:			**0.573**			**0.581**				**0.695**				**0.703**				**0.703**
	LEVEL OF SERVICE (LOS):			**A**			**A**				**B**				**C**				**C**

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project: 0.008 — $\Delta v/c$ after mitigation: 0.008

Significant impacted? NO — Fully mitigated? N/A

Level of Service Worksheet
(Circular 212 Method)

I/S #:	North-South Street:	Breed Street	Year of Count:	2018	Ambient Growth (%):	1.0	Conducted by:	LLG Engineers	Date:	7/5/2018
1	East-West Street:	1st Street	Projection Year:	2021	Peak Hour:	PM	Reviewed by:		Project:	Los Lirios Mixed-Use Project/1-18

No. of Phases				2				2				2				2				2				2
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?				0				0				0				0				0				0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB--	0	SB--	0	NB--	0	SB--	0	NB--	0	SB--	0	NB--	0	SB--	0	NB--	0	SB--	0	NB--	0	SB--	0
	EB--	0	WB--	0	EB--	0	WB--	0	EB--	0	WB--	0	EB--	0	WB--	0	EB--	0	WB--	0	EB--	0	WB--	0
ATSAC-1 or ATSAC+ATCS-2?				2				2				2				2				2				2
Override Capacity				0				0				0				0				0				0

MOVEMENT		EXISTING CONDITION			EXISTING PLUS PROJECT			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT				FUTURE W/ PROJECT W/ MITIGATION			
		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	15	0	15	0	15	15	70	85	0	85	0	85	0	85	0	85	0	85
	Left-Through		0							0				0				0	
	Through	92	0	**136**	0	92	**143**	0	95	0	**210**	0	95	0	**217**	0	95	0	**217**
	Through-Right		0							0				0				0	
	Right	29	0	0	7	36	0	0	30	0	0	7	37	0	0	0	37	0	0
	Left-Through-Right		1							1				1				1	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	26	0	**26**	1	27	**27**	0	27	0	**27**	1	28	0	**28**	0	28	0	**28**
	Left-Through		0							0				0				0	
	Through	35	0	91	0	35	92	0	36	0	94	0	36	0	95	0	36	0	95
	Through-Right		0							0				0				0	
	Right	30	0	0	0	30	0	0	31	0	0	0	31	0	0	0	31	0	0
	Left-Through-Right		1							1				1				1	
	Left-Right		0							0				0				0	
EASTBOUND	Left	53	1	53	0	53	53	0	55	1	55	0	55	1	55	0	55	1	55
	Left-Through		0							0				0				0	
	Through	615	0	**642**	3	618	**645**	170	804	0	**832**	3	807	0	**835**	0	807	0	**835**
	Through-Right		1							1				1				1	
	Right	27	0	0	0	27	0	0	28	0	0	0	28	0	0	0	28	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	27	1	**27**	4	31	**31**	0	28	1	**28**	4	32	1	**32**	0	32	1	**32**
	Left-Through		0							0				0				0	
	Through	409	0	490	2	411	493	62	483	0	566	2	485	0	569	0	485	0	569
	Through-Right		1							1				1				1	
	Right	81	0	0	1	82	0	0	83	0	0	1	84	0	0	0	84	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
CRITICAL VOLUMES		*North-South:*		162	*North-South:*		170	*North-South:*			237	*North-South:*			245	*North-South:*			245
		East-West:		669	*East-West:*		676	*East-West:*			860	*East-West:*			867	*East-West:*			867
		SUM:		831	*SUM:*		846	*SUM:*			1097	*SUM:*			1112	*SUM:*			1112
VOLUME/CAPACITY (V/C) RATIO:				0.554			0.564				0.731				0.741				0.741
V/C LESS ATSAC/ATCS ADJUSTMENT:				**0.454**			**0.464**				**0.631**				**0.641**				**0.641**
LEVEL OF SERVICE (LOS):				**A**			**A**				**B**				**B**				**B**

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project:	0.010	∆*v/c* after mitigation:	0.010
Significant impacted?	NO	Fully mitigated?	N/A

Level of Service Worksheet
(Circular 212 Method)

I/S #:	North-South Street:	Soto Street	Year of Count:	2018	Ambient Growth (%):	1.0	Conducted by:	LLG Engineers	Date:	7/5/2018
2	East-West Street:	Cesar E Chavez Avenue	Projection Year:	2021	Peak Hour:	AM	Reviewed by:		Project:	Los Lirios Mixed-Use Project/1-18

	EXISTING CONDITION	EXISTING PLUS PROJECT	FUTURE CONDITION W/O PROJECT	FUTURE CONDITION W/ PROJECT	FUTURE W/ PROJECT W/ MITIGATION
No. of Phases	2	2	2	2	2
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?	0	0	0	0	0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0 SB-- 0 EB-- 0 WB-- 0	NB-- 0 SB-- 0 EB-- 0 WB-- 0	NB-- 0 SB-- 0 EB-- 0 WB-- 0	NB-- 0 SB-- 0 EB-- 0 WB-- 0	NB-- 0 SB-- 0 EB-- 0 WB-- 0
ATSAC-1 or ATSAC+ATCS-2?	2	2	2	2	2
Override Capacity	0	0	0	0	0

MOVEMENT		EXISTING CONDITION			EXISTING PLUS PROJECT			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT				FUTURE W/ PROJECT W/ MITIGATION			
		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	77	1	**77**	3	80	**80**	88	167	1	**167**	3	170	1	**170**	0	170	1	**170**
	Left-Through		0							0				0				0	
	Through	536	1	297	4	540	299	213	765	1	418	4	769	1	420	0	769	1	420
	Through-Right		1							1				1				1	
	Right	57	0	57	0	57	57	11	70	0	70	0	70	0	70	0	70	0	70
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	82	1	82	0	82	82	4	88	1	88	0	88	1	88	0	88	1	88
	Left-Through		0							0				0				0	
	Through	721	1	**422**	3	724	**423**	143	886	1	**507**	3	889	1	**508**	0	889	1	**508**
	Through-Right		1							1				1				1	
	Right	122	0	122	0	122	122	1	127	0	127	0	127	0	127	0	127	0	127
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	2	0	**2**	0	2	**2**	0	2	0	**2**	0	2	0	**2**	0	2	0	**2**
	Left-Through		1							1				1				1	
	Through	265	0	189	0	265	190	4	277	0	227	0	277	0	228	0	277	0	228
	Through-Right		1							1				1				1	
	Right	101	0	189	2	103	190	61	165	0	227	2	167	0	228	0	167	0	228
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	9	0	9	0	9	9	0	9	0	9	0	9	0	9	0	9	0	9
	Left-Through		1							1				1				1	
	Through	1073	0	**575**	0	1073	**575**	6	1112	0	**598**	0	1112	0	**598**	0	1112	0	**598**
	Through-Right		1							1				1				1	
	Right	58	0	575	0	58	575	5	65	0	598	0	65	0	598	0	65	0	598
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
CRITICAL VOLUMES		*North-South:*		499	*North-South:*		503	*North-South:*			674	*North-South:*			678	*North-South:*			678
		East-West:		577	*East-West:*		577	*East-West:*			600	*East-West:*			600	*East-West:*			600
		SUM:		1076	*SUM:*		1080	*SUM:*			1274	*SUM:*			1278	*SUM:*			1278
VOLUME/CAPACITY *(V/C)* RATIO:				0.717			0.720				0.849				0.852				0.852
V/C LESS ATSAC/ATCS ADJUSTMENT:				**0.617**			**0.620**				**0.749**				**0.752**				**0.752**
LEVEL OF SERVICE (LOS):				**B**			**B**				**C**				**C**				**C**

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project:	0.003	∆*v/c* after mitigation:	0.003
Significant impacted?	NO	Fully mitigated?	N/A

