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CLEARWATER EAST SPECIFIC PLAN UPDATE TRANSPORTATION IMPACT ANALYSIS

City of Paramount

March 24, 2025

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

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City of Paramount

March 24, 2025

prepared by

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Project No. 19665

TABLE OF CONTENTS

APPENDICES

LIST OF TABLES

LIST OF FIGURES

EXECUTIVE SUMMARY

The approximately 68-acre Clearwater East Specific Plan (CESP) is located in the City of Paramount, California. The CESP is bounded by the Union Pacific rail corridor to the west, Rosecrans Avenue to the north, Paramount Boulevard to the east, and Somerset Boulevard to the south. The CESP is currently developed with commercial, industrial, and entertainment uses, including the Paramount Entertainment Center, Drive-In Theater, and Swap Meet.

The proposed Specific Plan includes six land use zones: Town Mixed-Use, Town Residential-40, Town Residential-65, Flex District, Quasi-Public, and Neo-Industrial. For purposes of evaluating impacts associated with the proposed CESP, this analysis is based on the following buildout potentials: 2,000 residential dwelling units, 230,000 square feet of commercial retail, and 800,000 square feet of neo-industrial uses.

Transportation Impacts

The project would not conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities.

The proposed CESP is located within a transit priority area and does not conflict with additional considerations that may contradict transit-oriented development; therefore, the project satisfies the "Proximity to Transit Based Screening Criteria" based on County Guidelines used by the City of Paramount and can be determined to have a less than significant VMT impact with implementation of Mitigation Measure 1.

Implementation of the proposed CESP would not substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment) with implementation Mitigation Measure 2.

The City's standard permitting process would ensure that construction of future developments within the CESP adhere to applicable regulations and that impacts to emergency access are less than significant.

Mitigation Measures

Mitigation Measure 1
Prior to completion of the planned Southeast Gateway Line Paramount South Gate station, all development proposals within the CESP shall be required to prepare a separate VMT screening/analysis. After completion of the planned Southeast Gateway Line Paramount South Gate station, only development proposals involving APN 6241-016-023 or 6241-016-907 shall be required to prepare a separate VMT screening/analysis.

Mitigation Measure 2
Future development proposals forecast to generate more than 50 peak hour trips shall be required to be prepare a traffic study that evaluates and addresses any deficiencies related to the following items:

- The need for installation of a traffic signal or turning restrictions at unsignalized access points.
- Left turn lane storage lengths.
- Any additional site access or safety concerns deemed necessary by the City of Paramount Director of Public Works.

1. INTRODUCTION

This section describes the purpose of this study and the project description. Although this is a technical report, effort has been made to write the report clearly and concisely. A glossary is provided in Appendix A to assist the reader with technical terms related to transportation engineering and planning.

PURPOSE AND OBJECTIVES

The purpose of this transportation impact analysis is to assess potential transportation impacts resulting from development of the proposed Specific Plan update in the context of the California Environmental Quality Act (CEQA) and for general circulation/mobility planning purposes.

For CEQA purposes, this study provides a programmatic-level assessment of potential impacts with respect to the thresholds established by the City of Paramount, as the Lead Agency, and identifies the appropriate measures to mitigate such impacts, if any. This study also evaluates non-CEQA transportation considerations for general circulation and mobility planning relating to internal vehicular circulation, parking, and pedestrian, bicycle, and transit connectivity.

PROJECT DESCRIPTION

The approximately 68-acre Clearwater East Specific Plan (CESP) is located in the City of Paramount, California. The CESP is bounded by the Union Pacific rail corridor to the west, Rosecrans Avenue to the north, Paramount Boulevard to the east, and Somerset Boulevard to the south. The CESP is currently developed with commercial, industrial, and entertainment uses, including the Paramount Entertainment Center, Drive-In Theater, and Swap Meet. Figure 1 shows the regional location map and Figure 2 shows the CESP boundary map.

The original CESP was approved by the City Council in 1987 to establish a multipurpose redevelopment district including housing, light industrial, office/business park, commercial, and public/quasi-public uses. The proposed project involves updates to the CESP to improve functionality of the plan.

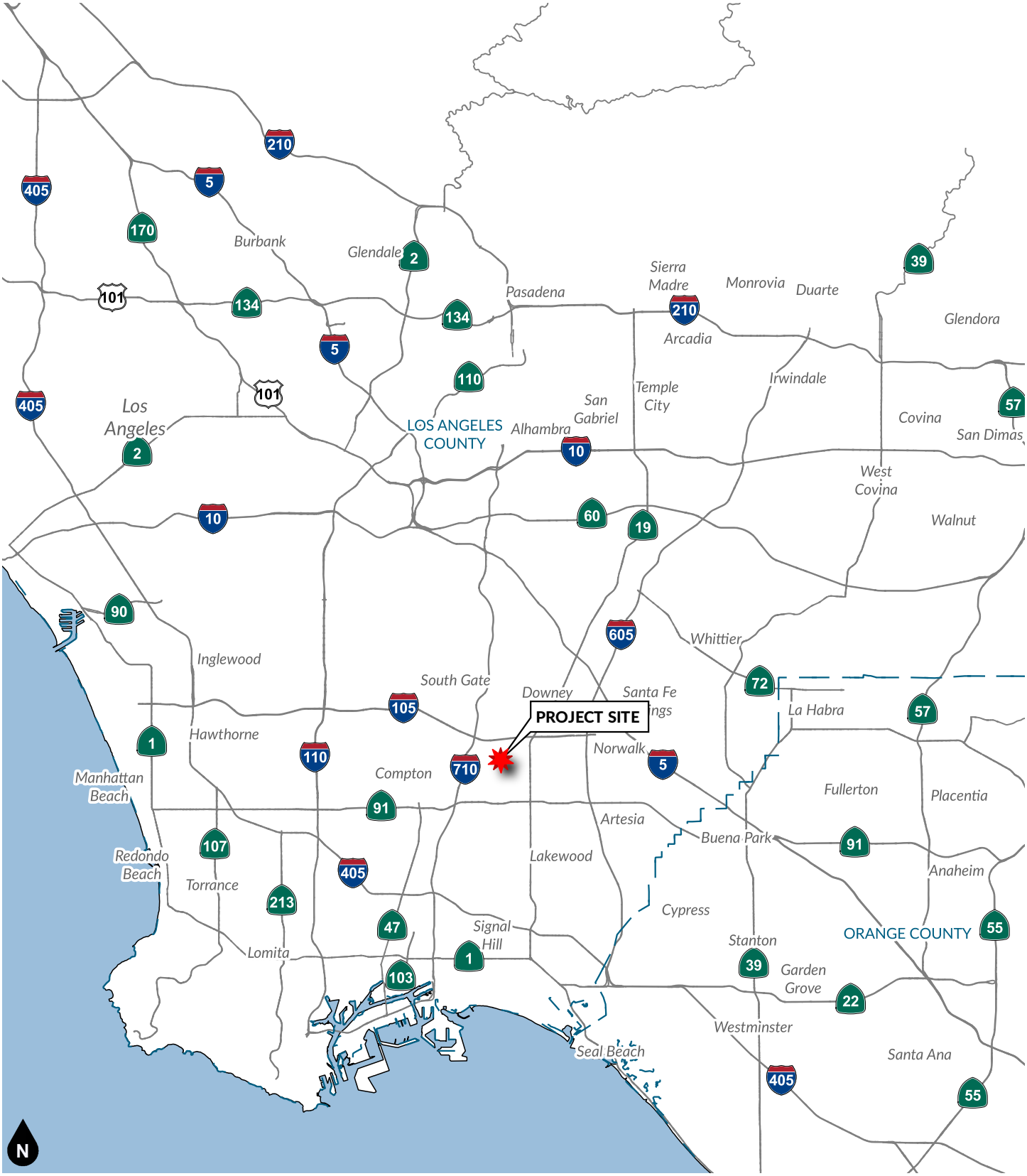
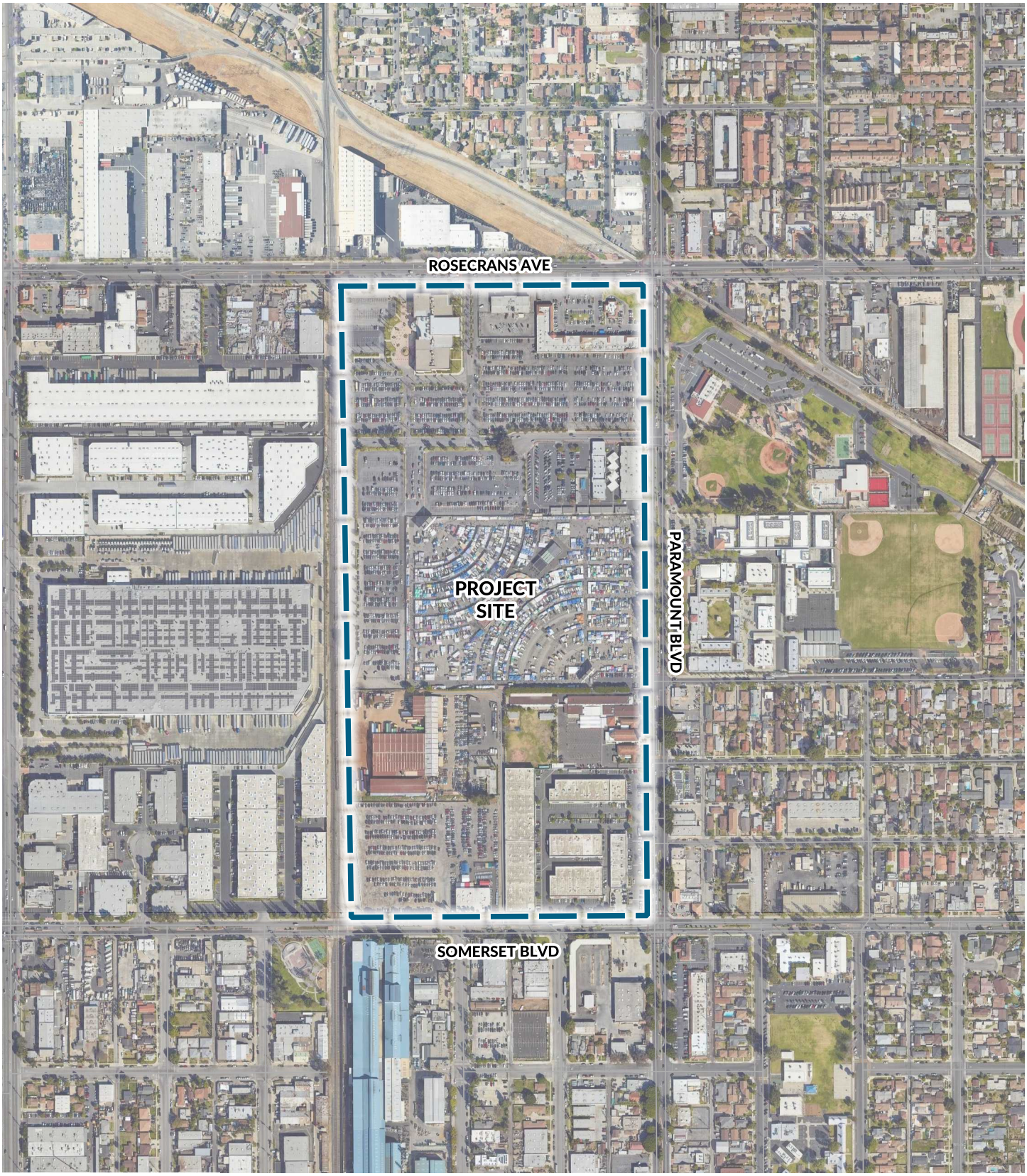


Figure 1
Regional Location Map



Legend

Specific Plan Boundary

Figure 2
CESP Boundary Map

Existing Planning Area Land Uses

The Specific Plan area has a General Plan land use designation of Clearwater East (AP-CE). The Clearwater East Land Use Plan was designed to produce a quality multiple use district and provide a positive interaction between land use types. Specific land use recommendations for this designation include housing, light industrial, office/business park, commercial, and public/quasi-public uses. The Planning Area is characterized by private land ownership, with the Bianchi family being the largest landowner with a contiguous area that includes the Bianchi Theater and Paramount Swap Meet and a majority of the northern half of the Planning Area, as well as a parcel in the southwest corner of the Planning Area that contains a retail/warehouse building and associated parking (see Exhibit 3-4, Existing Land Use Map). The parking in this area is used as overflow parking for the Swap Meet. Communications Workers of America (CWA) Local 9400 owns a small parcel with a single building in the northern portion of the Planning Area along Rosecrans Boulevard. A strip mall type shopping center is located in the northeastern portion of the Planning Area. A triangular shaped Southern California Edison easement is located in the northeastern portion of the planning area adjacent to the shopping center at the corner of Rosecrans Avenue and Paramount Boulevard. The Paramount Adult School is located in the east-central portion of the Planning Area just north of the Swap Meet at the corner of All America City Way and Paramount Boulevard. The Our Lady of the Rosary Parish is located in the east-central portion of the Planning Area just south of the Swap Meet along Paramount Boulevard. The Somerset Business Park is located in the southeastern portion of the Planning Area at the corner of Paramount Boulevard and Somerset Boulevard and is comprised of multiple parcels combined together to form a business park with multiple buildings; the buildings include multiple tenants, which are owned condominium style. One of the tenants is a Paramount Sheriff's Substation. There is an automobile storage and shipping yard owned by HoneyBee International located in the west-central portion of the Planning Area just south of the Swap Meet and west of the Our Lady of the Rosary Parish along All America City Way. There are multiple parcels located along the western edge of the Planning Area owned by the Port of Long Beach (formerly owned by Union Pacific Railroad) and containing the San Pedro Subdivision rail line. Finally, the Planning Area does not include any housing within its boundaries.

