

Appendix I

Transportation Assessment

CITY OF LOS ANGELES
INTER-DEPARTMENTAL CORRESPONDENCE

130 W College St
DOT Case No. CEN22-54014

Date: March 28, 2025

To: Brenda Kahinju, Administrative Clerk
Department of City Planning

From: Eileen Hunt, Transportation Engineer
Department of Transportation

Subject: **TRANSPORTATION ASSESSMENT FOR THE PROPOSED OFFICE AND COMMERCIAL PROJECT LOCATED AT 130 WEST COLLEGE STREET (CPC-2023-2306-GPA-VZC-HD-MCUP-SPR/ENV-2023-2307-EIR)**

The Los Angeles Department of Transportation (LADOT) has reviewed the transportation assessment prepared by Gibson Transportation Consulting, Inc. (GTC), dated October 2024, for the proposed office and commercial project located at 110, 114 and 130 West College Street, 117 and 119 West Bruno Street, and 943, 949, 953, 963, 971, and 973 North Main Street within the Central Area Planning Commission (APC) and a Transit Oriented Community (TOC) Tier 4. In compliance with Senate Bill (SB) 743 and the California Environmental Quality Act (CEQA), a vehicle miles traveled (VMT) analysis is required to identify the project's ability to promote the reduction of green-house gas emissions, the access to diverse land uses, and the development of multi-modal networks. The significance of a project's impact in this regard is measured against the VMT thresholds established in LADOT's Transportation Assessment Guidelines (TAG), as described below.

DISCUSSION AND FINDINGS

A. Project Description

On the block encompassed by College Street on the north, Main Street on the east, Bruno Street on the south, and Alameda Street on the west, the project proposes to replace a surface parking lot used for bus parking with a five-story creative office building comprised of 224,597 square feet of office space, 4,110 square feet of ground floor retail uses, and 5,894 square feet of ground floor restaurant use; 440 vehicle parking spaces within one subterranean level, one at-grade level, and one above-grade (Mezzanine) level; and 149 (26 short-term and 123 long-term) bicycle parking spaces. Vehicular access to the project would be provided along College Street via a primary full-access driveway to the parking garage and a separate driveway, west of the primary driveway, to the commercial loading area. Separate pedestrian and bicycle access to the office lobby and commercial entrances would be provided via sidewalks along Main Street, Bruno Street, and Alameda Street as illustrated in **Attachment A**. Passenger loading areas would be provided along Bruno Street and on-site in the parking garage. The project is expected to be completed by 2028.

B. Freeway Safety Analysis

Per LADOT's TAG issued in August 2022 to address Caltrans safety concerns on freeways, the study addresses the project's effects on vehicle queuing on freeway off-ramps. Such an evaluation measures the project's potential to lengthen a forecasted off-ramp queue and create speed differentials between vehicles exiting the freeway off-ramps and vehicles operating on the freeway mainline.

The evaluation identified the number of project trips expected to be added to nearby freeway off-ramps serving the project site. It was determined that project traffic will exceed 25 peak hour trips at the SR-110 Northbound and Southbound off-ramps to Hill Street. Therefore, the study included a freeway ramp safety analysis which determined that the project would contribute to the ramp queue on the SR-110 Northbound Hill Street off-ramp. However, this resulting queue would not exceed the ramp storage length and would not result in any adverse safety conditions along freeway off-ramp facilities.

C. CEQA Screening Threshold

Prior to accounting for trip reductions resulting from the application of Transportation Demand Management (TDM) strategies, a trip generation analysis was conducted to determine if the project would exceed the net 250 daily vehicle trips screening threshold. Using the City of Los Angeles VMT Calculator tool, which draws upon trip rate estimates published in the Institute of Transportation Engineers (ITE) Trip Generation Manual, 9th Edition as well as applying trip generation adjustments when applicable, based on sociodemographic data and the built environment factors of the project's surroundings, it was determined that the project **does** exceed the net 250 daily vehicle trips threshold.

Additionally, the analysis included further discussion of the transportation impact thresholds:

- T-1 Conflicting with plans, programs, ordinances, or policies
- T-2.1 Causing substantial vehicle miles traveled
- T-3 Substantially increasing hazards due to a geometric design feature or incompatible use.

The assessment determined that the project would **not** have a significant transportation impact under Thresholds T-1 and T-3. A project's impacts per Threshold T-2.1 is determined by using the VMT calculator and is discussed further below. A copy of the VMT Calculator summary report is provided as **Attachment B** to this report.

D. Transportation Impacts

On July 30, 2019, pursuant to SB 743 and the recent changes to Section 15064.03 of the State's CEQA Guidelines, the City of Los Angeles adopted VMT as criteria in determining transportation impacts under CEQA. The LADOT TAG provide instructions on preparing transportation assessments for land use proposals and defines the significant impact thresholds.

The LADOT VMT Calculator tool measures project impact in terms of Household VMT per Capita and Work VMT per Employee. LADOT identified distinct thresholds for significant VMT impacts for each of the seven APC areas in the City. For the Central APC area, in which the project is located, the following thresholds have been established:

- Household VMT per Capita: 6.0
- Work VMT per Employee: 7.6

As cited in the VMT Analysis report, prepared by GTC, the project proposes to incorporate the TDM strategies of reduced parking supply, parking cash-out, promotions and marketing, include bike parking per Los Angeles Municipal Code (LAMC) and secure bike parking and showers, and pedestrian network improvements as project design features. With the application of these TDM measures, the proposed project is projected to have no Household VMT and a Work VMT

per employee of 8.1. Therefore, the project would result in a significant Work VMT impact. A copy of the VMT Calculator summary report is provided as **Attachment B**.

E. Access and Circulation

Vehicular access would be provided along College Street via a driveway to the parking garage and a separate driveway to the commercial loading area. Separate pedestrian and bicycle access would be provided along Main Street, Bruno Street, and Alameda Street. During preparation of the CEQA guidelines, the State's Office of Planning and Research stressed that lead agencies can continue to apply traditional operational analysis requirements to inform land use decisions provided that such analyses were outside of the CEQA process. The authority for requiring non-CEQA transportation analysis and requiring improvements to address potential circulation deficiencies, lies in the City of Los Angeles' Site Plan Review authority as established in Section 16.05 of the LAMC. Therefore, LADOT continues to require and review a project's site access, circulation, and operational plan to determine if any access enhancements, transit amenities, intersection improvements, traffic signal upgrades, neighborhood traffic calming, or other improvements are needed.

In accordance with this authority, the project has completed a circulation analysis using a "level of service" screening methodology that indicates that the trips generated by the proposed development will not likely result in adverse circulation conditions at several locations. LADOT has reviewed this analysis and determined that it adequately discloses operational concerns. A copy of the circulation analysis table that summarizes these potential deficiencies is provided as **Attachment C** to this report. The project has also completed a pedestrian, bicycle, and transit facilities assessment and determined that the project would intensify use of existing pedestrian, bicycle and transit facilities along the project frontages which would require a corrective action as described in the project requirements below.

PROJECT REQUIREMENTS

CEQA-Related Requirement and Considerations

In order to reduce the project's Work VMT impact to less than significant, LADOT recommends that the project implement the TDM mitigation of a Ride-Share program, which would match interested employees with similar commutes into carpools and vanpools and reduce the number of single-occupant vehicles, automobile trips and VMT as indicated in **Attachment B**.

Non-CEQA-Related Requirements and Considerations

To comply with transportation and mobility goals and provisions of adopted City plans and ordinances, the applicant should implement the following:

1. Pedestrian and Transit Improvements

The following will improve the pedestrian and transit facilities along Alameda Street, College Street, Main Street, and Bruno Street:

- a. Install new pedestrian amenities at the signalized intersection of Spring Street/Alameda Street and College Street including high-visibility continental crosswalks and ADA curb ramps.
- b. Coordinate with the appropriate agencies and LADOT regarding improvements to the existing DASH bus stop adjacent to the project site along Alameda Street.

- c. Enhance pedestrian walkability by widening the sidewalk on all four project street frontages along Alameda Street, College Street, Main Street and Bruno Street and install pavement treatment designed to preserve the historic granite pavers on Bruno Street.
- d. Contribute a one-time, fixed fee contribution of **\$200,000** to be deposited to the City's **Bicycle Trust Fund** to implement active transportation improvements in the project vicinity.

All improvements, enhancements, and associated improvement work within the City of Los Angeles must be **guaranteed** through the Bureau of Engineering's (BOE) B-Permit process, prior to the issuance of any building permits and **completed** prior to the issuance of any certificates of occupancy. Temporary certificates of occupancy may be granted in the event of any delay through no fault of the applicant, provided that, in each case, the applicant has demonstrated reasonable efforts and due diligence to the satisfaction of LADOT. Prior to setting the bond amount, BOE shall require that the developer's engineer or contractor email LADOT's B-Permit Coordinator at ladot.planprocessing@lacity.org to arrange a pre-design meeting to finalize the proposed design needed for the project.

2. Parking Requirements

The project would provide parking for 440 vehicles and 149 bicycles onsite. The applicant should check with the Departments of Building and Safety and City Planning on the number of parking spaces required for this project within a TOC Tier 4.

3. Highway Dedication and Street Widening Requirements

Per the Mobility Element of the General Plan, **Alameda Street**, an Avenue I, would require a 35-foot half-width roadway within a 50-foot half-width right-of-way; **Main Street**, an Avenue II, would require a 28-foot half-width roadway within a 43-foot half-width right-of-way; **College Street**, a Modified Collector, would require a 20-foot half-width roadway within a 30-foot half-width right-of-way; and **Bruno Street**, a Collector, would require a 20-foot half-width roadway within a 33-foot half-width right-of-way. The applicant should check with the BOE's Land Development Group to determine if there are any other applicable highway dedication, street widening and/or sidewalk requirements for this project.

4. Project Access and Circulation

The conceptual site plan for the project (see **Attachment A**) is acceptable to LADOT. Vehicular access to the project would be provided along College Street via a full-access driveway to the parking garage and a separate driveway to the commercial loading area. Separate pedestrian and bicycle access would be provided along Main Street, Bruno Street, and Alameda Street. Passenger loading areas would be provided along Bruno Street and on-site in the parking garage. Review of this study does not constitute approval of the dimensions for any new proposed driveway. Review and approval of the driveway should be coordinated with LADOT's Citywide Planning Coordination Section <ladot.onestop@lacity.org>. In order to minimize and prevent last minute building design changes, the applicant should contact LADOT for driveway width and internal circulation requirements prior to the commencement of building or parking layout design. The applicant should check with City Planning regarding the project's driveway placement and design.

5. Worksite Traffic Control Requirements

LADOT recommends that a construction work site traffic control plan be submitted to LADOT'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/businesses/temporary-traffic-control-plans> 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. LADOT also recommends that all construction related truck traffic be restricted to off-peak hours to the extent feasible.

6. TDM Ordinance Requirements

The TDM Ordinance (LAMC 12.26 J) is currently being updated. The updated ordinance, which is currently progressing through the City's approval process, will:

- Expand the reach and application of TDM strategies to more land uses and neighborhoods,
- Rely on a broader range of strategies that can be updated to keep pace with technology, and
- Provide flexibility for developments and communities to choose strategies that work best for their neighborhood context.

Although not yet adopted, LADOT recommends that the applicant be subject to the terms of the proposed TDM Ordinance update which is expected to be completed prior to the anticipated construction of this project, if approved.

7. Development Review Fees

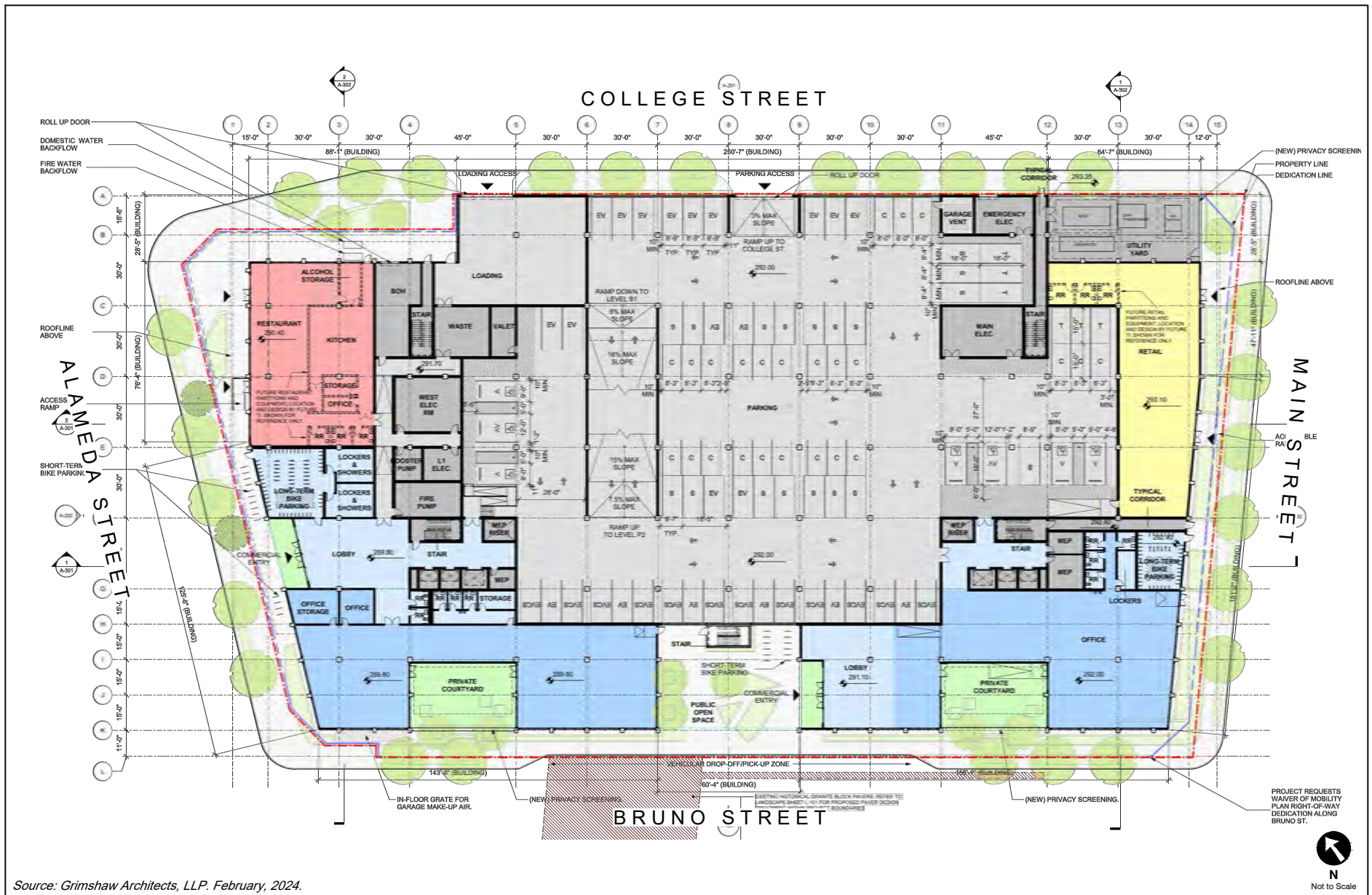
Section 19.15 of the LAMC identifies specific fees for traffic study review, condition clearance, and permit issuance. The applicant shall comply with any applicable fees per this ordinance.

If you have any questions, please contact Jose Cardenas of my staff at LADOT Central Development Review <ladot.devreview.cen@lacity.org>.

Attachments

K:\Letters\2024\CEN22-54014_130 College_office & commercial_ltr

- c: Helene Rotolo/Kyle Hickey, Council District 1
Hokchi Chiu, Central District, BOE
Kaylinn Pell, Central District, DOT
Taimour Tanavoli, Case Management Office, DOT
Rebecca Avanesian/Casey Le, GTC



Source: Grimshaw Architects, LLP. February, 2024.

PROJECT SITE PLAN

FIGURE
1

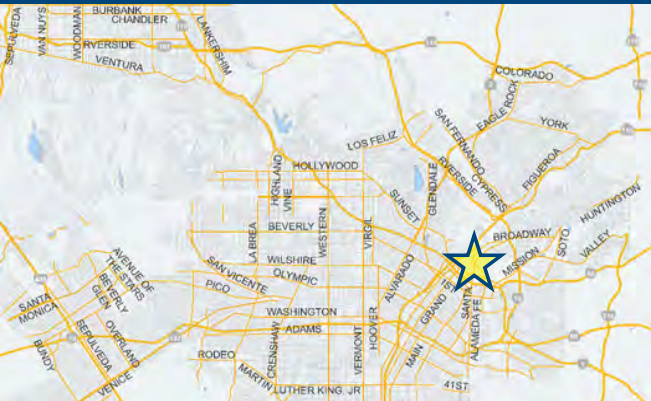
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Project Screening Criteria: Is this project required to conduct a vehicle miles traveled analysis?

Project Information

Project: 130 W College Street
Scenario: [www](#)
Address: 130 W COLLEGE ST, 90012



Is the project replacing an existing number of residential units with a smaller number of residential units AND is located within one-half mile of a fixed-rail or fixed-guideway transit station?

☒ Yes ☐ No

Existing Land Use

Land Use Type: Housing | Single Family Value: Unit DU

Click here to add a single custom land use type (will be included in the above list)

Proposed Project Land Use

Land Use Type: Retail | High-Turnover Sit-Down Restaurant Value: 5.894 Unit ksf

Retail | General Retail 4.11 ksf
Retail | High-Turnover Sit-Down Restaurant 5.894 ksf
Office | General Office 224.597 ksf

Click here to add a single custom land use type (will be included in the above list)

Project Screening Summary

Existing Land Use	Proposed Project
0 Daily Vehicle Trips	2,528 Daily Vehicle Trips
0 Daily VMT	19,796 Daily VMT

Tier 1 Screening Criteria

Project will have less residential units compared to existing residential units & is within one-half mile of a fixed-rail station. ☐

Tier 2 Screening Criteria

The net increase in daily trips < 250 trips 2,528
Net Daily Trips

The net increase in daily VMT ≤ 0 19,796
Net Daily VMT

The proposed project consists of only retail land uses ≤ 50,000 square feet total. 10,004
ksf

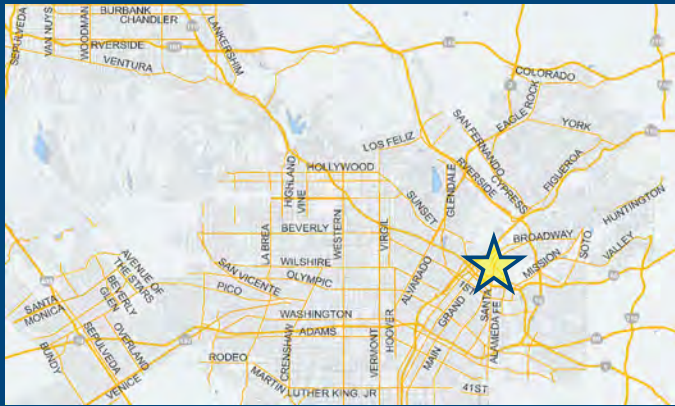
The proposed project is required to perform VMT analysis.

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Project Information

Project: 130 W College Street
Scenario:
Address: 130 W COLLEGE ST, 90012



TDM Strategies

Select each section to show individual strategies

Use ☒ to denote if the TDM strategy is part of the proposed project or is a mitigation strategy

	Proposed Project	With Mitigation
Max Home Based TDM Achieved?	No	No
Max Work Based TDM Achieved?	No	No
A Parking		
B Transit		
C Education & Encouragement		
D Commute Trip Reductions		
Required Commute Trip Reduction Program	100 percent of employees eligible	
☐ Proposed Prj ☐ Mitigation		
Alternative Work Schedules and Telecommute Program	1% percentage of employees participating	
☐ Proposed Prj ☐ Mitigation		
Employer Sponsored Vanpool or Shuttle	high degree of implementation	small employer size
☐ Proposed Prj ☐ Mitigation	100 percent of employees eligible	
Ride-Share Program	100 percent of employees eligible	
☐ Proposed Prj ☒ Mitigation		
E Shared Mobility		
F Bicycle Infrastructure		
G Neighborhood Enhancement		

Analysis Results

Proposed Project	With Mitigation
2,124 Daily Vehicle Trips	1,995 Daily Vehicle Trips
16,568 Daily VMT	15,445 Daily VMT
0.0 Household VMT per Capita	0.0 Household VMT per Capita
8.1 Work VMT per Employee	6.8 Work VMT per Employee

Significant VMT Impact?

Household: No Threshold = 6.0 15% Below APC	Household: No Threshold = 6.0 15% Below APC
Work: Yes Threshold = 7.6 15% Below APC	Work: No Threshold = 7.6 15% Below APC

CITY OF LOS ANGELES VMT CALCULATOR

Report 1: Project & Analysis Overview

Date: March 8, 2024

Project Name: 130 W College Street

Project Scenario:

Project Address: 130 W COLLEGE ST, 90012



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Project Information			
Land Use Type		Value	Units
Housing	Single Family	0	DU
	Multi Family	0	DU
	Townhouse	0	DU
	Hotel	0	Rooms
	Motel	0	Rooms
Affordable Housing	Family	0	DU
	Senior	0	DU
	Special Needs	0	DU
	Permanent Supportive	0	DU
Retail	General Retail	4.110	ksf
	Furniture Store	0.000	ksf
	Pharmacy/Drugstore	0.000	ksf
	Supermarket	0.000	ksf
	Bank	0.000	ksf
	Health Club	0.000	ksf
	High-Turnover Sit-Down Restaurant	5.894	ksf
	Fast-Food Restaurant	0.000	ksf
	Quality Restaurant	0.000	ksf
	Auto Repair	0.000	ksf
	Home Improvement	0.000	ksf
	Free-Standing Discount	0.000	ksf
	Movie Theater	0	Seats
Office	General Office	224.597	ksf
	Medical Office	0.000	ksf
Industrial	Light Industrial	0.000	ksf
	Manufacturing	0.000	ksf
	Warehousing/Self-Storage	0.000	ksf
School	University	0	Students
	High School	0	Students
	Middle School	0	Students
	Elementary	0	Students
	Private School (K-12)	0	Students

Project and Analysis Overview

CITY OF LOS ANGELES VMT CALCULATOR

Report 1: Project & Analysis Overview

Date: March 8, 2024

Project Name: 130 W College Street

Project Scenario:

Project Address: 130 W COLLEGE ST, 90012



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Other	0	Trips
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CITY OF LOS ANGELES VMT CALCULATOR

Report 1: Project & Analysis Overview

Date: March 8, 2024

Project Name: 130 W College Street

Project Scenario:

Project Address: 130 W COLLEGE ST, 90012



Version 1.4

Analysis Results			
Total Employees: 930			
Total Population: 0			
Proposed Project		With Mitigation	
2,124	Daily Vehicle Trips	1,995	Daily Vehicle Trips
16,568	Daily VMT	15,445	Daily VMT
0	Household VMT per Capita	0	Household VMT per Capita
8.1	Work VMT per Employee	6.8	Work VMT per Employee
Significant VMT Impact?			
APC: Central			
Impact Threshold: 15% Below APC Average			
Household = 6.0			
Work = 7.6			
Proposed Project		With Mitigation	
VMT Threshold	Impact	VMT Threshold	Impact
Household > 6.0	No	Household > 6.0	No
Work > 7.6	Yes	Work > 7.6	No

CITY OF LOS ANGELES VMT CALCULATOR

Report 2: TDM Inputs

Date: March 8, 2024

Project Name: 130 W College Street

Project Scenario:

Project Address: 130 W COLLEGE ST, 90012



Version 1.4

TDM Strategy Inputs				
Strategy Type		Description	Proposed Project	Mitigations
Parking	Reduce parking supply	City code parking provision (spaces)	506	506
		Actual parking provision (spaces)	440	440
	Unbundle parking	Monthly cost for parking (\$)	\$0	\$0
	Parking cash-out	Employees eligible (%)	100%	100%
	Price workplace parking	Daily parking charge (\$)	\$0.00	\$0.00
		Employees subject to priced parking (%)	0%	0%
	Residential area parking permits	Cost of annual permit (\$)	\$0	\$0
(cont. on following page)				

CITY OF LOS ANGELES VMT CALCULATOR

Report 2: TDM Inputs

Date: March 8, 2024

Project Name: 130 W College Street

Project Scenario:

Project Address: 130 W COLLEGE ST, 90012



Version 1.4

TDM Strategy Inputs, Cont.				
Strategy Type		Description	Proposed Project	Mitigations
Transit	Reduce transit headways	Reduction in headways (increase in frequency) (%)	0%	0%
		Existing transit mode share (as a percent of total daily trips) (%)	0%	0%
		Lines within project site improved (<50%, >=50%)	0	0
	Implement neighborhood shuttle	Degree of implementation (low, medium, high)	0	0
		Employees and residents eligible (%)	0%	0%
	Transit subsidies	Employees and residents eligible (%)	0%	0%
		Amount of transit subsidy per passenger (daily equivalent) (\$)	\$0.00	\$0.00
Education & Encouragement	Voluntary travel behavior change program	Employees and residents participating (%)	0%	0%
	Promotions and marketing	Employees and residents participating (%)	100%	100%
(cont. on following page)				

CITY OF LOS ANGELES VMT CALCULATOR

Report 2: TDM Inputs

Date: March 8, 2024

Project Name: 130 W College Street

Project Scenario:

Project Address: 130 W COLLEGE ST, 90012



Version 1.4

TDM Strategy Inputs, Cont.				
Strategy Type		Description	Proposed Project	Mitigations
Commute Trip Reductions	Required commute trip reduction program	Employees participating (%)	0%	0%
	Alternative Work Schedules and Telecommute	Employees participating (%)	0%	0%
		Type of program	0	0
		Degree of implementation (low, medium, high)	0	0
	Employer sponsored vanpool or shuttle	Employees eligible (%)	0%	0%
		Employer size (small, medium, large)	0	0
	Ride-share program	Employees eligible (%)	0%	100%
Shared Mobility	Car share	Car share project setting (Urban, Suburban, All Other)	0	0
	Bike share	Within 600 feet of existing bike share station - OR- implementing new bike share station (Yes/No)	0	0
	School carpool program	Level of implementation (Low, Medium, High)	0	0
(cont. on following page)				

CITY OF LOS ANGELES VMT CALCULATOR

Report 2: TDM Inputs

Date: March 8, 2024

Project Name: 130 W College Street

Project Scenario:

Project Address: 130 W COLLEGE ST, 90012



Version 1.4

TDM Strategy Inputs, Cont.				
Strategy Type		Description	Proposed Project	Mitigations
Bicycle Infrastructure	Implement/Improve on-street bicycle facility	Provide bicycle facility along site (Yes/No)	0	0
	Include Bike parking per LAMC	Meets City Bike Parking Code (Yes/No)	Yes	Yes
	Include secure bike parking and showers	Includes indoor bike parking/lockers, showers, & repair station (Yes/No)	Yes	Yes
Neighborhood Enhancement	Traffic calming improvements	Streets with traffic calming improvements (%)	0%	0%
		Intersections with traffic calming improvements (%)	0%	0%
	Pedestrian network improvements	Included (within project and connecting off-site/within project only)	within project and connecting off-site	within project and connecting off-site

CITY OF LOS ANGELES VMT CALCULATOR

Report 3: TDM Outputs

Date: March 8, 2024
 Project Name: 130 W College Street
 Project Scenario:
 Project Address: 130 W COLLEGE ST, 90012



TDM Adjustments by Trip Purpose & Strategy														
Place type: Urban														
		Home Based Work Production		Home Based Work Attraction		Home Based Other Production		Home Based Other Attraction		Non-Home Based Other Production		Non-Home Based Other Attraction		Source
		Proposed	Mitigated	Proposed	Mitigated	Proposed	Mitigated	Proposed	Mitigated	Proposed	Mitigated	Proposed	Mitigated	
Parking	Reduce parking supply	7%	7%	7%	7%	7%	7%	7%	7%	7%	7%	7%	7%	TDM Strategy Appendix, Parking sections 1 - 5
	Unbundle parking	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
	Parking cash-out	0%	0%	8%	8%	0%	0%	0%	0%	0%	0%	0%	0%	
	Price workplace parking	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
	Residential area parking permits	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	
Transit	Reduce transit headways	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	TDM Strategy Appendix, Transit sections 1 - 3
	Implement neighborhood shuttle	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
	Transit subsidies	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
Education & Encouragement	Voluntary travel behavior change program	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	TDM Strategy Appendix, Education & Encouragement sections 1 - 2
	Promotions and marketing	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	0%	
Commute Trip Reductions	Required commute trip reduction program	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	TDM Strategy Appendix, Commute Trip Reductions sections 1 - 4
	Alternative Work Schedules and Telecommute Program	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
	Employer sponsored vanpool or shuttle	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
	Ride-share program	0%	0%	0%	15%	0%	0%	0%	0%	0%	0%	0%	0%	
Shared Mobility	Car-share	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	TDM Strategy Appendix, Shared Mobility sections 1 - 3
	Bike share	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	
	School carpool program	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	

CITY OF LOS ANGELES VMT CALCULATOR

Report 3: TDM Outputs

Date: March 8, 2024

Project Name: 130 W College Street

Project Scenario:

Project Address: 130 W COLLEGE ST, 90012



Version 1.4

TDM Adjustments by Trip Purpose & Strategy, Cont.