Level of Service Worksheet
(Circular 212 Method)

I/S #:	North-South Street:	Soto Street	Year of Count:	2018	Ambient Growth (%):	1.0	Conducted by:	LLG Engineers	Date:	7/5/2018
2	East-West Street:	Cesar E Chavez Avenue	Projection Year:	2021	Peak Hour:	PM	Reviewed by:		Project:	Los Lirios Mixed-Use Project/1-18

No. of Phases				2				2				2				2				2				2
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?				0				0				0				0				0				0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB--	0	SB--	0	NB--	0	SB--	0	NB--	0	SB--	0	NB--	0	SB--	0	NB--	0	SB--	0	NB--	0	SB--	0
	EB--	0	WB--	0	EB--	0	WB--	0	EB--	0	WB--	0	EB--	0	WB--	0	EB--	0	WB--	0	EB--	0	WB--	0
ATSAC-1 or ATSAC+ATCS-2?				2				2				2				2				2				2
Override Capacity				0				0				0				0				0				0

MOVEMENT		EXISTING CONDITION			EXISTING PLUS PROJECT			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT				FUTURE W/ PROJECT W/ MITIGATION			
		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	106	1	106	2	108	108	71	180	1	180	2	182	1	182	0	182	1	182
	Left-Through		0							0				0				0	
	Through	840	1	**462**	3	843	**463**	172	1037	1	**573**	3	1040	1	**575**	0	1040	1	**575**
	Through-Right		1							1				1				1	
	Right	83	0	83	0	83	83	23	109	0	109	0	109	0	109	0	109	0	109
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	94	1	**94**	0	94	**94**	6	103	1	**103**	0	103	1	**103**	0	103	1	**103**
	Left-Through		0							0				0				0	
	Through	545	1	321	3	548	322	229	791	1	446	3	794	1	447	0	794	1	447
	Through-Right		1							1				1				1	
	Right	96	0	96	0	96	96	1	100	0	100	0	100	0	100	0	100	0	100
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	14	0	14	0	14	14	0	14	0	14	0	14	0	14	0	14	0	14
	Left-Through		1							1				1				1	
	Through	723	0	**432**	0	723	**433**	8	753	0	**494**	0	753	0	**495**	0	753	0	**495**
	Through-Right		1							1				1				1	
	Right	84	0	432	2	86	433	91	178	0	494	2	180	0	495	0	180	0	495
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	12	0	**12**	0	12	**12**	0	12	0	**12**	0	12	0	**12**	0	12	0	**12**
	Left-Through		1							1				1				1	
	Through	489	0	330	0	489	330	6	510	0	345	0	510	0	345	0	510	0	345
	Through-Right		1							1				1				1	
	Right	122	0	330	0	122	330	5	131	0	345	0	131	0	345	0	131	0	345
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
CRITICAL VOLUMES		*North-South:*		556	*North-South:*		557	*North-South:*			676	*North-South:*			678	*North-South:*			678
		East-West:		444	*East-West:*		445	*East-West:*			506	*East-West:*			507	*East-West:*			507
		SUM:		1000	*SUM:*		1002	*SUM:*			1182	*SUM:*			1185	*SUM:*			1185
VOLUME/CAPACITY (V/C) RATIO:				0.667			0.668				0.788				0.790				0.790
V/C LESS ATSAC/ATCS ADJUSTMENT:				**0.567**			**0.568**				**0.688**				**0.690**				**0.690**
LEVEL OF SERVICE (LOS):				**A**			**A**				**B**				**B**				**B**

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project:	0.002	∆*v/c* after mitigation:	0.002
Significant impacted?	NO	Fully mitigated?	N/A

Level of Service Worksheet
(Circular 212 Method)

I/S #:	North-South Street:	Soto Street	Year of Count:	2018	Ambient Growth (%):	1.0	Conducted by:	LLG Engineers	Date:	7/5/2018
3	East-West Street:	1st Street	Projection Year:	2021	Peak Hour:	AM	Reviewed by:		Project:	Los Lirios Mixed-Use Project/1-18

No. of Phases				2				2				2				2				2				2
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?				0				0				0				0				0				0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB--	0	SB--	0	NB--	0	SB--	0	NB--	0	SB--	0	NB--	0	SB--	0	NB--	0	SB--	0	NB--	0	SB--	0
	EB--	0	WB--	0	EB--	0	WB--	0	EB--	0	WB--	0	EB--	0	WB--	0	EB--	0	WB--	0	EB--	0	WB--	0
ATSAC-1 or ATSAC+ATCS-2?				2				2				2				2				2				2
Override Capacity				0				0				0				0				0				0

MOVEMENT		EXISTING CONDITION			EXISTING PLUS PROJECT			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT				FUTURE W/ PROJECT W/ MITIGATION			
		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	6	0	**6**	0	6	**6**	0	6	0	**6**	0	6	0	**6**	0	6	0	**6**
	Left-Through		1							1				1				1	
	Through	566	0	322	0	566	322	221	804	0	489	0	804	0	489	0	804	0	489
	Through-Right		1							1				1				1	
	Right	54	0	322	0	54	322	81	137	0	489	0	137	0	489	0	137	0	489
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	4	0	4	0	4	4	0	4	0	4	0	4	0	4	0	4	0	4
	Left-Through		1							1				1				1	
	Through	758	0	**425**	0	758	**429**	159	940	0	**520**	0	940	0	**524**	0	940	0	**524**
	Through-Right		1							1				1				1	
	Right	76	0	425	7	83	429	6	84	0	520	7	91	0	524	0	91	0	524
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	40	1	**40**	7	47	**47**	4	45	1	**45**	7	52	1	**52**	0	52	1	**52**
	Left-Through		0							0				0				0	
	Through	303	1	303	10	313	313	34	346	1	346	10	356	1	356	0	356	1	356
	Through-Right		0							0				0				0	
	Right	73	1	73	3	76	76	61	136	1	136	3	139	1	139	0	139	1	139
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	149	1	149	0	149	149	58	212	1	212	0	212	1	212	0	212	1	212
	Left-Through		0							0				0				0	
	Through	765	1	**765**	9	774	**774**	61	849	1	**849**	9	858	1	**858**	0	858	1	**858**
	Through-Right		0							0				0				0	
	Right	43	1	43	0	43	43	3	47	1	47	0	47	1	47	0	47	1	47
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
CRITICAL VOLUMES		*North-South:*		431	*North-South:*		435	*North-South:*			526	*North-South:*			530	*North-South:*			530
		East-West:		805	*East-West:*		821	*East-West:*			894	*East-West:*			910	*East-West:*			910
		SUM:		1236	*SUM:*		1256	*SUM:*			1420	*SUM:*			1440	*SUM:*			1440
VOLUME/CAPACITY *(V/C)* RATIO:				0.824			0.837				0.947				0.960				0.960
V/C LESS ATSAC/ATCS ADJUSTMENT:				**0.724**			**0.737**				**0.847**				**0.860**				**0.860**
LEVEL OF SERVICE (LOS):				**C**			**C**				**D**				**D**				**D**

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project: 0.013 **$\Delta v/c$ after mitigation:** 0.013

Significant impacted? NO **Fully mitigated?** N/A

Level of Service Worksheet
(Circular 212 Method)

I/S #:	North-South Street:	Soto Street	Year of Count:	2018	Ambient Growth (%):	1.0	Conducted by:	LLG Engineers	Date:	7/5/2018
3	East-West Street:	1st Street	Projection Year:	2021	Peak Hour:	PM	Reviewed by:		Project:	Los Lirios Mixed-Use Project/1-18