The existing land uses within the CESP Planning Areas are shown in Table 1 below.

Table 1. Existing Specific Plan Land Uses

Current Use	Land Use Equivalent	Acres	Square Footage
Movie Theater	Commercial	4.1	47,840
CWA Local 9400	Quasi-Public	1.2	10,023
Strip Mall/Shopping center	Commercial	2.5	40,843
Swap Meet and Drive-In (Concession Building)	Commercial	1.2	13,426
Swap Meet (Vendor Area)	Commercial	10	486,574
Swap Meet Parking	Commercial	23.1	0
Retail/Warehouse	Commercial	6.5	14,446
HoneyBee International	Industrial	6.6	86,714
Paramount Adult School	Quasi-Public	3.3	41,870
Our Lady of the Rosary	Quasi-Public	4.4	49,841
Somerset Business Park	Business Park/Office	6.3	140,386
Paramount Sheriff Substation	Public Facility	1.5	14,049
SCE Easement	Utility/Easement	0.3	0
Total		**71.0**	**946,012**

Note: Land Use Equivalent provides a common, general land use category based on the specific use.

Proposed CESP Planning Area Land Uses

The proposed Specific Plan includes six land use zones: Town Mixed-Use, Town Residential-40, Town Residential-65, Flex District, Quasi-Public, and Neo-Industrial. Figure 3 shows the development zone map. The following is a description of the six proposed development zones:

- The purpose of the **Mixed-Use Town Center (MU-TC)** zoning district is to promote a concentration of transit-oriented development best practices within the Specific Plan area that responds to the adjacent light rail station. This zone would accommodate the highest density of development allowed within the Specific Plan area that would encourage vertical mixed-use prioritizing housing above ground-level commercial uses. It would serve as the gateway between the City of Paramount and regional transit access.

- The **Town Residential–65 (TR-65)** zoning district will emphasize development of housing with community serving ground-floor uses to create a pleasant, walkable neighborhood. It would promote multiple, medium-density, multi-unit residential housing projects that establish a traditional urban block pattern.

- The **Town Residential–40 (TR-40)** zoning district will promote the same uses as the TR-65 district but at a lower density. Envisioned to include townhome, garden apartment, and other missing middle housing typologies. Limited ground-floor commercial or community uses would be allowed, such as Live/Work spaces and small, local coffee shops, dry cleaners, etc.

- The **Flex District (FD)** zoning district is intended to be a complementary mix of residential, commercial, and neo industrial uses. It provides for diverse land uses that promote a 24/7 live, work, play district; flexible building standards; and emphasis on healthy, sustainable performance standards. It allows for the continued operation of existing commercial and office uses while allowing for the evolution of the area into a denser mix of uses.

- The **Quasi-Public (QP)** zoning district is already in the City General Plan. This zone is used to note continued use of the Paramount Adult School and Our Lady of the Rosary Church. If residential development is proposed, as accessory/infill or as demolition and new development, the TR-40 standards would apply.

- The **Neo Industrial (NI)** zoning district will provide a model for neo-industrial development that complements the scale and character of neighborhood residential areas while providing a buffer from existing nonresidential uses outside the Specific Plan area. This zone encourages forward-thinking approaches to land uses, on-going operations, and building design to promote mixed-use, multi-story non-residential buildings.

Figure 3
Development Zone Map

Source: Clearwater East Specific Plan (MIG, Inc.)

Based on a development model according to the proposed development zones, the City estimates that the Specific Plan update would support the following development through 2045:

- Total new development of approximately 3 million square feet of residential, retail/restaurant, office, neo industrial, and community facilities
- 2,000 units at approximately 2.0 million square feet
  - 4,600 new residents based on average household size of 2.3 residents per unit
- Retain approximately 50,000-square foot movie theatre
- Retain existing Somerset Business Park
- Retain existing church and adult school; includes development of accessory residential units (approximately 60 townhomes)
- 30,000 square feet for adaptive reuse of light industrial/storage shed into a brewery type facility
- 150,000 square feet new retail/restaurant
- 800,000 square feet new neo industrial and/or office
- Approximately 4,000 off-street parking stalls; 1.3 million square feet structured and surface parking
- New Open Space and Streets

The proposed Specific Plan would result in a net increase in development within the Planning Area as summarized in Table 2 below.

Table 2. Existing and Projected Year 2045 Development Capacity Comparison

Land Use Category	Existing Conditions (2025)	Future Conditions (2045)	Difference (+/-)
Non-Residential (SF)			
Commercial	116,555	230,000	+113,445
Commercial (Swap Meet Stalls)*	486,574	100,000	-386,547
Neo Industrial (Light Manufacturing/R&D)	0	800,000	+800,000
Industrial/Logistics	86,714	0	-86,714
Public Facilities	14,049	14,049	0
Quasi-Public	101,734	101,734	0
Business Park (Office)	140,386	140,386	0
Utility/Easement	0	0	0
Total Nonresidential Building Area (SF)	**946,012**	**1,386,169**	**+440,157**
Total Residential (DU)	**0**	**2,000**	**+2,000**

Notes:
SF = Square Feet; DU = Dwelling Units
*486,574 square feet for Swap Meet stalls does not include built (i.e., building) square footage. This represents the use of temporary facilities (i.e., tents) on surface parking lots.

Planned Internal Roadway Network

Figure 4 shows the mobility plan concept for the CESP. As shown in Figure 4, there are six different street types being proposed for the internal roadways within the CESP:

- Street Type 1 includes an approximately 90-foot right-of-way with a raised center median, travel lane, parking lane, bike lane, and sidewalk in both directions.
- Street Type 2 includes an approximately 80-foot right-of-way with a travel lane, parking lane, and sidewalk in both directions with a two-way left turn median.
- Street Type 3 includes an approximately 70-foot right-of-way with a painted median, travel lane, parking lane, bike lane, and sidewalk in both directions.
- Street Type 4 includes an approximately 60- to 65-foot right-of-way with a painted median, travel lane, parking lane, and sidewalk in both directions.
- Street Type 5 includes an approximately 50 foot-right-of-way with two concepts. Once concept has a painted median with a travel lane in both directions and a sidewalk on one side of the roadway. The other concept has a travel lane and a sidewalk in each direction with off-street parking on one side of the roadway.
- Street Type 6 includes a varied right-of-way with a travel lane in both directions and an option center open space between travel lanes.

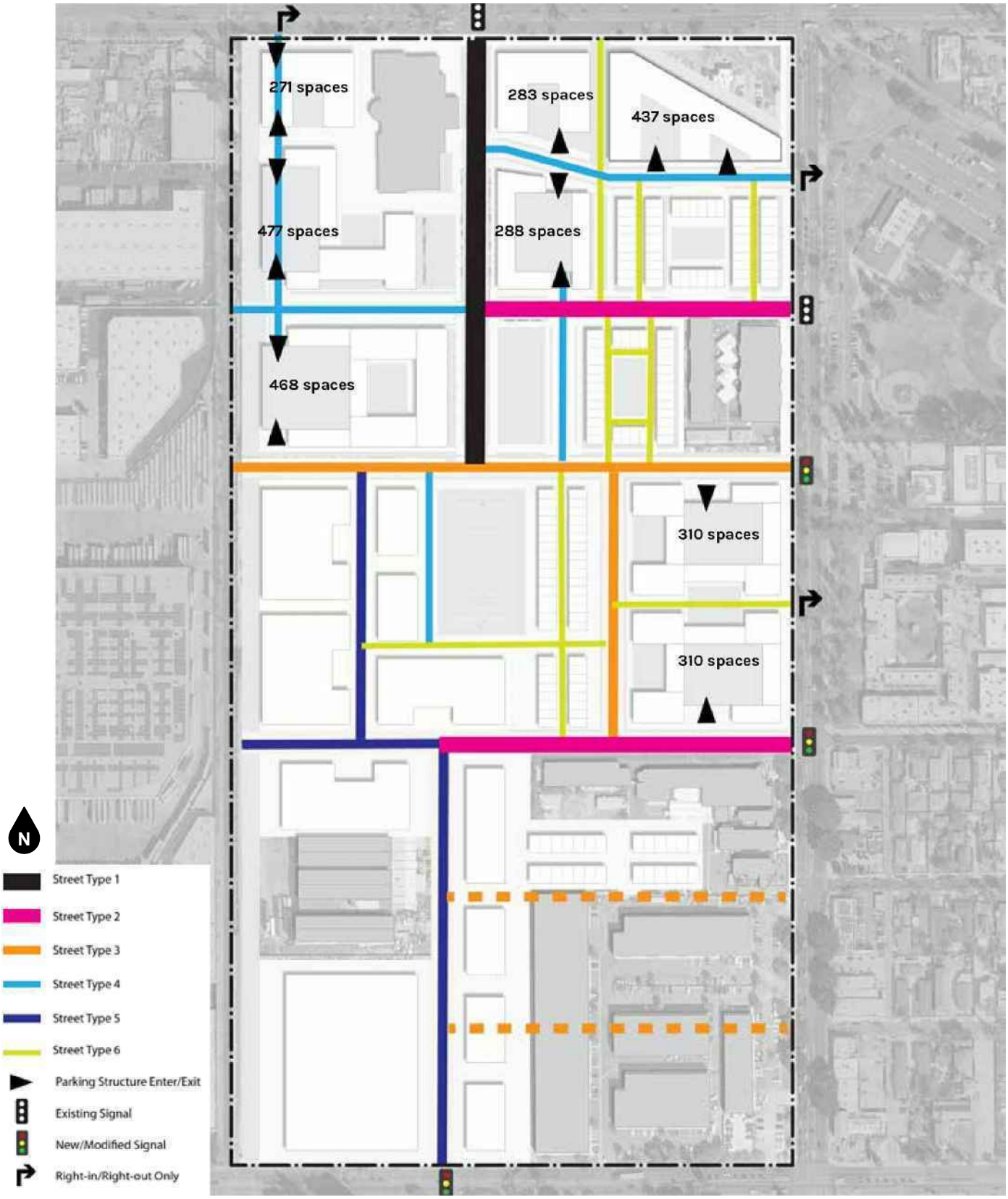


Figure 4
Mobility Plan Concept

Source: Clearwater East Specific Plan (MIG, Inc.)