Place type: Urban

		<i>Home Based Work Production</i>		<i>Home Based Work Attraction</i>		<i>Home Based Other Production</i>		<i>Home Based Other Attraction</i>		<i>Non-Home Based Other Production</i>		<i>Non-Home Based Other Attraction</i>		<i>Source</i>
		Proposed	Mitigated	Proposed	Mitigated	Proposed	Mitigated	Proposed	Mitigated	Proposed	Mitigated	Proposed	Mitigated	
Bicycle Infrastructure	Implement/ Improve on-street bicycle facility	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	TDM Strategy Appendix, Bicycle Infrastructure sections 1 - 3
	Include Bike parking per LAMC	0.6%	0.6%	0.6%	0.6%	0.6%	0.6%	0.6%	0.6%	0.6%	0.6%	0.6%	0.6%	
	Include secure bike parking and showers	0.6%	0.6%	0.6%	0.6%	0.6%	0.6%	0.6%	0.6%	0.6%	0.6%	0.6%	0.6%	
Neighborhood Enhancement	Traffic calming improvements	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	TDM Strategy Appendix, Neighborhood Enhancement
	Pedestrian network improvements	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	

Final Combined & Maximum TDM Effect

		<i>Home Based Work Production</i>		<i>Home Based Work Attraction</i>		<i>Home Based Other Production</i>		<i>Home Based Other Attraction</i>		<i>Non-Home Based Other Production</i>		<i>Non-Home Based Other Attraction</i>	
		Proposed	Mitigated	Proposed	Mitigated	Proposed	Mitigated	Proposed	Mitigated	Proposed	Mitigated	Proposed	Mitigated
COMBINED TOTAL		13%	13%	20%	32%	13%	13%	13%	13%	13%	13%	13%	10%
MAX. TDM EFFECT		13%	13%	20%	32%	13%	13%	13%	13%	13%	13%	13%	13%

= Minimum (X%, 1-[(1-A)*(1-B)...])
where X%=

PLACE	urban	75%
TYPE	compact infill	40%
MAX:	suburban center	20%
	suburban	15%

Note: (1-[(1-A)*(1-B)...]) reflects the dampened combined effectiveness of TDM Strategies (e.g., A, B,...). See the TDM Strategy Appendix (*Transportation Assessment Guidelines Attachment G*) for further discussion of dampening.

CITY OF LOS ANGELES VMT CALCULATOR

Report 4: MXD Methodology

Date: March 8, 2024

Project Name: 130 W College Street

Project Scenario:

Project Address: 130 W COLLEGE ST, 90012



Version 1.4

MXD Methodology - Project Without TDM

	Unadjusted Trips	MXD Adjustment	MXD Trips	Average Trip Length	Unadjusted VMT	MXD VMT
Home Based Work Production	0	0.0%	0	6.5	0	0
Home Based Other Production	0	0.0%	0	5.3	0	0
Non-Home Based Other Production	435	-6.0%	409	8.4	3,654	3,436
Home-Based Work Attraction	1,323	-18.8%	1,074	8.7	11,510	9,344
Home-Based Other Attraction	914	-30.5%	635	6.4	5,850	4,064
Non-Home Based Other Attraction	435	-5.7%	410	7.2	3,132	2,952

MXD Methodology with TDM Measures

	<i>Proposed Project</i>			<i>Project with Mitigation Measures</i>		
	TDM Adjustment	Project Trips	Project VMT	TDM Adjustment	Mitigated Trips	Mitigated VMT
Home Based Work Production	-13.2%	0	0	-13.2%	0	0
Home Based Other Production	-13.2%	0	0	-13.2%	0	0
Non-Home Based Other Production	-13.2%	355	2,984	-13.2%	355	2,984
Home-Based Work Attraction	-19.8%	861	7,490	-31.9%	732	6,367
Home-Based Other Attraction	-13.2%	552	3,530	-13.2%	552	3,530
Non-Home Based Other Attraction	-13.2%	356	2,564	-13.2%	356	2,564

MXD VMT Methodology Per Capita & Per Employee

Total Population: 0

Total Employees: 930

APC: Central

	<i>Proposed Project</i>	<i>Project with Mitigation Measures</i>
Total Home Based Production VMT	0	0
Total Home Based Work Attraction VMT	7,490	6,367
Total Home Based VMT Per Capita	0.0	0.0
Total Work Based VMT Per Employee	8.1	6.8

ATTACHMENT C
CEN22-54014_130 College St_Office & Commercial

TABLE 12
FUTURE WITH PROJECT CONDITIONS (YEAR 2028)
INTERSECTION LEVEL OF SERVICE ANALYSIS

No	Intersection	Peak Hour	Future without Project Conditions		Future with Project Conditions	
			Delay	LOS	Delay	LOS
1.	Hill Street & College Street	AM	44.7	D	45.8	D
		PM	53.2	D	61.3	E
2.	Broadway & College Street	AM	142.6	F	201.9	F
		PM	332.3	F	397.9	F
3.	Spring Street/Alameda Street & College Street	AM	26.3	C	28.1	C
		PM	24.4	C	27.9	C
4. [a]	Main Street & College Street	AM	[b]	F	[b]	F
		PM	[b]	F	[b]	F
5.	Alameda Street & Alpine Street	AM	25.2	C	25.7	C
		PM	59.6	E	60.7	E

Notes:

- [a] Intersection analysis based on the HCM Two-Way Stop Controlled unsignalized methodology. Reported results reflect the control delay for the worst-case approach. The average intersection delay is provided in Appendix G.
- [b] The reported control delay of the worst-case approach (i.e., minor street of the intersection) exceeds 300 seconds.

**TRANSPORTATION ASSESSMENT
FOR THE
130 W. COLLEGE STREET PROJECT
LOS ANGELES, CALIFORNIA**

OCTOBER 2024

PREPARED FOR
S&R PARTNERS, LLC

PREPARED BY
 **ibson**
transportation consulting, inc.

**TRANSPORTATION ASSESSMENT
FOR THE
130 W. COLLEGE STREET PROJECT
LOS ANGELES, CALIFORNIA**

October 2024

Prepared for:

S&R PARTNERS, LLC

Prepared by:

GIBSON TRANSPORTATION CONSULTING, INC.

655 N. Central Avenue, Suite 920
Glendale, California 91203
(213) 683-0088

Ref: J2019

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Chapter 1

Introduction

This study presents the transportation assessment for the proposed 130 W. College Street Project (Project) located at 110, 114 and 130 W. College Street, 117 and 119 W. Bruno Street, and 943, 949, 953, 955, 963, 971, and 973 N. Main Street (Project Site) in the *Central City North Community Plan* (Los Angeles Department of City Planning [LADCP]) area of the City of Los Angeles, California (City). The methodology and base assumptions used in the analysis were established pursuant to direction from the Los Angeles Department of Transportation (LADOT).

PROJECT DESCRIPTION

The Project is a five-story (with one mezzanine parking level) creative office building with approximately 224,597 square feet (sf) of office uses, 4,110 sf of ground floor retail uses, and 4,095 sf of ground floor restaurant uses, as well as 1,799 sf of exterior restaurant seating area. The Project Site is currently occupied by a surface parking lot used for bus parking. The Project would provide approximately 440 parking spaces within one subterranean level, one at-grade level, and one above-grade (mezzanine) level with access via one driveway on College Street. A separate driveway to the loading area would be provided west of the primary driveway along College Street. The Project would also provide approximately 149 bicycle parking spaces, including 26 short-term and 123 long-term spaces. Pedestrian access to the office lobby and commercial entrances would be provided from sidewalks along the Project Site frontages, including Main Street, Bruno Street, and Alameda Street. A passenger loading area would also be provided along Bruno Street. The Project's proposed site plan is shown in Figure 1. Project construction is anticipated to be completed by 2028.

PROJECT LOCATION

The Project Site, located within City Council District 1, is approximately 2.2-acres composed of seven contiguous parcels, which are assigned Assessor Parcel Numbers 5409-008-001 to -006 and -015. As shown in Figure 2, the Project Site is bounded by College Street to the north, Main Street to the east, Bruno Street to the south, and Alameda Street to the west. Nearby uses include office, commercial, and residential uses, as well as the Los Angeles State Historic Park.

The Project Site is located approximately 0.45 miles east of the State Route 110 (SR 110), approximately 0.50 miles north of the Hollywood Freeway (US 101), and approximately 1.0 miles west of the Golden State Freeway (I-5), all of which provide regional access to and from downtown Los Angeles. The Project Site is primarily served by College Street.

The Project is located within a Transit Priority Area (TPA), which is defined per Public Resources Code Section 21099 (a) as an area within 0.50 miles of an existing or planned major transit stop. A major transit stop, as defined in Public Resources Code Section 21064.3, is a fixed-rail station or an intersection of two or more bus routes with service intervals of 15 minutes or less during the morning and afternoon commuter peak periods. The Project Site is located diagonally opposite the Los Angeles County Metropolitan Transportation Authority (Metro) A Line (formerly L Line) Chinatown Station.¹ It is also located approximately 0.40 miles north of Union Station. The Metro A Line operates between Long Beach and Azusa, traveling via Downtown Los Angeles and connecting with the Metro E Line in Downtown Los Angeles and the Metro B and D Lines at Union Station. The Project Site is also located within 0.25-miles walking distance to bus stops that serve Metro Local 28, 33, 45, 78, 81, and 94 and LADOT DASH B bus lines with frequency of 15 minutes or less.

STUDY SCOPE

The scope of analysis for this study was developed pursuant to direction from LADOT and is consistent with *Transportation Assessment Guidelines* (LADOT, Updated August 2022) (TAG)

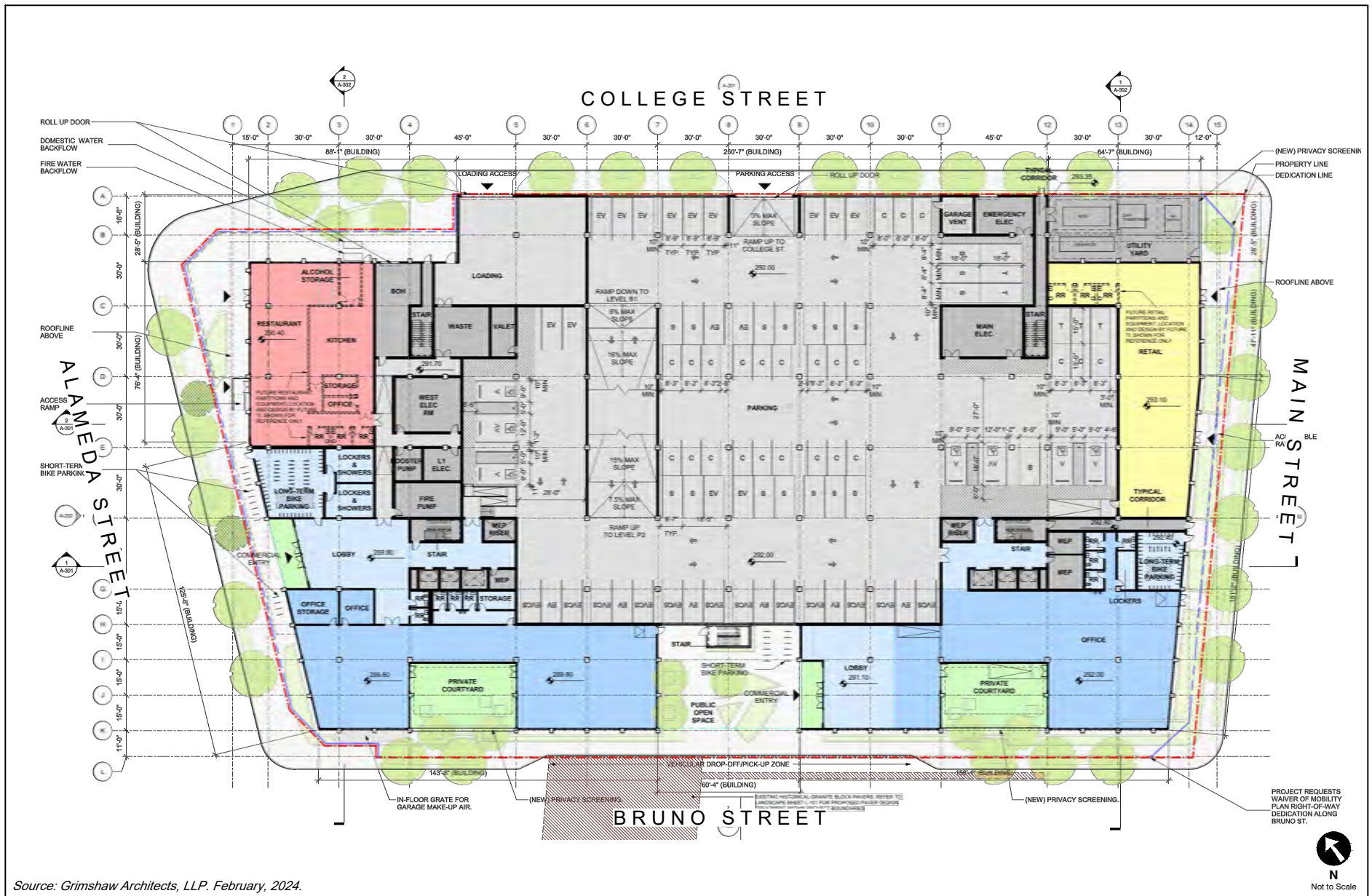
¹ It should be noted that the Project Site is not within ZI-1117 MTA Rail Project Area and falls outside the boundary of the 100-foot buffer from Metro infrastructure required for coordination.



and in compliance with the California Environmental Quality Act (CEQA) Guidelines (California Code of Regulations, Title 14, Section 15000 and following). The base assumptions and technical methodologies (i.e., vehicle miles traveled [VMT], trip generation, study locations, analysis, etc.) were identified and agreed to in a Memorandum of Understanding (MOU), which was reviewed and approved by LADOT in March 2024 and is provided in Appendix A.

ORGANIZATION OF REPORT

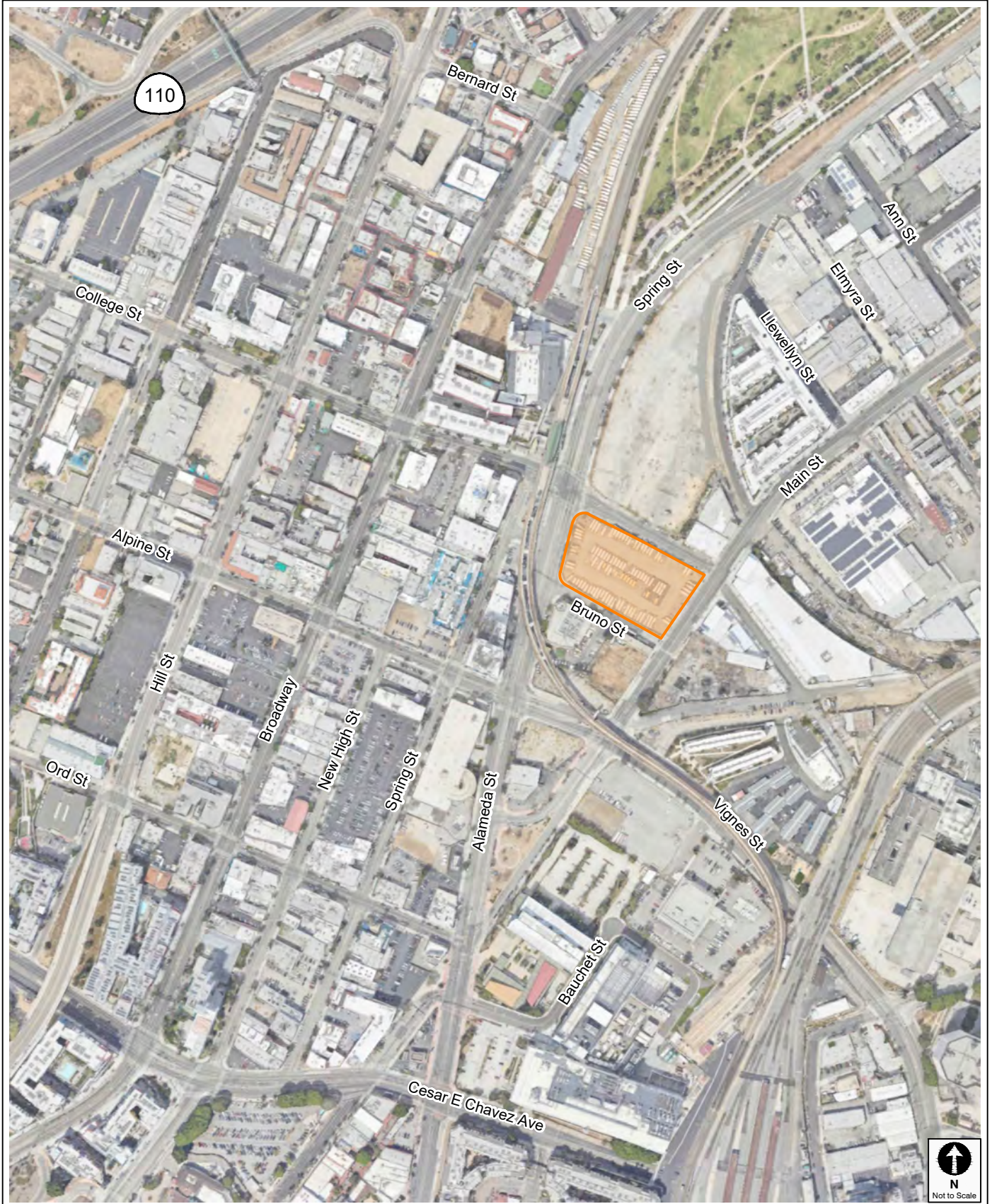
This report is divided into six chapters, including this introduction Chapter 1. Chapter 2 describes the Project context including the existing and future circulation system, traffic volumes, and traffic conditions in the Project area. Chapter 3 describes the procedure used to forecast Project traffic volumes and distribution. Chapter 4 presents the CEQA analysis of transportation impacts. Chapter 5 details the non-CEQA transportation analyses. Chapter 6 summarizes the analyses and study conclusions. The appendices contain supporting documentation, including the MOU that outlines the study scope and assumptions, and additional details supporting the technical analyses.



Source: Grimshaw Architects, LLP. February, 2024.

PROJECT SITE PLAN

FIGURE
1



PROJECT SITE LOCATION

FIGURE
2



Chapter 2

Project Context

A comprehensive data collection effort was undertaken to develop a detailed description of existing and future conditions in the Project area. The Existing Conditions analysis includes an assessment of the existing freeway and street systems, an analysis of traffic volumes and current operating conditions, and an assessment of the existing public transit service, and pedestrian and bicycle circulation. An inventory of lane configurations, signal phasing, parking restrictions, etc., was also collected for the analyzed intersections.

In addition, this Chapter contains a discussion of the future conditions detailing the assumptions used to develop the Future without Project Conditions in Year 2028, which corresponds to the Project's anticipated occupancy year.

STUDY AREA

The area studied in this analysis includes intersections along College Street and Spring Street/Alameda Street (Study Area), as shown in Figure 3. This Study Area was established in consultation with LADOT based on the following factors identified in the TAG:

1. Primary driveway(s)
2. Intersections at either end of the block on which the Project is located or up to 600 feet from the primary Project driveway(s)
3. Unsignalized intersections adjacent to the Project Site that are integral to the Project's Site access and circulation plan
4. Signalized intersections in proximity to the Project Site where 100 or more Project trips would be added

The following five study intersections, adjacent to and nearby the Project Site, were identified during the MOU process for detailed analysis of the above conditions:

-
- Hill Street & College Street (Intersection #1)
 - Broadway & College Street (Intersection #2)
 - Spring Street/Alameda Street & College Street (Intersection #3)
 - Main Street & College Street (Intersection #4)
 - Alameda Street & Alpine Street (Intersection #5)

The existing lane configurations and mobility facilities at the analyzed intersections are illustrated in Figures 4 and 5, respectively.

EXISTING TRANSPORTATION CONDITIONS

Existing Street System

The existing regional roadway system in the Study Area includes Arterial Streets and Local Streets that provide regional, sub-regional, or local access and circulation to the Project Site. These transportation facilities generally provide two to six travel lanes and usually allow parking on either side of the street. Typically, the speed limits range between 25 miles per hour (mph) on local streets, 35 mph on arterial streets, and between 55 and 65 mph on freeways.

Street classifications are designated in *Mobility Plan 2035, An Element of the General Plan* (LADCP, September 2016) (Mobility Plan). The Mobility Plan defines specific street standards in an effort to provide an 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 Mobility Plan, street classifications are defined as follows:

- Freeways are high-volume, high-speed roadways with limited access provided by interchanges that carry regional traffic through and do not provide local access to adjacent land uses.
- Arterial Streets are major streets that serve through traffic, as well as provide access to major commercial activity centers. Arterials are divided into two categories:
 - o Boulevards represent the widest arterial streets that typically provide regional access to major destinations and include two categories:

- Boulevard I provides up to four travel lanes in each direction with a target operating speed of 40 mph, and generally includes a right-of-way (ROW) width of 136 feet and pavement width of 100 feet.
- Boulevard II provides up to three travel lanes in each direction with a target operating speed of 35 mph, with ROW widths varying from 100-110 feet, and pavement widths from 70-80 feet.
- o Avenues are narrower arterial streets that pass through both residential and commercial areas and include three categories:
 - Avenue I provides up to two travel lanes in each direction with a target operating speed of 35 mph, with a ROW width of 100 feet and pavement width of 70 feet.
 - Avenue II provides up to two travel lanes in each direction with a target operating speed of 30 mph, with a ROW width of 86 feet and pavement width of 56 feet.
 - Avenue III provides up to two travel lanes in each direction with a target operating speed of 25 mph, with a ROW width of 72 feet and pavement width of 46 feet.
- Collector Streets are generally located in residential neighborhoods and commercial districts to provide access to and from arterial streets for local traffic and are not intended for cut-through traffic. They provide one travel lane in each direction with an operating speed of 25 mph, with ROW width generally at 66 feet and pavement width of 40 feet.
- Local Streets are intended to accommodate lower volumes of vehicle traffic and provide parking on both sides of the street. They provide one travel lane in each direction with a target operating speed of 15 to 20 mph. Pavement widths will vary between 30-36 feet within a ROW width of 50-60 feet. Local Streets include two categories:
 - o Continuous Local Streets connect to other streets at both ends.
 - o Non-continuous Local Streets lead to a dead-end.

Primary regional access to the Project Site is provided by US 101 and SR 110. US 101 generally runs in the east-west direction approximately 0.50 miles south of the Project Site and provides four travel lanes in each direction. SR 110 generally runs in the north-south direction approximately 0.45 miles west of the Project Site and provides three travel lanes in each direction. The arterials providing regional and sub-regional access to the Project Site include Spring Street/Alameda Street, Main Street, Alpine Street, Broadway, Hill Street, and College Street. The following is a brief description of the roadways in the Study Area, including their classifications under the Mobility Plan as illustrated in Figure 6:

Roadways

- **Hill Street** – Hill Street is a designated Avenue I and travels in the north-south direction. It is located approximately 1,060 feet west of the Project Site and provides four travel lanes, two lanes in each direction, with left-turn lanes at intersections. Metered parking with morning peak hour restrictions on the west side of the street and afternoon peak hour restrictions on the east side of the street is generally available within the Study Area. Travel lanes are typically 10 feet wide and the approximate total paved roadway width is 56 feet within the Study Area.
- **Broadway** – Broadway is a designated Avenue II and travels in the north-south direction. It is located approximately 665 feet west of the Project Site and provides four travel lanes, two lanes in each direction, with left-turn lanes at intersections and a center turn lane north of College Street. Metered parking with morning peak hour restrictions on the west side of the street and afternoon peak hour restrictions on the east side of the street is available within the Study Area. Inside lanes are typically 9.5 to 10 feet wide and the total paved width is typically 56 feet.
- **Spring Street** – Spring Street is a designated Collector Street south of Alpine Street, a designated Avenue III between Alpine Street and College Street, and a designated Modified Avenue I north of College Street. It is located approximately 190 feet west of the Project Site and provides two travel lanes, one lane in each direction, south of College Street. At College Street, it provides one right-turn lane before continuing north of College Street, where it provides four to five travel lanes, two to three lanes in each direction, with left-turn lanes at intersections. Metered parking is generally available on both sides of the street south of College Street within the Study Area. Unmetered parking is also available on both sides of the street north of College Street, with morning peak hour restrictions on the west side of the street within the Study Area. Inside lanes are typically 11 feet wide and the total paved width varies between 42 and 84 feet.
- **Alameda Street** – Alameda Street is a designated Avenue I that travels in the north-south direction and merges with Spring Street at College Street. It is located on the western boundary of the Project Site and provides five travel lanes, two to three lanes in each direction, with left-turn lanes at intersections. Metered parking is available on the west side of the street, with morning peak hour restrictions south of Alpine Street within the Study Area. Unmetered parking is generally available on the west side of the street north of Alpine Street and on the east side of the street within the Study Area. Travel lanes are generally 10 feet wide and the total paved width varies between 72 and 86 feet.
- **Main Street** – Main Street is a designated Avenue II that travels northbound south of Alpine Street/Vignes Street and in the north-south direction north of Alpine Street/Vignes Street. It is located on the eastern boundary of the Project Site and provides four travel lanes, two lanes in each direction, with left-turn lanes only at Alpine Street/Vignes Street. Unmetered parking with morning peak hour restrictions on the west side of the street and afternoon peak hour restrictions on the east side of the street is generally available within the Study Area. Travel lanes are generally 10 feet wide and the total paved width is approximately 56 feet.
- **College Street** – College Street is a designated Collector Street west of Hill Street, a designated Avenue III between Hill Street and Spring Street/Alameda Street, a designated

Modified Collector Street between Spring Street/Alameda Street and Main Street, and a designated Local Street east of Main Street. It travels in the east-west direction. It is located on the northern boundary of the Project Site and provides two to four travel lanes, with one to two lanes in each direction. Metered parking with peak hour restrictions is generally available on one side of the street within the Study Area. Inside lanes are typically 10 feet wide and the total paved width is typically 40 feet. The Project proposes one driveway to the parking garage and a separate driveway to the on-site loading area that would both connect to College Street.

- Alpine Street – Alpine Street is a designated Collector Street west of Hill Street, a designated Avenue III between Hill Street and Spring Street, a designated Avenue II between Spring Street and Alameda Street, and a designated Avenue I between Alameda Street and Main Street. It travels in the east-west direction and merges with Vignes Street at Main Street. It is located approximately 380 feet south of the Project Site and provides four travel lanes, two lanes in each direction. Metered parking with peak hour restrictions is generally available on both sides of the street within the Study Area. Inside lanes are typically 10 feet wide and the total paved width is typically 40 feet.
- Bruno Street – Bruno Street is a designated Collector Street that travels in the east-west direction. It is located on the southern boundary of the Project site and provides two travel lanes, one lane in each direction. Unmetered parking is generally available on both sides of the street within the Study Area. The total paved width is approximately 32 feet.

Existing Pedestrian Facilities

Figure 7 identifies the local-serving commercial uses, cultural uses, and institutional facilities within 0.25 miles of the Project Site that are considered as pedestrian destinations. An inventory was collected of existing transportation facilities serving pedestrians, bicyclists, and transit riders within the Project Site vicinity that support pedestrian activity to and from the pedestrian destinations, as shown in Figure 8.

The walkability of existing facilities is based on the availability of pedestrian routes necessary to accomplish daily tasks without the use of an automobile. These attributes are quantified by WalkScore.com and assigned a score out of 100 points. With the various commercial businesses and cultural facilities adjacent to residential neighborhoods, the walkability of the area is approximately 94 points ².

² Walk Score (www.walkscore.com) rates the Project Site with a score of 94 of 100 possible points (scores accessed on April 19, 2024, for 130 W College). Walk Score calculates the walkability of specific addresses by taking into account the ease of living in the neighborhood with a reduced reliance on automobile travel.



Currently along the Project frontages, 10-foot wide sidewalks are provided along Alameda Street and 12-foot wide sidewalks are provided along Main Street. Additionally, nine-foot wide and 10-foot wide sidewalks are provided along some sections of College Street and Bruno Street, respectively. Sidewalks along the remaining sections of College Street and Bruno Street are unpaved or substandard, thus providing incomplete pedestrian connections.