No. of Phases				2				2				2				2				2				2
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?				0				0				0				0				0				0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB--	0	SB--	0	NB--	0	SB--	0	NB--	0	SB--	0	NB--	0	SB--	0	NB--	0	SB--	0	NB--	0	SB--	0
	EB--	0	WB--	0	EB--	0	WB--	0	EB--	0	WB--	0	EB--	0	WB--	0	EB--	0	WB--	0	EB--	0	WB--	0
ATSAC-1 or ATSAC+ATCS-2?				2				2				2				2				2				2
Override Capacity				0				0				0				0				0				0

MOVEMENT		EXISTING CONDITION			EXISTING PLUS PROJECT			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT				FUTURE W/ PROJECT W/ MITIGATION			
		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	12	0	12	0	12	12	0	12	0	12	0	12	0	12	0	12	0	12
	Left-Through		1							1				1				1	
	Through	931	0	**537**	0	931	**549**	180	1139	0	**690**	0	1139	0	**690**	0	1139	0	**690**
	Through-Right		1							1				1				1	
	Right	119	0	537	0	119	549	69	192	0	690	0	192	0	690	0	192	0	690
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	12	0	**12**	0	12	**12**	0	12	0	**12**	0	12	0	**12**	0	12	0	**12**
	Left-Through		1							1				1				1	
	Through	542	0	334	0	542	338	230	788	0	461	0	788	0	465	0	788	0	465
	Through-Right		1							1				1				1	
	Right	54	0	334	7	61	338	6	62	0	461	7	69	0	465	0	69	0	465
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	65	1	65	6	71	71	7	74	1	74	6	80	1	80	0	80	1	80
	Left-Through		0							0				0				0	
	Through	558	1	**558**	8	566	**566**	75	650	1	**650**	8	658	1	**658**	0	658	1	**658**
	Through-Right		0							0				0				0	
	Right	78	1	78	2	80	80	89	169	1	169	2	171	1	171	0	171	1	171
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	74	1	**74**	0	74	**74**	90	166	1	**166**	0	166	1	**166**	0	166	1	**166**
	Left-Through		0							0				0				0	
	Through	407	1	407	10	417	417	57	476	1	476	10	486	1	486	0	486	1	486
	Through-Right		0							0				0				0	
	Right	56	1	56	0	56	56	5	63	1	63	0	63	1	63	0	63	1	63
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
CRITICAL VOLUMES		*North-South:*		549	*North-South:*		561	*North-South:*			702	*North-South:*			702	*North-South:*			702
		East-West:		632	*East-West:*		640	*East-West:*			816	*East-West:*			824	*East-West:*			824
		SUM:		1181	*SUM:*		1201	*SUM:*			1518	*SUM:*			1526	*SUM:*			1526
VOLUME/CAPACITY (V/C) RATIO:				0.787			0.801				1.012				1.017				1.017
V/C LESS ATSAC/ATCS ADJUSTMENT:				**0.687**			**0.701**				**0.912**				**0.917**				**0.917**
LEVEL OF SERVICE (LOS):				**B**			**C**				**E**				**E**				**E**

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project:	0.005	∆*v/c* after mitigation:	0.005
Significant impacted?	NO	Fully mitigated?	N/A

Level of Service Worksheet
(Circular 212 Method)

I/S #:	North-South Street:	Soto Street	Year of Count:	2018	Ambient Growth (%):	1.0	Conducted by:	LLG Engineers	Date:	7/5/2018
4	East-West Street:	4th Street	Projection Year:	2021	Peak Hour:	AM	Reviewed by:		Project:	Los Lirios Mixed-Use Project/1-18

	EXISTING CONDITION	EXISTING PLUS PROJECT	FUTURE CONDITION W/O PROJECT	FUTURE CONDITION W/ PROJECT	FUTURE W/ PROJECT W/ MITIGATION
No. of Phases	3	3	3	3	3
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?	0	0	0	0	0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0 SB-- 3 EB-- 0 WB-- 0	NB-- 0 SB-- 3 EB-- 0 WB-- 0	NB-- 0 SB-- 3 EB-- 0 WB-- 0	NB-- 0 SB-- 3 EB-- 0 WB-- 0	NB-- 0 SB-- 3 EB-- 0 WB-- 0
ATSAC-1 or ATSAC+ATCS-2?	2	2	2	2	2
Override Capacity	0	0	0	0	0

	MOVEMENT	EXISTING CONDITION			EXISTING PLUS PROJECT			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT				FUTURE W/ PROJECT W/ MITIGATION			
		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	103	1	**103**	2	105	**105**	103	209	1	**209**	2	211	1	**211**	0	211	1	**211**
	Left-Through		0							0				0				0	
	Through	496	2	248	0	496	248	385	896	2	448	0	896	2	448	0	896	2	448
	Through-Right		0							0				0				0	
	Right	63	1	0	0	63	0	86	151	1	14	0	151	1	14	0	151	1	14
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	110	1	110	0	110	110	6	119	1	119	0	119	1	119	0	119	1	119
	Left-Through		0							0				0				0	
	Through	773	2	**387**	3	776	**388**	272	1068	2	**534**	3	1071	2	**536**	0	1071	2	**536**
	Through-Right		0							0				0				0	
	Right	85	1	19	0	85	19	4	92	1	23	0	92	1	23	0	92	1	23
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	66	1	**66**	0	66	**66**	1	69	1	**69**	0	69	1	**69**	0	69	1	**69**
	Left-Through		0							0				0				0	
	Through	341	2	171	0	341	171	50	401	2	201	0	401	2	201	0	401	2	201
	Through-Right		0							0				0				0	
	Right	84	1	33	0	84	32	81	168	1	64	0	168	1	63	0	168	1	63
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	207	1	207	0	207	207	61	274	1	274	0	274	1	274	0	274	1	274
	Left-Through		0							0				0				0	
	Through	825	1	**471**	0	825	**471**	79	929	1	**525**	0	929	1	**525**	0	929	1	**525**
	Through-Right		1							1				1				1	
	Right	116	0	116	0	116	116	1	121	0	121	0	121	0	121	0	121	0	121
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
	CRITICAL VOLUMES	*North-South:*		490	*North-South:*		493	*North-South:*			743	*North-South:*			747	*North-South:*			747
		East-West:		537	*East-West:*		537	*East-West:*			594	*East-West:*			594	*East-West:*			594
		SUM:		1027	*SUM:*		1030	*SUM:*			1337	*SUM:*			1341	*SUM:*			1341
	VOLUME/CAPACITY *(V/C)* RATIO:			0.721			0.723				0.938				0.941				0.941
	V/C LESS ATSAC/ATCS ADJUSTMENT:			**0.621**			**0.623**				**0.838**				**0.841**				**0.841**
	LEVEL OF SERVICE (LOS):			**B**			**B**				**D**				**D**				**D**

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project:	0.003	∆*v/c* after mitigation:	0.003
Significant impacted?	NO	Fully mitigated?	N/A

Level of Service Worksheet
(Circular 212 Method)

I/S #:	North-South Street:	Soto Street	Year of Count:	2018	Ambient Growth (%):	1.0	Conducted by:	LLG Engineers	Date:	7/5/2018
4	East-West Street:	4th Street	Projection Year:	2021	Peak Hour:	PM	Reviewed by:		Project:	Los Lirios Mixed-Use Project/1-18

No. of Phases			3			3			3			3			3			3	
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?			0			0			0			0			0			0	
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0	SB--	3	NB-- 0	SB--	3	NB-- 0	SB--	3	NB-- 0	SB--	3	NB-- 0	SB--	3	NB-- 0	SB--	3	
	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	
ATSAC-1 or ATSAC+ATCS-2?			2			2			2			2			2			2	
Override Capacity			0			0			0			0			0			0	