2. EXISTING TRANSPORTATION SETTING

This section presents the existing transportation setting, including the existing street system, pedestrian, bicycle, and transit facilities, General Plan context, and the existing Clearwater East Specific Plan.

EXISTING STREET SYSTEM

Regional access for the CESP is primarily provided by Interstate 105 approximately one mile to the north, Interstate 710 approximately 1.5 miles to the west, and State Route 91 approximately 1.5 to the south. The CESP is bounded by the Union Pacific rail corridor to the west, Rosecrans Avenue to the north, Paramount Boulevard to the east, and Somerset Boulevard to the south.

Paramount Boulevard is a four-lane divided roadway with intermittent raised medians trending in a north-south direction along the CESP eastern boundary. The existing pavement width is approximately 68 feet. Sidewalks are provided on both sides of the roadway. On-street parking is generally permitted along the northbound side of the roadway. The posted speed limit is 40 miles per hour and there are no bicycle lanes in the CESP vicinity. Paramount Boulevard is designated as a Major Arterial in City of Paramount General Plan Transportation Element.

Rosecrans Avenue is a five-lane divided roadway (three lanes eastbound, two lanes westbound) with intermittent raised medians trending in an east-west direction along the CESP northern boundary. The existing pavement width is approximately 84 feet. Sidewalks are provided on both sides of the roadway. On-street parking is generally permitted except Monday through Friday from 3:00 PM – 6:00 PM along the eastbound side of the roadway. There is no posted speed limit or bicycle lanes in the CESP vicinity. Rosecrans Avenue is designated as a Major Arterial in City of Paramount General Plan Transportation Element.

Somerset Boulevard is a four-lane divided roadway with intermittent raised medians trending in an east-west direction along the CESP eastern boundary. The existing pavement width is approximately 64 feet. Sidewalks are provided on both sides of the roadway. On-street parking is prohibited. The posted speed limit is 35 miles per hour and there are no bicycle lanes in the CESP vicinity. Somerset Boulevard is designated as a Secondary Arterial in City of Paramount General Plan Transportation Element.

Internally, there are two main roadways providing internal circulation for the Specific Plan: Bianchi Way and All American City Way. These roadways connect existing parking areas to the surrounding street system via signalized intersections at Rosecrans Avenue and Paramount Boulevard, respectively. Other existing access points on Rosecrans Avenue, Paramount Boulevard, and Somerset Boulevard provide direct access to/from on-site parking areas.

EXISTING PEDESTRIAN AND BICYCLE FACILITIES

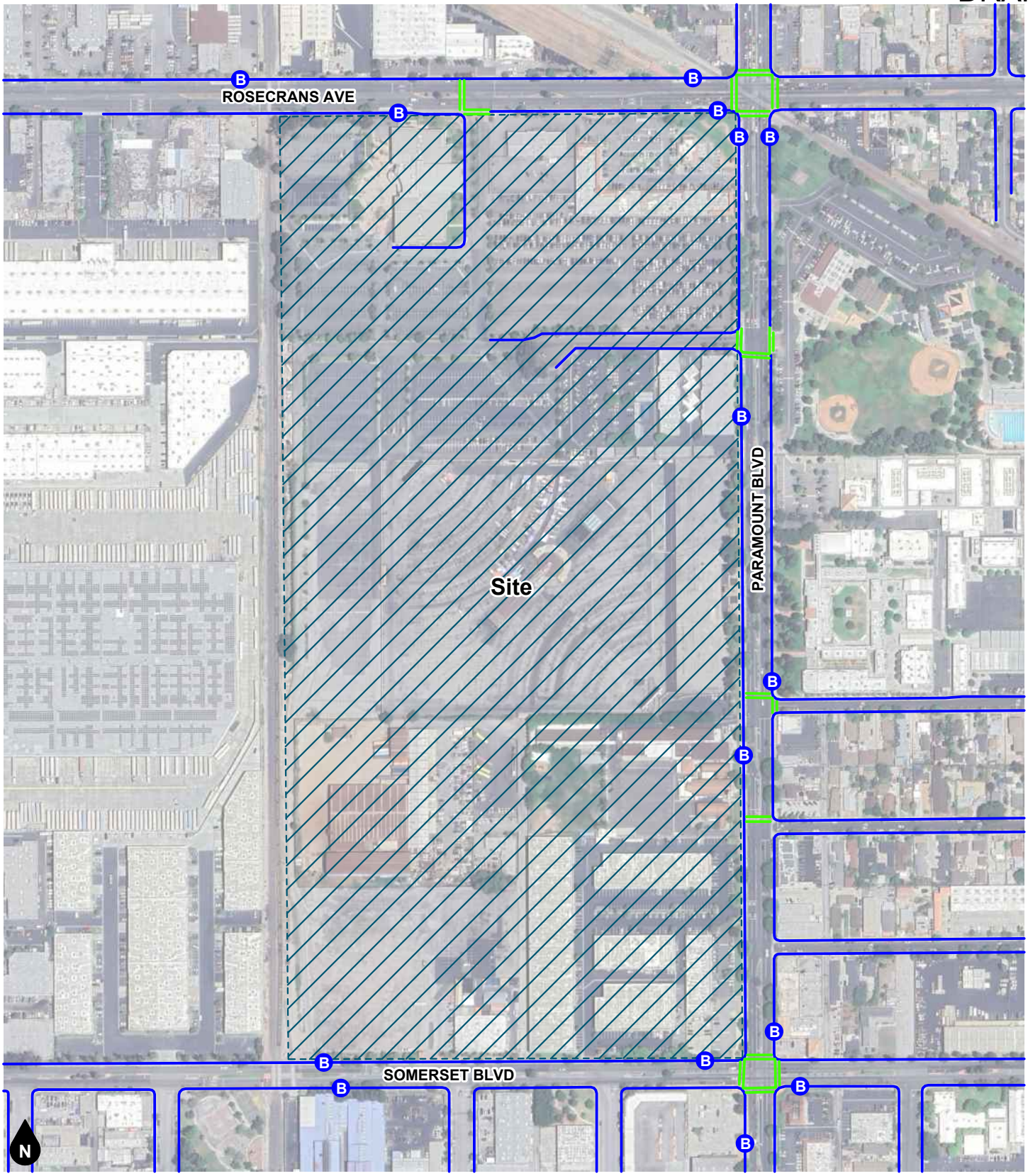
Figure 5 shows existing pedestrian and bicycle facilities in the project vicinity.

As shown on Figure 5, pedestrian sidewalks are currently provided along the CESP frontage and marked crosswalks are provided on all legs of the major intersections of Paramount Boulevard/Rosecrans Avenue and Paramount Boulevard/Somerset Boulevard. Crosswalks at the signal-controlled intersections of Paramount Boulevard/All America City Way and Paramount Boulevard/3rd Street provide connectivity to Paramount Park and Paramount High School. A rectangular rapid flashing beacon (RRFB) provides enhanced pedestrian safety at the cross-street stop-controlled intersection Paramount Boulevard/2nd Street.

There are currently no bicycle facilities along the CESP-adjacent or internal roadways.

EXISTING TRANSIT FACILITIES

Figure 6 shows existing transit services in the CESP vicinity. As shown on Figure 6, the CESP is served by Los Angeles Metro Bus Line 125 along Rosecrans Avenue, Line 265 along Paramount Boulevard, and Line 127 along Somerset Boulevard; Long Beach Transit Route 71 runs along Rosecrans Avenue. Table 3 provides a description of the existing transit services.



Legend
- Sidewalk
- Cross Walk
- B Bus Stop

Figure 5
Existing Pedestrian and Bicycle Facilities

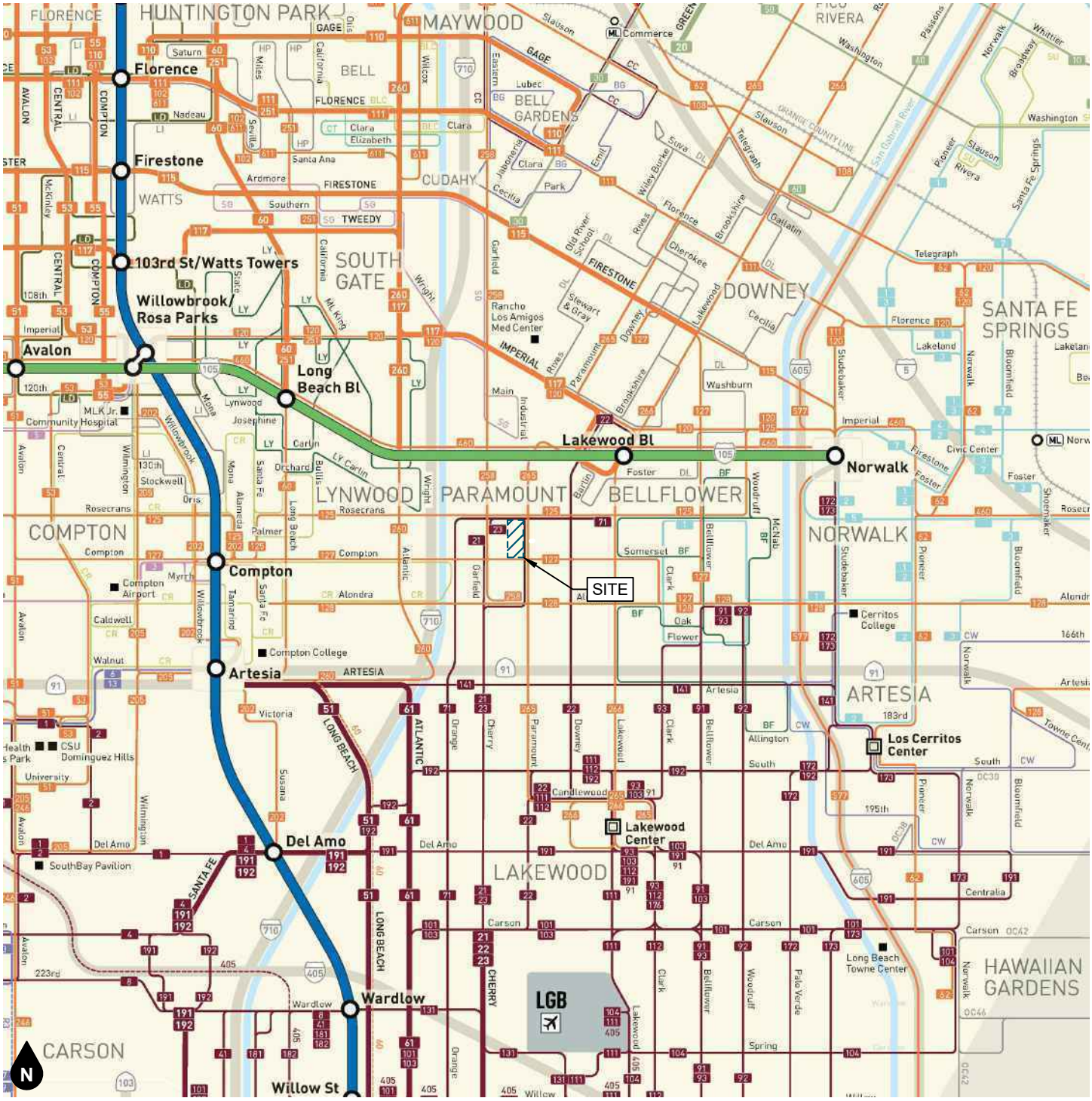


Figure 6
Existing Transit Service

Source: L.A. Metro

Table 3
Existing Transit Service Descriptions

Provider/Route	Mode	Service Type	Description	Direction[1]	Hours of Service (Monday-Friday)[2]	Peak Period Headways (Minutes)[3]	
						AM	PM
Long Beach Transit Route 71	Bus	Local	Downtown Long Beach - Lakewood Blvd/Rosecrans Ave	NB	6:11 AM - 7:11 PM	36	45
				SB	7:22 AM - 8:06 PM	45	45
LA Metro 125	Bus	Local	El Segundo - Norwalk Station	EB	6:09 AM - 9:32 PM	20	20
				WB	4:29 AM - 8:31 PM	20	23
LA Metro 127	Bus	Local	Harbor Freeway Station - Downey	EB/NB	6:23 AM - 7:04 PM	36	36
				WB/SB	4:49 AM - 2:46 AM	36	36
LA Metro 265	Bus	Local	Pico Rivera - Lakewood Center Mall	NB	5:21 AM - 8:21 PM	60	60
				SB	6:13 AM - 9:13 PM	60	60

Notes:

(1) NB = Northbound; SB = Southbound; EB = Eastbound; WB = Westbound

(2) Based on nearest timepoint shown on route schedule.