The adjacent signalized study intersection of Spring Street/Alameda Street & College Street (Intersection #3) provides pedestrian facilities, such as curb ramps, pedestrian phasing, crosswalk striping, and marked pedestrian crossings on all approaches.

Additional pedestrian facilities located within the Study Area, including midblock crosswalks, are illustrated in Figure 8.

Vision Zero. As described in *Vision Zero: Eliminating Traffic Deaths in Los Angeles by 2025* (City of Los Angeles, August 2015), Vision Zero is a traffic safety policy that promotes strategies to eliminate transportation-related collisions that result in severe injury or death. Vision Zero has identified the High Injury Network (HIN), a network of streets included based on collision data from the last five years, where strategic investments will have the biggest impact in reducing death and severe injury. The Project Site is not located along any streets that have been identified as part of the HIN. Near the Project Site, College Street between Spring Street and Yale Street is identified in the HIN. Additional corridors within the vicinity of the Project Site that have been identified in the HIN are depicted in Figure 8.

In efforts to increase safety on the most vulnerable City streets, LADOT has identified basic safety improvements (e.g., continental crosswalk upgrades, traffic signals) for implementation along corridors as part of the Vision Zero Safety Improvements projects. Projects within 0.25 miles of the Project Site include the Chinatown Safe Routes for Seniors, which is a community-driven program to improve mobility, safety, comfort, and social connections for older adults in Chinatown.

Existing Bicycle System

Based on *2010 Bicycle Plan, A Component of the City of Los Angeles Transportation Element* (LADCP, adopted March 1, 2011) (2010 Bicycle Plan), the existing bicycle system consists of a



limited network of bicycle lanes (Class II) and bicycle routes (Class III). Class II bicycle lanes are a component of street design with dedicated striping, separating vehicular traffic from bicycle traffic. These facilities offer a safer environment for both cyclists and motorists. Class III bicycle routes and bicycle-friendly streets are those where motorists and cyclists share the roadway and there is no striping separating vehicular traffic from bicycle travel. Bicycle routes and bicycle-friendly streets are preferably placed on Collector and lower volume Arterial Streets. Bicycle routes with shared lane markings, or “sharrows”, remind bicyclists to ride farther from parked cars to prevent collisions, increases awareness of motorists that bicycles may be in the travel lane, and shows bicyclists the correct direction of travel.

The components of the 2010 Bicycle Plan have been incorporated into the bicycle network of the Mobility Plan. The Mobility Plan consists of a Bicycle Enhanced Network (BEN) (Low-Stress Network) and a Bicycle Lane Network (BLN). The BEN is a subset of and supplement to the 2010 Bicycle Plan and is comprised of a network of streets that prioritize bicyclists and provide bicycle paths and protected bicycle lanes (Class IV). Class IV protected bicycle lanes including cycle tracks, bicycle traffic signals, and demarcated areas to facilitate turns at intersections and along neighborhood streets, provide further protection from other travel lanes. Class IV networks often provide mini-roundabouts, cross-street stop signs, crossing islands at major intersection crossings, improved street lighting, bicycle boxes, and bicycle-only left-turn pockets. Once implemented, these facilities would offer a safer environment for both cyclists and motorists. The BLN consists of Class II bicycle lanes with striped separation from motorized vehicle traffic.

In addition, bike-share facilities provide accessible and affordable short-term bicycle rentals to complete first-mile / last-mile connections. Within the City, the Metro Bike Share program currently services the Downtown Los Angeles, Central Los Angeles, and North Hollywood areas.

There are no bicycle facilities adjacent to the Project Site, however, there are bicycle facilities within the Study Area. Specifically, there is a Metro bike share station approximately 170 feet west of the Project Site at one of the Metro A Line Chinatown Station entrances. Bicycle facilities within the Study Area, including Class II bicycle lanes, Class III bicycle routes, and bikeshare stations, are shown in Figure 8.

Existing Transit System

The Study Area is served by bus lines operated by Metro, DASH and Commuter Express, Santa Clarita Transit, Antelope Valley Transit Authority, and Torrance Transit. Figure 9 illustrates the existing transit service and transit stops within the Study Area.

The Project Site is also served by the Metro A Line Chinatown Station, located diagonally opposite the Project Site, and Union Station, located approximately 0.40 miles south of the Project Site. Metro Rail also operates multiple lines in Downtown Los Angeles, including the B and D Lines, which provide service in the Study Area. The Metro A Line currently operates between Long Beach and Azusa, traveling via downtown Los Angeles and connecting with the B and D Lines at Union Station before continuing to Long Beach. The Metro B Line runs in the north-south direction between Union Station and North Hollywood, where it connects with the Metro G Line (formerly Orange Line), a bus rapid transit service that operates between North Hollywood and Warner Center and Chatsworth. The Metro D Line runs in the east-west direction between Union Station and Koreatown.

Table 1 summarizes the transit lines operating in the Study Area for each of the service providers in the region, the type of service (peak vs. off-peak, express vs. local), and frequency of service, as described above. The average frequency of transit service during the peak hour was derived from the number of peak-period stops made at the stop nearest the Project Site and reflects current conditions, including recent changes per Metro's NextGen Bus Plan. Adjacent to and near the Project Site, Metro Local 76 and Santa Clarita Transit Lines 794 and 799, as well as DASH B and DASH Lincoln Heights/Chinatown, service the bus stops at Alameda Street & College Street.

Existing Traffic Volumes

Intersection turning movement counts at the study intersections were collected on January 12, 2023 during the morning (7:00 AM to 10:00 AM) and afternoon (3:00 PM to 6:00 PM) peak hour traffic count data were utilized for this analysis. Local schools were in session and the weather conditions were typical when all traffic counts were conducted. The traffic counts were increased at a rate of 1% per year to estimate Existing Year 2024 traffic volumes. The existing peak hour



traffic volumes, representing Existing Conditions in Year 2024, are illustrated in Figure 10. The traffic count worksheets are provided in Appendix B.

FUTURE CUMULATIVE TRANSPORTATION CONDITIONS

The forecast of Future without Project conditions was prepared in accordance with procedures outlined in the TAG. Specifically, two requirements are provided for developing the cumulative traffic volume forecast:

“The Transportation Assessment must estimate ambient traffic conditions for the study horizon year selected during the scoping phase and recorded in the executed MOU. The study must clearly identify the horizon year and annual ambient growth rate used for the study. The horizon year should align with the development project’s expected completion year. For development projects constructed in phases over several years, the Transportation Assessment should analyze intermediary milestones before the buildout and completion of the project. The annual ambient growth rate shall be determined by LADOT staff during the scoping process and can be based on an adopted TSP [Transportation Specific Plan], the most recent SCAG regional transportation model, the citywide transportation model, or other empirical information approved by LADOT.

“The Transportation Assessment must consider related projects. For related development projects, this should include the associated trip generation for known development projects within one-half mile (2,640 foot) radius of the project site and one-quarter mile (1,320 foot) radius of the farthest outlying study intersections. Consultation with the Department of City Planning and LADOT may be required to compile the related projects list. The City’s ZIMAS database can be used to assist in identifying development projects that have submitted applications to the City of Los Angeles. Project access and circulation constraints would be determined by adding project-generated trips to future base traffic volumes including ambient growth and related projects and conducting the operational analysis.”

As detailed below, the analysis of future conditions includes both ambient growth, which reflects increase in traffic due to regional growth and development outside the Study Area, and traffic generated by ongoing or entitled projects near or within the Study Area (Related Projects). The ambient growth factor likely captures some traffic increases resulting from the Related Projects. Therefore, due to inherent double-counting of vehicles, the traffic analysis provides a conservative estimate of Future without Project traffic volumes.

Ambient Traffic Growth

Existing traffic levels have historically been projected to increase as a result of regional growth and development. Based on discussions with LADOT during the MOU process, an ambient growth factor of 1% per year compounded annually was applied to be conservative by adjusting the Existing Conditions traffic volumes to simulate the effects of the regional growth and development by Year 2028. The total adjustment applied over the four-year period between Year 2024 and the anticipated buildout year of the Project was 4.06%. This growth factor accounts for increases in traffic due to potential projects plus others not yet proposed and those located outside the Study Area.

Related Projects

In accordance with the TAG, this study also considered the effects of the Project on the Related Projects, which means that the potential impact of the Project was evaluated within the context of past, present, and probable future developments capable of producing cumulative impacts. In accordance with the procedures outlined in the TAG, Related Projects within 0.50 miles of the Project Site and within 0.25 miles of the farthest outlying study intersections were considered for analysis.

The list of Related Projects is based on information provided by LADCP and LADOT in June 2024. The Related Projects are detailed in Table 2 and their general locations shown in Figure 11. Though the buildout years of many of these Related Projects are uncertain and may be well beyond the buildout year of the Project, and notwithstanding that some may never be approved or developed, they were all considered as part of this study and conservatively assumed to be completed by the Project buildout Year 2028. Therefore, the traffic growth due to the development of Related Projects considered in this analysis is highly conservative and, by itself, substantially overestimates the actual traffic volume growth in the Study Area that would likely occur prior to Project buildout. With the addition of the 1% per year ambient growth factor previously discussed, the Future without Project cumulative condition is even more conservative.

The development of estimated traffic volumes added to the Study Area as a result of Related Projects involves the use of a three-step process: trip generation, trip distribution, and trip assignment.

Trip Generation. Trip generation estimates for the Related Projects were provided by LADOT or were calculated using a combination of previous study findings and the trip generation rates contained in the latest Institute of Transportation Engineers (ITE). As shown in Table 2, Related Projects trip generation estimates are conservative in that they do not in every case account for either the existing uses to be removed or the likely use of other travel modes (transit, bus, bicycling, walking, carpool, etc.) Further, in many cases, they do not account for the internal capture trips within a multi-use development, nor the interaction of trips between multiple Related Projects within the Study Area, in which one Related Project serves as the origin for a trip destined for another Related Project.

Trip Distribution. The geographic distribution of the traffic generated by the Related Projects is dependent on several factors. These include the type and density of the proposed land uses, the geographic distribution of the population from which the employees/residents and potential patrons of the proposed developments are drawn, and the location of these projects in relation to the surrounding street system. These factors are considered along with logical travel routes through the street system to develop a reasonable pattern of trip distribution.

Trip Assignment. The trip generation estimates for the Related Projects were assigned to the local street system using the trip distribution pattern described above. Figure 12 shows the peak hour traffic volumes associated with these Related Projects at the study intersections.

Future without Project Traffic Volumes

The Future without Project Condition traffic volumes were estimated by adding the Related Project volumes to the Existing Conditions traffic volumes with the aforementioned annual ambient growth factor through the projected buildout year of 2028. As discussed above, this is a conservative approach as many of the Related Projects may already be reflected in the ambient growth rate. These volumes represent the Future without Project Conditions (i.e., ambient traffic growth and Related Project traffic added to existing traffic volumes) for the five study intersections and are shown in Figure 13.

Future Roadway and Street Improvements

The analysis of Future Conditions accounted for roadway improvements that were funded and reasonably expected to be implemented prior to the buildout of the Project. Any improvement that would result in changes to the physical configuration at the study intersections would be incorporated into the analysis. Other proposed traffic/trip reduction strategies such as transportation demand management (TDM) programs for individual buildings and developments were omitted from the Future Conditions analyses. Figure 14 illustrates the locations of proposed transportation facilities improvements, including any future transit, bicycle, and pedestrian facilities within the Study Area. The following projects were evaluated for their potential effects on the future roadway configurations and for consideration in the Future Conditions analysis:

The Los Angeles State Historic Park Pedestrian Bridge. The Los Angeles State Historic Park provides 32 acres of public open space and is located northwest of the Project Site, adjacent to the Metro A Line. Currently, the only viable access to the park is provided along Spring Street. Studies are being conducted to review the addition of a pedestrian bridge connection to the park from Broadway. The pedestrian bridge connection is anticipated to increase pedestrian activity along the adjacent Broadway corridor. There is currently no dedicated funding or design of the future pedestrian bridge connection; nonetheless, no changes to intersection lane configurations are anticipated in the Study Area as a result of this proposed pedestrian bridge.

Los Angeles Aerial Rapid Transit. The Los Angeles Aerial Rapid Transit (LA ART) is a proposed aerial rapid transit gondola system that would provide daily transit service to connect communities of El Pueblo, Mission Junction, Solano Canyon, and William Meade Homes. The proposed route would include stations at Union Station, Chinatown/the Los Angeles State Historic Park, and Dodger Stadium. The LA ART is anticipated to increase pedestrian activity within the Study Area. No changes to intersection lane configurations are anticipated in the Study Area as a result of the LA ART.

Safe Routes for Seniors. The Safe Routes for Seniors (SR4S) program is community-driven and aims to “improve mobility, safety, comfort, and social connections for older adults.” Within the Study Area, Chinatown has been selected for further pedestrian safety improvements. At this time, no improvements have been identified; therefore, no changes to intersection lane configurations were made as a result of the SR4S program.

Cornfield Arroyo Seco Specific Plan. While the Project Site is not located within the *Cornfield Arroyo Seco Specific Plan* (LADCP, 2013) (CASP), which is currently undergoing updates, the Project Site is adjacent to the areas subject to the CASP. The CASP provides a general framework to transition the existing land use mix, which is primarily vehicle-oriented, to pedestrian and transit-oriented uses. As identified in the CASP, proposed transportation facilities improvements include traffic signals, continental crosswalks, and sidewalk extensions that would be located within the Study Area; these proposed improvements are shown in Figure 14. All of the specific improvements detailed in the CASP are currently unfunded and there is no schedule for implementation; therefore, no changes to intersection lane configurations have been made in the Study Area as a result of the CASP.

Mobility Plan. In the Mobility Plan, the City identifies key corridors as components of various “mobility-enhanced networks.” Each network is intended to focus on improving a particular aspect of urban mobility, including transit, neighborhood connectivity, bicycles, pedestrians, and vehicles. The specific improvements that may be implemented in those networks have not yet been identified, and there is no schedule for implementation; therefore, no changes to intersection lane configurations were made as a result of the Mobility Plan. However, the following mobility-enhanced networks included corridors within the Project Site vicinity and are depicted in Figure 15:

- **Transit Enhanced Network (TEN):** The TEN aims to improve existing and future bus services through reliable and frequent transit service in order to increase transit ridership, reduce single-occupancy vehicle trips, and integrate transit infrastructure investments within the surrounding street system. Broadway, Cesar E. Chavez Avenue, and Main Street have been designated as part of the TEN.

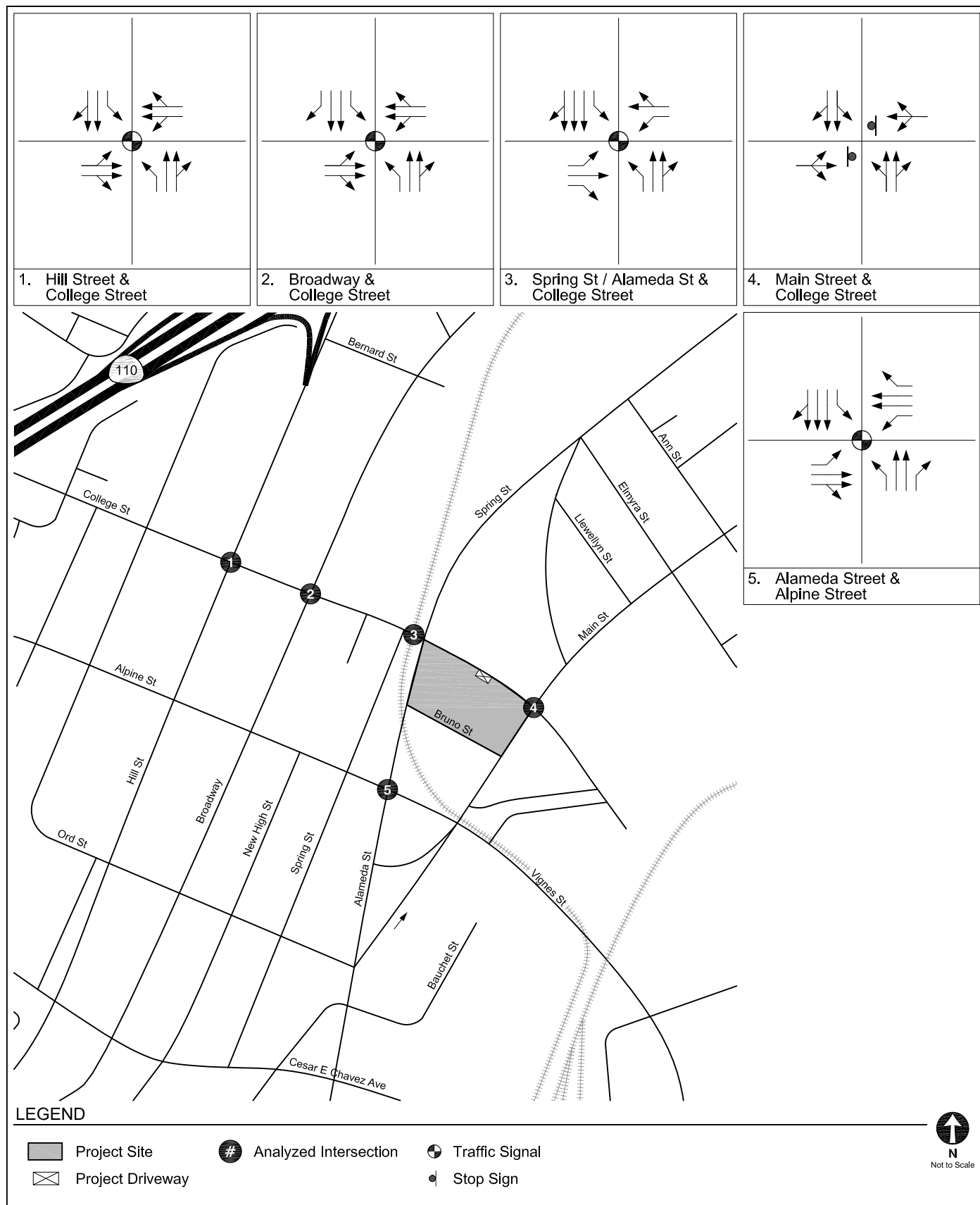
Neighborhood Enhanced Network (NEN): The NEN reflects the synthesis of the bicycle and pedestrian networks and serves as a system of local streets that are slow moving and safe enough to connect neighborhoods through active transportation. Ord Street between New High Street and Alameda Street, Alpine Street between Broadway and Main Street, College Street between Broadway and Main Street, Llewellyn Street, West Ann Street between Spring Street and Main Street, New High Street between Ord Street and Cesar E. Chavez Avenue, and Spring Street between Ord Street and Cesar E. Chavez Avenue have been designated as part of the NEN.

- **BEN/BLN:** Broadway north of Cesar E. Chavez Avenue, Spring Street south of Cesar E. Chavez Avenue, Main Street, Cesar E. Chavez Avenue west of Broadway, and Alpine Street / Vignes Street east of Broadway have been designated as part of the BEN. Spring Street north of Ord Street and Cesar E. Chavez Avenue east of Broadway have been designated as part of the BLN.

-
- Pedestrian Enhanced District (PED): The Mobility Plan aims to promote walking to reduce the reliance on automobile travel by providing more attractive and pedestrian-friendly sidewalks, as well as adding pedestrian signalizations, street trees, and pedestrian-oriented design features. Hill Street, Broadway, Spring Street, New High Street, Main Street, Cesar E. Chavez Avenue, Alpine Street / Vignes Street east of Hill Street, and College Street west of Main Street are designated as part of the PED.

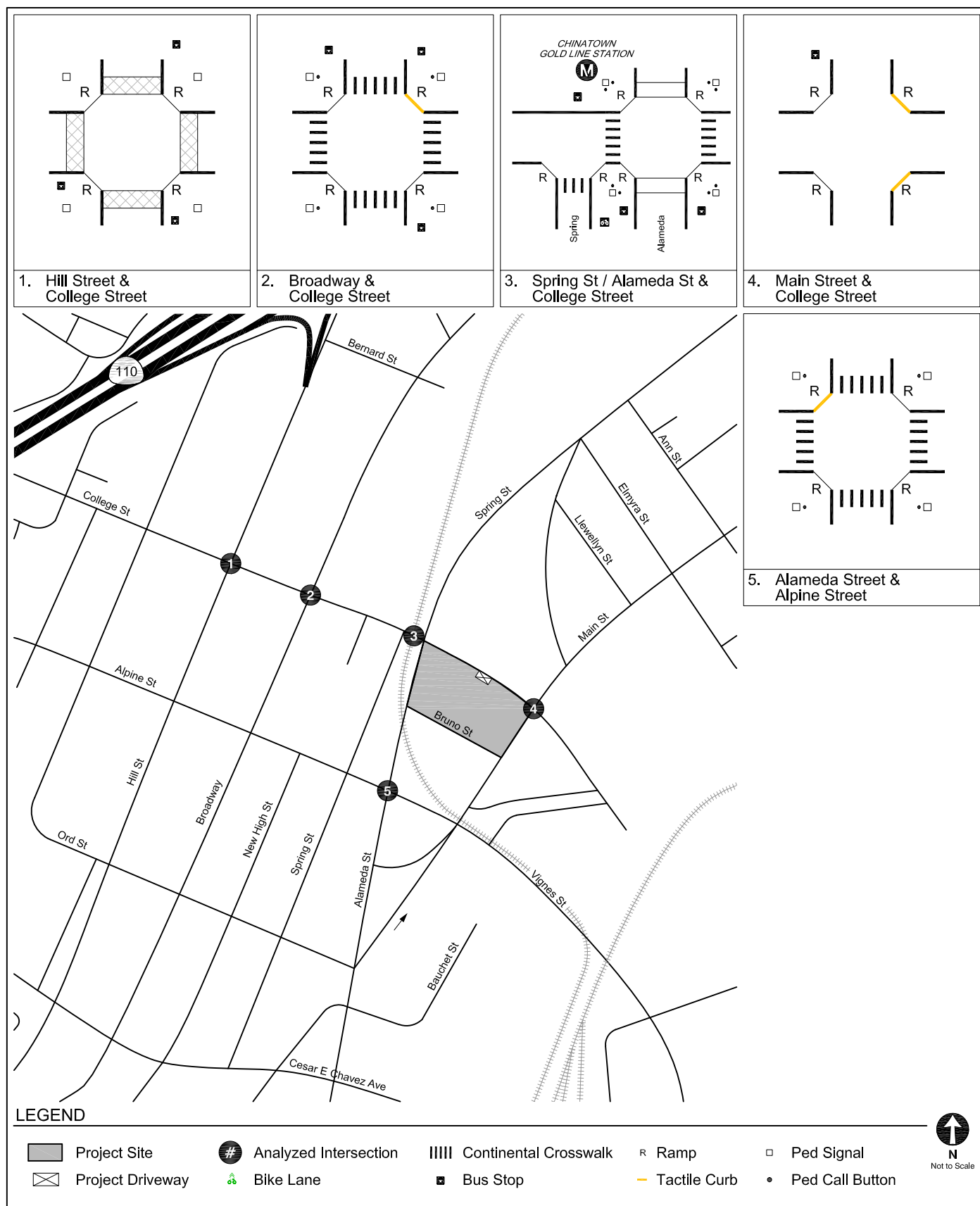
Per the City's *Los Angeles Safe Streets for All Initiative* (Ordinance No. 188,198), adopted in April 2024, should the City make any improvement to a street segment of at least 0.125 miles in length, the street enhancements of the "mobility-enhanced networks" as described above shall also be installed along that segment as part of the improvements undertaken by the City.