MOVEMENT		EXISTING CONDITION			EXISTING PLUS PROJECT			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT				FUTURE W/ PROJECT W/ MITIGATION			
		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	138	1	138	2	140	140	73	215	1	215	2	217	1	217	0	217	1	217
	Left-Through		0							0				0				0	
	Through	834	2	**417**	0	834	**417**	311	1170	2	**585**	0	1170	2	**585**	0	1170	2	**585**
	Through-Right		0							0				0				0	
	Right	129	1	88	0	129	88	70	203	1	117	0	203	1	117	0	203	1	117
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	91	1	**91**	0	91	**91**	8	102	1	**102**	0	102	1	**102**	0	102	1	**102**
	Left-Through		0							0				0				0	
	Through	501	2	251	2	503	252	402	918	2	459	2	920	2	460	0	920	2	460
	Through-Right		0							0				0				0	
	Right	59	1	0	0	59	0	3	64	1	0	0	64	1	0	0	64	1	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	171	1	171	0	171	171	5	181	1	181	0	181	1	181	0	181	1	181
	Left-Through		0							0				0				0	
	Through	862	2	**431**	0	862	**431**	99	987	2	**494**	0	987	2	**494**	0	987	2	**494**
	Through-Right		0							0				0				0	
	Right	122	1	53	0	122	52	94	220	1	113	0	220	1	112	0	220	1	112
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	82	1	**82**	0	82	**82**	89	173	1	**173**	0	173	1	**173**	0	173	1	**173**
	Left-Through		0							0				0				0	
	Through	406	1	251	0	406	251	81	499	1	301	0	499	1	301	0	499	1	301
	Through-Right		1							1				1				1	
	Right	95	0	95	0	95	95	4	102	0	102	0	102	0	102	0	102	0	102
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
CRITICAL VOLUMES		*North-South:*		508	*North-South:*		508	*North-South:*			687	*North-South:*			687	*North-South:*			687
		East-West:		513	*East-West:*		513	*East-West:*			667	*East-West:*			667	*East-West:*			667
		SUM:		1021	*SUM:*		1021	*SUM:*			1354	*SUM:*			1354	*SUM:*			1354
VOLUME/CAPACITY (V/C) RATIO:				0.716			0.716				0.950				0.950				0.950
V/C LESS ATSAC/ATCS ADJUSTMENT:				**0.616**			**0.616**				**0.850**				**0.850**				**0.850**
LEVEL OF SERVICE (LOS):				**B**			**B**				**D**				**D**				**D**

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project: 0.000 **$\Delta v/c$ after mitigation:** 0.000

Significant impacted? NO **Fully mitigated?** N/A

Level of Service Worksheet
(Circular 212 Method)

I/S #:	North-South Street:	Mott Street	Year of Count:	2018	Ambient Growth (%):	1.0	Conducted by:	LLG Engineers	Date:	7/5/2018
5	East-West Street:	1st Street	Projection Year:	2021	Peak Hour:	AM	Reviewed by:		Project:	Los Lirios Mixed-Use Project/1-18

No. of Phases			2			2			2			2			2			2	
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?			0			0			0			0			0			0	
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	
	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	
ATSAC-1 or ATSAC+ATCS-2?			2			2			2			2			2			2	
Override Capacity			0			0			0			0			0			0	

	MOVEMENT	EXISTING CONDITION			EXISTING PLUS PROJECT			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT				FUTURE W/ PROJECT W/ MITIGATION			
		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	61	0	**61**	3	64	**64**	0	63	0	**63**	3	66	0	**66**	0	66	0	**66**
	Left-Through		0							0				0				0	
	Through	110	0	229	0	110	232	0	113	0	236	0	113	0	239	0	113	0	239
	Through-Right		0							0				0				0	
	Right	58	0	0	0	58	0	0	60	0	0	0	60	0	0	0	60	0	0
	Left-Through-Right		1							1				1				1	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	29	0	29	0	29	29	0	30	0	30	0	30	0	30	0	30	0	30
	Left-Through		0							0				0				0	
	Through	118	0	**200**	0	118	**202**	0	122	0	**207**	0	122	0	**209**	0	122	0	**209**
	Through-Right		0							0				0				0	
	Right	53	0	0	2	55	0	0	55	0	0	2	57	0	0	0	57	0	0
	Left-Through-Right		1							1				1				1	
	Left-Right		0							0				0				0	
EASTBOUND	Left	35	1	**35**	3	38	**38**	1	37	1	**37**	3	40	1	**40**	0	40	1	**40**
	Left-Through		0							0				0				0	
	Through	335	1	335	3	338	338	121	466	1	466	3	469	1	469	0	469	1	469
	Through-Right		0							0				0				0	
	Right	23	1	23	4	27	27	3	27	1	27	4	31	1	31	0	31	1	31
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	52	1	52	0	52	52	0	54	1	54	0	54	1	54	0	54	1	54
	Left-Through		0							0				0				0	
	Through	782	1	**782**	2	784	**784**	116	922	1	**922**	2	924	1	**924**	0	924	1	**924**
	Through-Right		0							0				0				0	
	Right	14	1	14	0	14	14	0	14	1	14	0	14	1	14	0	14	1	14
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
CRITICAL VOLUMES		*North-South:*		261	*North-South:*		266	*North-South:*			270	*North-South:*			275	*North-South:*			275
		East-West:		817	*East-West:*		822	*East-West:*			959	*East-West:*			964	*East-West:*			964
		SUM:		1078	*SUM:*		1088	*SUM:*			1229	*SUM:*			1239	*SUM:*			1239
VOLUME/CAPACITY *(V/C)* RATIO:				0.719			0.725				0.819				0.826				0.826
V/C LESS ATSAC/ATCS ADJUSTMENT:				**0.619**			**0.625**				**0.719**				**0.726**				**0.726**
LEVEL OF SERVICE (LOS):				**B**			**B**				**C**				**C**				**C**

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project:	0.007	∆*v/c* after mitigation:	0.007
Significant impacted?	NO	Fully mitigated?	N/A

Level of Service Worksheet
(Circular 212 Method)

I/S #:	North-South Street:	Mott Street	Year of Count:	2018	Ambient Growth (%):	1.0	Conducted by:	LLG Engineers	Date:	7/5/2018
5	East-West Street:	1st Street	Projection Year:	2021	Peak Hour:	PM	Reviewed by:		Project:	Los Lirios Mixed-Use Project/1-18

No. of Phases			2			2			2			2			2			2	
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?			0			0			0			0			0			0	
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	
	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	
ATSAC-1 or ATSAC+ATCS-2?			2			2			2			2			2			2	
Override Capacity			0			0			0			0			0			0	