(3) Based on number of stops within the 3-hour peak period (7-10 AM and 3-6 PM) at the nearest timepoint shown on the route schedule.

GENERAL PLAN CONTEXT

Figure 7 shows City of Paramount Transportation Plan from the City's General Plan. As shown on Figure 7, the CESP is bounded by Paramount Boulevard and Rosecrans Avenue are classified as Major Arterials and Somerset Boulevard is classified as a Secondary Arterial in the City of Paramount Transportation Plan. Table 4 shows the roadway classification standards per the City of Paramount General Plan.

Table 4. General Plan Roadway Classification Standards

Attribute	Classification			
	Major Arterial	Secondary Arterial	Collector	Local
Travel Lanes	4	4	2	2
Parking Lanes	0-2	0-2	0-2	0-2
Volume (ADT)	≥20,000	10,000-20,000	2,000-10,000	0-,2000
ROW Width	100 feet	80 feet	60 feet	40-50 feet
Pavement Width	84 feet	64 feet	40 feet	24-30 feet

Notes:
ADT = Average Daily Traffic
ROW = Right-of-Way

Figure 8 shows the truck routes and railroads as designated in the City of Paramount General Plan. As shown on Figure 8, Rosecrans Avenue is the CESP is bounded by railroad right-of-way to the west.

Figure 7
City of Paramount General Plan Transportation Plan

Source: City of Paramount

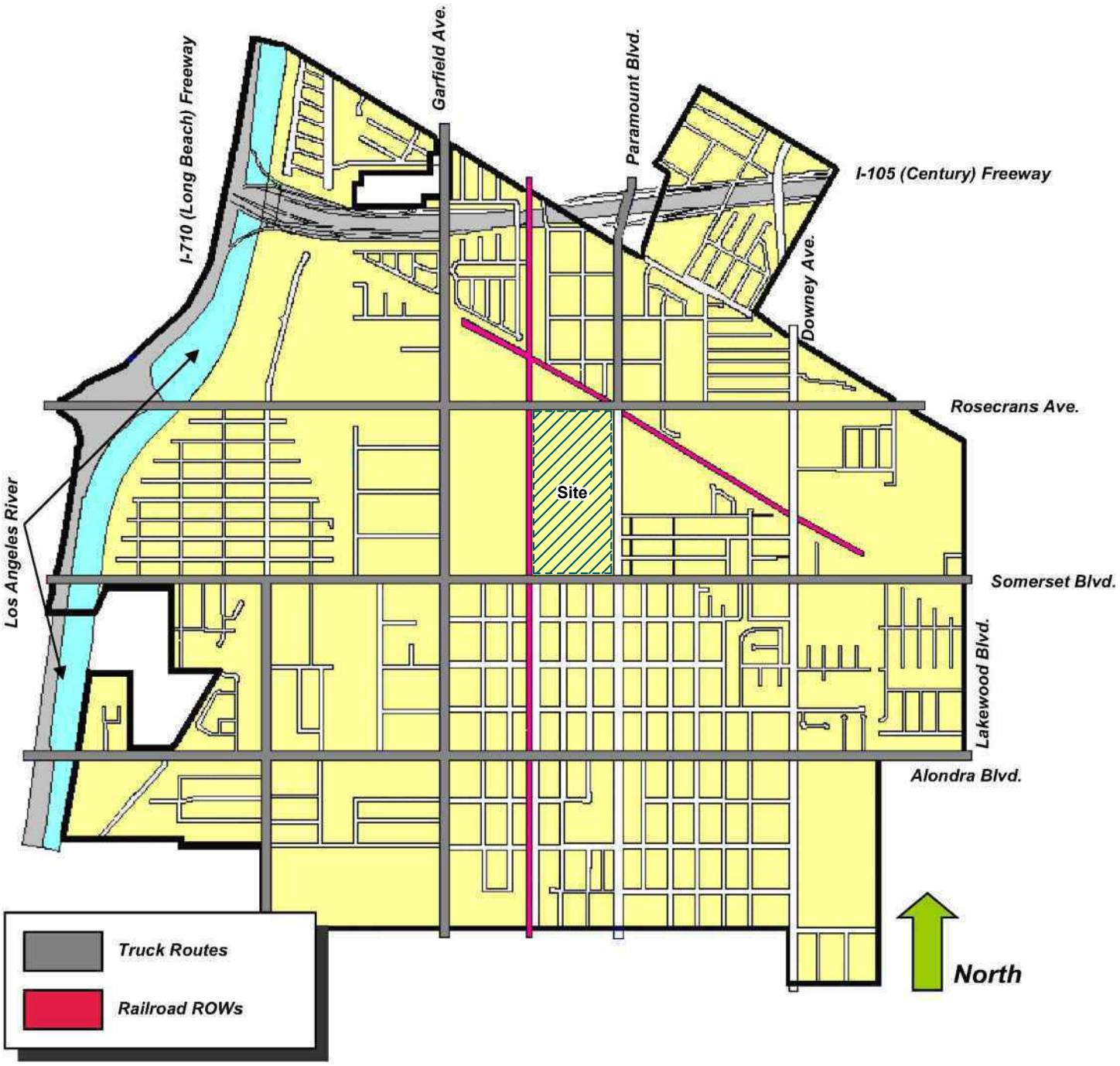


Figure 8
City of Paramount General Plan Truck Routes and Railroads

Source: City of Paramount

EXISTING SPECIFIC PLAN

Transportation-related development standards established in the existing CESP (last amended in May 2019) consist primarily of the following parking standards:

Commercial Development	One parking spaces for each 250 square feet of building area. Up to 25 Percent of the required parking spaces may be designated for compact automobiles, with each compact space measuring at least 8 feet in width by 16 feet in length.
Office/Professional Development	General and professional, medical, dental, and clinical: One space for every 300 square feet of gross floor area. Banks: One space for every 200 square feet of gross floor area. Hospitals: Two spaces for each bed.
Industrial Development	By use as required by Paramount Municipal Code Section 44-130.
Housing Development	Efficiency/studio – 1.5 per unit for resident parking and 0.15 per unit for guest parking. One, two, or three bedroom units – 2 per unit for resident parking and 0.2 per unit for guest parking. Senior housing – 0.8 per unit for resident parking and 0.3 per unit for guest parking. Live/work units – 2 per unit for resident parking and 0.15 per unit for guest parking. Commercial/Office/Professional/Industrial uses require parking at the rate specified in the respective sections of the Clearwater East Development Plan.

The existing CESP also establishes the following standards for housing development proposals:

- Parking structures:
  1) No parking or loading areas shall be visible on the ground floor of any building façade that faces a public street, except the minimum ground-level frontage required for walkways and driveways required for access to parking and loading areas.
  2) All parking, loading, or circulation located above the ground floor shall be integrated into the design of the building facade so that it is not visible from the street. The parking levels may be screened with other materials, or lined with habitable floor area.
  3) Exhaust vents shall be located and directed away from residential uses.
  4) Surfaces of floors and ramps of parking structures within 200 feet of housing shall be textured to reduce tire squeal.

- Electric vehicle infrastructure – the Community Development Director shall review and approve an electric vehicle charging station plan. A minimum of eight percent of automobile parking spaces provided in a project shall be capable of supporting electric vehicle (EV) supply equipment.
- Bicycle facilities – the Community Development Director shall review and approve a bicycle parking plan.

3. ANALYTICAL METHODOLOGY

This section presents the analytical methodologies used to assess the potential for transportation impacts associated with the proposed Specific Plan update relative to the CEQA Guidelines.

VMT BACKGROUND

California Senate Bill 743 (SB 743) directs the State Office of Planning and Research (OPR) to revise the California Environmental Quality Act (CEQA) Guidelines for evaluating transportation impacts to provide alternatives to Level of Service that "promote the reduction of greenhouse gas emissions, the development of multimodal transportation networks, and a diversity of land uses." In December 2018, the California Natural Resources Agency certified and adopted the updated CEQA Guidelines package. The revised CEQA Guidelines, specifically Section 15064.3, recommend the use of Vehicle Miles Travelled (VMT) as the primary metric for the evaluation of transportation impacts associated with land use and transportation projects. In general terms, VMT quantifies the amount and distance of automobile travel attributable to a project or region. All agencies and projects State-wide are required to utilize the updated CEQA guidelines recommending use of VMT for evaluating transportation impacts as of July 1, 2020.

The updated CEQA Guidelines allow for lead agency discretion in establishing methodologies and thresholds provided there is substantial evidence to demonstrate that the established procedures promote the intended goals of the legislation. Where quantitative models or methods are unavailable, Section 15064.3 allows agencies to assess VMT qualitatively using factors such as availability of transit and proximity to other destinations. The Office of Planning and Research (OPR) *Technical Advisory on Evaluating Transportation Impacts in CEQA* (State of California, December 2018) ["OPR Technical Advisory"] provides technical considerations regarding methodologies and thresholds with a focus on office, residential, and retail developments as these projects tend to have the greatest influence on VMT.

THRESHOLDS OF SIGNIFICANCE

Appendix G of the CEQA Guidelines indicate that a significant transportation impact could occur if a project were to:

a) Conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities;

b) Conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b);

c) Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment);

d) Result in inadequate emergency access.

VMT Significance Criteria

CEQA Guidelines section 15064.3, subdivision (b)(1) establishes the following significance criteria for land use projects:

> *Vehicle miles traveled exceeding an applicable threshold of significance may indicate a significant impact. Generally, projects within one-half mile of either an existing major transit stop or a stop along an existing high quality transit corridor should be presumed to cause a less than significant transportation impact. Projects that decrease vehicle miles traveled in the project area compared to existing conditions should be presumed to have a less than significant transportation impact.*

The City of Paramount uses the County of Los Angeles *Transportation Impact Analysis Guidelines* (July 2020) ["County Guidelines"] to estimate VMT impacts. The County Guidelines establish criteria for determining the significance of a project's VMT impact, including the following screening criteria for projects that may be presumed to have less than significant impacts based on the OPR Technical Advisory guidance: 1) Non-Retail Project Trip Generation Screening; 2) Retail Project Site Plan Screening; 3) Proximity to Transit Based Screening; and 4) Residential Land Use Based Screening. Projects that do not meet one or more of these screening criteria must perform a more detailed evaluation of the VMT produced by the project. As established in the County Guidelines, a project has a potentially significant VMT impact if it meets one or more of the following thresholds:

- Residential Projects: The project's residential VMT per capita[1] exceeds 16.8%[2] below the existing residential VMT per capita for the Baseline Area in which the project is located.
- Office Projects: The project's employment VMT per employee[3] exceeds 16.8% below the existing employment VMT per employee for the Baseline Area in which the project is located.
- Regional Serving Retail Projects: The project would result in a net increase in existing total VMT.
- Land Use Plans: The plan total VMT per service population[4] exceeds 16.8% below the existing VMT per service population for the Baseline Area in which the plan is located.

Based on the thresholds described above, Table 3.1.3-1 of the County Guidelines establish the following VMT impact criteria:

Baseline Area	Residential VMT per Capita	Employment VMT per Employee	Total VMT per Service Population
North County	18.6	15.8	35.9
South County	10.6	15.3	25.9

Source: County of Los Angeles *Transportation Impact Analysis Guidelines* (July 2020), Table 3.1.3-2.

Since the proposed Specific Plan update consists of a land use plan located in South County, the applicable threshold of significance is 25.9 total VMT per service population.

[1] Residential VMT is the VMT generated by Home-Based Work and Home-Based Other trip productions.