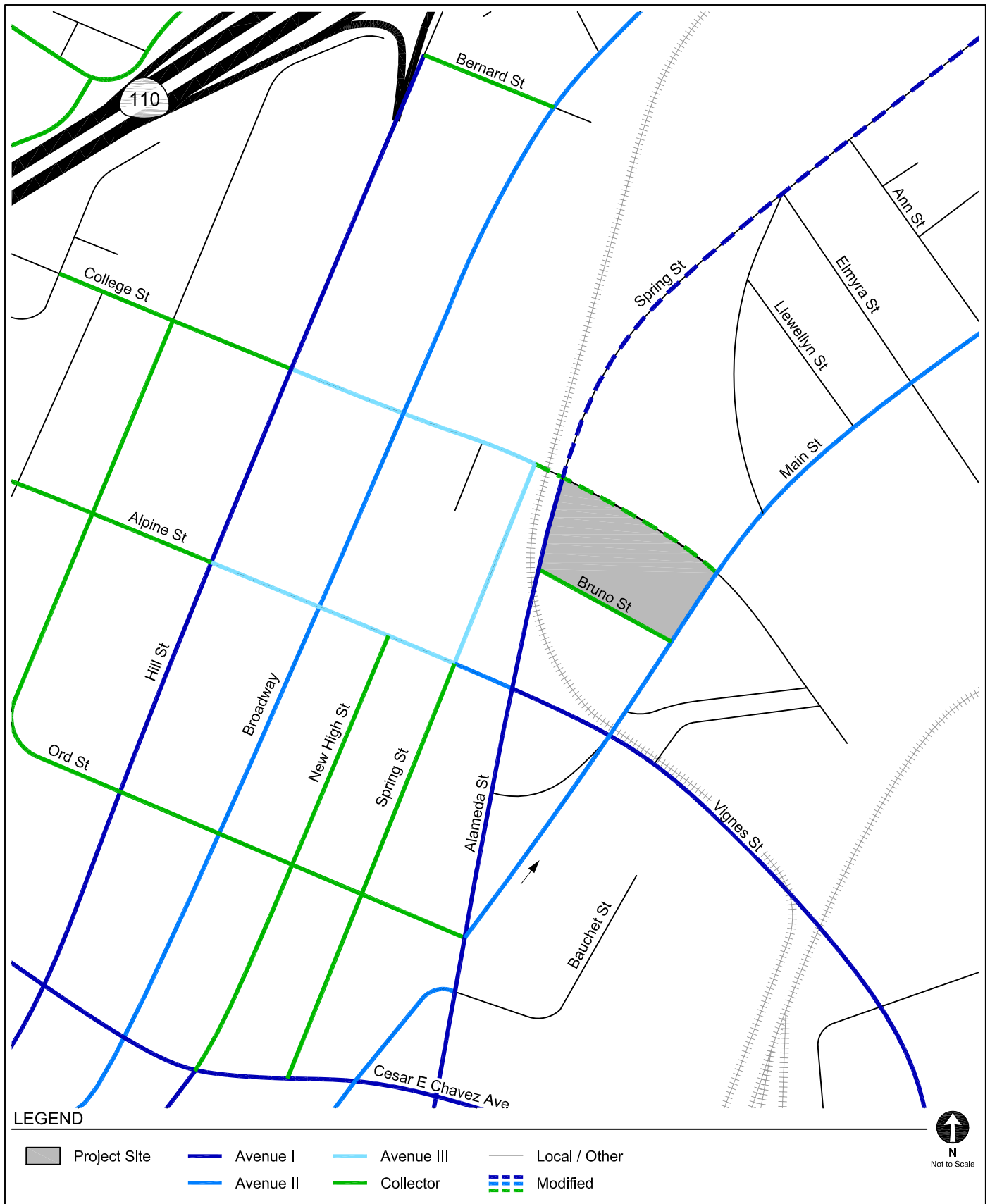
INTERSECTION LANE CONFIGURATIONS

FIGURE
4



EXISTING INTERSECTION MOBILITY FACILITIES

FIGURE
5



MOBILITY PLAN STREET DESIGNATIONS

FIGURE
6



FIGURE 7

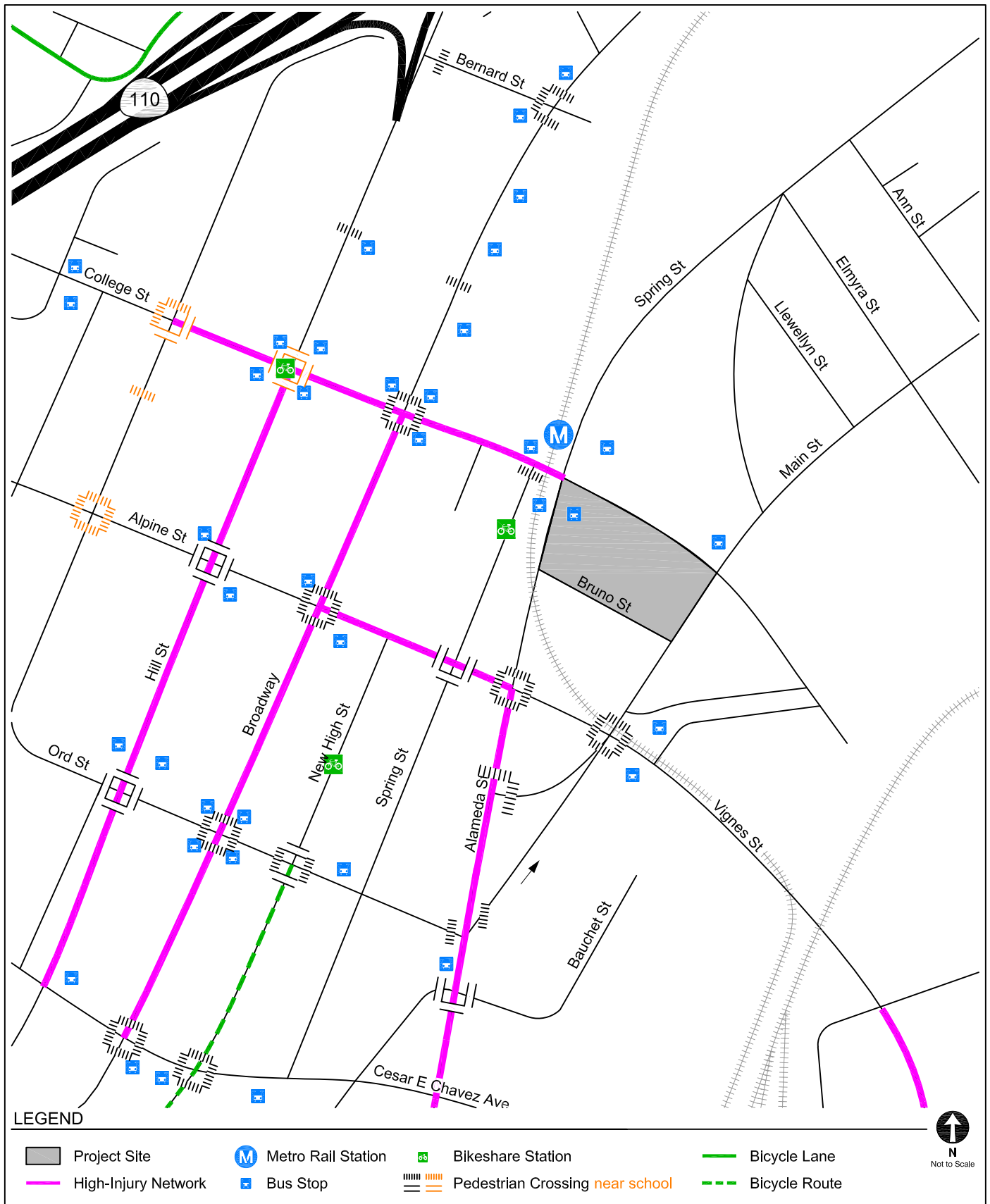
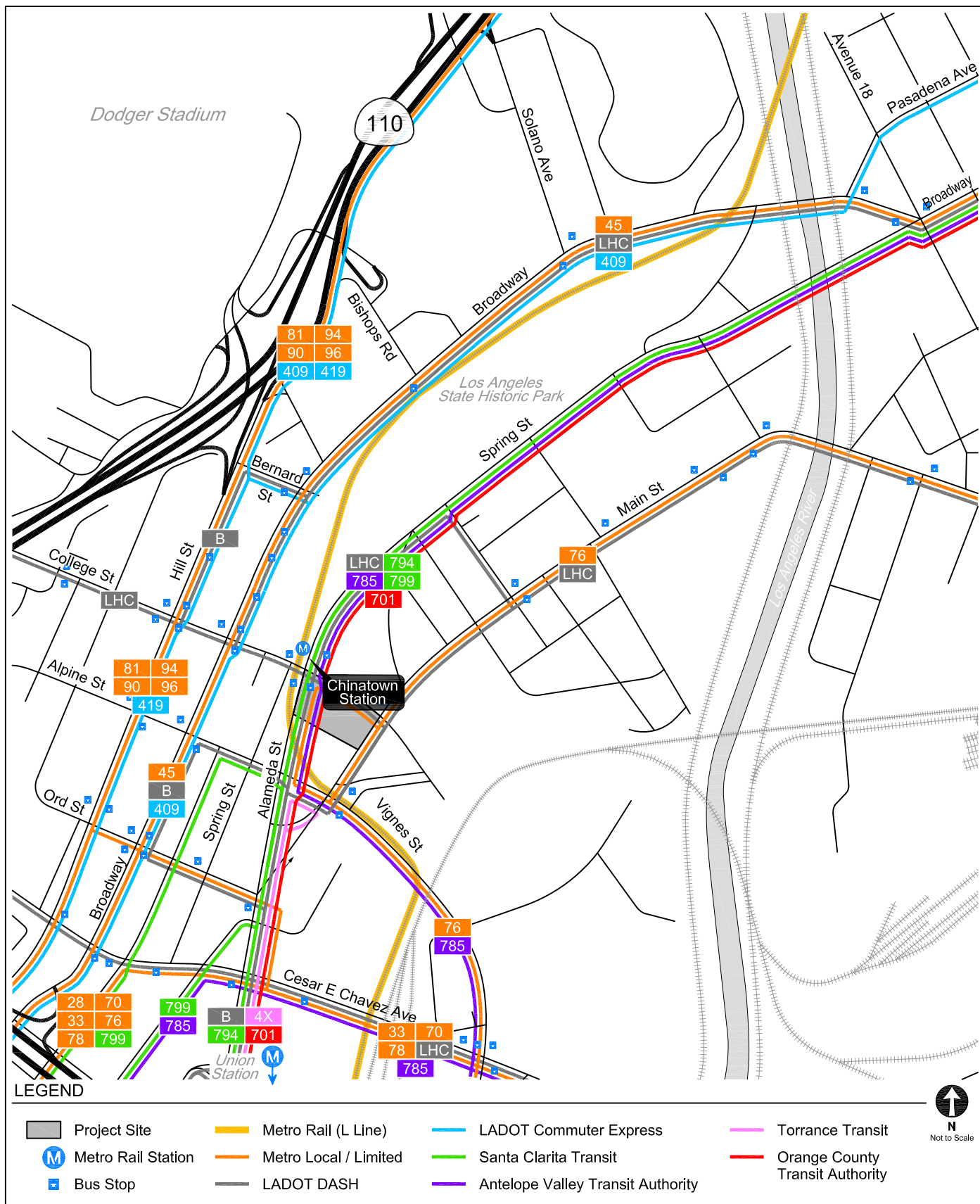
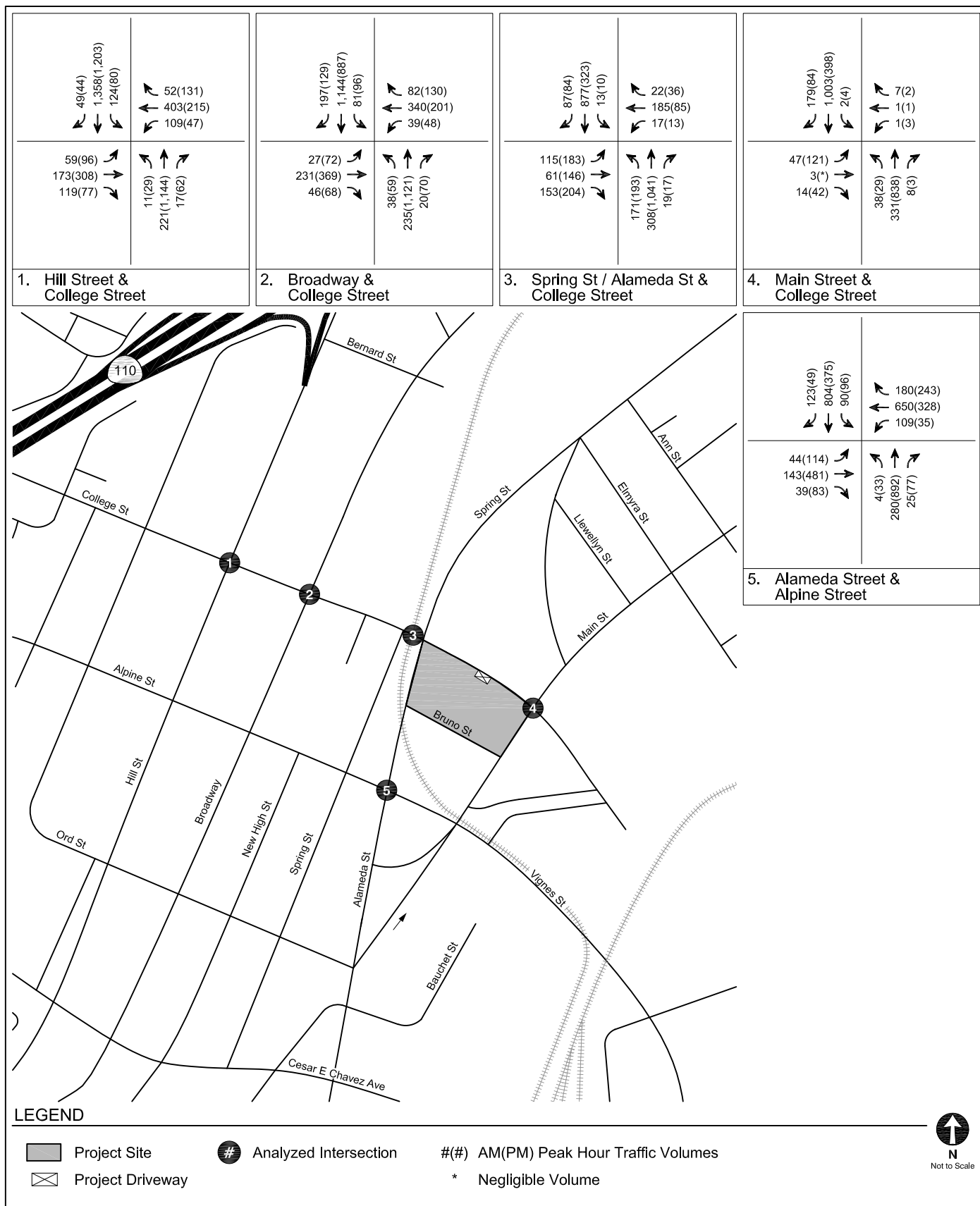


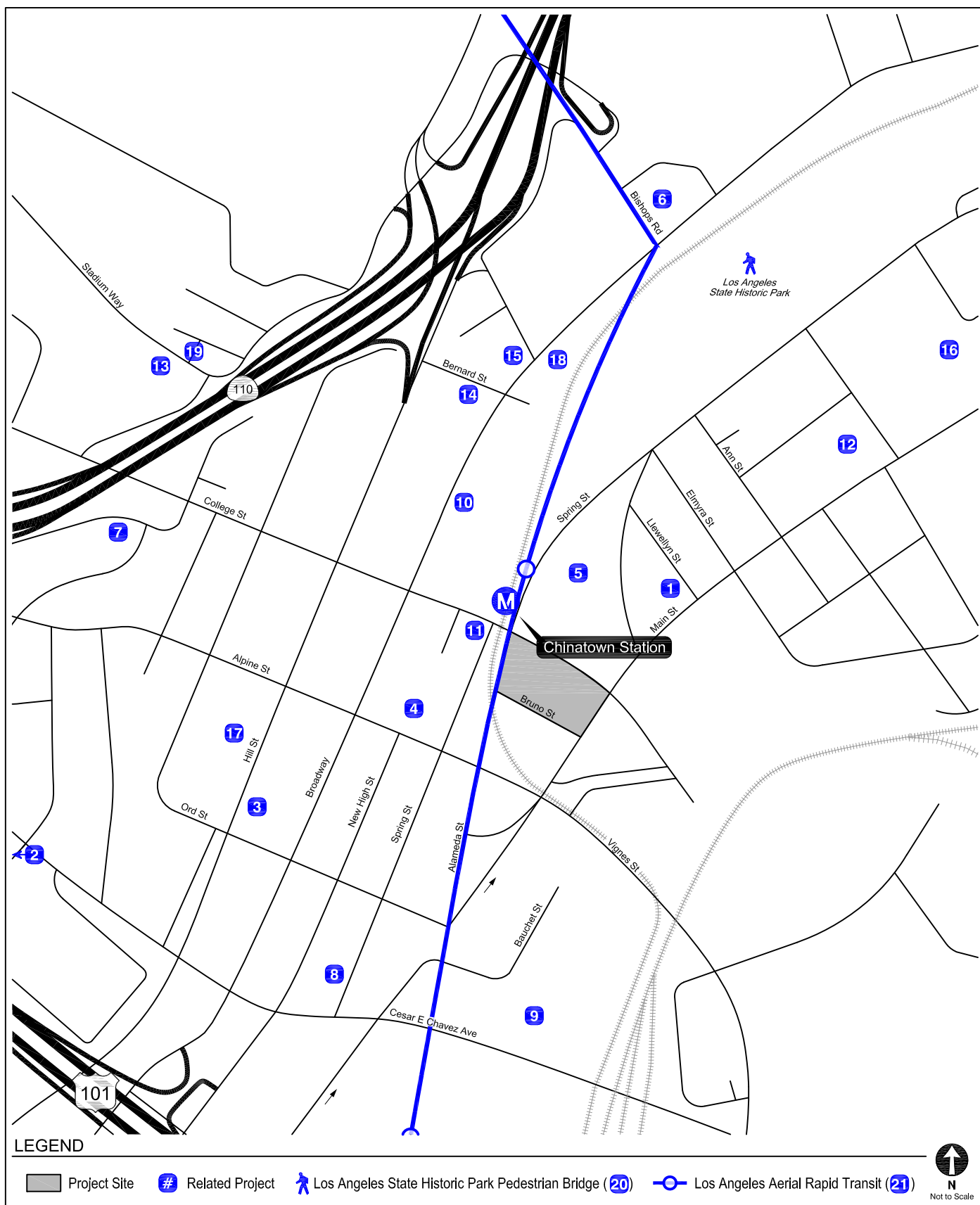
FIGURE
8



EXISTING TRANSIT SERVICE

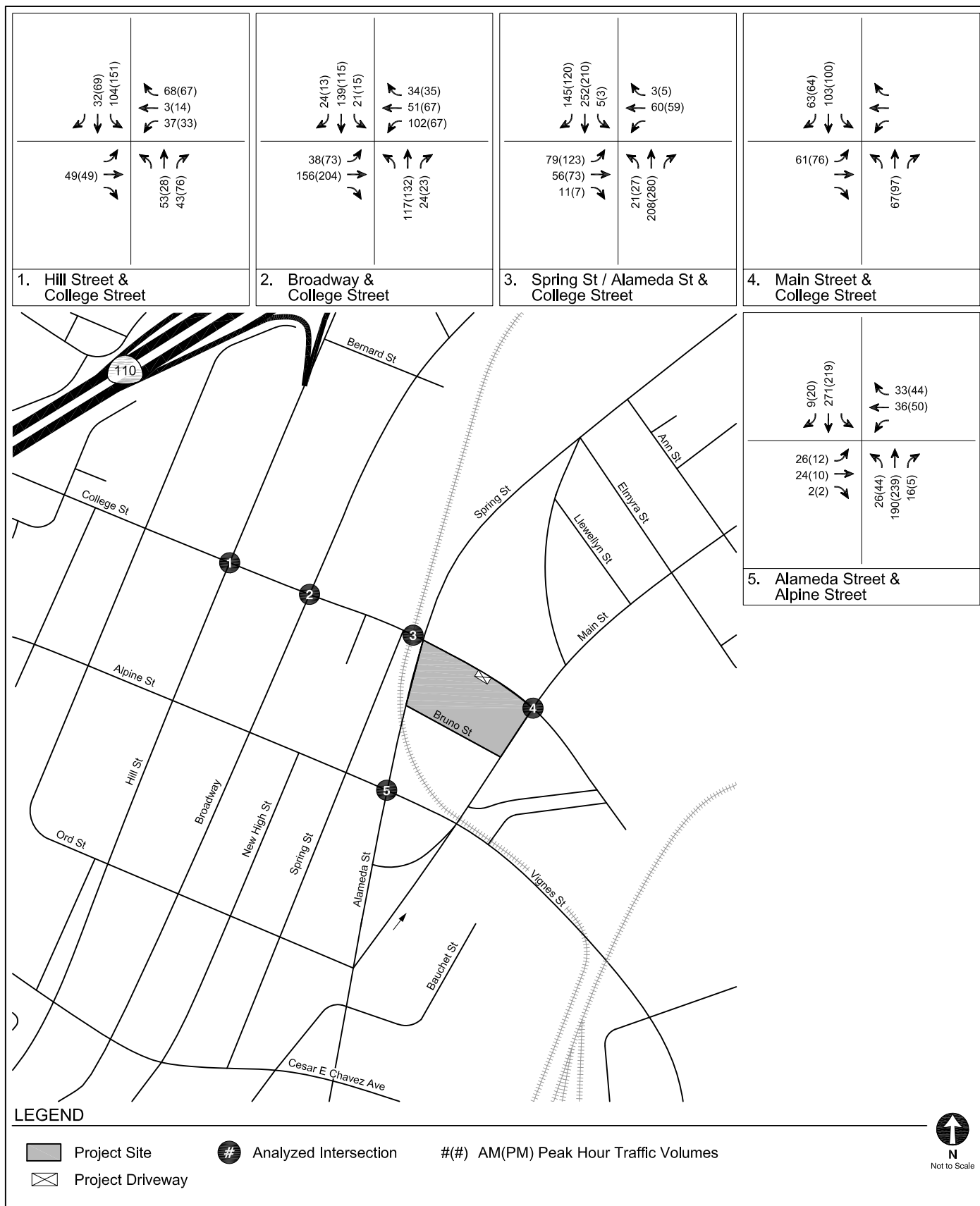
FIGURE
9





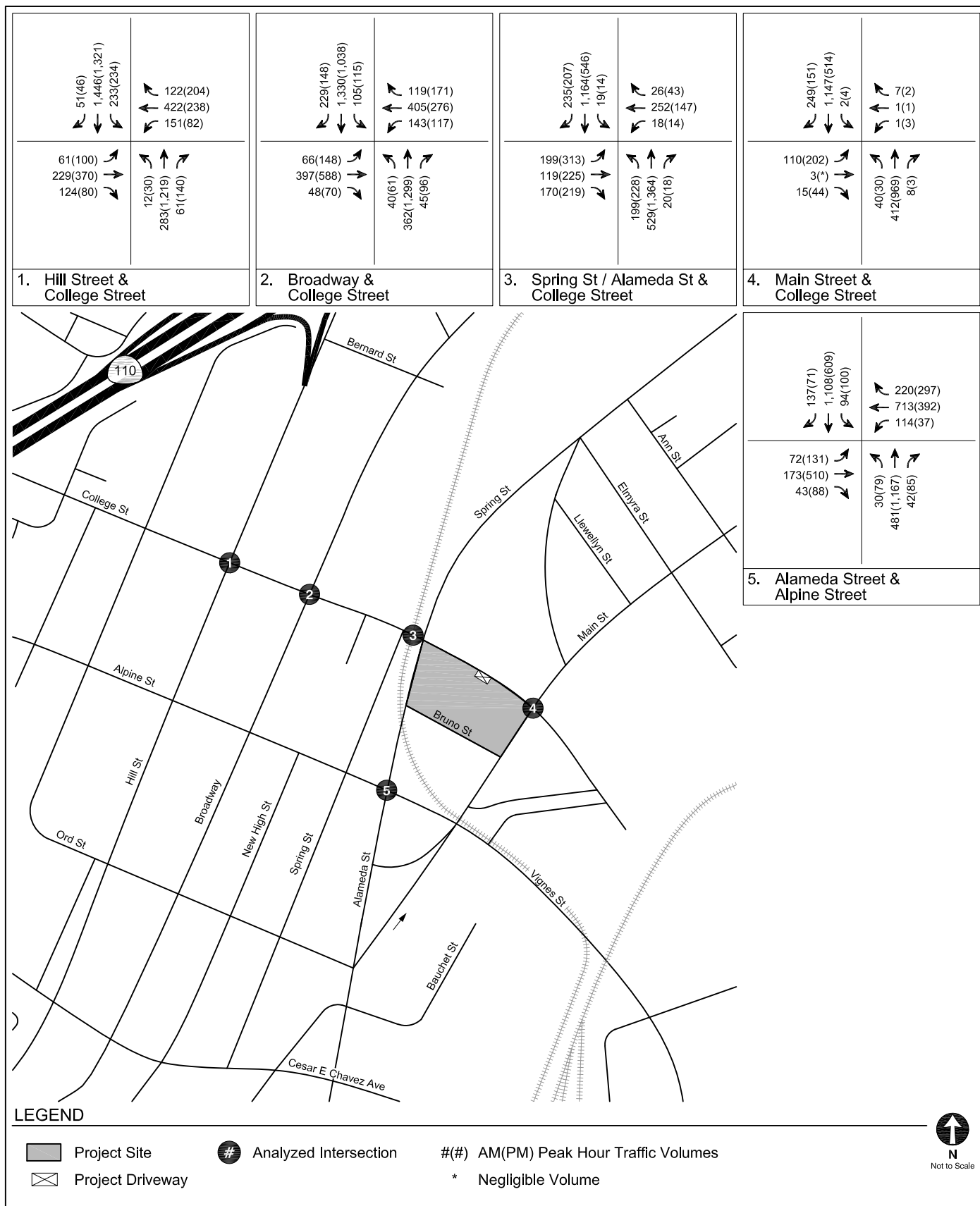
LOCATIONS OF RELATED PROJECTS

FIGURE
11



**RELATED PROJECT-ONLY
PEAK HOUR TRAFFIC VOLUMES**

**FIGURE
12**



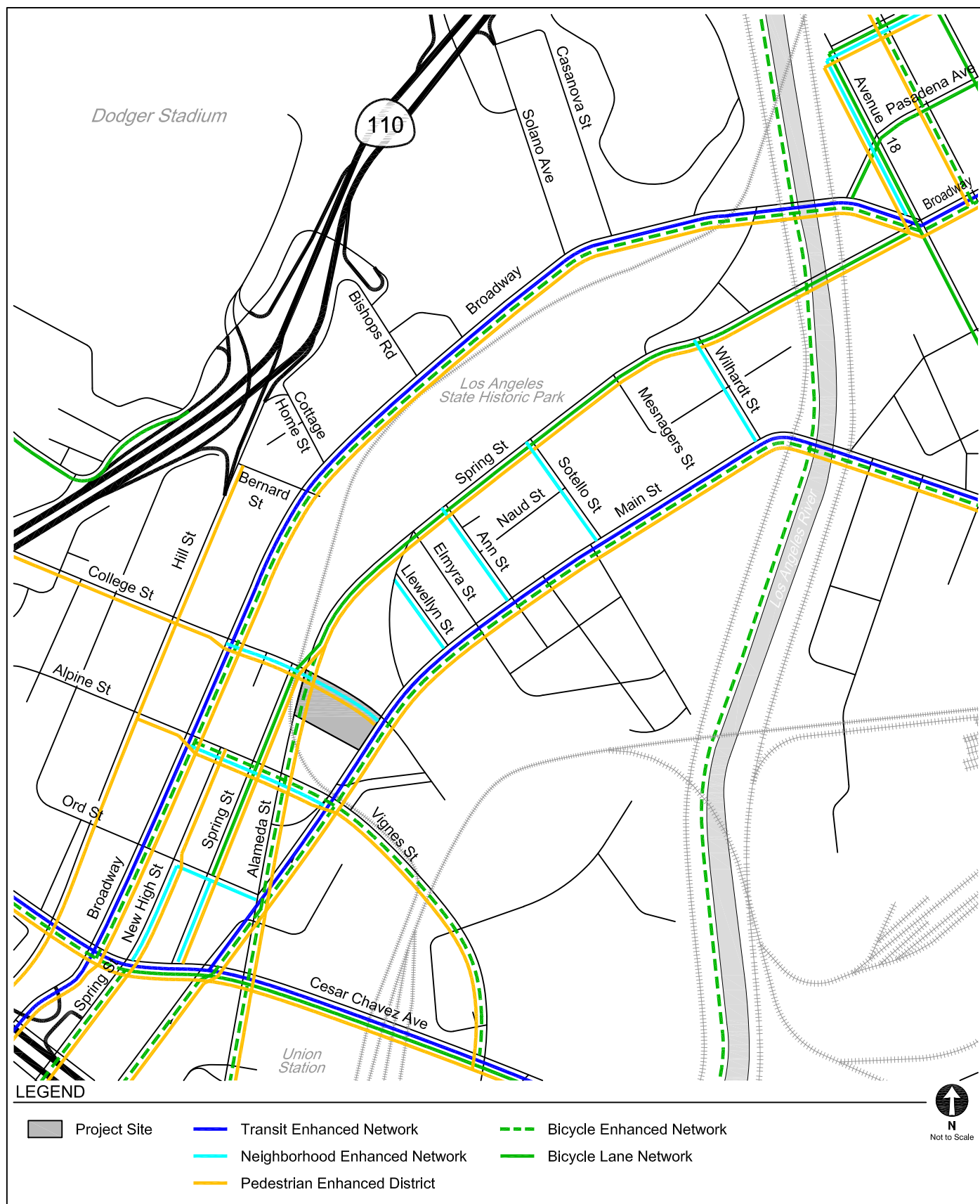
FUTURE WITHOUT PROJECT CONDITIONS (YEAR 2028)
PEAK HOUR TRAFFIC VOLUMES

FIGURE
13



FUTURE TRANSPORTATION FACILITIES

FIGURE
14



MOBILITY PLAN ROADWAY MODAL PRIORITIES

FIGURE
15

**TABLE 1
EXISTING TRANSIT SERVICE**

Provider, Route, and Service Area			Hours of Operation [a]	Average Headway (minutes)			
				AM Peak Period		PM Peak Period	
Metro Bus				NB/EB	SB/WB	NB/EB	SB/WB
28	Century City - Downtown Los Angeles via Olympic Blvd	Local	4:30 AM - 2:30 AM	8	8	8	9
33	Downtown Los Angeles - Santa Monica via Venice Blvd	Local	4:00 AM - 1:00 AM	15	15	15	16
45	Lincoln Heights - Downtown Los Angeles - Harbor Freeway Station via Broadway	Local	24 - Hour	8	10	10	10
70	Downtown Los Angeles - El Monte via Cesar Chavez Ave/Atlantic Blvd/Garvey Ave	Local	24 - Hour	8	8	8	8
76	Downtown Los Angeles - El Monte via Valley Blvd	Local	24 - Hour	15	16	17	16
78	Downtown Los Angeles - Arcadia via Las Tunas Ave/Huntington Dr	Local	4:00 AM - 2:00 AM	11	11	10	10
81	Eagle Rock - Downtown Los Angeles - Harbor Freeway Station via Figueroa St	Local	24 - Hour	15	15	15	16
90	Los Angeles Civic Center - Sunland - North Hollywood via Glendale Ave/Foothill Bl/Vineland Ave	Local	4:00 AM - 11:30 PM	18	18	20	20
94	Downtown Los Angeles - Glendale - Burbank - North Hollywood via San Fernando Rd/Magnolia Blvd	Local	4:30 AM - 2:30 AM	14	12	13	13
96	Chinatown - Burbank Station via Griffith Park Dr	Local	5:00 AM - 9:30 PM	45	36	40	48
Metro Rail				NB/EB	SB/WB	NB/EB	SB/WB
A	East Los Angeles - Downtown Los Angeles - Pasadena	Rail	3:30 AM - 1:30 AM	10	10	10	10
LADOT Commuter Express				NB/EB	SB/WB	NB/EB	SB/WB
409	East Glendale - Downtown Los Angeles	Local	6:00 AM - 9:00 AM 4:00 PM - 7:30 PM	N/A	23	34	N/A
419	Chatsworth - Downtown Los Angeles	Local	5:30 AM - 9:30 AM 3:30 PM - 8:30 PM	23	N/A	N/A	34
LADOT DASH				CW/CCW	CW/CCW	CW/CCW	CW/CCW
B	Downtown Los Angeles - Chinatown - Financial District	Local	6:00 AM - 9:00 PM	8	8	8	8
LHC	Lincoln Heights/Chinatown	Local	6:15 AM - 7:15 PM	30	30	30	30
Santa Clarita Transit				NB/EB	SB/WB	NB/EB	SB/WB
794	Downtown Los Angeles - Santa Clarita	Express	7:00 AM - 8:00 AM 4:30 PM - 6:30 PM	1 Stop	N/A	N/A	47
799	Santa Clarita - Downtown Los Angeles	Express	5:00 AM - 8:30 AM 3:30 PM - 8:00 PM	N/A	36	48	N/A
Antelope Valley Transit Authority				NB/EB	SB/WB	NB/EB	SB/WB
785	Lancaster/Palmdale - Downtown Los Angeles	Express	4:00 AM - 9:00 AM 3:00 PM - 8:00 PM	N/A	23	20	N/A
Torrance Transit				NB/EB	SB/WB	NB/EB	SB/WB
4X	Torrance - Downtown Los Angeles	Express	5:00 AM - 10:00 AM 2:30 PM - 8:00 PM	60	60	30	30

Notes:

Metro: Los Angeles County Metropolitan Transportation Authority; LADOT: Los Angeles Department of Transportation; DASH: Downtown Area Short Hop
AM Peak from 6-9 AM; PM Peak from 3-7 PM

[a] Service routes and frequencies are current as of the time of publishing this study, including recent changes based on the Metro's NextGen Bus Plan.