	MOVEMENT	EXISTING CONDITION			EXISTING PLUS PROJECT			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT				FUTURE W/ PROJECT W/ MITIGATION			
		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	62	0	62	3	65	65	2	66	0	66	3	69	0	69	0	69	0	69
	Left-Through		0							0				0				0	
	Through	148	0	**264**	0	148	**267**	0	152	0	**274**	0	152	0	**277**	0	152	0	**277**
	Through-Right		0							0				0				0	
	Right	54	0	0	0	54	0	0	56	0	0	0	56	0	0	0	56	0	0
	Left-Through-Right		1							1				1				1	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	37	0	**37**	0	37	**37**	0	38	0	**38**	0	38	0	**38**	0	38	0	**38**
	Left-Through		0							0				0				0	
	Through	82	0	143	0	82	145	0	84	0	149	0	84	0	151	0	84	0	151
	Through-Right		0							0				0				0	
	Right	24	0	0	2	26	0	2	27	0	0	2	29	0	0	0	29	0	0
	Left-Through-Right		1							1				1				1	
	Left-Right		0							0				0				0	
EASTBOUND	Left	35	1	35	2	37	37	1	37	1	37	2	39	1	39	0	39	1	39
	Left-Through		0							0				0				0	
	Through	607	1	**607**	2	609	**609**	145	770	1	**770**	2	772	1	**772**	0	772	1	**772**
	Through-Right		0							0				0				0	
	Right	37	1	37	3	40	40	2	40	1	40	3	43	1	43	0	43	1	43
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	35	1	**35**	0	35	**35**	0	36	1	**36**	0	36	1	**36**	0	36	1	**36**
	Left-Through		0							0				0				0	
	Through	387	1	387	2	389	389	150	549	1	549	2	551	1	551	0	551	1	551
	Through-Right		0							0				0				0	
	Right	32	1	32	0	32	32	0	33	1	33	0	33	1	33	0	33	1	33
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
CRITICAL VOLUMES		*North-South:*		301	*North-South:*		304	*North-South:*			312	*North-South:*			315	*North-South:*			315
		East-West:		642	*East-West:*		644	*East-West:*			806	*East-West:*			808	*East-West:*			808
		SUM:		943	*SUM:*		948	*SUM:*			1118	*SUM:*			1123	*SUM:*			1123
VOLUME/CAPACITY (V/C) RATIO:				0.629			0.632				0.745				0.749				0.749
V/C LESS ATSAC/ATCS ADJUSTMENT:				**0.529**			**0.532**				**0.645**				**0.649**				**0.649**
LEVEL OF SERVICE (LOS):				**A**			**A**				**B**				**B**				**B**

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project:	0.004	$\Delta v/c$ after mitigation:	0.004
Significant impacted?	NO	Fully mitigated?	N/A

Appendix D

Transportation Impact Study Addendum

MEMORANDUM

To:	Ms. Eileen Hunt City of Los Angeles Dept. of Transportation Metro Development Review Unit	Date:	June 11, 2019
From:	Clare M. Look-Jaeger, P.E. Chin S. Taing, PTP LLG Engineers	LLG Ref:	1-18-4288-1
Subject:	Los Lirios Mixed-Use Project – Addendum		

LINSCOTT LAW & GREENSPAN engineers

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Linscott, Law & Greenspan, Engineers (LLG Engineers) has prepared this memorandum as an addendum to the transportation impact study dated July 30, 2018, which was previously reviewed and approved by the City of Los Angeles Department of Transportation[1]. Based on information provided by the Project Applicant representatives, we understand that the project description has been revised since the issuance of the LADOT assessment letter as discussed further below.

Prior Project Description

The prior transportation impact study prepared for the proposed Los Lirios Mixed-Use project ("proposed project") consisted of two sites located in the Boyle Heights Community Plan area of the City of Los Angeles. The previous project included two separate sites: Site A located at 113, 119, and 121 Soto Street and 2316 and 2322 East 1st Street and the adjacent Site B located at 2400 East 1st Street. Site A is located adjacent to the Metro Gold Line Soto Street station at 2330 East 1st Street and Site B is currently fenced and occupied by the historic Victorian house (i.e., Peabody Werden Duplex).

Site A included the development of 66 affordable housing units, a 1,490 square-foot community room, and up to 5,000 square feet of retail/restaurant uses fronting Soto Street. As noted in the transportation impact study and LADOT assessment letter, the additional uses of Site B was not yet determined during the preparation of the transportation impact study and as such, the prior transportation analysis did not include any program development for Site B. It was also noted that when the uses are defined for Site B, that a separate transportation analysis would be required at that time.

Current Project Description

Since the issuance of the LADOT's assessment letter, it is our understanding that Site B is no longer proposed as part of the project and the revised project only consists of

[1] City of Los Angeles Inter-departmental Correspondence on the *Transportation Impact Analysis for the proposed Los Lirios Mixed-Use Project at 113, 119, and 121 South Soto Street and 2316, 2322, and 2400 East 1st Street (ENV-2018-3692-EAF)*, from Wes Pringle with Department of Transportation to Heather Bleemers with Department of City Planning, dated October 2, 2018.

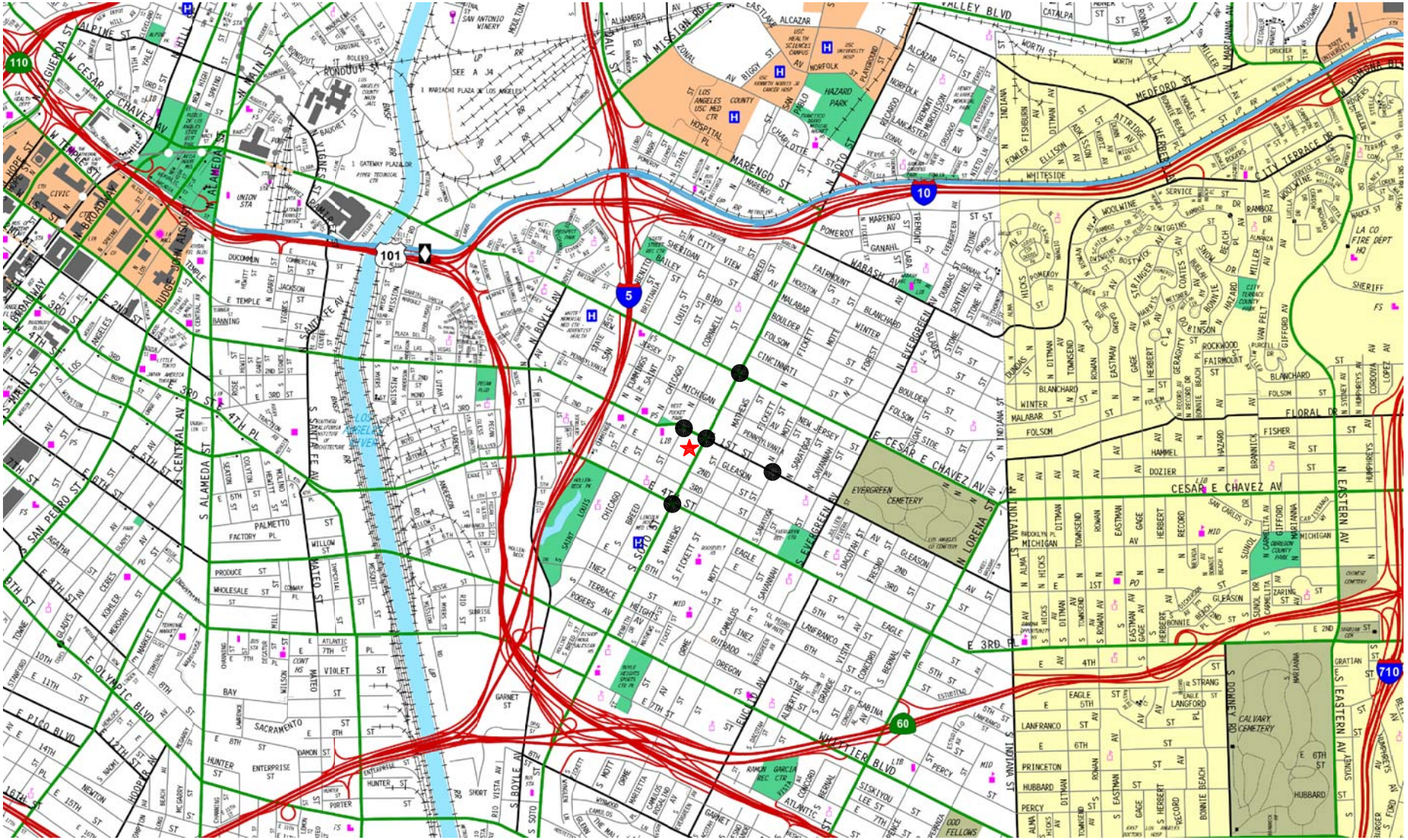
the development on Site A. The development for Site A has been slightly modified to include 64 affordable housing units, a 1,650 square-foot community room, and roughly 4,300 square feet of ground floor commercial space. The revised project site (Site A only) and general vicinity are shown in ***Figure 1***. An aerial photograph of the project site and vicinity is displayed in ***Figure 2***. The revised project site plan is illustrated in ***Figure 3***.