[2] As referenced by the VMT reduction goals discussed in the California Air Resources Board, 2017 Scoping Plan-Identified VMT Reductions and Relationship to State Goals, January 2019, Figure 3.

[3] Employment VMT is the VMT generated by Home-Based Work trip attractions.

[4] Service population is the sum of the number residents and the number of employees.

4. TRANSPORTATION IMPACTS

This section provides a program-level assessment of the potential for transportation impacts associated with the proposed Specific Plan update relative to the CEQA Guidelines, Appendix G.

CONSISTENCY WITH PROGRAMS, PLANS, ORDINANCES OR POLICIES ADDRESSING THE CIRCULATION SYSTEM

a) Less Than Significant Impact: The project would not conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities.

Roadway Network: The CESP is currently developed with commercial, industrial, and entertainment uses, including the Paramount Entertainment Center, Drive-In Theater, and Swap Meet, while the CESP update proposes transit-oriented, mixed-use development with medium to high density multifamily residential located directly above or adjacent to commercial, neo industrial, and quasi-public uses. Regional access for the CESP is primarily provided by Interstate 105 approximately one mile to the north, Interstate 710 approximately 1.5 miles to the west, and State Route 91 approximately 1.5 to the south. Local circulation is provided by Rosecrans Avenue to the north, Paramount Boulevard to the east, and Somerset Boulevard to the south.

Table 5 shows the project trip generation based on the rates obtained from the Institute of Transportation Engineers (ITE) *Trip Generation Manual* (11th Edition, 2021). As shown in Table 5, the proposed CESP Update is forecast to result in a total of approximately 11,118 net new daily vehicle trips, including 799 net new trips during the AM peak hour and 667 net new trips during the PM peak hour.

For trip generation purposes, this analysis assumes development capacity for up to 200 single-family attached housing units (i.e., townhomes) out of the total 2,000 residential units. The project trip generation in Table 5 includes internal capture adjustments in accordance with procedures developed by the National Cooperative Highway Research Program 684 Internal Capture Estimation Tool as incorporated into the ITE *Trip Generation Handbook* (3rd Edition). Internal capture refers to the trips that start and end within the boundaries a mixed-use development, thus reducing demand on the external roadway system. Detailed internal capture worksheets are provided in the scoping agreement in Appendix B.

The trip generation shown in Table 5 excludes trips associated with existing/future public facilities, quasi-public uses, business park, and utilities since the Specific Plan update does not propose changes to these land uses (see Table 2). Additionally, the project trip generation estimate does not account for trip reductions associated with the reduction in Swap Meet stalls (approximately 386,547 square feet); thus resulting in a conservative estimate of the net future trips generated.

The CESP Mobility Plan proposes an internal roadway network consisting of six street types, including minimum/maximum design requirements and guidelines to facilitate a multi-modal roadway network that will provide low-speed vehicular travel lanes, sidewalks, bicycle lanes, curb extensions, and enhanced parkway/amenity zones. The *Clearwater East Specific Plan Update Mobility Element Planning Analysis* (Ganddini Group, February 2025) documents a vehicular roadway capacity analysis for the CESP roadway network. As documented in the Clearwater East Specific Plan Update Mobility Element Planning Analysis, the roadway segments within the CESP are projected to operate within acceptable Levels of Service (LOS B or better) upon buildout of the proposed Specific Plan update.

All future development will be required to construct adjacent circulation improvements in accordance with the proposed CESP Mobility Plan and participate in the City's Development Impact Fee (DIF) program. Such improvements shall adhere to Americans with Disability Act (ADA) requirements and applicable engineering design standards. Implementation of the proposed CESP and internal roadway network as proposed by the CESP Mobility Plan would not conflict with any program, plan, ordinance or policy addressing roadway facilities; therefore, roadway network impacts would be less than significant.

Table 5
Project Trip Generation

Trip Generation Rates									
Land Use	Source[1]	Land Use Variable[2]	AM Peak Hour			PM Peak Hour			Daily Rate
			% In	% Out	Rate	% In	% Out	Rate	
Shopping Plaza (40-150k without Supermarket)	ITE 821	TSF	62%	38%	1.73	49%	51%	5.19	67.52
General Light Industrial	ITE 110	TSF	88%	12%	0.74	14%	86%	0.65	4.87
Single-Family Attached Housing	ITE 215	DU	25%	75%	0.48	59%	41%	0.57	7.20
Multifamily Housing (Mid-Rise, Close to Rail Transit)	ITE 221	DU	36%	64%	0.32	65%	35%	0.29	4.75
Shopping Center (>150k)	ITE 820	TSF	62%	38%	0.84	48%	52%	3.40	37.01
Neo Industrial (Industrial Park)	ITE 130	TSF	81%	19%	0.34	22%	78%	0.34	3.37

Trips Generated									
Land Use	Source	Quantity	AM Peak Hour			PM Peak Hour			Daily
			In	Out	Total	In	Out	Total	
Existing Uses To Be Displaced									
Shopping Plaza (40-150k without Supermarket)	ITE 821	116.555 TSF	125	77	202	296	309	605	7,870
General Light Industrial	ITE 110	86.714 TSF	56	8	64	8	48	56	422
Subtotal - Existing Trips (Gross)			181	85	266	304	357	661	8,292
Internal Capture (3%AM/4%PM/4%Daily)[3]			*-5*	*-3*	*-8*	*-12*	*-14*	*-26*	*-332*
Total - Existing Trips			176	82	258	292	343	635	7,960
Proposed New Development Capacity									
Single-Family Attached Housing	ITE 215	200 DU	24	72	96	67	47	114	1,440
Multifamily Housing (Mid-Rise, Close to Rail Transit)	ITE 221	1,800 DU	207	369	576	339	183	522	8,550
Shopping Center (>150k)	ITE 820	230.000 TSF	120	73	193	375	407	782	8,512
Neo Industrial	ITE 130	800.000 TSF	220	52	272	60	212	272	2,696
Subtotal - Proposed Trips (Gross)			571	566	1,137	841	849	1,690	21,198
Internal Capture (7%AM/23%PM/10%Daily)[3]			*-40*	*-40*	*-80*	*-193*	*-195*	*-388*	*-2,120*
Total - Proposed Trips			531	526	1,057	648	654	1,302	19,078
NET TRIPS GENERATED			**+355**	**+444**	**+799**	**+356**	**+311**	**+667**	**+11,118**

Notes:
1. ITE = Institute of Transportation Engineers *Trip Generation Manual* (11th Edition, 2021); ### = Land Use Code. All rates based on General Urban/Suburban setting unless otherwise noted.
2. TSF = Thousand Square Feet; DU = Dwelling Units
3. Internal capture per NCHRP Report 684 as incorporated into the ITE *Trip Generation Handbook* (3rd Edition); see Appendix B.

Bicycle Facilities: Figure 9 shows bicycle circulation upon buildout of the proposed CESP Mobility Plan. As shown on Figure 9, buildout of CESP Mobility Plan would provide bicycle circulation throughout the CESP via dedicated bicycle lanes on Street Types 1 and 3 and shared bicycle routes on Street Type 6. Connectivity to the surrounding bicycle network is proposed at Rosecrans Avenue and Paramount Boulevard. A shared use path is planned along Los Angeles Metro's Southeast Gateway Line alignment.

Implementation of the proposed CESP and internal bicycle network as proposed by the CESP Mobility Plan would not conflict with any program, plan, ordinance or policy addressing the bicycle facilities; therefore, bicycle facility impacts would be less than significant.

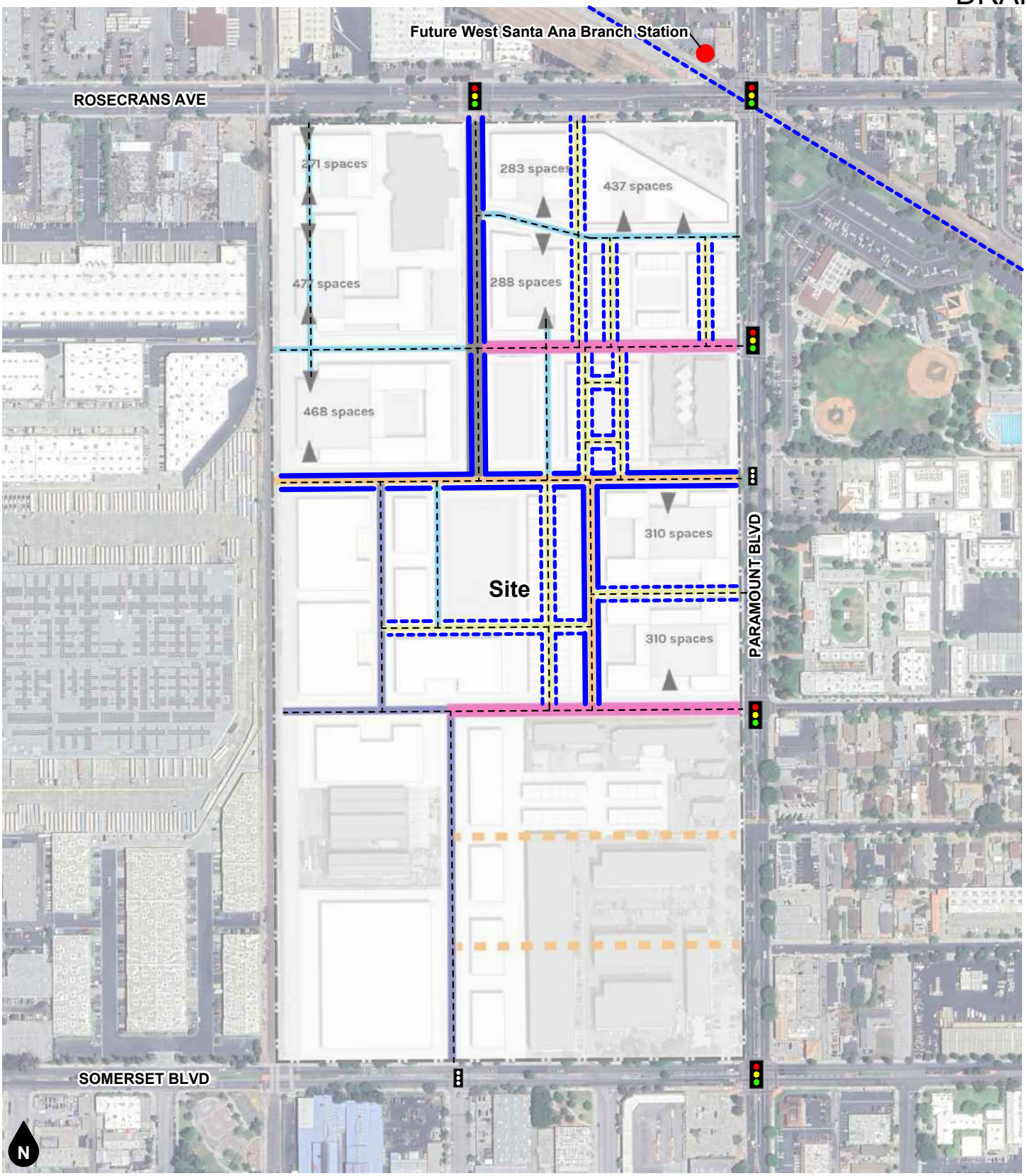
Pedestrian Facilities: Figure 10 shows the proposed pedestrian circulation for the CESP and adjacent roadways. As shown on Figure 10, pedestrian circulation is currently provided on adjacent street frontage of Rosecrans Avenue, Paramount Boulevard, and Somerset Boulevard and will be provided on all street types throughout the proposed CESP with connectivity to the surrounding pedestrian network proposed at the following key access points:

- Bianchi Way/Rosecrans Avenue: Existing signal-controlled crossing on west leg.
- Paramount Boulevard/All American City Way: Existing signal-controlled crossing on south leg.
- Paramount Boulevard/3rd Street: Existing signal-controlled crossing on north leg.
- Paramount Boulevard/2nd Street: Existing unsignalized crossing on north leg.