**TABLE 2
RELATED PROJECTS**

No.	Project	Address	Description	Trip Generation [a]						
				Daily	Morning Peak Hour			Afternoon Peak Hour		
					In	Out	Total	In	Out	Total
1.	1101 N Main Condos	1101 N Main St	318 condominium units	1,102	(9)	80	71	75	12	87
2.	Mixed-Use	511 N Grand Ave	299 apartment units and 8,000 sf retail	1,511	7	89	96	99	54	153
3.	Hill Mixed Use Project	708 N Hill St	162 apartment units and 5,000 sf retail	980	16	57	73	57	33	90
4.	Alpine Mixed-Use	211 W Alpine St	170 apartment units and 2,499 sf retail	879	8	45	53	40	25	65
5.	College Station Mixed-Use	129 W College St, 924 N Spring St	725 apartment units and 51,600 sf commercial	6,401	165	278	443	298	196	494
6.	1201 N Broadway Mixed-Use	1201 N Broadway	118 apartment units and 8,800 sf office/commercial	569	(11)	43	32	41	5	46
7.	708 S New Depot Street Residential	708 S New Depot St	33 apartment units	219	3	14	17	13	7	20
8.	643-655 N Spring Street	643-655 N Spring St	294 apartment units, 149 hotel rooms, and 10,664 sf commercial	3,495	131	151	282	176	113	289
9.	Data Center	900 N Alameda St	179,900 sf data center	178	8	8	16	3	13	16
10.	942 Broadway	942 N Broadway	178 apartment units, including 9 affordable housing units, and 35,805 sf commercial restaurant and office space	672	27	39	66	32	27	59
11.	843 N Spring St MU	843 N Spring St	100,517 sf commercial office and restaurant space	2,059	144	80	224	112	89	201
12.	Mixed-Use	1457 N Main St	376 apartment units, including 42 affordable housing units, and 6,448 sf restaurant and office space	1,950	69	199	188	121	79	200
13.	Stadium Way and Chavez Ravine Apartments	959 E Stadium Way	151 apartment units	1,051	16	65	81	64	34	98
14.	Pagoda Hotel	995 N Broadway	111,751 sf hotel and 6,211 sf restaurant	1,387	56	42	98	62	48	110
15.	1011 N Broadway	1011 N Broadway	92 hotel rooms, 1,713 sf restaurant, 895 sf café/retail, and 978 sf café	929	31	24	55	38	33	71
16.	1600 N Naud	1600 N Naud St	147,601 sf office	1,759	160	34	194	46	138	184
17.	TRJLA	717 N Hill St	411 apartment units, including 39 affordable housing, 17,140 sf retail	2,137	55	135	190	131	63	194
18.	Buena Vista Project	1030 N Broadway	986 apartment units, 15,000 sf retail, 23,800 sf restaurant	6,913	141	3,269	410	254	136	390
19.	950 Stadium Way Residential	950 E Stadium Wy	267 apartment units	1,212	25	48	72	48	38	85
Infrastructure Projects										
No.	Project	Description								
20.	Los Angeles State Historic Park Pedestrian Bridge	A pedestrian bridge connection is proposed to provide access to the Los Angeles State Historic Park from Broadway. Current access to the Los Angeles State Historic Park is only available along Spring Street. There is currently no dedicated funding or design of the future pedestrian bridge connection.								
21. [b]	Los Angeles Aerial Rapid Transit (LA ART)	An aerial rapid gondola transit system is proposed to provide daily transit service to connect communities of El Pueblo, Mission Junction, Solano Canyon, and William Meade Homes. The station and junction locations include Alameda Station, Alameda Tower, Alpine Tower, Chinatown/State Park Station, Broadway Junction, Stadium Tower, and Dodger Stadium Station.								

Notes:

[a] Source: Related project information and trip generation estimates for development projects are provided by Los Angeles Department of Transportation (LADOT) or accessed from <http://planning.lacity.org> based on cases filed since May 2024 .

[b] Source: *Draft Environmental Impact Report for the Los Angeles Aerial Rapid Transit Project, Los Angeles, California* (AECOM, October 2022)

Chapter 3

Project Traffic

This chapter describes the assumptions and methodology used in developing the trip generation estimates, trip distribution patterns, and trip assignments for the Project.

PROJECT TRIP GENERATION

As detailed in Chapter 1, the Project proposes 224,597 sf of office uses, 4,110 sf of ground floor retail uses, and 4,095 sf of ground floor retail uses, as well as 1,799 sf of exterior restaurant seating area. For conservative trip generation purposes, the exterior restaurant seating area is included in the trip generation analysis. The number of trips expected to be generated by the Project was estimated using rates published in *Trip Generation Manual, 11th Edition* (ITE, 2021). These rates are based on surveys of similar land uses at sites around the country and are provided as both daily rates and morning and afternoon peak hour rates. They relate the number of vehicle trips traveling to and from the Project Site to the size of development of each land use. In consultation with LADOT during the MOU process, the following are allowable trip generation reductions were applied to account for internal capture, public transit usage/walking arrivals, and pass-by trips:

- Internal Capture: A 10% internal capture reduction was applied to the retail and restaurant trip generation estimates to account for person trips made between distinct land uses within a mixed-use development (i.e., office employees visiting the retail and restaurant uses).
- Transit/Walk-In Usage: The Project is located diagonally opposite a fixed-rail transit station (i.e., the Metro A Line Chinatown Station). Thus, a 25% transit/walk-in reduction was applied to the retail and restaurant uses to account for transit usage and walk-in arrivals from surrounding neighborhoods and adjacent commercial developments. No transit usage reduction was applied to the office uses, which are assumed to be inherent in the trip generation rates.
- Pass-By Trips: Consistent with Attachment J of the TAG, 50% and 20% pass-by reductions were also applied to the retail and restaurant uses, respectively, to account for



Project trips made as an intermediate stop on the way from an origin to a primary trip destination without route diversion. This credit does not apply to Project trips at the Project driveways.

After accounting for the reductions described above, the Project is estimated to generate 289 net morning peak hour trips (242 inbound, 47 outbound) and 279 net afternoon peak hour trips (61 inbound, 219 outbound), as summarized in Table 3.

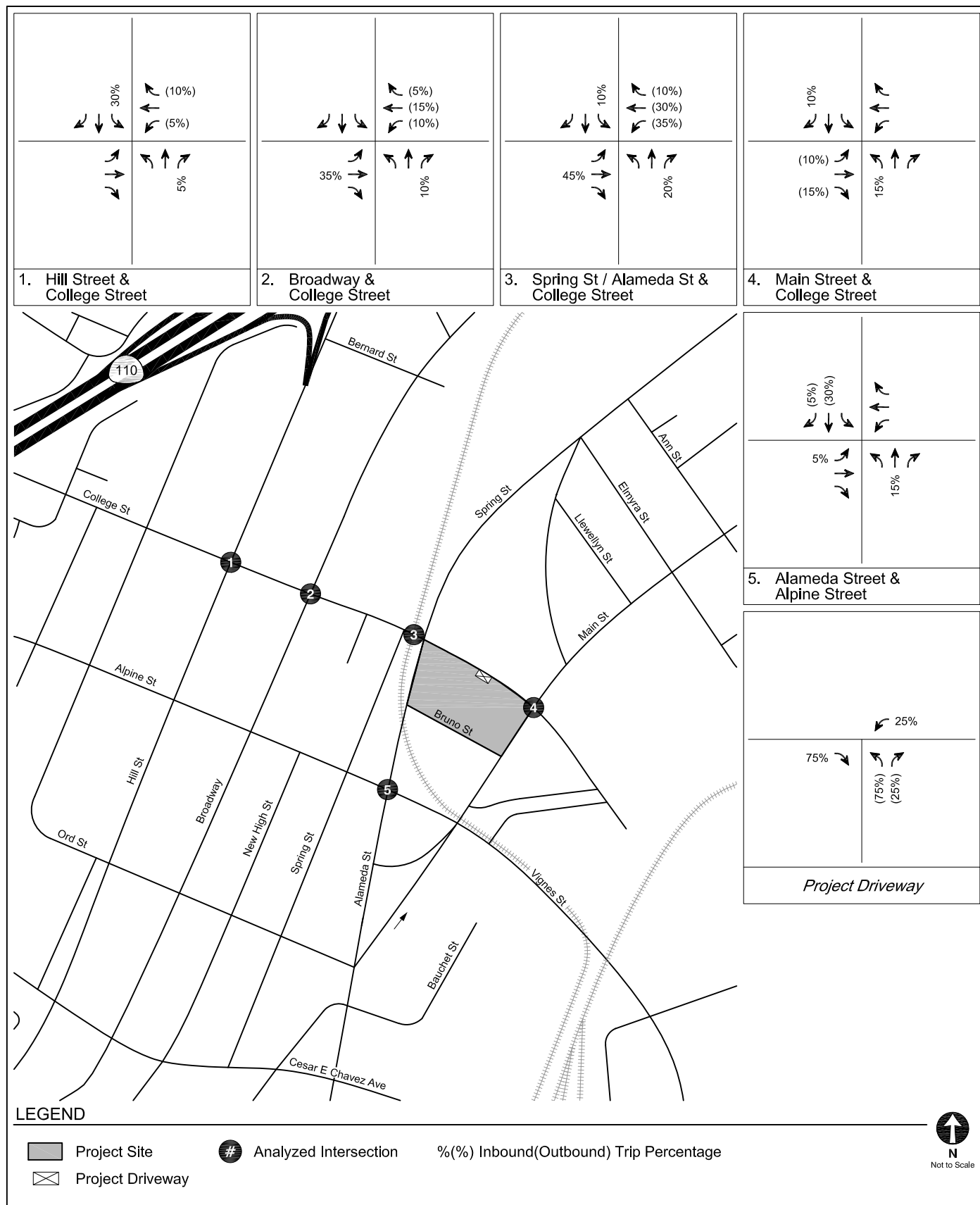
PROJECT TRIP DISTRIBUTION

Similar to the trip distribution of traffic for the Related Projects described in Chapter 2, the geographic distribution of trips generated by the Project is dependent on the location of commercial and residential centers from which patrons and employees of the Project would be drawn, characteristics of the street system serving the Project Site, the level of accessibility of the routes to and from the Project Site, existing intersection traffic volumes, the Project ingress/egress availability based on the proposed site access and circulation scheme, and the location of the proposed driveways, as well as input from LADOT staff.

Access to the Project's parking garage would be provided via one full-access driveway along College Street. Based on these considerations, traffic entering and exiting the Project was assigned to the surrounding street system. The intersection-level trip distribution patterns for the Project are shown in Figure 16.

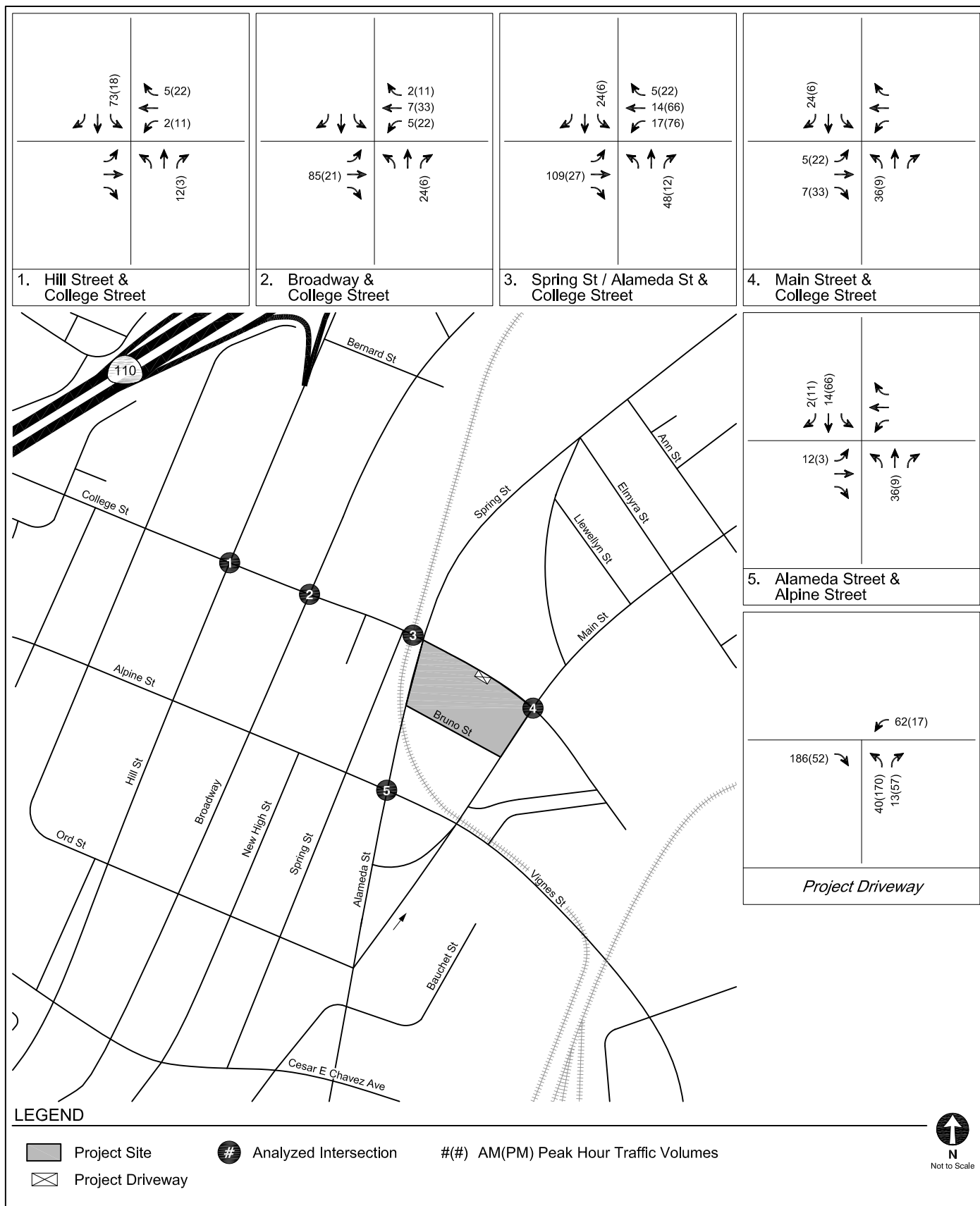
PROJECT TRIP ASSIGNMENT

The Project trip generation estimates summarized in Table 3 and the trip distribution patterns shown in Figure 16 were used to assign the Project-generated traffic through the study intersections. Figure 17 illustrates Project-only traffic volumes at the study intersections during typical weekday morning and afternoon peak hours.



PROJECT TRIP DISTRIBUTION

FIGURE
16



PROJECT-ONLY
PEAK HOUR TRAFFIC VOLUMES

FIGURE
17

**TABLE 3
TRIP GENERATION ESTIMATES**

Land Use	ITE Land Use	Size	Weekday					
			Morning Peak Hour			Afternoon Peak Hour		
			In	Out	Total	In	Out	Total
<u>Trip Generation Rates</u> [a]								
Office	710	per 1,000 sf	88%	12%	1.52	17%	83%	1.44
Strip Retail Plaza (<40k)	822	per 1,000 sf	60%	40%	2.36	50%	50%	6.59
High-Turnover Restaurant	932	per 1,000 sf	55%	45%	9.57	61%	39%	9.05
<u>Proposed Project</u>								
Office	710	224.597 ksf	300	41	341	55	268	323
Less 25% Transit/Walk-in Reduction [b]			(75)	(10)	(85)	(14)	(67)	(81)
Strip Retail Plaza	822	4.110 ksf	6	4	10	14	14	27
Less 10% Internal Capture Reduction [c]			(1)	0	(1)	(1)	(1)	(2)
Less 25% Transit/Walk-in Reduction [b]			(1)	(1)	(2)	(3)	(3)	(6)
Less 50% Pass-by Reduction [d]			(2)	(2)	(4)	(5)	(5)	(10)
High-Turnover Restaurant [e]	932	5.894 ksf	28	28	56	29	24	53
Less 10% Internal Capture Reduction [c]			(3)	(3)	(6)	(3)	(2)	(5)
Less 25% Transit/Walk-in Reduction [b]			(6)	(6)	(12)	(7)	(6)	(13)
Less 20% Pass-by Reduction [d]			(4)	(4)	(8)	(4)	(3)	(7)
Total - Project Driveway Trips			248	53	301	70	227	296
Total - Net Project Trips			242	47	289	61	219	279

Notes:

[a] Source: *Trip Generation Manual, 11th Edition*, Institute of Transportation Engineers, 2021.

[b] Per City of Los Angeles Department of Transportation's (LADOT) *Transportation Assessment Guidelines* (Updated August 2022), the Project Site is located diagonally opposite from Metro A Line Chinatown Station, therefore a 25% transit reduction was applied to account for transit usage and walking visitor arrivals from the surrounding neighborhoods and adjacent commercial developments.

[c] Internal capture reductions account for person trips made between distinct land uses within a mixed-use development (i.e., office employees visiting the commercial retail and restaurant uses).

[d] Per Attachment J of LADOT's *Transportation Assessment Guidelines*, pass-by reductions were taken into account for Project trips made as an intermediate stop on the way from an origin to a primary trip destination without route diversion.

[e] For conservative trip generation purposes, the total restaurant floor area includes 1,799 sf of exterior seating area.

Chapter 4

CEQA Analysis of Transportation Impacts

This chapter presents the results of an analysis of CEQA-related transportation impacts per the TAG. The analysis identifies any potential conflicts the Project may have with adopted City plans and policies and the improvements associated with the potential conflicts as well as the results of a Project VMT analysis that satisfies State requirements under *State of California Senate Bill 743* (Steinberg, 2013) (SB 743) and an identification of any hazards that would be created due to geometric design features.

METHODOLOGY

SB 743, which went into effect in January 2014, required the Governor's Office of Planning and Research to change the CEQA Guidelines regarding the analysis of transportation impacts. Under SB 743, the focus of transportation analysis shifted from driver delay (level of service [LOS]) to VMT, in order to reduce greenhouse gas emissions (GHG), create multimodal networks, and promote mixed-use developments.

The TAG defines the methodology of analyzing a project's transportation impacts in accordance with SB 743. Per the TAG, the CEQA transportation analysis contains the following thresholds for identifying significant impacts:

- Threshold T-1: Conflicting with Plans, Programs, Ordinances, or Policies
- Threshold T-2.1: Causing Substantial Vehicle Miles Traveled (VMT)
- Threshold T-2.2: Substantially Inducing Additional Automobile Travel
- Threshold T-3: Substantially Increasing Hazards Due to a Geometric Design Feature or Incompatible Use

The thresholds were reviewed and analyzed, as detailed in the following Sections 4A through 4D.



Section 4A: Threshold T-1

Conflicting with Plans, Programs, Ordinances, or Policies Analysis

This section presents a review of the Project's consistency (i.e., whether there is a conflict) with plans and policies guiding development and transportation networks in Los Angeles.

PLANS, PROGRAMS, ORDINANCES, AND POLICIES

Table 2.1-1 of the TAG provides the City plans, policies, programs, ordinances, and standards relevant in determining project consistency (i.e., whether there is a conflict). Attachment D of the TAG, *Plans, Policies, and Programs Consistency Worksheet*, provides a structured approach to evaluate whether a project conflicts with the City's plans, programs, ordinances, or policies and to streamline the review by highlighting the most relevant plans, policies, and programs when assessing potential impacts to the City's transportation system. The *Plans, Policies, and Programs Consistency Worksheet* was completed for the Project and is provided in Appendix C.

The Project is consistent (i.e., does not conflict) with the City plans, policies, programs, ordinances, and standards listed in Table 2.1-1 of the TAG; therefore, the Project would not result in a significant impact under Threshold T-1. Detailed discussion of these plans, programs, ordinances, or policies related is provided below.

Mobility Plan

The Mobility Plan combines “complete street” principles with the following five goals that define the City's mobility priorities:

- **Safety First**: Design and operate streets in a way that enables safe access for all users, regardless of age, ability, or transportation mode of choice.

- World Class Infrastructure: A well-maintained and connected network of streets, paths, bikeways, trails, and more provides Angelenos with the optimum variety of mode choices.
- Access for All Angelenos: A fair and equitable system must be accessible to all and must pay particularly close attention to the most vulnerable users.
- Collaboration, Communication, and Informed Choices: The impact of new technologies on our day-to-day mobility demands will continue to become increasingly important to the future. The amount of information made available by new technologies must be managed responsibly in the future.
- Clean Environments and Healthy Communities: Active transportation modes such as bicycling and walking can significantly improve personal fitness and create new opportunities for social interaction, while lessening impacts on the environment.

An analysis of the Project's consistency (i.e., no conflict) with the Mobility Plan is provided in Table 4. As detailed in Chapter 2, the Mobility Plan identifies key corridors within the Study Area as components of various "mobility-enhanced networks." Though no specific improvements have been identified and there is no schedule for implementation, the mobility-enhanced networks represent a focus on improving a particular aspect of urban mobility, including transit, neighborhood connectivity, bicycles, pedestrians, and vehicles. The Project would not preclude the City from implementing Mobility Plan improvements.

The Mobility Plan also designates street and sidewalk width standards based on a street's functional classification. Los Angeles Municipal Code (LAMC) Section 12.37 states that a project must dedicate and improve adjacent streets to half-ROW standards consistent with the street designations of the Mobility Plan. The Project Site is bordered by Alameda Street, a designated Avenue I, College Street, a designated Modified Collector, Main Street, a designated Avenue II, and Bruno Street, a designed Collector in the Mobility Plan. A one-foot dedication on Alameda Street and College Street and a three-foot dedication on Main Street along the Project Site frontages would be provided to meet the half-ROW requirements and widen the sidewalks. While the Mobility Plan would have typically required an eight-foot dedication and improvement along Bruno Street to meet the half-ROW requirements, LADCP policy prohibits the City from requesting a dedication and improvement along Bruno Street adjacent to the Project Site due to the presence of historic granite pavers (Historic-Cultural Monument #211)³. As such, five-foot sidewalks are provided along Bruno Street so as not to disturb the historical pavers. An additional five feet would

³ An LADCP interdepartmental memorandum to the City's Department of Public Works, dated August 14, 2007, states that: "Under no circumstances, is the granite paving to be removed or covered in asphalt."

be provided to extend the proposed sidewalk to 10 feet along both ends of the block where the historical pavers are not present. The additional sidewalk width would enhance pedestrian walkability and allow for passenger pick-ups and drop-offs to occur outside of the travel lane and minimize disruption to through traffic along Bruno Street. The LADCP policy regarding the protection of the granite pavers is provided in Appendix D.

Vehicular access to the Project parking would be provided from College Street, a designated Modified Collector. Consistent with the driveway location planning guidelines, vehicular access to the Project would be placed on a non-arterial street. A separate driveway would be provided to the loading area west of the primary vehicular driveway. The driveways would be designed consistent with LADOT standards and all Americans with Disabilities Act (ADA) requirements. The Project would retain the existing on-street parking around the Project Site perimeter to the extent feasible. Pedestrian and bicycle access, as well as a passenger loading area along Bruno Street, would be provided separate from vehicle access and would connect to the internal pedestrian walkways to reduce potential conflicts with vehicle traffic. Further, the Project does not propose modifying, removing, or otherwise affecting existing bicycle infrastructure, and the Project vehicular access is not proposed along a street with an existing bicycle facility and would not preclude or prohibit any future roadway improvements proposed in the Mobility Plan.

The Project supports initiatives to create transit-oriented developments by proposing an office development with local-serving retail/restaurant uses located in an active commercial area near Chinatown and within proximity of the Metro A Line Chinatown Station, which provides a direct rail connection to Union Station. The Project's development of office and commercial uses enhances the value of the connection to Union Station, minimizes vehicle trips, and enhances proximity and convenience to jobs and services. The Project does not propose narrowing or shifting existing sidewalk placement or paving, narrowing, shifting, or removing an existing parkway. With the development of the Project, all four Project Site street frontages would be improved to provide wider pedestrian sidewalks. The Project would also provide a pedestrian drop-off area and pavement treatment along Bruno Street to provide a seamless connection between the pedestrian walkways and public sidewalks. Additionally, the Project would plant street trees, provide publicly accessible outdoor amenities, and landscaping elements to create a walkable and attractive pedestrian environment. As further detailed in Section 4B, the Project would implement TDM strategies to reduce the dependency on single-occupancy vehicles and

encourage the use of transit and other alternative modes of transportation. Thus, the Project would be consistent and not conflict with the goals of the Mobility Plan.

Plan for a Healthy Los Angeles

Plan for a Healthy Los Angeles: A Health and Wellness Element of the General Plan (LADCP, March 2015) (Plan for a Healthy Los Angeles) introduces guidelines for the City to follow to enhance the City's position as a regional leader in health and equity, encourage healthy design and equitable access, and increase awareness of equity and environmental issues.

An analysis of the Project's consistency (i.e., whether there is a conflict) with Plan for a Healthy Los Angeles is provided in Table 5. In summary, the Project would prioritize safety and access for all individuals utilizing the Project Site by complying with all ADA requirements and providing connections to pedestrian amenities. Further, the Project supports healthy lifestyles by locating employment opportunities within a TPA, providing bicycle parking, and enhancing the pedestrian environment through wider pedestrian sidewalks, publicly accessible outdoor amenities, and landscaping elements. Additionally, the Project local-serving commercial uses would be easily accessed by foot from surrounding neighborhoods. The Project would not displace existing housing; rather, it converts a surface parking lot into an active development with an office component and local-serving commercial space. As discussed in Section 4B, the Project would generate lower VMT per capita for employees than the average for this area. Thus, the Project would be consistent and not conflict with the goals of *Plan for a Healthy Los Angeles*.

Land Use Element of the General Plan

The City General Plan's Land Use Element contains 35 Community Plans that establish specific goals and strategies for the various neighborhoods across Los Angeles. The Project Site is located within the *Central City North Community Plan* area, as well as the City's *River Improvement Overlay District* (Revised January 12, 2015) (RIO District) area. The City is in the process of updating *Central City North Community Plan* and *Central City Community Plan* (LADCP, September 2016) as part of the DTLA 2040 Plan, which is currently pending adoption.

However, the existing *Central City North Community Plan* is currently in effect and the Project's consistency with it is described below.

Central City North Community Plan. A detailed analysis of the Project's consistency (i.e., whether there is a conflict) with *Central City North Community Plan* is detailed in Table 6. In summary, the Project would expand employment opportunities near accessible transit, encourage commercial development opportunities, and provide publicly accessible outdoor amenities and landscaped spaces to serve the recreational, environmental and health needs of the community. The Project would enhance pedestrian activity by locating commercial uses on the ground floor and encourage bicycle activity through provision of bicycle parking and amenities on-site. Additionally, the Project would provide wider sidewalks along all four Project Site frontages, as well as a pedestrian drop-off area and pavement treatment on Bruno Street. The Project would coordinate with the appropriate agencies and LADOT regarding any improvements to the existing bus stop on Alameda Street adjacent to the Project Site. As further discussed in Section 4B, the Project would implement a TDM program that would encourage employees and patrons of the Project to utilize alternative modes of travel. Thus, the Project would be consistent and not conflict with the objectives of *Central City North Community Plan*.

RIO District. The purpose of the RIO District is to support the goals of the City's *Los Angeles River Revitalization Master Plan* (April 2007) and promote multi-modal connection between the Los Angeles River and its surrounding neighborhoods with a safe, accessible, and aesthetically pleasing environment. The Project would comply with the design objectives outlined in the City's *Los Angeles River Design Guidelines* (July 29, 2015) as the Project would improve the public ROW along the Project Site frontages that could provide public access to the Los Angeles River, provide on-site bicycle amenities near the river corridor to encourage multi-modal transportation, and locate on-site parking or loading facilities away from the river corridor as to not disrupt the visual appearance to the river. As such, the Project would be consistent and not conflict with the objectives of the RIO District.

Specific Plans

The Project is not located within an area currently governed by a Specific Plan, so this analysis does not apply. Therefore, there is no conflict.