Summary

The prior transportation impact study concluded that the Los Lirios Mixed-Use project was not expected to create a significant impact at any of the five study intersections. As mentioned previously, since the prior transportation impact analysis did not account for any program development contemplated for Site B and Site B is no longer part of the project site, no changes to the transportation impact analysis are required and the prior conclusions/findings remain valid.

Please feel free to call us at 626-796-2322 with any questions or comments regarding this addendum prepared for the proposed Los Lirios Mixed-Use project.

c: File



NOT TO SCALE

MAP SOURCE: RAND MCNALLY & COMPANY

★ PROJECT SITE

● STUDY INTERSECTION

FIGURE 1
VICINITY MAP

LINSCOTT, LAW & GREENSPAN, engineers

LOS LIRIOS MIXED-USE PROJECT

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NOT TO SCALE

PROJECT SITE

EXISTING DRIVEWAY

FIGURE 2
AERIAL PHOTOGRAPH OF EXISTING PROJECT SITE

LINSCOTT, LAW & GREENSPAN, engineers

LOS LIRIOS MIXED-USE PROJECT

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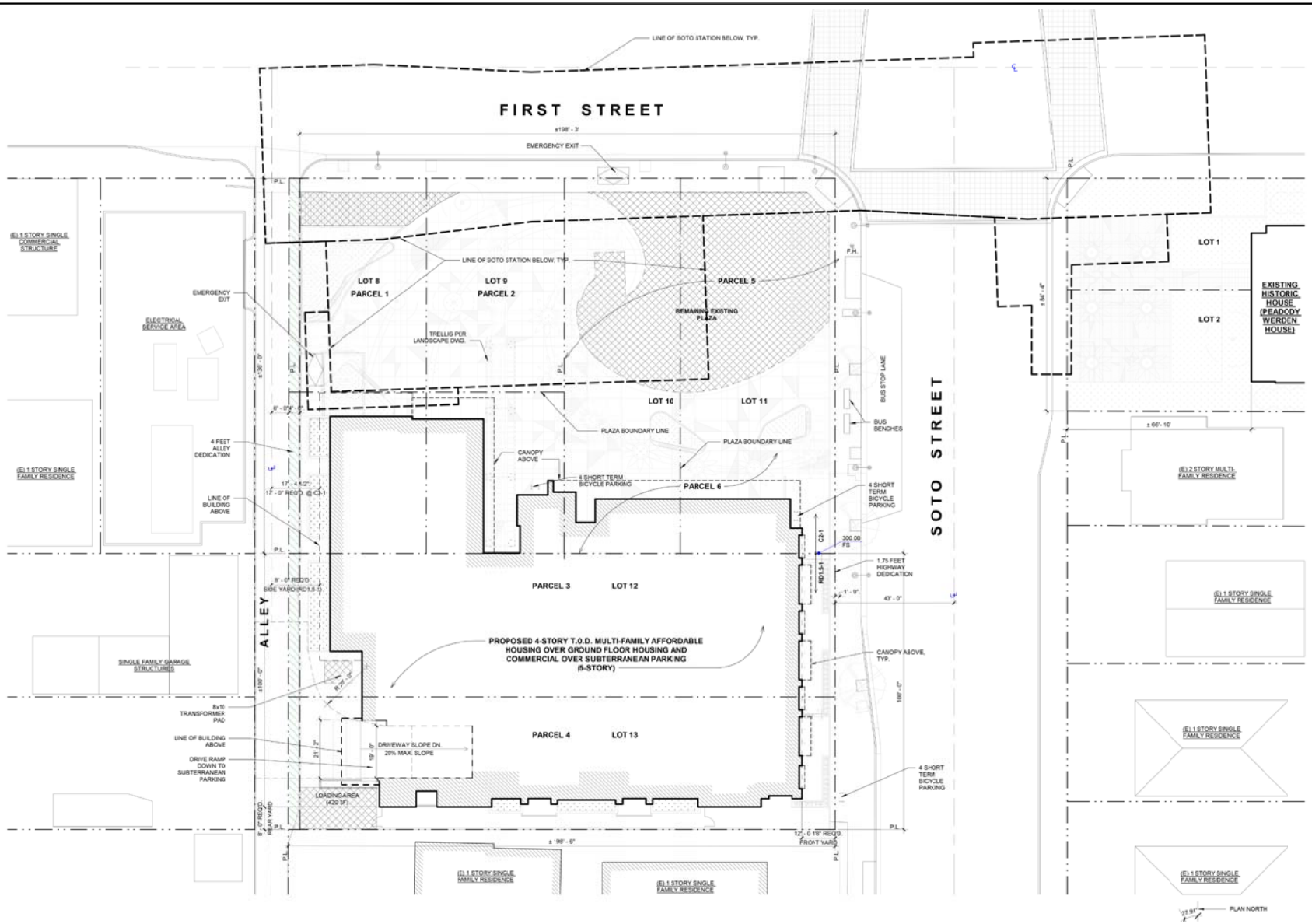

NOT TO SCALE

MAP SOURCE: GONZALEZ GOODALE ARCHITECTS

FIGURE 3
SITE PLAN

LINSCOTT, LAW & GREENSPAN, engineers

LOS LIRIOS MIXED-USE PROJECT

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Appendix D

DOT Letter

FORM GEN. 160A (Rev. 1/82)

CITY OF LOS ANGELES

INTER-DEPARTMENTAL CORRESPONDENCE

119 S Soto St
DOT Case No. CEN 18-46417

Date: October 2, 2018

To: Heather Bleemers, Senior City Planner
Department of City Planning

From: Wes Pringle, Transportation Engineer
Department of Transportation

Subject: **TRANSPORTATION IMPACT ANALYSIS FOR THE PROPOSED LOS LIRIOS MIXED-USE PROJECT AT 113, 119, AND 121 SOUTH SOTO STREET AND 2316, 2322, AND 2400 EAST 1ST STREET (ENV-2018-3692-EAF)**

The Department of Transportation (DOT) has reviewed the transportation analysis prepared by Linscott, Law & Greenspan, Engineers, dated July 30, 2018, for the proposed Los Lirios Mixed-Use project located on two sites: 113-121 South Soto Street and 2316-2400 East 1st Street. In order to evaluate the effects of the project's traffic on the available transportation infrastructure, the significance of the project's traffic impacts is measured in terms of change to the volume-to-capacity (V/C) ratio between the "future no project" and the "future with project" scenarios. This change in the V/C ratio is compared to established threshold standards to assess the project-related traffic impacts. Based on DOT's traffic impact criteria[1], the transportation study included the analysis of five intersections and determined that none of the study intersections would be significantly impacted by project-related traffic. The results of the traffic analysis, which accounted for other known development projects in estimating potential cumulative impacts and adequately evaluated the project's transportation impacts on the surrounding community, are summarized in **Attachment 1**.

DISCUSSION AND FINDINGS

A. Project Description

The project, in partnership with the Los Angeles County Metropolitan Transportation Authority (Metro), proposes to construct the Los Lirios Mixed-Use project on two sites with affordable housing apartments and ground floor local community serving retail/restaurant land use components in Boyle Heights as illustrated in **Attachment 2a**. Site A south of the Metro Soto Station is currently vacant and will include 66 affordable housing units, a 1,490 square-foot community room, office space, computer/conference room, laundry room, and up to 5,000 square feet of retail/restaurant uses fronting Soto Street. Site B at 2316-2400 East 1st Street is currently occupied by the historic Peabody Werden Duplex and will primarily consist of the restoration and rehabilitation of the Peabody Werden Duplex. Additional uses of Site B have not yet been determined, and, as such, additional traffic analyses may be required. The subterranean parking on Site A will be accessed via the existing alleyway south of 1st Street on the southwest side of Site A as illustrated in

[1] Per DOT's Traffic Study Policies and Procedures, a significant impact is identified as an increase in the Critical Movement Analysis (CMA) value, due to project related traffic, of 0.01 or more when the final ("with project") Level of Service (LOS) is LOS E or F; an increase of 0.020 or more when the final LOS is LOS D; or an increase of 0.040 or more when the final LOS is LOS C.