Pedestrian access between the CESP and the future West Santa Ana Branch Paramount South Gate Station is currently provided via existing pedestrian crosswalks on all four legs of the signalized intersection of Paramount Boulevard and Rosecrans Avenue and the west leg of the signalized intersection of Bianchi way and Rosecrans Avenue.

All future development will be required to construct adjacent circulation improvements in accordance with the proposed CESP Mobility Plan, including sidewalks, crosswalks, curb extensions, and parkway improvements. Such improvements shall adhere to Americans with Disability Act (ADA) requirements and applicable engineering design standards. Buildout of the proposed CESP and internal pedestrian network as proposed by the CESP Mobility Plan would not conflict with any program, plan, ordinance or policy addressing the pedestrian facilities; therefore, pedestrian facility impacts would be less than significant.

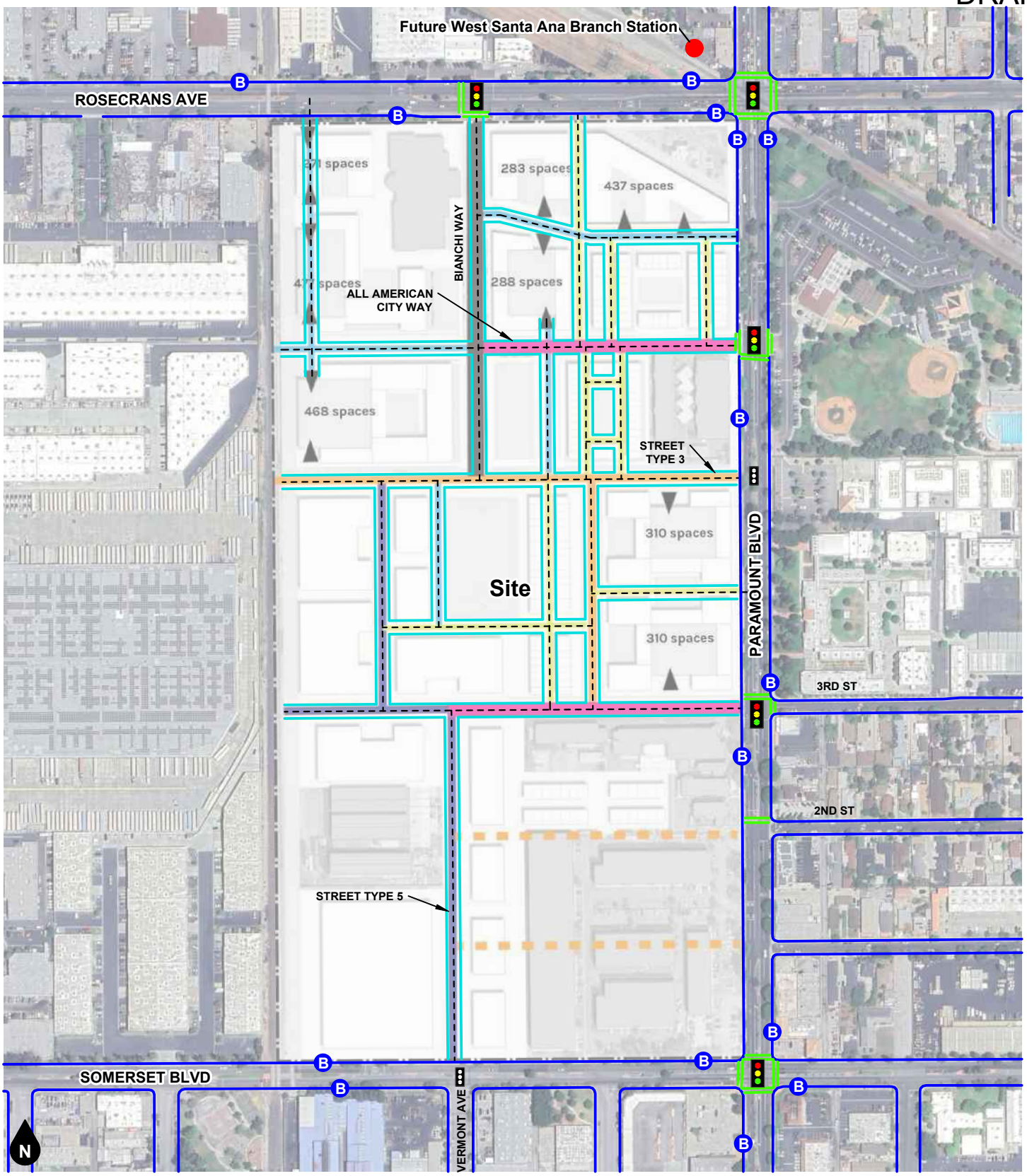
Transit Facilities: As previously summarized in Table 3, the CESP is served by Los Angeles Metro Bus Line 125 along Rosecrans Avenue, Line 265 along Paramount Boulevard, and Line 127 along Somerset Boulevard; Long Beach Transit Route 71 runs along Rosecrans Avenue. Furthermore, the Southeast Gateway Line (formerly West Santa Ana Branch Transit Corridor) is an approximately 19-mile planned light rail transit (LRT) line that will connect from Union Station in Downtown Los Angeles to the City of Artesia, to the future Paramount South Gate station at the northwest corner of the intersection of Paramount Boulevard and Rosecrans Avenue. The half-mile radius from the future Paramount South Gate station will encompass nearly the entire CESP with two signalized pedestrian crossings across Rosecrans Avenue at Bianchi Way and Paramount Boulevard. The LRT project has received CEQA certification and is estimated to be completed by 2035. The proposed CESP features several transit-oriented design characteristics, including residential and employment proximity to transit and a robust internal bicycle and pedestrian network with two existing signalized crosswalks providing access to the future transit station. Buildout of the proposed CESP and internal pedestrian network as proposed by the CESP Mobility Plan would not conflict with any program, plan, ordinance or policy addressing the transit facilities; therefore, transit facility impacts would be less than significant.



Legend

- Future Bike Lanes
- Future Shared Bike Lanes
- Existing Signalized Intersection
- Future Signalized Intersection

Figure 9
Bicycle Circulation



Legend

- Existing Sidewalk
- Future Sidewalk
- Existing Cross Walk
- B Bus Stop
- Existing Signalized Intersection
- Future Signalized Intersection

Figure 10
Pedestrian Circulation

CONSISTENCY WITH CEQA GUIDELINES SECTION 15064.3, SUBDIVISION (B)

b) Less Than Significant Impact with Mitigation Incorporated: The project would not conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b).

CEQA Guidelines section 15064.3, subdivision (b) establishes VMT as the most appropriate metric for determining the significance of transportation impacts. The potential for the proposed CESP to result in VMT impacts was evaluated based on screening criteria established in the County Guidelines as follows.

Non-Retail Project Trip Generation Screening

If the answer is no to the question below, further analysis is not required, and a less than significant determination can be made.

- Does the development project generate a net increase of 110 or more daily vehicle trips? [5, 6]

As previously shown in Table 5, the proposed CESP is forecast to generate a total of approximately 11,118 net new daily vehicle trips. While the trip generation estimate in shown in Table 5 does not include trip credits for existing development to be displaced, such credits are not expected to result in fewer than 110 net daily trips generated.

Assessment: This screening criteria is not met.

Retail Project Site Plan Screening

A project that contains a local serving retail use is assumed to have less than significant VMT impacts for the retail portion of the project. If the answer to the following question is no, a less than significant determination can be made for the portion of the project that contains retail uses.

- Does the project contain retail uses that exceed 50,000 square feet of gross floor area?

Overall, the proposed CESP includes a total of 182,200 square feet of commercial retail uses; therefore, this screening criteria is not met for the overall CESP. Individual development proposals may re-assess this screening criteria for any proposed retail components, in particular for ground-floor mixed-use proposals which are anticipated to include small local coffee shops, dry cleaners, etc.

Assessment: This screening criteria is not met.

Proximity to Transit Based Screening

If a project is located near a major transit stop or high-quality transit corridor, the following question should be considered:

[5] The term vehicle refers to on-road passenger vehicles, specifically cars and light trucks. Heavy-duty trucks should only be included in a traffic impacts analysis for modeling convenience and ease of calculation (e.g., where models or data provide combine auto and heavy-freight VMT) but should not contribute to a finding of significant traffic impact under any circumstances.

[6] As referenced in the OPR Technical Advisory.

- Is the project located within a one-half mile radius[7] of a major transit stop[8] or an existing stop along a high-quality transit corridor[9]?

If the answer to the question above is yes, then the following subsequent questions should be considered:

- Does the project have a Floor Area Ratio (FAR) less than 0.75?
- Does the project provide more parking than required by the Code?[10]
- Is the project inconsistent with the Southern California Association of Governments (SCAG) Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS)?
- Does the project replace residential units set aside for lower income households with a smaller number of market-rate residential units?

If the answer to all four questions is no, further analysis is not required, and a less than significant determination can be made.

Figure 11 shows a transit proximity map in the CESP vicinity. As shown on Figure 11, with the exception of two parcels (APN 6241- 016-023 and -907), all parcels within the CESP have no more than 25 percent of their area farther than one-half mile from the planned Southeast Gateway Line (formerly West Santa Ana Branch Transit Corridor) station at the northwest corner of the intersection of Paramount Boulevard and Rosecrans Avenue. The Southeast Gateway Line is an approximately 19-mile planned light rail transit (LRT) line that will connect from Union Station in Downtown Los Angeles to the City of Artesia. The half-mile radius from the Paramount South Gate station will encompass nearly the entire CESP with two signalized pedestrian crossings across Rosecrans Avenue at Bianchi Way and Paramount Boulevard. The LRT project has received CEQA certification and is estimated to be completed by 2035.

The CESP is located within a transit priority area (TPA), which includes areas within one-half mile of major transit stops that are scheduled to be completed within the planning horizon of a Transportation Improvement Program or applicable regional transportation plan (in this case, the SCAG RTP/SCS).[11]

Development zones within the proposed CESP include maximum floor area ratios ranging from 1.5 to 3.0; thus encouraging development well above the minimum 0.75 FAR criteria. The CESP does not propose more parking than required by the City of Paramount Municipal Code as shown below:

[7] A project shall be considered to be within one-half mile of a major transit stop or high-quality transit corridor if all parcels within the project have no more than 25 percent of their area farther than one-half mile from the stop or corridor and if not more than 10 percent of the residential units or 100 units, whichever is less, in the project are farther than one-half mile from the stop or corridor. (Pub. Resources Code, § 21155)

[8] A major transit stop is defined as an existing rail or bus rapid transit station, ferry terminal served by either a bus or rail transit service or the intersection of two or more major bus routes with a frequency of service interval of 20 minutes or less during the morning and afternoon peak commute periods. (Pub. Resources Code, § 21064.3.)

[9] A high-quality transit corridor is defined as a corridor with fixed route bus service with service intervals no longer than 15 minutes during peak commute hours. (Pub. Resources Code, § 21155)

[10] The County Guidelines refer to County Code; however, this analysis substitutes the City of Paramount Municipal Code as the applicable code for the Lead Agency.

[11] "Transit priority area" means an area within one-half mile of a major transit stop that is existing or planned, if the planned stop is scheduled to be completed within the planning horizon included in a Transportation Improvement Program or applicable regional transportation plan. (Pub. Resources Code, § 21099)

Land Use	Proposed CESP	Municipal Code[1]
Residential	2 stalls per unit	2.25 stalls per unit
Office	3 stalls per 1,000 SF	3.33 stalls per 1,000 SF
Commercial/Retail	3 stalls per 1,000 SF	4 stalls per 1,000 SF
Neo Light Industrial	1 stall per 1,000 SF	2 stalls per 500 SF

Notes:
1. Source: City of Paramount Municipal Code § 17.44.460. Office requirements based on general and professional office uses; commercial/retail requirements based on C-3 zone; industrial requirements based on C-M zone and M-1/M-2 zones for properties containing more than 15,000 square feet.

The SCAG RTP/SCS Data/Map Book for the City of Paramount identifies the CESP as a specific plan area consisting of mixed residential, commercial, and industrial land uses and its majority location within a transit priority area. Lastly, the proposed CESP would not displace any residential units set aside for lower income households.