LAMC Section 12.21.A.16 (Bicycle Parking)

LAMC Section 12.21.A.16 details the bicycle parking requirements for new developments. The Project would provide 149 bicycle parking spaces, including 26 short-term and 123 long-term spaces, as well as bicycle showers and lockers. As further detailed in Section 5E, the proposed short-term and long-term bicycle parking would meet the LAMC requirements for the Project. Thus, the Project would be consistent (i.e., not conflict) with LAMC Section 12.21.A.16.

LAMC Section 12.26G (TDM Ordinance)

LAMC Section 12.26G, the TDM Ordinance (1993), establishes TDM requirements for non-residential projects, in addition to non-residential components of the mixed-use projects, in excess of 25,000 sf, including the Project. Key requirements of the TDM Ordinance applicable to the Project include providing a bulletin board or display case of transportation information, carpool/vanpool loading and designated parking areas, access from external circulation system to LAMC-required bicycle parking areas, designated pathways and safe routes from development buildings to public sidewalks, and, if determined to be necessary, improving bus stops. The TDM Ordinance is currently being updated and is expected to be completed prior to the anticipated occupancy of the Project. If approved and adopted, the Project would be subject to the terms of the proposed TDM Ordinance. The existing TDM Ordinance is currently in effect and the Project's consistency with it is described below.

The Project would implement TDM strategies that would include promotions and marketing (i.e., informational bulletin boards or digital displays) to educate and inform employees and visitors to the Project Site of available mobility options. Passenger loading activities would occur along Bruno Street at the passenger loading area as well as on-site in the parking garage. The Project would provide internal and external pedestrian connections to the public sidewalks and access to on-site bicycle parking areas. The Project would include pedestrian enhancements surrounding the Project Site, such as wider sidewalks, street trees, publicly accessible outdoor amenities, and landscaping elements for a more comfortable environment. A bus stop serving DASH Lincoln Heights/Chinatown is located on Alameda Street adjacent to the Project Site and, as such, the Project would coordinate with the appropriate agencies and LADOT regarding any improvements



to the existing bus stop. The Project would be consistent (i.e., not conflict) with the current TDM Ordinance and, therefore, would be consistent (i.e., not conflict) with LAMC Section 12.26G.

Vision Zero Action Plan / Vision Zero Corridor Plans

Vision Zero implements projects that are designed to increase safety on the most vulnerable City streets. As discussed in Chapter 2, the Project Site is not located along a roadway that is part of the HIN. Nonetheless, the Project would provide pedestrian enhancements along the Project Site frontages to improve the overall pedestrian experience. The Project improvements to the pedestrian environment would not preclude any future Vision Zero Safety Improvements by the City. Thus, the Project would be consistent (i.e., not conflict) with Vision Zero.

Streetscape Plans

The Project is not located within the boundaries of any streetscape plan, so this analysis does not apply. Therefore, there is no conflict.

Citywide Design Guidelines

Citywide Design Guidelines (Los Angeles City Planning Urban Design Studio, October 2019) identifies urban design principles to guide architects and developers in designing high-quality projects that meet the City's functional, aesthetic, and policy objectives and help foster a sense of community. The design guidelines are organized around three design approaches, Pedestrian-First Design, 360-Degree Design, and Climate-Adapted Design. Per the TAG, a detailed analysis of the Project's consistency with the following guidelines of the Pedestrian-First Design was conducted:

- Guideline 1: Promote a safe, comfortable, and accessible pedestrian experience for all.
- Guideline 2: Carefully incorporate vehicular access such that it does not degrade the pedestrian experience.
- Guideline 3: Design projects to actively engage with streets and public space and maintain human scale.

An analysis of the Project's consistency (i.e., whether it would conflict) with the guidelines of the Pedestrian-First Design approach is provided in Table 7. In summary, the Project would provide pedestrian enhancements including wider sidewalks, pedestrian connections throughout the Project Site, and publicly accessible outdoor amenities. As needed, the Project would upgrade existing crosswalks at the adjacent signalized intersection and existing bus stop on Alameda Street along the Project Site frontage. New street trees and other landscaping elements would be incorporated to provide adequate shade and create a more comfortable environment for pedestrians. The Project would provide bicycle parking to encourage bicycling and is located near multiple transit services to promote use of transit and other alternative modes. Further, the active ground floor facilities would ensure that the Project engages with the street and its surrounding uses. Thus, the Project design provides for the safety, comfort, and accessibility of pedestrians, and does not conflict with the Pedestrian-First Design approach of *Citywide Design Guidelines*.

CUMULATIVE ANALYSIS

In addition to potential Project-specific impacts, the TAG requires that the Project be reviewed in combination with nearby Related Projects to determine if there may be a cumulatively significant impact resulting from inconsistency with a particular program, plan, policy, or ordinance. In accordance with the TAG, the cumulative analysis must include consideration of any Related Projects within 0.50 miles of the Project Site and any transportation system improvements in the vicinity. Related Projects located within 0.50 miles of the Project Site and within 0.25 miles from the farthest study intersections are identified in Table 2.

Similar to the Project, the Related Projects, which are also located within the City and subject to LADOT review, would be individually required to comply with relevant programs, plans, policies, and ordinances addressing the circulation system. Thus, the Project, together with the Related Projects, would not result in cumulative impacts and would be consistent (i.e., not conflict) with



each of the plans, ordinances, or policies reviewed. The Project and the Related Projects would not interfere with any of the general policy recommendations and/or pilot proposals and, therefore, there would be no significant Project-level impact or cumulative impact.

TABLE 4
PROJECT CONSISTENCY WITH MOBILITY PLAN 2035

Objective, Policy, Program, or Plan [a]	Analysis of Project Conflicts/Consistency
Chapter 1 – Safety First	
<u>Policy 1.1 Roadway User Vulnerability</u> Design, plan, and operate streets to prioritize the safety of the most vulnerable roadway user.	No Conflict. While not applicable to private development projects, the Project would not conflict with this policy because it would include pedestrian enhancements within and along the Project Site frontages to prioritize the safety of all roadway users. Such enhancements include wider sidewalks on Alameda Street, College Street, and Main Street along the Project Site frontages, a passenger loading area and pavement treatment to provide a seamless connection between the internal pedestrian walkways and the public sidewalks on Bruno Street, and publicly accessible outdoor amenities. Separate pedestrian and bicycle access to the Project Site would be provided via office lobbies and commercial entrances along Alameda Street, Main Street, and Bruno Street. All improvements within the public right-of-way would be designed and completed in consultation with Los Angeles Department of Transportation (LADOT), or other agencies, and in compliance of standard guidelines, including Americans with Disabilities Act (ADA). Therefore, the Project is consistent and does not conflict with Policy 1.1.
<u>Policy 1.2 Complete Streets</u> Implement a balanced transportation system on all streets, tunnels, and bridges using complete streets principles to ensure the safety and mobility of all users.	No Conflict. While not applicable to private development projects, the Project would support the mobility goals of the City and help facilitate pedestrian and bicycle accessibility and improve the safety and mobility of all users. The Project would conform to all design element requirements which may affect public rights-of-way, including proper driveway alignment, sidewalk widths, and design that would not hinder sight distance, mobility, or accessibility. Therefore, the Project is consistent and does not conflict with Policy 1.2.
<u>Policy 1.3 Safe Routes to Schools</u> Prioritize the safety of school children on all streets regardless of highway classifications.	No Conflict. There are no schools adjacent to the Project Site. Castelar Elementary School and Ann Elementary School are located approximately 1,100 feet west and 1,200 feet north of the Project Site, respectively. All infrastructure and safety improvements identified as part of the City's Safe Routes to School program that are located within the vicinity of the Project Site have been implemented. The Project would not preclude any future improvements of nearby crossings. Therefore, the Project is consistent and does not conflict with Policy 1.3.
<u>Policy 1.6 Multi-Modal Detour Facilities</u> Design detour facilities to provide safe passage for all modes of travel.	No Conflict. The Project would prepare a Construction Traffic Management Plan (described in Section 5D of this report) that would include detour routes for all applicable travel modes, including pedestrian and transit users, and any impediments to the public right-of-way. Therefore, the Project is consistent and does not conflict with Policy 1.6.
Chapter 2 – World Class Infrastructure	

TABLE 4 (CONT'D)
PROJECT CONSISTENCY WITH MOBILITY PLAN 2035

Objective, Policy, Program, or Plan [a]	Analysis of Project Conflicts/Consistency
<u>Policy 2.2 Complete Streets Design Guide</u> Establish the Complete Streets Design Guide as the City's document to guide the operations and design of streets and other public rights-of-way.	No Conflict. While not applicable to private development projects, the Project would not conflict with this policy because it would conform to all design element requirements which may affect public right-of-way, including proper driveway alignment, sidewalk widths to the extent feasible, improved lighting elements, and landscaping design that would not hinder sight distance, mobility, or accessibility. Therefore, the Project is consistent and does not conflict with Policy 2.2.
<u>Policy 2.3 Pedestrian Infrastructure</u> Recognize walking as a component of every trip, and ensure high-quality pedestrian access in all site planning and public right-of-way modifications to provide a safe and comfortable walking environment.	No Conflict. College Street and Main Street along the Project Site frontages are designated as part of the Pedestrian Enhanced District. The Project would enhance pedestrian access within and around the Project Site by providing connections to pedestrian walkways, publicly accessible outdoor amenities, and landscaping elements. The Project would provide a one-foot dedication on College Street and a three-foot dedication on Main Street to meet the Mobility Plan street standards and widen the pedestrian sidewalk. The Project would also provide the required dedications along Alameda Street. Separate pedestrian entrances from vehicular driveways to the Project Site would also be provided. All driveways would be designed to provide an adequate pedestrian refuge area between the driveways where necessary. Therefore, the Project is consistent and does not conflict with Policy 2.3.
<u>Policy 2.4 Neighborhood Enhanced Network</u> Provide a slow speed network of locally serving streets.	No Conflict. College Street along the Project Site has been identified as part of the Neighborhood Enhanced Network. College Street would provide direct access to the Project Site, however, the Project frontages would be lined with street trees as visual cues to the neighborhood character of the streets. The Project would not impede the development of any future improvements on this roadway. Therefore, the Project is consistent and does not conflict with Policy 1.1.
<u>Policy 2.5 Transit Network</u> Improve the performance and reliability of existing and future bus service.	No Conflict. Main Street along the Project Site has been identified as part of the Transit Enhanced Network. The Project would not provide any vehicular access along this roadway, and, as such, would not preclude future improvements to existing and/or future transit services or operations. The Project would encourage transit usage by developing an office project and ground floor commercial uses with convenient access to nearby rail and bus transit services. Therefore, the Project is consistent and does not conflict with Policy 2.5.
<u>Policy 2.6 Bicycle Networks</u> Provide safe, convenient, and comfortable local and regional bicycling facilities for people of all types and abilities. (includes scooters, skateboards, rollerblades, etc.)	No Conflict. There are no existing bicycle facilities adjacent to the Project Site, and, as such, the Project does not propose modifying, removing, or otherwise affecting existing bicycle infrastructure. Main Street along the Project Site has been identified as part of the Bicycle Enhanced Network. The Project driveway is proposed on College Street and would not be located along a street with an existing or proposed bicycle facility. The Project would provide bicycle parking and amenities such as showers, lockers/storage, and repair stands to encourage bicycling for employees and patrons

TABLE 4 (CONT'D)
PROJECT CONSISTENCY WITH MOBILITY PLAN 2035

Objective, Policy, Program, or Plan [a]	Analysis of Project Conflicts/Consistency
	to the Project Site. The Project would not preclude future implementation of the bicycle infrastructure. Therefore, the Project is consistent and does not conflict with Policy 2.6.
<u>Policy 2.9 Multiple Networks</u> Consider the role of each mode enhanced network when designing a street that included multiple modes.	No Conflict. As detailed in Policies 2.3 to 2.6 and illustrated in Figure 16, the Project vicinity includes a mix of enhanced networks identified as part of the Mobility Plan. The Project would improve the overall pedestrian experience surrounding the Project Site and would not conflict with the City's bicycle plans as identified in the Mobility Plan. Therefore, the Project is consistent and does not conflict with Policy 2.9.
<u>Policy 2.10 Loading Areas</u> Facilitate the provision of adequate on and off-street loading areas.	No Conflict. The Project would provide a loading area on-site with a separate driveway located on College Street. The loading area would be designed to meet the Project Site loading needs without disrupting operations within the public right-of-way. Therefore, the Project is consistent and does not conflict with Policy 2.10.
<u>Policy 2.17 Street Widenings</u> Carefully consider the overall implications (costs, character, safety, travel, infrastructure, environment) of widening a street before requiring the widening, even when the existing right of way does not include a curb and gutter or the resulting roadway would be less than the standard dimension.	No Conflict. The Project would provide a one-foot dedication on both Alameda Street and College Street and a three-foot dedication on and Main Street to meet the Mobility Plan half right-of-way requirements, which would widen the pedestrian sidewalks. While the Mobility Plan would have typically required an eight foot dedication and improvement along Bruno Street to meet the half right-of-way requirements, Los Angeles Department of City Planning policy prohibits the City from requesting a dedication and improvement along Bruno Street adjacent to the Project Site due to the presence of historic granite pavers. Nonetheless, the Project includes a pavement treatment along the Bruno Street frontage to provide a seamless connection between the pedestrian walkways and public sidewalks. Therefore, the Project is consistent and does not conflict with Policy 2.17.
<i>Chapter 3 – Access for All Angelenos</i>	
<u>Policy 3.1 Access for All</u> Recognize all modes of travel, including pedestrian, bicycle, transit, and vehicular modes – including goods movement – as integral components of the City's transportation system.	No Conflict. The Project encourages multi-modal transportation alternatives and access for all travel modes to and from the Project Site as it is located diagonally opposite the Metro A Line Chinatown Station. The Project provides separate pedestrian entrances and would provide on-site bicycle parking and amenities to encourage walking and bicycling. The Project encourages transit usage by developing an office project with local-serving commercial uses located in proximity to transit. The Project would support those employees and visitors who choose to travel by automobile through the provision of one primary driveway along College Street to the parking garage. Therefore, the Project is consistent and does not conflict with Policy 3.1.

TABLE 4 (CONT'D)
PROJECT CONSISTENCY WITH MOBILITY PLAN 2035

Objective, Policy, Program, or Plan [a]	Analysis of Project Conflicts/Consistency
<u>Policy 3.2 People with Disabilities</u> Accommodate the needs of people with disabilities when modifying or installing infrastructure in the public right-of-way.	No Conflict. The Project would be designed consistent with all ADA requirements and would provide direct connections to pedestrian amenities at adjacent and nearby intersections. Therefore, the Project is consistent and does not conflict with Policy 3.2.
<u>Policy 3.3 Land Use Access and Mix</u> Promote equitable land use decisions that result in fewer vehicle trips by providing greater proximity and access to jobs, destinations, and other neighborhood services.	No Conflict. The Project would develop office and commercial uses and promote jobs/housing balance within proximity of employment, commercial, and cultural destinations, and local-serving retail and restaurants in an urban area. The Project's and its surrounding mix of land uses would encourage ridesharing and use of alternative transportation modes to minimize vehicle trips. The Project supports initiatives to create transit-oriented developments as it would develop on an infill site located adjacent to and near multiple transit services. Additionally, the Project includes design elements considered as TDM strategies that would further reduce the number of single occupancy vehicle trips to the Project Site. Therefore, the Project is consistent and does not conflict with Policy 3.3.
<u>Policy 3.4 Transit Services</u> Provide all residents, workers, and visitors with affordable, efficient, convenient, and attractive transit services.	No Conflict. The Project is located diagonally opposite the Metro A Line Chinatown station as well as bus stops serviced by local and rapid bus lines. Access to nearby transit stops would be maintained with safe and convenient paths of travel from the Project Site. Therefore, the Project is consistent and does not conflict with Policy 3.4.
<u>Policy 3.5 Multi-Modal Features</u> Support "first-mile, last-mile solutions" such as multi-modal transportation services, organizations, and activities in the areas around transit stations and major bus stops (transit stops) to maximize multi-modal connectivity and access for transit riders.	No Conflict. The Project would support "first-mile, last-mile solutions" by developing a commercial office project located in an active urban area near major transit stops and local and rapid bus stops. Additionally, the Project would include several TDM strategies that would encourage the use of transit and other alternative modes of transportation. Therefore, the Project is consistent and does not conflict with Policy 3.5.
<u>Policy 3.6 Regional Transportation & Union Station</u> Continue to promote Union Station as the major regional transportation hub linking Amtrak, Metrolink, Metro Rail, and high-speed rail service.	No Conflict. The Project is located approximately 0.40 miles north of Union Station and diagonally opposite the Metro A Line Chinatown Station, which provides a direct connection to Union Station. Therefore, the Project is consistent and does not conflict with Policy 3.6.
<u>Policy 3.7 Regional Transit Connections</u> Improve transit access and service to major regional destinations, job centers, and inter-modal facilities.	No Conflict. The Project would improve access between transit and major regional destinations by developing a mix of office with commercial uses and promoting jobs/housing balance in an urban area near transit. Therefore, the Project is consistent and does not conflict with Policy 3.7.

TABLE 4 (CONT'D)
PROJECT CONSISTENCY WITH MOBILITY PLAN 2035

Objective, Policy, Program, or Plan [a]	Analysis of Project Conflicts/Consistency
<u>Policy 3.8 Bicycle Parking</u> Provide bicyclists with convenient, secure, and well-maintained bicycle parking facilities.	No Conflict. The Project would provide 123 long-term and 26 short-term bicycle parking and bicycle amenities such as showers, lockers/storage, and repair stands to encourage bicycling for employees and visitors to the Project Site. Therefore, the Project is consistent and does not conflict with Policy 3.8.
<i>Chapter 4 – Collaboration, Communication, & Informed Choices</i>	
<u>Policy 4.8 Transportation Demand Management Strategies</u> Encourage greater utilization of Transportation Demand Management (TDM) strategies to reduce dependence on single-occupancy vehicles.	No Conflict. The Project would encourage alternative modes of travel through its proximity to multiple transit services. Additionally, the Project would include TDM strategies as part of its TDM program to reduce the number of single occupancy vehicle trips to the Project Site, such as promotions and marketing to educate and inform employees and visitors of available mobility options, parking incentives and allowable reductions, ride-share program, on-site bicycle parking and amenities, etc. Therefore, the Project is consistent and does not conflict with Policy 4.8.
<u>Policy 4.13 Parking and Land Use Management</u> Balance on-street and off-street parking supply with other transportation and land use objectives.	No Conflict. The Project would provide sufficient off-street parking to accommodate the needs of employees and visitors at the Project Site. To the extent feasible, the Project would maintain existing on-street parking around the Project Site frontages. Therefore, the Project is consistent and does not conflict with Policy 4.13.
<u>Policy 4.14 Wayfinding</u> Provide widespread, user-friendly information about mobility options and local destinations, delivered through a variety of channels including traditional signage and digital platforms.	No Conflict. The Project would include marketing activities, including printed/posted materials and digitally distributed information, to ensure that employees and visitors at the Project Site are aware of all mobility options available on-site and in the surrounding area. Therefore, the Project is consistent and does not conflict with Policy 4.14.
<u>Policy 4.15 Public Hearing Process</u> Require a public hearing for the proposed removal of an existing or designated bicycle lane or path.	No Conflict. The Project would not remove any existing or designated bicycle lane or path. The Project is subject to public hearings as part of its entitlement process. Therefore, the Project is consistent and does not conflict with Policy 4.15.
<i>Chapter 5 – Clean Environments & Healthy Communities</i>	
<u>Policy 5.1 Sustainable Transportation</u> Encourage the development of a sustainable transportation system that promotes environmental and public health.	No Conflict. While not applicable to private development projects, the Project would support this policy because it would encourage sustainable transportation by providing on-site bicycle parking facilities and amenities and separate pedestrian entrances, both of which would promote active transportation modes such as biking and walking. Additionally, the Project is located nearby transit stops serviced by rail and bus lines providing employees and visitors to the Project with public transportation alternatives. Therefore, the Project is consistent and does not conflict with Policy 5.1.

TABLE 4 (CONT'D)
PROJECT CONSISTENCY WITH MOBILITY PLAN 2035

Objective, Policy, Program, or Plan [a]	Analysis of Project Conflicts/Consistency
<u>Policy 5.2 Vehicle Miles Traveled (VMT)</u> Support ways to reduce vehicle miles traveled (VMT) per capita.	No Conflict. The Project is estimated to generate lower work VMT per employee than the average for the area with implementation of the mitigation measure, as demonstrated in Section 4B of this Transportation Assessment. Therefore, the Project is consistent and does not conflict with Policy 5.2.
<u>Policy 5.4 Clean Fuels and Vehicles</u> Continue to encourage the adoption of alternative fuels, new mobility technologies, and supporting infrastructure.	No Conflict. The Project would provide electric vehicle (EV) parking and charging stations in accordance with applicable Los Angeles Municipal Code requirements to accommodate those who arrive in EVs. By providing this type of service, the Project promotes usage of EVs, which produce less GHG emissions compared to non-electric vehicles. Therefore, the Project is consistent and does not conflict with Policy 5.4.

Notes:

[a] Objectives, Policies, Programs, or Plans based on information provided in *Mobility Plan 2035: An Element of the General Plan* (Los Angeles Department of City Planning, January 2016).

TABLE 5
PROJECT CONSISTENCY WITH PLAN FOR A HEALTHY LOS ANGELES

Objective, Policy, Program, or Plan [a]	Analysis of Project Conflicts/Consistency
<i>Chapter 1 – Los Angeles, a Leader in Health and Equity</i>	
<u>Policy 1.5 Plan for Health</u> Improve Angelenos’ health and well-being by incorporating a health perspective into land use, design, policy, and zoning decisions through existing tools, practices, and programs.	No Conflict. While not applicable to private development projects, the Project would support this policy and its initiatives to create transit-oriented developments by developing an office project with local-serving commercial uses and promoting jobs/housing balance in a dense urbanized area well served by transit. The Project would provide on-site bicycle parking and amenities to encourage bicycling for employees and visitors to the Project Site. As such, it would encourage the use of active travel modes and thereby promote healthy living. It would also provide pedestrian enhancements around the Project Site, including wider pedestrian sidewalks on Alameda Street, College Street, and Main Street, a passenger loading area and pavement treatment to provide a seamless connection between the internal pedestrian walkways and the public sidewalks on Bruno Street, and publicly accessible outdoor amenities. Therefore, the Project is consistent and does not conflict with Policy 1.5.
<u>Policy 1.7 Displacement and Health</u> Reduce the harmful health impacts of displacement on individuals, families and communities by pursuing strategies to create opportunities for existing residents to benefit from local revitalization efforts by: creating local employment and economic opportunities for low-income residents and local small businesses; expanding and preserving existing housing opportunities available to low-income residents; preserving cultural and social resources; and creating and implementing tools to evaluate and mitigate the potential displacement caused by large-scale investment and development.	No Conflict. The Project would propose 224,597 square feet of office uses and ground floor retail and restaurant space that can provide employment and entrepreneurial opportunities. The Project does not displace any existing housing; rather, it converts a surface parking lot into an active development with office and local-serving retail and restaurant uses. Therefore, the Project is consistent and does not conflict with Policy 1.7.
<i>Chapter 2 – A City Built for Health</i>	

TABLE 5 (CONT'D)
PROJECT CONSISTENCY WITH PLAN FOR A HEALTHY LOS ANGELES

Objective, Policy, Program, or Plan [a]	Analysis of Project Conflicts/Consistency
<u>Policy 2.1 Access to Goods and Services</u> Enhance opportunities for improved health and well-being for all Angelenos by increasing the availability of and access to affordable goods and services that promote health and healthy environments, with a priority on low-income neighborhoods.	No Conflict. The Project provides employment and entrepreneurial opportunities through the office development and commercial retail/restaurant space. Therefore, the Project is consistent and does not conflict with Policy 2.1.
<u>2.11 Foundation for Health</u> Lay the foundation for healthy communities and healthy living by promoting infrastructure improvements that support active transportation with safe, attractive, and comfortable facilities that meet community needs; prioritize implementation in communities with the greatest infrastructure deficiencies that threaten the health, safety, and well-being of the most vulnerable users.	No Conflict. The Project would support active transportation through pedestrian enhancements within and along the Project Site frontages such as wider sidewalks on Alameda Street, College Street, and Main Street along the Project Site frontages, a passenger loading area and pavement treatment to provide a seamless connection between the internal pedestrian walkways and the public sidewalks on Bruno Street, and publicly accessible outdoor amenities.
<i>Chapter 5 – An Environment Where Life Thrives</i>	
<u>Policy 5.7 Land Use Planning for Public Health and GHG Emission Reduction</u> Promote land use policies that reduce per capita greenhouse gas emissions, result in improved air quality and decreased air pollution, especially for children, seniors and others susceptible to respiratory diseases.	No Conflict. While not applicable to private development projects, the Project would not conflict with this policy because it is estimated to generate lower work VMT per employee than the average for the area with implementation of the mitigation measure, as demonstrated in Section 4B of this Transportation Assessment. VMT directly contributes to GHG emissions, so a reduced VMT per capita also reduces GHG per capita. Therefore, the Project is consistent and does not conflict with Policy 5.7.

Notes:

[a] Objectives, Policies, Programs, or Plans based on information provided in *Plan for a Healthy Los Angeles: A Health and Wellness Element of the General Plan* (Los Angeles Department of City Planning, November 2021).

TABLE 6
PROJECT CONSISTENCY WITH CENTRAL CITY NORTH COMMUNITY PLAN

Objective, Policy, Program, or Plan [a]	Analysis of Project Conflicts/Consistency
Transportation	
<u>Policy 10-1.1</u> Coordinate with the MTA to improve local bus service to and within the Central City North community and on a Bus Restructuring Program for the area.	No Conflict. While not applicable to private development projects, the Project would not conflict with this policy because it would coordinate with the appropriate agencies regarding any improvements to local transit infrastructure (e.g. benches, shelters, lighting, signage, etc.) in the area, as needed. Therefore, the Project is consistent and does not conflict with Policy 10-1.1.
<u>Policy 10-1.2</u> Encourage the provision of safe, attractive and clearly identifiable transit stops with user friendly design amenities.	No Conflict. An existing bus stop is located along Alameda Street adjacent to the Project Site frontage. The bus stop would be maintained at its current location. Any necessary adjustments to the bus stop would be coordinated with LADOT and other appropriate agencies. The Project would not preclude future implementation of transit stop improvements. Therefore, the Project is consistent and does not conflict with Policy 10-1.2.
<u>Policy 11-1.1</u> Install ATSAC equipment at an accelerated rate with expanded funding.	No Conflict. While not applicable to private development projects, the Project would not preclude any future improvements to ATSAC equipment. The majority, if not all, signalized intersections within the City are currently equipped with both ATSAC and Adaptive Traffic Control System (ATCS). Therefore, the Project is consistent and does not conflict with Policy 11-1.1.
<u>Policy 12-1.1</u> Encourage non-residential development to provide employee incentives for utilizing alternatives to the automobile (i.e., carpools, vanpools, buses, flex time, bicycles, and walking, etc.)	No Conflict. The Project is a non-residential development and would implement a TDM Program to encourage employees and visitors to use other alternative modes of transportation including public transit, carpool/vanpool, biking/scooter, and walking. Therefore, the Project is consistent and does not conflict with Policy 12-1.1.
<u>Policy 12-1.3</u> Require that proposals for major new non-residential development projects include submission of a TDM Plan to the City.	No Conflict. The Project is a non-residential development and would submit a TDM Plan to the City for approval, as required. Therefore, the Project is consistent and does not conflict with Policy 12-1.3.
<u>Policy 12-1.4</u> TDM measures in Central City North should be consistent with adopted City policy.	No Conflict. As detailed in Section 4B of the Transportation Assessment, the proposed TDM strategies would be consistent with adopted City policy. Therefore, the Project is consistent and does not conflict with Policy 12-1.4.
Non-Motorized Transportation	

TABLE 6 (CONT'D)
PROJECT CONSISTENCY WITH CENTRAL CITY NORTH COMMUNITY PLAN

Objective, Policy, Program, or Plan [a]	Analysis of Project Conflicts/Consistency
<u>Policy 13-1.1</u> Plan for and encourage funding and construction of bicycle facilities connecting residential neighborhoods to schools, open space areas, and employment centers.	No Conflict. While not applicable to private development projects, the Project would not preclude any future implementation of bicycle infrastructure. Main Street has been identified as part of the Bicycle Enhanced Network in the Mobility Plan. Access to the Project Site is not proposed along this roadway and would not disrupt the proposed on-street bicycle facilities. Additionally, the Project would encourage bicycling as it would provide bicycle parking and amenities such as showers, lockers/storage, and repair stands. Therefore, the Project is consistent and does not conflict with Policy 13-1.1.
<u>Policy 13-1.2</u> Identify bicycle facilities along arterials in the community.	No Conflict. This Study identifies existing and proposed bicycle facilities within the Study Area. Existing bicycle facilities along arterials include Class III bicycle routes along New High Street/Spring Street south of Ord Street and bikeshare stations located throughout the Study Area. Proposed bicycle facilities along arterials have been identified as part of the Bicycle Enhanced Network and Bicycle Lane Network and include Broadway, Spring Street, Alameda Street, Main Street, Vignes Street, and Cesar E. Chavez Avenue. Therefore, the Project is consistent and does not conflict with Policy 13-1.2.
<u>Policy 13-1.3</u> Assure that local bicycle facilities are linked with the facilities of neighboring areas of the City.	No Conflict. While not applicable to private development projects, the Project would not preclude any future implementation of bicycle infrastructure. No bicycle facilities are currently provided adjacent to the Project Site. Main Street has been identified as part of the Bicycle Enhanced Network identified in the Mobility Plan. Therefore, the Project is consistent and does not conflict with Policy 1.1.
<u>Policy 13-1.4</u> Encourage the provision of changing rooms, showers, and bicycle storage at new and existing and non-residential developments and public places.	No Conflict. The Project would provide 123 long-term and 26 short-term bicycle parking spaces and bicycle amenities such as showers, lockers/storage, and repair stands. Therefore, the Project is consistent and does not conflict with Policy 13-1.4.
<u>Policy 13-2.1</u> Encourage the safe utilization of easements and/or rights-of-way along flood control channels, public utilities, railroad rights-of-way, and streets wherever feasible for the use of bicycles and/or pedestrians.	No Conflict. The Project would provide a one-foot dedication on both Alameda Street and College Street and a three-foot dedication on Main Street along the Project Site frontages to provide wider pedestrian sidewalks. The Project would also provide pavement treatment along Bruno Street to provide a seamless connection to public sidewalks. Therefore, the Project is consistent and does not conflict with Policy 13-2.1.