Attachment 2b. The project is expected to be completed by 2021.

B. Trip Generation

The project is estimated to generate an approximate net increase of 496 daily trips, a net increase of 48 trips during the a.m. peak hour and a net increase of 41 trips during the p.m. peak hour. The trip generation estimates are based on formulas published by the Institute of Transportation Engineers (ITE) Trip Generation, 10th Edition, 2017 and the LADOT Transportation Impact Study Guidelines, December 2016, Table 5: Trip Generation Rates for Affordable Housing Projects. A copy of the project trip generation table can be found in **Attachment 3**.

C. Freeway Analysis

To comply with the Freeway Analysis Agreement executed between Caltrans and DOT in October 2013, a screening analysis is necessary to determine if additional evaluation of freeway mainline and ramp segments is necessary beyond the State-mandated Congestion Management Program (CMP) requirements. Exceeding one of the four screening criteria would require the applicant to work directly with Caltrans to prepare more detailed freeway analyses. However, the project does not meet or exceed any of the four thresholds defined in the agreement; therefore, no additional freeway analysis was required.

D. Construction Impacts

DOT recommends that a construction work site traffic control plan be submitted to DOT's Citywide Temporary Traffic Control Section or Permit Plan Review Section for review and approval prior to the start of any construction work. Refer to http://ladot.lacity.org/what-we-do/plan-review to determine which section to coordinate review of the work site traffic control plan. The plan should show the location of any roadway or sidewalk closures, traffic detours, haul routes, hours of operation, protective devices, warning signs and access to abutting properties. DOT also recommends that all construction related truck traffic be restricted to off-peak hours to the extent feasible.

PROJECT REQUIREMENTS

A. Highway Dedication and Street Widening Requirements

On January 20, 2016, the City Council adopted the Mobility Plan 2035 which represents the new Mobility Element of the General Plan. A key feature of the updated plan is to revise street standards in an effort to provide a more enhanced balance between traffic flow and other important street functions including transit routes and stops, pedestrian environments, bicycle routes, building design and site access, etc. Per the new Mobility Element, **Soto Street and 1st Street**, both Avenue IIs, would require a 28-foot half-width roadway within a 43-foot half-width right-of-way, and the alley adjacent to Site A would require a 10-foot half-width right-of-way. The applicant should check with BOE's Land Development Group to determine if there are any other applicable highway dedication, street widening and/or sidewalk requirements for this project.

B. Parking Requirements

The transportation analysis did not indicate the number of vehicle parking spaces the project will provide. The project will provide 70 long-term and 10 short-term bicycle parking spaces. The applicant should check with the Department of Building and Safety on the

number of Code-required parking spaces needed for the project.

C. Driveway Access and Circulation

The conceptual site plan for the project (see **Attachment 2b**) is acceptable to DOT. However, the review of this study does not constitute approval of the dimensions for any new proposed driveways. This requires separate review and approval and should be coordinated with DOT's Citywide Planning Coordination Section (201 North Figueroa Street, 5th Floor, Room 550, at 213-482-7024). In order to minimize and prevent last minute building design changes, the applicant should contact DOT for driveway width and internal circulation requirements prior to the commencement of building or parking layout design.

D. Development Review Fees

An ordinance adding Section 19.15 to the Los Angeles Municipal Code relative to application fees paid to DOT for permit issuance activities was adopted by the Los Angeles City Council in 2009 and updated in 2014. Ordinance No. 183270 identifies specific fees for traffic study review, condition clearance, and permit issuance. The applicant shall comply with any applicable fees per this ordinance.

If you have any questions, please contact Eileen Hunt of my staff at (213) 972-8481.

Attachments

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c: Kevin Ocubillo, Council District No. 14
Mehrdad Moshksar, Central District Office, DOT
Bert Moklebust, Central District, BOE
Taimour Tanavoli, Case Management Office, DOT
Chin S. Taing, Linscott, Law & Greenspan, Engineers

Table 9-1
SUMMARY OF VOLUME TO CAPACITY RATIOS
AND LEVELS OF SERVICE
WEEKDAY AM AND PM PEAK HOURS

NO.	INTERSECTION	PEAK HOUR	[1] YEAR 2018 EXISTING V/C	[1] LOS	[2] YEAR 2018 EXISTING WITH PROJECT V/C	[2] LOS	[2] CHANGE V/C [(2)-(1)]	[2] SIGNIF. IMPACT [a]	[3] YEAR 2021 FUTURE W/O PROJECT V/C	[3] LOS	[4] YEAR 2021 FUTURE WITH PROJECT V/C	[4] LOS	[4] CHANGE V/C [(4)-(3)]	[4] SIGNIF. IMPACT [a]
1	Breed Street/	AM	0.573	A	0.581	A	0.008	No	0.695	B	0.703	C	0.008	No
	1st Street	PM	0.454	A	0.464	A	0.010	No	0.631	B	0.641	B	0.010	No
2	Soto Street/	AM	0.617	B	0.620	B	0.003	No	0.749	C	0.752	C	0.003	No
	Cesar E. Chavez Avenue	PM	0.567	A	0.568	A	0.001	No	0.688	B	0.690	B	0.002	No
3	Soto Street/	AM	0.724	C	0.737	C	0.013	No	0.847	D	0.860	D	0.013	No
	1st Street	PM	0.687	B	0.701	C	0.014	No	0.912	E	0.917	E	0.005	No
4	Soto Street/	AM	0.621	B	0.623	B	0.002	No	0.838	D	0.841	D	0.003	No
	4th Street	PM	0.616	B	0.616	B	0.000	No	0.850	D	0.850	D	0.000	No
5	Mott Street/	AM	0.619	B	0.625	B	0.006	No	0.719	C	0.726	C	0.007	No
	1st Street	PM	0.529	A	0.532	A	0.003	No	0.645	B	0.649	B	0.004	No

[a] According to LADOT's "Transportation Impact Study Guidelines," December 2016, a transportation impact on an intersection shall be deemed significant in accordance with the following table:

Final v/c	LOS	Project Related Increase in v/c
>0.701 - 0.800	C	equal to or greater than 0.040
>0.801 - 0.900	D	equal to or greater than 0.020
>0.901	E/F	equal to or greater than 0.010