To ensure implementation of the CESP does not result in significant VMT impacts, the following mitigation measure is recommended:

Mitigation Measure 1
Prior to completion of the planned Southeast Gateway Line Paramount South Gate station, all development proposals within the CESP shall be required to prepare a separate VMT screening/analysis. After completion of the planned Southeast Gateway Line Paramount South Gate station, only development proposals involving APN 6241-016-023 or 6241-016-907 shall be required to prepare a separate VMT screening/analysis.

Assessment: The proposed CESP is located within a transit priority area and does not conflict with additional considerations that may contradict transit-oriented development; therefore, the project satisfies the "Proximity to Transit Based Screening Criteria" based on County Guidelines used by the City of Paramount and can be determined to have a less than significant VMT impact with implementation of Mitigation Measure 1.

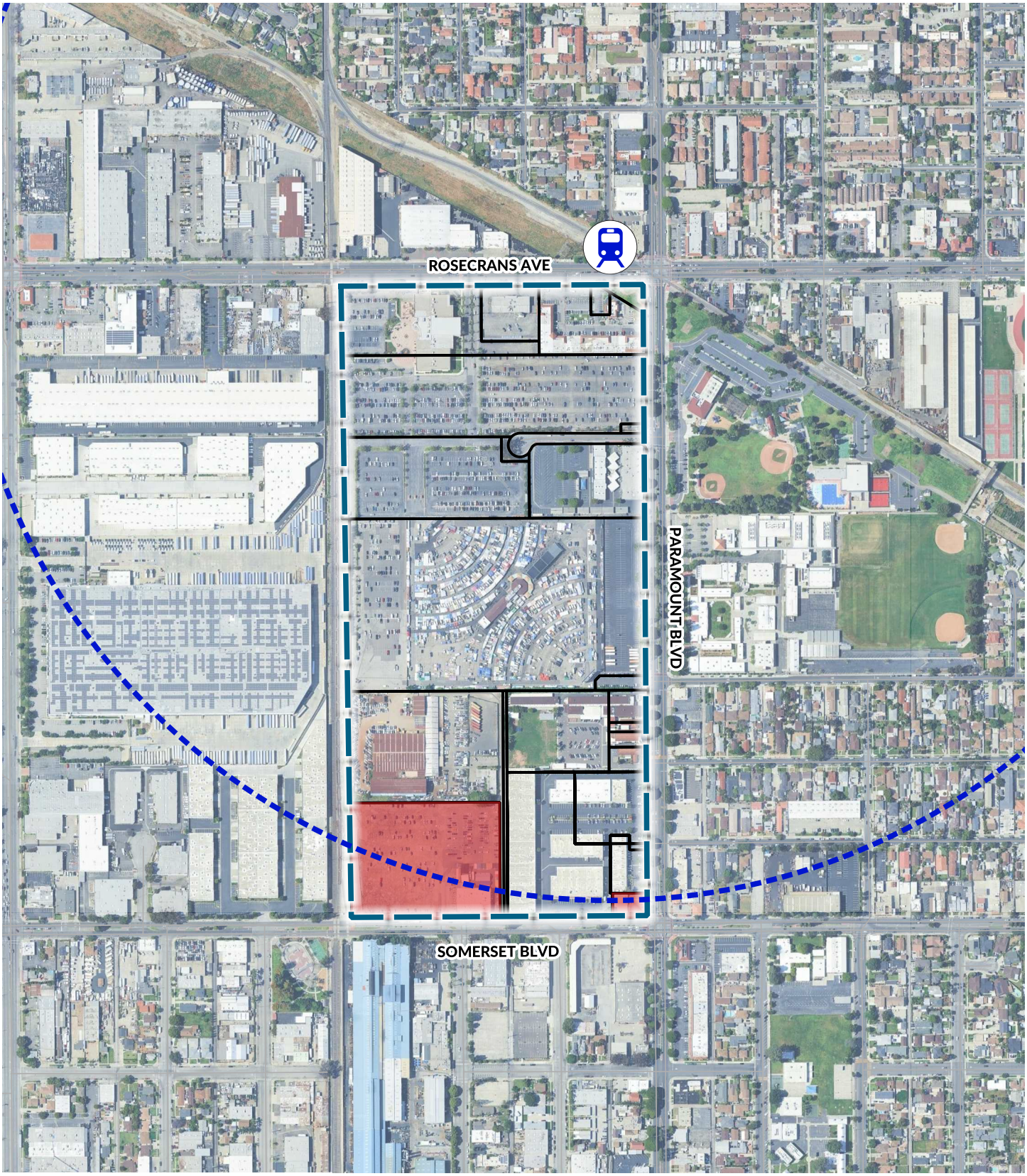
Residential Land Use Based Screening

Independent of the screening criteria for non-retail and retail projects, certain projects that further the State's affordable housing goals have been identified as having the presumption of a less than significant impact. If the project requires a discretionary action and the answer is yes to the question below, further analysis is not required, and a less than significant determination can be made.

- Are 100% of the units, excluding manager's units, set aside for lower income households?

The residential components of the proposed CESP are not proposed to be set aside for lower income households.

Assessment: This screening criteria is not met.



Legend

Half-Mile Radius from Major Transit Stop

Parcels >25% Outside Half-Mile Radius

Figure 11
Transit Proximity Map

HAZARDS DUE TO A GEOMETRIC DESIGN FEATURE

c) Less Than Significant Impact with Mitigation Incorporated: The project would not substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment).

Implementation of the proposed CESP would not substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment) with implementation Mitigation Measure 1. The CESP proposes a framework for future redevelopment of parcels with new transit-oriented, mixed-use development including medium to high density multifamily residential located directly above or adjacent to commercial, neo industrial, and quasi-public uses. The proposed CESP does not propose any incompatible uses such as farm equipment.

The proposed CESP includes a Mobility Plan consisting of six street types, including minimum/maximum design requirements and guidelines to facilitate a multi-modal roadway network that will provide low-speed vehicular travel lanes, sidewalks, bicycle lanes, curb extensions, and enhanced parkway/amenity zones. The proposed roadway alignments do not include sharp curves or dangerous intersections.

All future development will be required to construct adjacent circulation improvements in accordance with the proposed CESP Mobility Plan, at which time such improvements will be subject to further engineering review for compliance with all applicable engineering guidelines and standards, including but not limited to Americans with Disability Act (ADA) requirements, the California Manual on Uniform Traffic Control Devices (CA MUTCD), Caltrans Highway Design Manual (HDM), and the City of Paramount Municipal Code.

To ensure adequate vehicular site access, the following mitigation measure is recommended:

Mitigation Measure 2
Future development proposals forecast to generate more than 50 peak hour trips shall be required to be prepare a traffic study that evaluates and addresses any deficiencies related to the following items:

- The need for installation of a traffic signal or turning restrictions at unsignalized access points.
- Left turn lane storage lengths.
- Any additional site access or safety concerns deemed necessary by the City of Paramount Director of Public Works.

Although the City's standard permitting process already includes development review by the City of Paramount Public Works Department for compliance with applicable engineering standards, implementation of Mitigation Measure 2 would explicitly require preparation of a traffic analysis to ensure any critical site access needs are adequately addressed.

EMERGENCY ACCESS

d) Less Than Significant Impact: The project would not result in inadequate emergency access.

As shown on Figure 4, the proposed CESP Mobility Plan includes an internal roadway network that would provide circulation for emergency vehicles throughout the CESP and multiple points of access from the surrounding street network. With the exception of Street Type 1 and Street Type 6, all proposed street typologies provide a minimum of 20 feet of all-weather, hard-surfaced right-of-way required for fire access roads. Excluding Street Types 1 and 6, the remaining street types are expected to provide adequate on-site emergency vehicle circulation.

Furthermore, future development proposals within the CESP shall be subject to the City's standard development review and approval process requiring compliance with the City's Municipal Code and fire code compliance review to meet California Fire Code (CCR Title 24 Part 9), Section 503. Therefore, the City's standard permitting process would ensure that construction of future developments within the CESP adhere to applicable regulations and that impacts to emergency access are less than significant.

5. CONCLUSIONS

This section presents the key findings and any mitigation measures based on the analysis presented in this report.

TRANSPORTATION IMPACTS

The project would not conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities.

The proposed CESP is located within a transit priority area and does not conflict with additional considerations that may contradict transit-oriented development; therefore, the project satisfies the "Proximity to Transit Based Screening Criteria" based on County Guidelines used by the City of Paramount and can be determined to have a less than significant VMT impact with implementation of Mitigation Measure 1.

Implementation of the proposed CESP would not substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment) with implementation Mitigation Measure 2.

The City's standard permitting process would ensure that construction of future developments within the CESP adhere to applicable regulations and that impacts to emergency access are less than significant.

MITIGATION MEASURES

Mitigation Measure 1
Prior to completion of the planned Southeast Gateway Line Paramount South Gate station, all development proposals within the CESP shall be required to prepare a separate VMT screening/analysis. After completion of the planned Southeast Gateway Line Paramount South Gate station, only development proposals involving APN 6241-016-023 or 6241-016-907 shall be required to prepare a separate VMT screening/analysis.

Mitigation Measure 2
Future development proposals forecast to generate more than 50 peak hour trips shall be required to be prepare a traffic study that evaluates and addresses any deficiencies related to the following items:

- The need for installation of a traffic signal or turning restrictions at unsignalized access points.
- Left turn lane storage lengths.
- Any additional site access or safety concerns deemed necessary by the City of Paramount Director of Public Works.

APPENDICES

Appendix A Glossary
Appendix B Internal Capture Worksheets

APPENDIX A

GLOSSARY

ACRONYMS

AC	Acres
ADA	Americans with Disabilities Act
ADT	Average Daily Traffic
Caltrans	California Department of Transportation
CAPCOA	California Air Pollution Control Officers Association
CEQA	California Environmental Quality Act
DU	Dwelling Unit
GFA	Gross Floor Area
GHG	Greenhouse Gas
LOS	Level of Service
PCE	Passenger Car Equivalent
RTP/SCS	Regional Transportation Plan/Sustainable Communities Strategy
SCAG	Southern California Association of Governments
SF	Square Feet
SP	Service Population
TDM	Transportation Demand Management
TPA	Transit Priority Area
TSF	Thousand Square Feet
V/C	Volume/Capacity
VMT	Vehicle Miles Traveled

KEY TERMS

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

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

DESIGN SPEED: A speed used for purposes of designing horizontal and vertical alignments of a highway.

HEAVY-DUTY VEHICLES: Heavy automobiles such as trucks and buses.

HIGH-QUALITY TRANSIT CORRIDOR: A high-quality transit corridor is defined as a corridor with fixed route bus service with service intervals no longer than 15 minutes during peak commute hours.

HOME-BASED VMT: The total distance traveled by residents of a household between their home and all destinations.

HOME-BASED WORK VMT: The total distance traveled by residents of a household between their home and work.

LEVEL OF SERVICE: A grading scale of quantitative performance measures representing the quality of service of a transportation facility or service from an average traveler's perspective.

LIGHT-DUTY VEHICLES: Light automobiles such as passenger cars, light trucks/vans, and sport utility vehicles.

MAJOR TRANSIT STOP: A major transit stop is defined as an existing rail or bus rapid transit station, ferry terminal served by either a bus or rail transit service or the intersection of two or more major bus routes with a frequency of service interval of 20 minutes or less during the morning and afternoon peak commute periods.

MULTI-MODAL: More than one mode, such as automobile, transit, bicycle, and pedestrian.

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

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

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

TRANSIT PRIORITY AREA: An area within one-half mile of a major transit stop or high-quality transit corridor.

TRIP OR TRIP END: The one-directional movement of a person or vehicle. Every trip has an origin and a destination at its respective ends (i.e., trip ends). In terms of site trip generation, the same vehicle entering and exiting a site generates two trips: one inbound trip and one outbound trip.

TRIP GENERATION RATE: The rate at which a land use generates trips per a given land use variable, such per dwelling unit or per thousand square feet.