TABLE 6 (CONT'D)
PROJECT CONSISTENCY WITH CENTRAL CITY NORTH COMMUNITY PLAN

Objective, Policy, Program, or Plan [a]	Analysis of Project Conflicts/Consistency
<u>Policy 13-2.2</u> Require the installation of sidewalks with all new roadway construction and significant reconstruction of existing roadways.	No Conflict. As detailed in Policy 13-2.1, the Project would provide a one-foot dedication on both Alameda Street and College Street and a three-foot dedication on Main Street along the Project Site frontages to provide wider pedestrian sidewalks. Therefore, the Project is consistent and does not conflict with Policy 13-2.2.
<i>Parking</i>	
<u>Policy 14-1.1</u> Consolidate parking, where appropriate, to eliminate the number of ingress and egress points onto the arterial.	No Conflict. Vehicular access to/from the parking garage would be provided at one driveway on College Street. A separate driveway to the loading area is also provided on College Street. Therefore, the Project is consistent and does not conflict with Policy 14-1.1.
<u>Policy 14-1.2</u> New parking lots and garages shall be developed in accordance with design standards.	No Conflict. The parking garage and driveways would be designed in compliance to standard guidelines. Therefore, the Project is consistent and does not conflict with Policy 14-1.2.
<i>Capital Improvements</i>	
<u>Policy 16-1.1</u> To the extent feasible and consistent with the Mobility Plan 2035's and the Community Plans' policies promoting multimodal transportation (e.g. walking, bicycling, driving and taking public transit) and safety, maintain a satisfactory LOS for streets that should not exceed LOS "D" for Boulevards, Avenues, and Collector Streets. If existing levels of service are LOS "E" or LOS "F" on a portion of a arterial or collector street, then the level of service for future growth should be maintained at LOS "E", where feasible and consistent with the policies of the Mobility Plan.	No Conflict. Under State of California Senate Bill 743, the focus of transportation analysis shifted from vehicular delay (LOS) to VMT. Thus, a project's CEQA transportation-related analysis and resulting impacts are assessed via VMT methodology. LOS methodology is no longer applicable for purposes of identifying a project's CEQA transportation-related impacts. Nevertheless, Section 5B of the Transportation Assessment details the non-CEQA LOS operations at the nearby study intersections selected for operational evaluation. The Project would provide pedestrian enhancements around the Project Site, including wider sidewalks, landscaping elements, crosswalk improvements, and publicly accessible outdoor amenities. The Project would implement various TDM strategies as part of its TDM program to encourage employee and visitor use of public transit, carpooling/vanpooling, and biking/scooter to work, and support strategies to further promote alternative transportation modes and reduce single occupancy trips to the Project Site. Therefore, the Project is consistent and does not conflict with Policy 16-1.1.

Notes:

[a] Objectives, Policies, Programs, or Plans based on information provided in *Central City North Community Plan* (Los Angeles Department of City Planning, December 15, 2000)

TABLE 7
PROJECT CONSISTENCY WITH CITYWIDE DESIGN GUIDELINES

Objective, Policy, Program, or Plan [a]	Analysis of Project Conflicts/Consistency
<i>Pedestrian-First Design</i>	
<u>Guideline 1: Promote a safe, comfortable, and accessible pedestrian experience for all</u> Design projects to be safe and accessible and contribute to a better public right-of-way for people of all ages, genders, and abilities, especially the most vulnerable - children, seniors, and people with disabilities. <u>Guideline 2: Carefully incorporate vehicular access such that it does not degrade the pedestrian experience</u> Design to avoid pedestrian and vehicular conflicts and to create an inviting and comfortable public right-of-way. A pleasant and welcoming public realm reinforces walkability and improves the quality of life for users. <u>Guideline 3: Design projects to actively engage with streets and public space and maintain human scale</u> New projects should be designed to contribute to a vibrant and attractive public realm that promotes a sense of civic pride. Better connections within the built environment contribute to a livable and accessible city and a healthier public realm.	No Conflict. The Project would include pedestrian enhancements within and along the Project Site frontages. The Project would provide a one-foot dedication on both Alameda Street and College Street and a three-foot dedication on Main Street along the Project Site frontages to provide wider pedestrian sidewalks. Additionally, the Project would provide a passenger loading area and install pavement treatment to provide a seamless connection between the internal pedestrian walkways and the public sidewalks on Bruno Street and provide publicly accessible outdoor amenities. The adjacent sidewalks would be lined with street trees and landscaping elements to provide shade and create a more comfortable environment for pedestrians. The Project would provide bicycle parking and amenities to encourage bicycling. The Project is located near multiple transit services to promote the use of transit and other alternative modes of transportation. Pedestrian and bicycle access to the Project Site would be separated from vehicles to minimize potential vehicle/pedestrian/bicycle conflicts. Further, the orientation of the Project design and active ground floor facilities ensure that the Project actively engages with the street and its surrounding uses. Therefore, the Project is consistent and does not conflict with Guidelines 1, 2, and 3.

Notes:

[a] Objectives, Policies, Programs, or Plans based on information provided in the *Citywide Design Guidelines* (Los Angeles Department of City Planning, 2019).

Section 4B: Threshold T-2.1 Causing Substantial VMT Analysis

Threshold T-2.1 states that a commercial project would result in a significant VMT impact if it cannot meet the work VMT per employee of 15% below the existing average work VMT per employee for the Area Planning Commission (APC) area in which the project is located.

The VMT analysis presented below was conducted in accordance with the TAG, which satisfies State requirements under SB 743.

VMT METHODOLOGY

The following describes the methodology by which vehicle trips and VMT are calculated in *City of Los Angeles VMT Calculator Version 1.4* (LADOT, June 2023) (VMT Calculator), as detailed in *City of Los Angeles VMT Calculator Documentation* (LADOT and LADCP, May 2020). LADOT developed the VMT Calculator to estimate project-specific daily household VMT per capita and daily work VMT per employee for developments within City limits, which are based on the following types of one-way trips:

- Home-Based Work Production: trips to a workplace destination originating from a residential use
- Home-Based Other Production: trips to a non-workplace destination (e.g., retail, restaurant) originating from a residential use
- Home-Based Work Attraction: trips to a workplace destination originating from a residential use

As detailed in *City of Los Angeles VMT Calculator Documentation*, the household VMT per capita threshold applies to Home-Based Work Production and Home-Based Other Production trips, and the work VMT per employee threshold applies to Home-Based Work Attraction trips, as the location and characteristics of residences and workplaces are often the main drivers of VMT, as

detailed in Appendix 1 of *Technical Advisory on Evaluating Transportation Impacts in CEQA* (Governor's Office of Planning and Research, December 2018).

Other types of trips generated in the VMT Calculator include Non-Home-Based Other Production (trips to a non-residential destination originating from a non-residential use), Home-Based Other Attraction (trips to a non-workplace destination originating from a residential use), and Non-Home-Based Other Attraction (trips to a non-residential destination originating from a non-residential use). These trip types are not factored into the VMT per capita and VMT per employee thresholds as those trips are typically localized and are assumed to have a negligible effect on the VMT impact assessment. However, those trips are factored into the calculation of total project VMT for screening purposes when determining if VMT analysis would be required.

Table 2.2-1 of the TAG details the following daily household VMT per capita and daily work VMT per employee impact criteria (15% below the APC average) for the APC areas:

APC	Daily Household VMT per Capita	Daily Work VMT per Employee
Central	6.0	7.6
East LA	7.2	12.7
Harbor	9.2	12.3
North Valley	9.2	15.0
South LA	6.0	11.6
South Valley	9.4	11.6
West LA	7.4	11.1

The Project is located in the Central APC area and, therefore, has a daily work VMT per employee impact threshold of 7.6.

Travel Behavior Zone (TBZ)

The City developed TBZ categories to determine the magnitude of VMT and vehicle trip reductions that could be achieved through TDM strategies. As detailed in the VMT Calculator Documentation, the development of the TBZs considered the population density, land use density, intersection density, and proximity to transit of each Census tract in the City and are categorized as follows:

- Suburban (Zone 1): Very low-density primarily centered around single-family homes and minimally connected street network.
- Suburban Center (Zone 2): Low-density developments with a mix of residential and commercial uses with larger blocks and lower intersection density.
- Compact Infill (Zone 3): Higher density neighborhoods that include multi-story buildings and well-connected streets.
- Urban (Zone 4): High-density neighborhoods characterized by multi-story buildings with a dense road network.

The VMT Calculator determines a project's TBZ based on the latitude and longitude of the project address. The Project is located in an Urban (Zone 4) TBZ.

Mixed-Use Development Methodology

As detailed in the VMT Calculator Documentation, the VMT Calculator accounts for the interaction of land uses within a mixed-use development and considers the following sociodemographic, land use, and built environment factors for the Project area:

- The project's jobs/housing balance
- Land use density of the project
- Transportation network connectivity
- Availability of and proximity to transit
- Proximity to retail and other destinations
- Vehicle ownership rates
- Household size



Trip Lengths

The VMT Calculator estimates trip lengths based on information from the City's Travel Demand Forecasting Model, which considers the traffic analysis zones within 0.125 miles of where a project is located to determine the average trip length and trip type, which factor into the calculation of a project's VMT.

Population and Employment Assumptions

As previously stated, the VMT thresholds identified in the TAG are based on household VMT per capita and work VMT per employee. Thus, the VMT Calculator contains population assumptions developed based on Census data for the City and employment assumptions derived from multiple data sources, including *2012 Developer Fee Justification Study* (Los Angeles Unified School District, 2012), *Trip Generation Manual, 9th Edition* (ITE, 2012), the San Diego Association of Governments Activity Based Model, the United States Department of Energy, and other modeling resources.⁴ A summary of population and employment assumptions for various land uses is provided in Table 1 of *City of Los Angeles VMT Calculator Documentation*.

TDM Measures

Additionally, the VMT Calculator measures the reduction in VMT resulting from a project's incorporation of TDM strategies as project design features/elements or mitigation measures. The following seven categories of TDM strategies are included in the VMT Calculator:

1. Parking
2. Transit
3. Education and Encouragement
4. Commute Trip Reductions
5. Shared Mobility

⁴ *2022 Developer Fee Justification Study Los Angeles Unified School District* (SchoolWorks, Inc.) and *Trip Generation Manual, 11th Edition* are now available; however, the City's VMT Calculator utilized the editions indicated herein.

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6. Bicycle Infrastructure
 7. Neighborhood Enhancement

TDM strategies within each of these categories have been empirically demonstrated to reduce trip-making or mode choice in such a way as to reduce VMT, as documented in *Quantifying Greenhouse Gas Mitigation Measures* (California Air Pollution Control Officers Association, 2010).

PROJECT VMT ANALYSIS

The VMT Calculator was used to evaluate Project VMT for comparison to the VMT impact criteria. The VMT Calculator was modeled for the Project's land uses and their respective sizes as the primary input, including 224,597 sf of office uses, 4,110 sf of ground floor retail, and 5,894 sf of total ground floor restaurant uses, including the exterior restaurant seating area. The VMT analysis results for the Project are detailed in Table 8 and the detailed output from the VMT Calculator is provided in Appendix E.

The Project does not include any residential uses. Therefore, per *City of Los Angeles VMT Calculator User Guide* (LADOT and LADCP, May 2020), the Project would not generate any household VMT per capita and would not result in a significant household VMT impact and non-office commercial uses (i.e., small-scale non-office commercial components less than 50,000 sf) are assumed to have a negligible effect on VMT and are not considered for the purposes of identifying significant VMT impacts. Nonetheless, the following VMT analyses account for the local-serving non-office commercial uses as part of the total daily work VMT for a more conservative analysis.

Project VMT, Prior to Mitigation

The Project incorporates several design elements that include measures to reduce the number of single occupancy vehicle trips to the Project Site, as well as comply with the current TDM Ordinance. For this analysis, the following Project design elements were accounted for in the VMT evaluation:

- Reduced parking supply using allowable parking reduction rates from standard LAMC requirements
- Parking cash out opportunities/incentives, which requires certain employers who provide subsidized parking to offer employees a cash allowance in lieu of a parking space
- Promotions and marketing to educate and inform travelers about site-specific transportation options and the effects of travel choices
- Secure bicycle parking that meets LAMC requirements, including short-term and long-term parking facilities, to support safe and comfortable bicycle travel by providing end-of-trip amenities
- Pedestrian network improvements, within and around the Project Site, to improve pedestrian circulation and encourage walking

As shown in Table 8, the VMT Calculator estimates that the Project would generate a daily work VMT of 7,490. The Project would generate an average work VMT per employee of 8.1, which exceeds the Central APC significant work VMT impact threshold of 7.6. Therefore, the Project would result in a significant VMT impact, and mitigation measures would be required.

Project VMT, with Mitigation

The Project would implement a ride-share program as the mitigation measure to reduce the significant VMT impact by matching interested employees with similar commutes into carpools and vanpools. Carpools/vanpools provide the potential for employees to come to work relaxed and/or work during the commute and reduce the number of single-occupant vehicles and, therefore, reduce automobile trips and VMT. In addition to the ride-share program mitigation measure, as discussed above, the Project would provide designated parking areas and safe and convenient passenger loading areas for employee carpools/vanpools on-site and along Bruno Street.

As shown in Table 8, the Project is estimated to generate a daily work VMT of 6,367 and an average work VMT per employee of 6.8 with the implementation of the ride-share program mitigation measure. As such, with implementation of the mitigation measure, the average work VMT per employee would not exceed the Central APC significant work VMT impact threshold of 7.6 and the Project would not result in a significant VMT impact.

CUMULATIVE ANALYSIS

Cumulative effects of development projects are determined based on the consistency with the air quality and GHG reduction goals of *Connect SoCal – The 2024-2050 Regional Transportation Plan / Sustainable Communities Strategy of the Southern California Association of Governments* (Southern California Association of Governments [SCAG], Adopted April 2024) (RTP/SCS) in terms of development location, density, and intensity. The RTP/SCS presents a long-term vision for the region's transportation system through Year 2050 and balances the region's future mobility and housing needs with economic, environmental, and public health goals.

As detailed in the TAG, for projects that do not demonstrate a project impact by applying an efficiency-based impact threshold (i.e., household VMT per capita, work VMT per employee) in the project impact analysis, a less than significant impact conclusion is sufficient in demonstrating there is no cumulative VMT impact, as those projects are already shown to align with the long-term VMT and GHG goals of the RTP/SCS. As described above, the Project would not result in a significant VMT impact with implementation of the mitigation measure. Therefore, the Project would not result in a cumulative VMT impact under Threshold T-2.1, and no further evaluation or further mitigation measures are required.

The Project Site is well-served by transit as it is located near local bus lines and diagonally opposite the Metro A Line Chinatown Station. In addition, the Project would implement various TDM strategies to further reduce single occupancy trips to the Project Site including parking incentives and reductions from standard requirements, education and marketing, bicycle and pedestrian amenities and facilities, and a ride-share program. The Project would also contribute to the productivity and use of the regional transportation system by providing employment near transit and encourage active transportation by providing new bicycle parking and active street frontages, consistent with RTP/SCS goals. The Project would be consistent (i.e., not conflict) with RTP/SCS goals to improve the mobility, accessibility, reliability, and travel safety for people through enhancements to pedestrian and bicycle access at separated entrances, wider sidewalks, and upgraded pedestrian crossings at the adjacent signalized intersection. The Project would include promotions and marketing (e.g., informational bulletin boards or digital displays) so that employees and visitors may make informed decisions for travel planning, resulting in improved efficiency.

TABLE 8
VMT ANALYSIS SUMMARY

Project Information	
Address	130 W College Street
Land Uses	Size
Office	224,597 sf
Retail	4,110 sf
Restaurant	5,894 sf
Resident Population [a]	N/A
Employee Population [b]	930
Area Planning Commission	Central
Travel Behavior Zone [c]	Urban
Maximum VMT Reduction [d]	75%
VMT Analysis	Project [g]
Daily Vehicle Trips	2,124
Daily VMT	16,568
Household VMT	--
Household VMT per Capita [e]	--
Impact Threshold	6.0
Significant Impact	NO
Work VMT	7,490
Work VMT per Employee [f]	8.1
Impact Threshold	7.6
Significant Impact	YES
	With Mitigation [h]
Daily Vehicle Trips	1,995
Daily VMT	15,445
Household VMT	--
Household VMT per Capita [e]	--
Impact Threshold	6.0
Significant Impact	NO
Work VMT	6,367
Work VMT per Employee [f]	6.8
Impact Threshold	7.6
Significant Impact	NO

Notes:

[a] The Project does not include residential uses, therefore, the residential population and total Household VMT do not apply to the Project.

[b] Total employment estimates are based on the following factors:

General Office: 4.0 employees / 1,000 sf

General Retail: 2.0 employees / 1,000 sf

High-Turnover Sit-Down Restaurant: 4.0 employees / 1,000 sf

The employment factors are based on employee data from the Los Angeles Unified School District, 2012 SANDAG Activity Based Model, ITE trip generation rates, US Department of Energy, and other modeling resources.

[c] An "Urban" TBZ is characterized in *City of Los Angeles VMT Calculator* Documentation (LADOT and DCP, May 2020) as higher density neighborhoods that include multi-story buildings with a dense road network.

[d] The maximum allowable VMT reduction is based on the Project's designated TBZ as determined from *Transportation Demand Management Strategies in LA VMT Calculator* (LADOT, November 2019) and *Quantifying Greenhouse Gas Mitigation Measures* (California Air Pollution Control Officers Association, 2010).

[e] Household VMT per Capita is based on the "home-based work production" trip types.

[f] Work VMT per Employee is based on the "home-based work attraction" trip types.

[g] The Project includes several TDM strategies to reduce the number of single occupancy vehicle trips, such as application of allowable parking reduction rates from standard LAMC requirements, provision of LAMC-required bicycle parking and amenities, pedestrian network improvements within and around the Project Site, and promotions and marketing to educate travelers of alternative transportation modes. The VMT output results are provided in Appendix E.

[h] The Project would implement a ride-share program as part of its mitigation measures.



Section 4C: Threshold T-2.2

Substantially Inducing Additional Automobile Travel Analysis

The intent of Threshold T-2.2 is to assess whether a transportation project would induce substantial VMT by increasing vehicular capacity on the roadway network, such as the addition of through traffic lanes on existing or new highways, including general purpose lanes, high-occupancy vehicle lanes, peak period lanes, auxiliary lanes, and lanes through grade-separated interchanges.

As a commercial project with office, restaurant, and retail uses, the Project is not a transportation project that would induce automobile travel. Therefore, further evaluation will not be required, and the Project would not result in a significant impact under Threshold T-2.2.

Section 4D: Threshold T-3

Substantially Increasing Hazards Due to a Geometric Design Feature or Incompatible Use Analysis

Threshold T-3 requires that a project undergo further evaluation if it proposes new driveways or new vehicle access points to the property from the public ROW or modifications along the public ROW (i.e., street dedications). Project access plans were reviewed to determine if the Project would substantially increase hazards due to geometric design features, including safety, operational, or capacity impacts, with consideration of the following factors:

1. The relative amount of pedestrian activity at Project access points
2. Design features/physical configurations that affect the visibility of pedestrians and bicyclists to drivers entering and exiting the site and the visibility of cars to pedestrians and bicyclists
3. The type of bicycle facilities the project driveway(s) crosses and the relative level of utilization
4. The physical conditions of the site and surrounding area, such as curves, slopes, walks, landscaping or other barriers that could result in vehicle/pedestrian, vehicle/bicycle, or vehicle/vehicle impacts
5. The Project location, or Project-related changes to the public ROW, relative to proximity to the HIN or a Safe Routes to School program area
6. Any other conditions, including the approximate location of incompatible uses that would substantially increase a transportation hazard.

PROJECT HAZARDS ANALYSIS

Driveway Design Features

The Project driveways were closely reviewed and compared to the driveway design guidelines from Section 321 of *Manual of Policies and Procedures, Driveway Access, Circulation, Design Guidelines* (LADOT, 2024). These guidelines include factors such as driveway placement, width,

and type. The final design of the driveways would be reviewed by the Department of Building and Safety, Bureau of Engineering, and LADOT during site plan review to ensure code compliance and safe pedestrian and vehicular design. All parking control systems (i.e., security booths, gate arms) would be placed on-site and would provide adequate reservoir area to avoid potential queue spillover onto adjacent roadways. As detailed below, the Project driveways would neither result in an increase of total number of curb cuts, nor substantially increase vehicular conflicts with other vehicles, bicycles, and/or pedestrians along College Street, nor present any geometric design hazards related to traffic movement.

The Project would not modify roadway widths or otherwise affect the geometric design of roads surrounding the Project Site, nor would it implement any features that would obstruct sight distance or paths of vehicular, pedestrian, or bicycle travel. Pedestrian and bicycle access would be provided separate from vehicular access. College Street has no roadway curvature, and the Project driveways would intersect the adjacent roadway at right angles to provide adequate sight distance. The conceptual driveway design does not locate impediments that would affect visibility of approaching vehicles, pedestrians, or bicycles. The primary driveway to the parking garage would be approximately 26 feet wide, and the driveway to the loading area would be approximately 24 feet wide. The driveways would be separated by approximately 90 feet to minimize driveway ingress/egress vehicle conflicts and to provide a pedestrian refuge area. The driveways would provide full inbound/outbound access and accommodate all turning maneuvers. The primary vehicular driveway to the parking garage would be located approximately 210 feet east of the adjacent signalized intersection of Spring Street/Alameda Street & College Street, which operates with a traffic signal.

The proposed driveways along College Street would require two new curb cuts onto public ROW; however, the two existing curb cuts along Main Street would be removed and replaced with standard curb and gutter, as well as the discontinuous and substandard curbs along College Street and Bruno Street. As such, the Project would not result in an increase of the total number of curb cuts that would result in impacts to the pedestrian walkway continuity along the Project Site frontages. The proposed driveways would be placed and configured to limit vehicle queues and bicycle/pedestrian-vehicle conflicts. Generally, on-street parking is permitted along College Street adjacent to the Project Site. The proposed driveways would be designed to minimize any reduction of on-street parking. However, red curb parking restrictions within a reasonable distance of the edges of each driveway would be installed to maximize sight distance.

A pedestrian loading area and five-foot to 10-foot sidewalks are also proposed along Bruno Street. Thus, the proposed roadway width would be 20 feet to 25 feet, which would minimize potential pedestrian-vehicle conflicts and accommodate the passenger loading operations and/or parking without impeding through traffic operations.

Pedestrian and Bicycle Activity

The Project would naturally result in an increase of pedestrian and bicycle activity along all Project Site frontages as compared to the existing conditions since the Project Site is currently vacant parking lot for buses; however, pedestrians would have separate access points from vehicles and the Project driveways would not cross any existing on-street bicycle facilities. The existing sidewalks along the Project Site frontages do not meet City standards and are discontinuous along College Street and Bruno Street. The Project would improve and widen the sidewalk widths along all four Project Site street frontages, install pavement treatment to provide a seamless connection between the internal pedestrian walkways and the public sidewalks on Bruno Street, and provide publicly accessible outdoor amenities. The adjacent sidewalks would be lined with new street trees and landscaping elements to provide shade and create a more walkable and attractive pedestrian environment.

In addition to the existing bike share station facilities near the Project Site, Alameda Street and Main Street adjacent to the Project Site have been identified as part of the Mobility Plan's BEN. The existing CASP has proposed bicycle lanes along College Street and Main Street adjacent to the Project Site, however, as previously noted, the Project Site is not located within the CASP area. As detailed in CASP Appendix 4: Modified Street Cross-Sections, College Street and Main Street are proposed to continue to provide one and two travel lanes in each direction, respectively, and provide bicycle lanes on both sides of the street. College Street is proposed to provide one travel lane in each direction, on-street parking on one side of the street, and bicycle lanes on both sides of the street. Main Street is proposed to provide two travel lanes in each direction and bicycle lanes on both sides of the street. The improvements illustrated in the existing CASP are currently unfunded and there is no schedule for implementation. If implemented, these improvements would require the removal of parking on one or both sides of the street. Nonetheless, the Project driveways along College Street would be designed and located

so as to not preclude or interfere with the implementation of any future roadway improvements benefiting transit, pedestrians, or bicycles.

Pedestrian and bicycle activity in the immediate vicinity of the Project was reviewed based on the peak period traffic volume data collection provided in Appendix B. Generally, approximately 150 to 200 pedestrians per hour were observed to traverse College Street and intersecting corridors west of Spring Street/Alameda Street to access commercial and cultural uses to the west in the Chinatown area and the Metro A Line Chinatown Station. Low bicycle activity was generally observed in the Study Area, and low activity similarly occurred along the Project Site frontages. The Project driveways on College Street would not disrupt the primary corridors with high pedestrian activity and would be designed and placed to provide adequate sight distance and pedestrian refuge areas to limit any potential vehicular-pedestrian conflicts. Therefore, the driveway designs do not present significant safety issues regarding traffic/pedestrian conflicts.

Physical Terrain

The Project's proposed driveways would intersect the sidewalk and adjacent roadway at right angles to allow pedestrians and bicyclists to observe vehicles within the driveway. Furthermore, the Project would install red curb striping to prohibit on-street parking within a reasonable distance of the edges of each driveway to maximize sight distance.

The Project's landscape improvements in the public ROW would be designed to not interfere with visibility. The Project's streetscape and pedestrian enhancements, including wider sidewalks, connections to pedestrian walkways, publicly accessible outdoor amenities, pedestrian drop-off area, and landscaping elements would facilitate pedestrian and bicycle accessibility and improve visibility near vehicular access points.

Project Location

The Project Site is not located along any roadways that have been identified as part of the HIN. The Project is also located approximately 1,100 feet east of Castelar Elementary School and 1,200 feet south of Ann Elementary School. The City's Safe Routes to School program does not

identify any future infrastructure or safety improvement projects within the vicinity of the Project, nonetheless, the Project would not preclude any future improvements to the local street system.

The Project would maintain the designated driveway and roadway width requirements as indicated in the Mobility Plan and would not preclude future roadway improvements proposed in the Mobility Plan.

Incompatible Uses

The Project is located diagonally opposite the Metro A Line Chinatown Station and near other commercial, residential, and retail land uses, as well as the Los Angeles State Historic Park. These nearby uses are compatible with the Project because there would be a synergy between the different uses. For example, the Metro A Line station is a transit feature that enhances the Project Site from a mass transit accessibility perspective as it would allow Project employees and visitors to travel via an alternative transportation mode. Project employees could patronize nearby restaurants or reside in local residential areas. The Los Angeles State Historic Park is a historic feature that would not be disturbed by the Project and would provide a nearby public greenspace for Project employees and visitors to access.

The Project design, which includes wider sidewalks, street trees, publicly accessible plazas, and landscaping elements, incorporates and complements the surrounding areas to provide a more attractive, well-defined, and accessible interaction between the Project and the nearby uses. None of the Project design elements or land uses are considered incompatible with the surrounding uses. There are no unusual or new obstacles proposed by the Project that would be considered hazardous to motorized vehicles, non-motorized vehicles, or pedestrians.