NOT TO SCALE

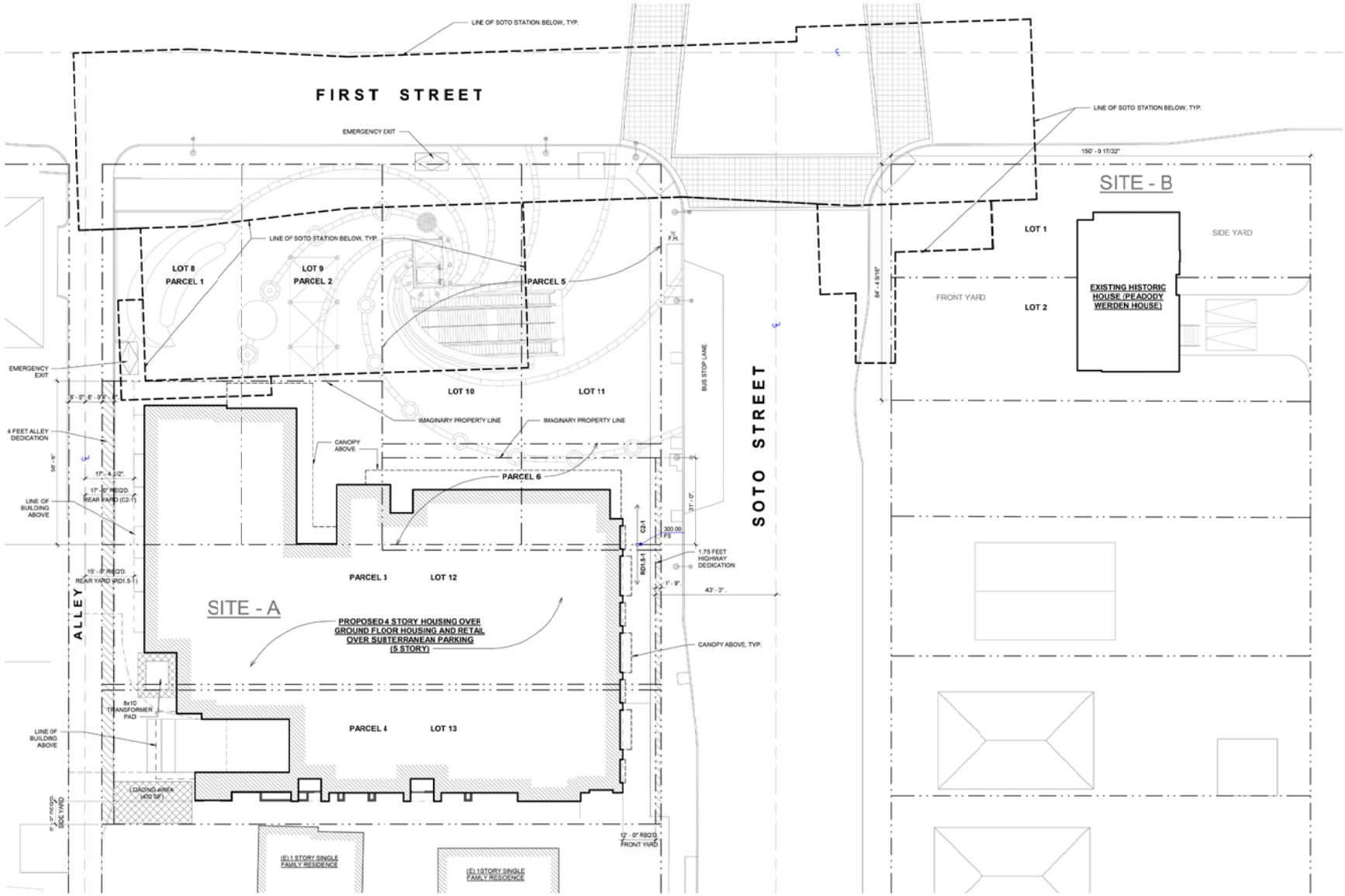
PROJECT SITES

EXISTING DRIVEWAY

FIGURE 2-1
AERIAL PHOTOGRAPH OF EXISTING PROJECT SITE

LINSCOTT, LAW & GREENSPAN, engineers

LOS LIRIOS MIXED-USE PROJECT



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NOT TO SCALE

MAP SOURCE: GONZALEZ GOODALE ARCHITECTS

FIGURE 2-2
SITE PLAN

LINSCOTT, LAW & GREENSPAN, engineers

LOS LIRIOS MIXED-USE PROJECT

Table 7-1
PROJECT TRIP GENERATION [1]

LAND USE	SIZE	DAILY TRIP ENDS [2] VOLUMES	AM PEAK HOUR VOLUMES [2] IN	AM PEAK HOUR VOLUMES [2] OUT	AM PEAK HOUR VOLUMES [2] TOTAL	PM PEAK HOUR VOLUMES [2] IN	PM PEAK HOUR VOLUMES [2] OUT	PM PEAK HOUR VOLUMES [2] TOTAL
Proposed Uses								
Apartment [3]	66 DU	270	13	20	33	12	10	22
Less Transit Adjustment (15%) [4]		(41)	(2)	(3)	(5)	(2)	(2)	(4)
Community Room [5]	1,490 GSF	43	2	1	3	1	2	3
Less Transit Adjustment (15%) [4]		(6)	nom.	nom.	nom.	nom.	nom.	nom.
Retail [6]	2,500 GLSF	94	1	1	2	5	5	10
Less Pass-by Adjustment (50%) [7]		(47)	(1)	(1)	(2)	(3)	(3)	(6)
Less Transit Adjustment (15%) [4]		(7)	nom.	nom.	nom.	nom.	nom.	nom.
High-Turnover (Sit-Down) Restaurant [8]	2,500 GSF	280	14	11	25	15	9	24
Less Pass-by Adjustment (20%) [7]		(56)	(3)	(2)	(5)	(3)	(2)	(5)
Less Transit Adjustment (15%) [4]		(34)	(2)	(1)	(3)	(2)	(1)	(3)
NET TOTAL PROJECT TRIPS		**496**	**22**	**26**	**48**	**23**	**18**	**41**

[1] Source: ITE "Trip Generation Manual", 10th Edition, 2017.

[2] Trips are one-way traffic movements, entering or leaving.

[3] Affordable housing (family) trip generation average rates based on vehicle trip count data collected at affordable housing sites in the City of Los Angeles in 2016 as provided in the *Transportation Impact Study Guidelines*, December 2016.
- Daily Trip Rate: 4.08 trips/dwelling unit; 50% inbound/50% outbound
- AM Peak Hour Trip Rate: 0.50 trips/dwelling unit; 40% inbound/60% outbound
- PM Peak Hour Trip Rate: 0.34 trips/dwelling unit; 55% inbound/45% outbound

[4] A transit adjustment of 15 percent was applied to all the land use components due to the proximity to the Metro Gold Line Soto station located at 2330 E. 1st Street. The transit adjustments were applied after the pass-by adjustments were applied.

[5] ITE Land Use Code 495 (Recreational Community Room) trip generation average rates.
- Daily Trip Rate: 28.82 trips/1,000 SF of floor area; 50% inbound/50% outbound
- AM Peak Hour Trip Rate: 1.76 trips/1,000 SF of floor area; 66% inbound/34% outbound
- PM Peak Hour Trip Rate: 2.31 trips/1,000 SF of floor area; 47% inbound/53% outbound

[6] ITE Land Use Code 820 (Shopping Center) trip generation average rates.
- Daily Trip Rate: 37.75 trips/1,000 SF of leasable floor area; 50% inbound/50% outbound
- AM Peak Hour Trip Rate: 0.94 trips/1,000 SF of leasable floor area; 62% inbound/38% outbound
- PM Peak Hour Trip Rate: 3.81 trips/1,000 SF of leasable floor area; 48% inbound/52% outbound

[7] Pass-by trips are made as intermediate stops on the way from an origin to a primary destination without a route diversion. Pass-by trips are attracted from the traffic passing the site on an adjacent street or roadway that offers direct access to the site. The pass-by adjustment factors of 50 percent and 20 percent were applied to the retail and restaurant land use components, respectively, pursuant to the *Transportation Impact Study Guidelines*, December 2016.

[8] ITE Land Use Code 932 (High-Turnover [Sit-Down] Restaurant) trip generation average rates.
- Daily Trip Rate: 112.18 trips/1,000 SF of floor area; 50% inbound/50% outbound
- AM Peak Hour Trip Rate: 9.94 trips/1,000 SF of floor area; 55% inbound/45% outbound
- PM Peak Hour Trip Rate: 9.77 trips/1,000 SF of floor area; 62% inbound/38% outbound