VEHICLE MILES TRAVELED: A measure of the amount and distance of automobile travel essentially calculated as the sum of each trip times the trip length.

APPENDIX B

INTERNAL CAPTURE WORKSHEETS

NCHRP 684 Internal Trip Capture Estimation Tool			
Project Name:	CESP	**Organization:**	
Project Location:	Paramount	**Performed By:**	
Scenario Description:	Existing	**Date:**	
Analysis Year:		**Checked By:**	
Analysis Period:	**AM Street Peak Hour**	**Date:**	

Table 1-A: Base Vehicle-Trip Generation Estimates (Single-Use Site Estimate)

Land Use	Development Data (*For Information Only*)			Estimated Vehicle-Trips[3]		
	ITE LUCs[1]	Quantity	Units	Total	Entering	Exiting
Office				64	56	8
Retail				202	125	77
Restaurant				0		
Cinema/Entertainment				0		
Residential				0		
Hotel				0		
All Other Land Uses[2]				0		
				266	181	85

Table 2-A: Mode Split and Vehicle Occupancy Estimates

Land Use	Entering Trips			Exiting Trips		
	Veh. Occ.[4]	% Transit	% Non-Motorized	Veh. Occ.[4]	% Transit	% Non-Motorized
Office						
Retail						
Restaurant						
Cinema/Entertainment						
Residential						
Hotel						
All Other Land Uses[2]						

Table 3-A: Average Land Use Interchange Distances (Feet Walking Distance)

Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office						
Retail						
Restaurant						
Cinema/Entertainment						
Residential						
Hotel						

Table 4-A: Internal Person-Trip Origin-Destination Matrix*

Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		2	0	0	0	0
Retail	2		0	0	0	0
Restaurant	0	0		0	0	0
Cinema/Entertainment	0	0	0		0	0
Residential	0	0	0	0		0
Hotel	0	0	0	0	0	

Table 5-A: Computations Summary

	Total	Entering	Exiting
All Person-Trips	266	181	85
Internal Capture Percentage	3%	2%	5%
External Vehicle-Trips[5]	258	177	81
External Transit-Trips[6]	0	0	0
External Non-Motorized Trips[6]	0	0	0

Table 6-A: Internal Trip Capture Percentages by Land Use

Land Use	Entering Trips	Exiting Trips
Office	4%	25%
Retail	2%	3%
Restaurant	N/A	N/A
Cinema/Entertainment	N/A	N/A
Residential	N/A	N/A
Hotel	N/A	N/A

[1]Land Use Codes (LUCs) from *Trip Generation Manual*, published by the Institute of Transportation Engineers.

[2]Total estimate for all other land uses at mixed-use development site is not subject to internal trip capture computations in this estimator.

[3]Enter trips assuming no transit or non-motorized trips (as assumed in ITE *Trip Generation Manual*).

[4]Enter vehicle occupancy assumed in Table 1-A vehicle trips. If vehicle occupancy changes for proposed mixed-use project, manual adjustments must be made to Tables 5-A, 9-A (O and D). Enter transit, non-motorized percentages that will result with proposed mixed-use project complete.

[5]Vehicle-trips computed using the mode split and vehicle occupancy values provided in Table 2-A.

[6]Person-Trips

*Indicates computation that has been rounded to the nearest whole number.

Estimation Tool Developed by the Texas A&M Transportation Institute - Version 2013.1

NCHRP 684 Internal Trip Capture Estimation Tool			
Project Name:	CESP	**Organization:**	
Project Location:	Paramount	**Performed By:**	
Scenario Description:	Existing	**Date:**	
Analysis Year:		**Checked By:**	
Analysis Period:	**PM Street Peak Hour**	**Date:**	

Table 1-P: Base Vehicle-Trip Generation Estimates (Single-Use Site Estimate)

Land Use	Development Data (*For Information Only*)			Estimated Vehicle-Trips[3]		
	ITE LUCs[1]	Quantity	Units	Total	Entering	Exiting
Office				56	8	48
Retail				605	296	309
Restaurant				0		
Cinema/Entertainment				0		
Residential				0		
Hotel				0		
All Other Land Uses[2]				0		
				661	304	357

Table 2-P: Mode Split and Vehicle Occupancy Estimates

Land Use	Entering Trips			Exiting Trips		
	Veh. Occ.[4]	% Transit	% Non-Motorized	Veh. Occ.[4]	% Transit	% Non-Motorized
Office						
Retail						
Restaurant						
Cinema/Entertainment						
Residential						
Hotel						
All Other Land Uses[2]						

Table 3-P: Average Land Use Interchange Distances (Feet Walking Distance)

Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office						
Retail						
Restaurant						
Cinema/Entertainment						
Residential						
Hotel						

Table 4-P: Internal Person-Trip Origin-Destination Matrix*

Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		10	0	0	0	0
Retail	2		0	0	0	0
Restaurant	0	0		0	0	0
Cinema/Entertainment	0	0	0		0	0
Residential	0	0	0	0		0
Hotel	0	0	0	0	0	

Table 5-P: Computations Summary

	Total	Entering	Exiting
All Person-Trips	661	304	357
Internal Capture Percentage	4%	4%	3%
External Vehicle-Trips[5]	637	292	345
External Transit-Trips[6]	0	0	0
External Non-Motorized Trips[6]	0	0	0

Table 6-P: Internal Trip Capture Percentages by Land Use

Land Use	Entering Trips	Exiting Trips
Office	25%	21%
Retail	3%	1%
Restaurant	N/A	N/A
Cinema/Entertainment	N/A	N/A
Residential	N/A	N/A
Hotel	N/A	N/A

[1]Land Use Codes (LUCs) from *Trip Generation Manual*, published by the Institute of Transportation Engineers.

[2]Total estimate for all other land uses at mixed-use development site is not subject to internal trip capture computations in this estimator.

[3]Enter trips assuming no transit or non-motorized trips (as assumed in ITE *Trip Generation Manual*).

[4]Enter vehicle occupancy assumed in Table 1-P vehicle trips. If vehicle occupancy changes for proposed mixed-use project, manual adjustments must be made

[5]Vehicle-trips computed using the mode split and vehicle occupancy values provided in Table 2-P.

[6]Person-Trips

*Indicates computation that has been rounded to the nearest whole number.

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NCHRP 684 Internal Trip Capture Estimation Tool			
Project Name:	CESP	**Organization:**	
Project Location:	Paramount	**Performed By:**	
Scenario Description:	Proposed	**Date:**	
Analysis Year:		**Checked By:**	
Analysis Period:	**AM Street Peak Hour**	**Date:**	

Table 1-A: Base Vehicle-Trip Generation Estimates (Single-Use Site Estimate)

Land Use	Development Data (*For Information Only*)			Estimated Vehicle-Trips[3]		
	ITE LUCs[1]	Quantity	Units	Total	Entering	Exiting
Office				272	220	52
Retail				193	120	73
Restaurant				0		
Cinema/Entertainment				0		
Residential				672	231	441
Hotel				0		
All Other Land Uses[2]				0		
				1,137	571	566

Table 2-A: Mode Split and Vehicle Occupancy Estimates

Land Use	Entering Trips			Exiting Trips		
	Veh. Occ.[4]	% Transit	% Non-Motorized	Veh. Occ.[4]	% Transit	% Non-Motorized
Office						
Retail						
Restaurant						
Cinema/Entertainment						
Residential						
Hotel						
All Other Land Uses[2]						

Table 3-A: Average Land Use Interchange Distances (Feet Walking Distance)

Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office						
Retail						
Restaurant						
Cinema/Entertainment						
Residential						
Hotel						

Table 4-A: Internal Person-Trip Origin-Destination Matrix*

Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		15	0	0	0	0
Retail	9		0	0	5	0
Restaurant	0	0		0	0	0
Cinema/Entertainment	0	0	0		0	0
Residential	7	4	0	0		0
Hotel	0	0	0	0	0	

Table 5-A: Computations Summary

	Total	Entering	Exiting
All Person-Trips	1,137	571	566
Internal Capture Percentage	7%	7%	7%
External Vehicle-Trips[5]	1,057	531	526
External Transit-Trips[6]	0	0	0
External Non-Motorized Trips[6]	0	0	0

Table 6-A: Internal Trip Capture Percentages by Land Use

Land Use	Entering Trips	Exiting Trips
Office	7%	29%
Retail	16%	19%
Restaurant	N/A	N/A
Cinema/Entertainment	N/A	N/A
Residential	2%	2%
Hotel	N/A	N/A

[1]Land Use Codes (LUCs) from *Trip Generation Manual*, published by the Institute of Transportation Engineers.

[2]Total estimate for all other land uses at mixed-use development site is not subject to internal trip capture computations in this estimator.

[3]Enter trips assuming no transit or non-motorized trips (as assumed in ITE *Trip Generation Manual*).

[4]Enter vehicle occupancy assumed in Table 1-A vehicle trips. If vehicle occupancy changes for proposed mixed-use project, manual adjustments must be made to Tables 5-A, 9-A (O and D). Enter transit, non-motorized percentages that will result with proposed mixed-use project complete.

[5]Vehicle-trips computed using the mode split and vehicle occupancy values provided in Table 2-A.

[6]Person-Trips

*Indicates computation that has been rounded to the nearest whole number.

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NCHRP 684 Internal Trip Capture Estimation Tool			
Project Name:	CESP	**Organization:**	
Project Location:	Paramount	**Performed By:**	
Scenario Description:	Proposed	**Date:**	
Analysis Year:		**Checked By:**	
Analysis Period:	**PM Street Peak Hour**	**Date:**	

Table 1-P: Base Vehicle-Trip Generation Estimates (Single-Use Site Estimate)

Land Use	Development Data (*For Information Only*)			Estimated Vehicle-Trips[3]		
	ITE LUCs[1]	Quantity	Units	Total	Entering	Exiting
Office				272	60	212
Retail				782	375	407
Restaurant				0		
Cinema/Entertainment				0		
Residential				636	406	230
Hotel				0		
All Other Land Uses[2]				0		
				1,690	841	849

Table 2-P: Mode Split and Vehicle Occupancy Estimates

Land Use	Entering Trips			Exiting Trips		
	Veh. Occ.[4]	% Transit	% Non-Motorized	Veh. Occ.[4]	% Transit	% Non-Motorized
Office						
Retail						
Restaurant						
Cinema/Entertainment						
Residential						
Hotel						
All Other Land Uses[2]						

Table 3-P: Average Land Use Interchange Distances (Feet Walking Distance)

Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office						
Retail						
Restaurant						
Cinema/Entertainment						
Residential						
Hotel						

Table 4-P: Internal Person-Trip Origin-Destination Matrix*

Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		30	0	0	4	0
Retail	8		0	0	106	0
Restaurant	0	0		0	0	0
Cinema/Entertainment	0	0	0		0	0
Residential	9	38	0	0		0
Hotel	0	0	0	0	0	

Table 5-P: Computations Summary

	Total	Entering	Exiting
All Person-Trips	1,690	841	849
Internal Capture Percentage	23%	23%	23%
External Vehicle-Trips[5]	1,300	646	654
External Transit-Trips[6]	0	0	0
External Non-Motorized Trips[6]	0	0	0

Table 6-P: Internal Trip Capture Percentages by Land Use

Land Use	Entering Trips	Exiting Trips
Office	28%	16%
Retail	18%	28%
Restaurant	N/A	N/A
Cinema/Entertainment	N/A	N/A
Residential	27%	20%
Hotel	N/A	N/A

[1]Land Use Codes (LUCs) from *Trip Generation Manual*, published by the Institute of Transportation Engineers.

[2]Total estimate for all other land uses at mixed-use development site is not subject to internal trip capture computations in this estimator.

[3]Enter trips assuming no transit or non-motorized trips (as assumed in ITE *Trip Generation Manual*).

[4]Enter vehicle occupancy assumed in Table 1-P vehicle trips. If vehicle occupancy changes for proposed mixed-use project, manual adjustments must be made

[5]Vehicle-trips computed using the mode split and vehicle occupancy values provided in Table 2-P.

[6]Person-Trips

*Indicates computation that has been rounded to the nearest whole number.

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