Therefore, based on the analysis above, the Project does not present any geometric design hazards related to traffic movement, mobility, or pedestrian accessibility. Thus, the Project would not result in an impact under Threshold T-3.

CUMULATIVE ANALYSIS

In addition to potential Project-specific impacts, the TAG requires that the Project be reviewed in combination with Related Projects with access points along the same block as the proposed project to determine if there may be a cumulatively significant impact. A mixed-use development (Related Project #5, College Station Mixed-Use) is proposed located opposite the Project Site along College Street. Related Project #5 proposes vehicular access only along Spring Street north of College Street. As such, the Project and Related Project #5 driveway locations would neither be proposed along the same block, nor create vehicle turn conflicts, nor impose significant safety issues. Therefore, the Project would not result in cumulative impacts that would substantially increase hazards due to geometric design features, including safety, operational, or capacity impacts.

FREEWAY SAFETY ANALYSIS

Section 2.4.4 of the TAG outlines the methodology of assessing potential vehicle to vehicle impacts that may result in unsafe vehicle queues from freeway off-ramp facilities due to speed differentials between the mainline freeway lanes and the queued vehicles at the off-ramp.

Analysis Methodology

Further freeway safety analysis is required for a development project when the project adds 25 or more peak hour trips to any freeway off-ramp. A project would result in adverse safety conditions at such a ramp if each of the following three criteria were met:

1. Under a scenario analyzing future conditions upon project buildout, with project traffic included, the off-ramp queue would extend to the mainline freeway lanes⁵.
2. The project would contribute at least two vehicle lengths (50 feet, assuming 25 feet per vehicle) to the queue.

⁵ If an auxiliary lane is provided on the freeway, then half the length of the auxiliary lane is added to the ramp storage length.

3. The average speed of mainline freeway traffic adjacent to the off-ramp during the analyzed peak hour(s) is greater than 30 mph.

Should an adverse safety condition be identified, corrective measures to be considered include TDM strategies to reduce a project's trip generation, investments in active transportation or transit system infrastructure to reduce a project's trip generation, changes to the traffic signal timing or lane assignments at the ramp intersection, or physical changes to the off-ramp. Any physical change to the ramp would have to improve safety, not induce greater VMT, and not result in secondary environmental impacts.

Project Freeway Safety Analysis

The Project is generally located approximately 0.45 miles east of SR 110 and 0.50 miles north of US 101. A freeway off-ramp safety screening analysis was conducted at two SR 110 off-ramps and three US 101 off-ramps. Other off-ramp locations, including those along I-10 and I-5, were considered but were not selected for analysis as they are located at a greater distance and would not have a more direct access to the Project Site as compared to other off-ramps that were analyzed and, as such, would only accommodate nominal, if any, Project-related traffic. As detailed in the MOU approved by LADOT, the Project exceeds the City's screening threshold of 25 net new peak hour trips at two freeway off-ramps: SR 110 Southbound and Northbound off-ramps to Hill Street. The Project would add 36 trips to each of the SR 110 off-ramps during the morning peak hour. It should be noted that traffic from the SR 110 Northbound off-ramp is stop-controlled at the junction where it merges with free-flow traffic from the SR 110 Southbound off-ramp and becomes Hill Street. As such, further freeway ramp safety analysis at the junction of the two off-ramps was conducted. The Project would not add 25 or more peak hour trips to any other off-ramps.

A Project freeway safety analysis of California Department of Transportation (Caltrans) facilities was conducted for the Future without and with Project Conditions Year 2028. The Year 2028 traffic volumes were forecasted based on available traffic volume data at the off-ramps in 2018.⁶

⁶ Freeway ramp volumes were collected using published data in Caltrans' Traffic Census Program, which consists of the annual average daily traffic (AADT) volumes, as well as peak hour percent of AADT factor ("K factor"), which were used to develop peak hour volumes at the two off-ramps.

The traffic volumes were adjusted with both ambient growth (1% per year) and Related Project traffic, in the same manner as future traffic volumes developed for Year 2028 in Chapter 2.

The assessment of the off-ramps included a review of the resulting queue length as compared to the total available queuing capacity of the ramp to determine whether the queue would extend beyond the length of the ramp onto the mainline. The total available ramp capacity includes the length of each approach lane to the intersection and the remaining length of the ramp, behind any approach lane delineation lines, to the gore point where the ramp diverges from the freeway mainline. The 95th percentile ramp queue was calculated using the *Highway Capacity Manual, 6th Edition* (Transportation Research Board, 2017) (HCM) methodology used in the operational evaluation in Section 5B. The HCM methodology was implemented using Synchro software and signal timing worksheets from the City. The 95th percentile ramp queue measures the probability that a queue length will reach a certain length and is the maximum vehicular queue that would not be exceeded 95% of the time. Synchro queue results that are reported in vehicle-length were converted to feet by multiplying each vehicle by 25 feet to account for the average length of a vehicle plus distance between vehicles in the queue. The freeway safety analysis worksheets are provided in Appendix F.

As summarized in Table 9, the Project would contribute to the stop-controlled queue of the SR 110 Northbound off-ramp to Hill Street during the morning peak hour by approximately 65 feet, or approximately three vehicle-lengths; however, the resulting queue would not exceed the ramp storage length. Therefore, the Project is not required to conduct a speed differential analysis.

The queues at the two off-ramps would not extend onto the freeway mainline and the Project would not result in any adverse safety conditions along freeway off-ramp facilities. Thus, no corrective measures are required. Nonetheless, the Project would implement various TDM strategies, as previously described in Section 4B, to reduce single-occupancy vehicle trips to and from the Project Site.

TABLE 9
FREEWAY OFF-RAMP QUEUING SAFETY ANALYSIS

Off-ramp	Ramp Storage Length Capacity [a]	Peak Hour	95th Percentile Queue		Exceeds Ramp Storage [b]	Project Adds 50 Feet [c]	Requires Speed Analysis [d]
			Future without Project Conditions (Year 2028)	Future with Project Conditions (Year 2028)			
SR-110 Northbound Off-Ramp to Hill Street [e]	1,245	AM	113	175	NO	YES	NO
SR-110 Southbound Off-Ramp to Hill Street [f]	1,925	AM	608	608	NO	NO	NO

Notes:

Ramp storage length and 95th percentile queue reported in feet.

[a] Storage length capacity is the distance from the freeway mainline gore point to the terminus of the off-ramp, expressed in feet.

[b] Based on Future with Project Conditions (Year 2028) queue.

[c] The difference in queue length between Future with Project Conditions and Future without Project Conditions.

[d] Speed differential analysis is required if the ramp storage length is exceeded and the Project adds 50 or more feet to the queue length.

[e] The northbound off-ramp provides one travel lane to Hill Street and operates with a stop-control at the junction with the southbound off-ramp. As detailed, the off-ramp approach has more than sufficient storage length to accommodate cumulative traffic, both without and with Project traffic.

[f] The southbound off-ramp provides two travel lanes and becomes Hill Street. Traffic operates as free-flow conditions from the freeway mainline and is controlled by a traffic signal at the intersection of Hill Street & College Street. For informational purposes, the reported queue is based on the total southbound queue at the signalized intersection as the queue for the off-ramp approach cannot be determined at this location. Nonetheless, the off-ramp approach has more than sufficient storage length to accommodate cumulative traffic, both without and with Project traffic.



Chapter 5

Non-CEQA Transportation Analysis

This chapter summarizes the non-CEQA Transportation Analysis of the Project and includes sections related to the Project traffic, proposed access provisions, safety, and circulation operations of the Project, and pedestrian, bicycle, and transit facilities in the vicinity of the Project. This chapter also evaluates the Project's operational conditions, parking supply and requirements, and effects due to Project construction.

Per Section 3.1 of the TAG, any deficiencies identified based on the non-CEQA transportation analysis is “not intended to be interpreted as thresholds of significance, or significance criteria for purposes of CEQA review unless otherwise specifically identified in Section 2.” Section 3 of the TAG identifies the following four non-CEQA transportation analyses for reviewing potential transportation deficiencies that may result from a development project:

- Pedestrian, Bicycle, and Transit Access Assessment
- Project Access, Safety, and Circulation Evaluation
- Residential Street Cut-Through Analysis
- Project Construction Assessment

These four non-CEQA transportation analyses were reviewed in detail in the subsequent Sections 5A through 5D. In addition, a review of the proposed parking and the City's parking requirement for the Project is provided in Section 5E.

Section 5A

Pedestrian, Bicycle, and Transit Assessment

This section assesses the Project's potential effect on pedestrian, bicycle, and transit facilities in the vicinity of the Project Site. Per the TAG, factors to consider when assessing a project's potential effect on pedestrian, bicycle, and transit facilities, include the following:

- Would a project directly or indirectly result in a permanent removal or modification that would lead to the degradation of pedestrian, bicycle, or transit facilities?
- Would a project intensify use of existing pedestrian, bicycle, or transit facilities?

EXISTING INFRASTRUCTURE

Pedestrians and Bicycles

Generally, 10-foot to 12-foot wide sidewalks are currently provided along the Project Site frontages; however, sidewalks along some sections of College Street and Bruno Street are unpaved or substandard, thus providing incomplete pedestrian connections. The adjacent signalized study intersection of Spring Street/Alameda Street & College Street (Intersection #3) provides continental crosswalks on the east and west legs and standard crosswalks on the north and south legs. As illustrated in Figure 5, pedestrian facilities are provided at nearby signalized study intersections, including tactile warning strips for ADA accessibility, pedestrian push buttons, and crosswalks.

Figure 7 shows a map of local-serving commercial uses, cultural uses, and institutional facilities within the Study Area that could attract pedestrian activity. Figure 8 shows the existing transportation facilities that would support pedestrian activity to and from the pedestrian destinations.

There are currently no on-street bicycle facilities adjacent to the Project Site, however, a bike-share station is provided at one of the nearby Metro A Line Chinatown Station entrances.

Transit

In addition to the adjacency of the Metro A Line Chinatown Station, the Project is also located directly adjacent to a bus stop that serves DASH Lincoln Heights/Chinatown. Additional bus stops are located along Alameda Street, Main Street, and College Street opposite the Project Site and serve Santa Clarita Transit Lines 794 and 799, DASH B, and Metro Local 76. None of these bus stops are currently equipped with benches and/or shelters for rain or shade.

PROJECT EFFECTS ON INFRASTRUCTURE

The Project would provide the required dedications along Alameda Street, College Street, and Main Street along the Project Site frontages to provide wider and continuous pedestrian sidewalks and create a walkable and attractive pedestrian environment. As noted above, the City does not require the Project to provide dedications and improvements along Bruno Street due to the presence of the historic granite pavers; however, the Project would provide five-foot sidewalks along Bruno Street and would widen the sidewalks to 10 feet where historical pavers are not present. The Project also includes a pavement treatment along the Bruno Street frontage to provide a seamless connection between the pedestrian walkways and public sidewalks. The Project would further provide a comfortable mobility environment for pedestrians through publicly accessible outdoor amenities, new street trees, a pedestrian loading area, and other landscaping elements. To facilitate bicycle use, the Project would also provide bicycle parking for employees and visitors in excess of the LAMC requirements. The Project would coordinate with the appropriate agencies regarding any improvements to transit infrastructure (e.g., benches, shelters, lighting, signage), as needed.

The Project would also replace two existing curb cuts on Main Street with two new curb cuts on College Street, which would be designed in accordance with City standards to minimize any potential conflicts with pedestrians and bicyclists by providing adequate sight distance and visibility. Any improvements to the public ROW will be processed through the City B-permit process. The Project improvements would not preclude or interfere with the implementation of any future roadway improvements benefiting pedestrians, bicyclists, and transit users.

PROJECT EFFECTS ON VOLUME

Pedestrian and Bicycle

The Project would result in additional pedestrian and bicycle activity in the vicinity of the Project Site. Given the Project Site's proximity to active commercial and cultural uses in the Chinatown area, it is ideally located to encourage non-automobile trips to and from those destinations. Furthermore, the Project Site is well-served by transit that would encourage the utilization of public transit as discussed above. However, the pedestrian and bicycle volumes are not anticipated to reach a level where any degradation, capacity constraint, or conflict would arise. The Project's improvements to sidewalk infrastructure would accommodate the Project-related increase in pedestrian traffic. While there is no existing off-site bicycle infrastructure and no timeline for planned future infrastructure, the Project would provide bicycle parking and storage on-site to accommodate bicycle travel and encourage alternative travel modes. Therefore, the Project would not directly or indirectly result in a permanent removal or modification that would lead to the degradation of existing facilities serving pedestrians or bicyclists.

Transit

Although the Project (and other Related Projects) would cumulatively add transit ridership, the Project Site and the Study Area are well-served by transit, as detailed in Table 1. As detailed in Table 3, transit usage for the Project accounts for the reduction of approximately 99 and 100 vehicle trips during the morning and afternoon peak hours, respectively. Based on the average vehicle occupancy factor of 1.55 for all trip purposes in Los Angeles County as identified in Table 6-20 of *SCAG Regional Travel Demand Model and 2012 Model Validation* (SCAG, March 2016), the total Project vehicle-transit trips correspond to 153 and 155 person-transit trips during the morning and afternoon peak hours, respectively. The existing nearby transit, including rail and local bus lines, can accommodate the intensification of transit usage attributable to the Project.

Furthermore, Los Angeles County voters approved Measure M, a ballot measure to fund transportation projects and programs with a half-cent sales tax and the indefinite extension of the existing half-cent sales tax (i.e., Measure R) set to expire in 2039. This allowed Metro to continue to develop projects to improve the existing transportation system. *2020 Long Range*



Transportation Plan (Metro, Adopted September 2020) outlines a range of transit and highway projects throughout Los Angeles County that were aimed to improve mobility and address future growth. It is recognized that with the aforementioned plans in place, Metro will continue to maintain and expand regional transit service in order to accommodate cumulative demand in the region.

CONCLUSION

The Project would result in some intensification of pedestrian, bicycle, and transit activity in the vicinity of the Project Site. However, given the Project's location near local bus and rail services and its proximity to active commercial and cultural centers, it is ideally located to encourage non-automobile trips to and from those destinations and reach additional public transit routes. Additionally, the Project would provide extensive improvements to the adjacent pedestrian network system to promote a more comfortable and walkable environment for all users through wider sidewalks and new landscaping along the Project frontages. Therefore, the amount of additional pedestrian, bicycle, and transit activity generated by the Project would not strain the capacity of facilities and operations dedicated to those alternative modes.

Section 5B

Project Access, Safety, and Circulation Assessment

This section summarizes the Project site access, safety, and circulation. It includes a quantitative evaluation of the Project's access and circulation operations, as well as the anticipated LOS at the study intersections and anticipated traffic queues. Operational deficiencies of a project may consist of operational delays or queues on surrounding streets that result in unsafe conditions. Such effects are not considered significant under CEQA but could require Project modifications or off-site improvements to ensure safe and efficient circulation around the Project Site.

OPERATIONAL EVALUATION

Intersection operation conditions were evaluated for typical weekday morning (7:00 AM to 10:00 AM) and afternoon (3:00 PM to 6:00 PM) peak periods. A total of five study intersections in the vicinity of the Project Site were selected for detailed transportation analysis for each study scenario based on the selection criteria detailed in the TAG.

In addition to the Existing Conditions and Future without Project Conditions in Year 2028 developed in Chapter 2, the following traffic conditions were developed and analyzed as part of this study:

- Existing with Project Conditions (Year 2024) – This scenario analyzes the potential intersection operating conditions that could be expected if the Project were built under Existing Conditions. In this scenario, the Project-generated traffic is added to the Existing Conditions.
- Future with Project Conditions (Year 2028) – This scenario analyzes the potential intersection operating conditions that could be expected if the Project is fully occupied in the projected buildout year. In this analysis, the Project-generated traffic is added to Future without Project Conditions (Year 2028).

Methodology

In accordance with the TAG, the intersection delay and queue analyses for the operational evaluation were conducted using the HCM methodology, which was implemented using Synchro software and signal timing worksheets from the City to analyze intersection operating conditions. The HCM signalized methodology calculates the average delay, in seconds, for each vehicle passing through the intersections while the HCM unsignalized two-way stop-control methodology calculates the control delay, in seconds, for individual approaches of an intersection. Calculated delay is converted into LOS according to the definitions in Table 10. LOS ranges from excellent, nearly free-flow traffic at LOS A, to congested stop-and-go conditions at LOS F. The queue lengths were estimated using Synchro, which reports the 95th percentile queue length for each approach lane.

LOS and queuing worksheets for each scenario are provided in Appendix G.

Project TDM Trip Reductions

The Project would implement various TDM strategies to reduce single-occupancy vehicle trips to and from the Project Site. The TDM strategies would include, but not be limited to, reduced parking and parking incentives, educational and ride-share programs, bicycle and pedestrian amenities, and neighborhood enhancements. The combined effect of the various strategies implemented would result in a reduction in peak hour and overall trip generation by offering services, actions, specific facilities, etc. aimed at encouraging use of alternative transportation.

As detailed in Section 4B, the VMT Calculator was used to estimate the daily vehicle trip and VMT reductions associated with the implementation of various TDM strategies. As detailed in Table 8, the TDM strategies would result in an approximately 20% reduction in daily vehicle trips and daily VMT as compared to the baseline daily trips and VMT with no strategies implemented. However, for the purpose of providing a conservative analysis, the operational analyses in this section were conducted without consideration of any trip reductions as a result of the TDM strategies. The detailed reports from the VMT Calculator are provided in Appendix E.

Existing with Project Conditions

Traffic Volumes. The Project-only morning and afternoon peak hour traffic volumes described in Chapter 4 and shown in Figure 17 were added to the Existing morning and afternoon peak hour traffic volumes shown in Figure 10. The resulting volumes are illustrated in Figure 18 and represent Existing with Project Conditions, assuming Project operation under Existing Conditions.

Intersection LOS. Table 11 summarizes the results of the Existing and Existing with Project Conditions during the weekday morning and afternoon peak hours for the five study intersections. As shown in Table 11, four of the five study intersections are anticipated to continue to operate at LOS D or better during both the morning and afternoon peak hours under Existing with Project Conditions. The remaining unsignalized study intersection is anticipated to operate at LOS F during both analyzed peak hours. Overall, however, the unsignalized intersection would operate at LOS A conditions during both the morning and afternoon peak hours. It should be noted that the HCM two-way stop control methodology calculates the control delay, in seconds, for each individual approach of an intersection. The reported control delay represents the worst-case approach, typically on the lower volume minor street (i.e., College Street), and does not account for traffic gaps created by the metering of traffic via the adjacent traffic signals that allow turn movements to proceed from the minor street.

Future with Project Conditions

All future cumulative traffic growth (i.e., ambient and Cumulative Project traffic growth) and transportation infrastructure improvements described in Chapter 2 are incorporated into this analysis.

Traffic Volumes. The Project-only morning and afternoon peak hour traffic volumes described in Section 4A and shown in Figure 17 were added to the Future without Project (Year 2028) morning and afternoon peak hour traffic volumes shown in Figure 13. The resulting volumes are illustrated in Figure 19 and represent Future with Project Conditions after development of the Project in Year 2028.

Intersection LOS. Table 12 summarizes the results of the Future without Project (Year 2028) and Future with Project Conditions during the weekday morning and afternoon peak hours for the five study intersections. As shown in Table 12, one of the five study intersections is anticipated to operate at LOS D or better during both the morning and afternoon peak hours under Future with Project Conditions. The remaining three signalized study intersections are anticipated to operate at either LOS E or F during at least one of the analyzed peak hours under Future with Project Conditions. The remaining unsignalized study intersection is anticipated to operate at LOS F during both analyzed peak hours. It should be noted that the HCM two-way stop control methodology calculates the control delay, in seconds, for each individual approach of an intersection. The reported control delay represents the worst-case approach, typically on the lower volume minor street (i.e., College Street), and does not account for traffic gaps created by the metering of traffic via the adjacent traffic signals that allow turn movements to proceed from the minor street.

Intersection Queuing Analysis

In accordance with operational evaluation guidelines detailed in Section 3.3.3 of the TAG, the Project traffic was evaluated to determine whether the Project access would contribute to unacceptable queuing on an Avenue or Boulevard (as designated in the Mobility Plan) at Project driveways or would cause or substantially extend queuing at nearby signalized intersections. Per the TAG, unacceptable or extended queuing may be defined as follows:

- *Additional queue along through lanes and either of the following conditions are expected:*
 - o *The projected peak hour intersection LOS is D and the through lane queue increases by greater than 75 feet on any approach with the directional approach LOS at E or F, or*
 - o *The projected peak hour intersection LOS is E or F and the through lane queue increases by greater than 50 feet on any approach with the directional approach LOS at E or F.*
- *Spill over from turn pockets into through lanes.*
- *Block cross streets or alleys.*
- *Spill over from drive-throughs into streets.*
- *Contribute to “gridlock” congestion. For the purposes of this section, “gridlock” is defined as the condition where traffic queues between closely-spaced intersections and impedes the flow of traffic through upstream intersections.*

The queue lengths were estimated using Synchro software, which reports the 95th percentile queue length, in vehicles, for each approach lane, which can be converted into linear distance by multiplying vehicle lengths by 25 feet. The reported queues are calculated using the HCM methodology and shown in Table 13. Detailed queuing analysis worksheets are provided in Appendix G.

Table 13 includes the resulting queues along through lanes at five signalized intersections that are projected to operate at LOS D or worse under Future Conditions (Year 2028). The following queues at the identified approaches were identified to potentially experience extended through queuing conditions as defined by the TAG. It should be noted that, although the Project would contribute to the extended queues by at least 50 feet, or two vehicle-lengths, the through lane queues already extend beyond the available storage capacity prior to the addition of Project traffic:

- College Street westbound between Hill Street to Broadway during both morning and afternoon peak hours
- College Street eastbound between Broadway to Hill Street during both morning and afternoon peak hours

Table 14 includes the resulting queue lengths at six existing turn pockets where the Project would add trips and identifies queues that may exceed turn pocket lengths. As detailed, the Project would contribute at least 50 feet to queues at the following two turn pocket locations under Future with Project Conditions (Year 2028):

- Hill Street & College Street (Intersection #1): The southbound left-turn queue is projected to extend beyond the available 70-foot turn pocket during both analyzed peak hours, without and with the Project traffic. During the morning and afternoon peak hours, the Project would contribute approximately 78 feet, or roughly three vehicle lengths, and 112 feet, or four vehicle lengths, respectively.
- Spring Street/Alameda Street & College Street (Intersection #3): With the Project traffic, the westbound left-turn queue is projected to extend beyond the available 50-foot turn pocket only during the afternoon peak hour. The Project would contribute approximately 72 feet, or three vehicle lengths, to the westbound left-turn queue during the afternoon peak hour.

The Project would not contribute to substantial queues at the remaining four turn pocket locations.

Driveway Operational Analysis

As detailed in Table 3, the Project would generate a maximum of 301 vehicle trips at the proposed driveways during a one-hour period (morning peak hour), or approximately five vehicles every minute (through a combination of inbound and outbound vehicles). The traffic expected at the Project driveway can be accommodated internally and would neither cause vehicle queues to extend beyond the driveways into the adjacent street system nor cause any substantial operational conditions. Furthermore, the adjacent signalized intersection of Spring Street/Alameda Street & College Street (Intersection #3) facilitates traffic flow and creates traffic gaps that allow turn movements to proceed to and from the Project driveways. The Project driveway operates at LOS C under Future with Project conditions during both peak hours, as detailed in the LOS Worksheets provided in Appendix G.

PASSENGER LOADING EVALUATION

The passenger loading evaluation determines if the Project provides adequate on-site passenger loading facilities to accommodate the usage of transportation network companies (TNCs) and shared mobility services. Additionally, this evaluation includes review of any potential conflicts with pedestrian and bicycle and potential curbside management options to reduce the need for curbside space in the public ROW. The Project proposes a passenger pick-up and drop-off area along Bruno Street with sufficient roadway width that would allow loading operations to occur outside of the travel lane and minimize disruption to through traffic. Visitors and patrons who arrive or depart via TNC, shared mobility services, or general pick-up/drop-off can also do so within the Project's parking garage with access via College Street.

Additionally, Alameda Street, College Street, and Main Street provide parking on at least one side of the streets within the vicinity of the Project Site. The proposed driveways along College Street would be designed to minimize any reduction of on-street parking and maximize curbside sections that can serve passenger loading purposes when not in use by parked vehicles. College Street would maintain at least one side of on-street parking. The Project would not affect on-street parking along Alameda Street and Main Street.

RECOMMENDED ACTIONS

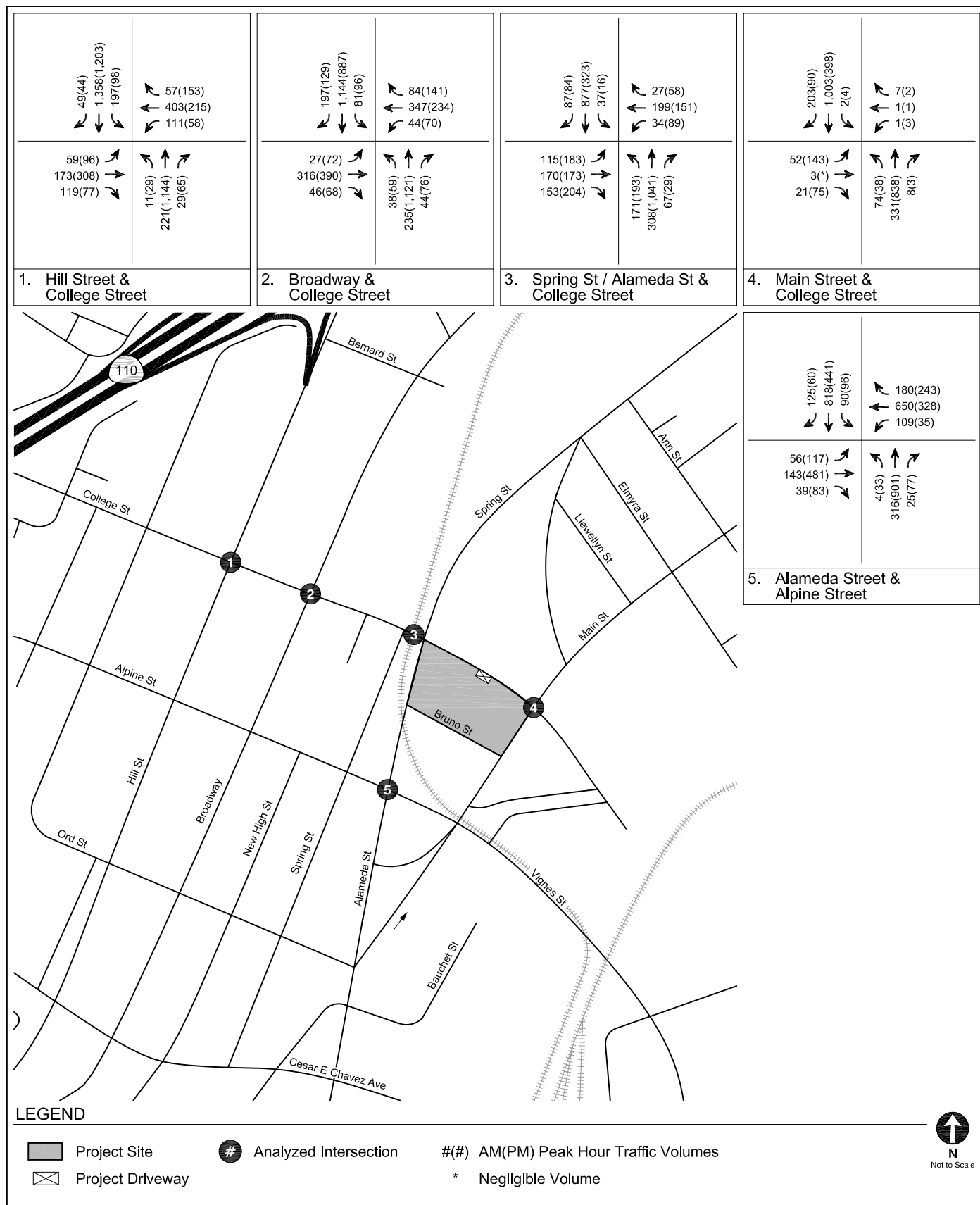
It is anticipated that the Project would add to the cumulative traffic within the Study Area as detailed above. Based on Section 3.3.5 of the TAG, proposed improvement measures or corrective actions should support improvements that increase safety and reduce GHG emissions by reducing the use of single-occupant vehicle trips, encourage developers to construct transit and pedestrian-friendly projects with safe and walkable sidewalks, and promote other modes of travel.

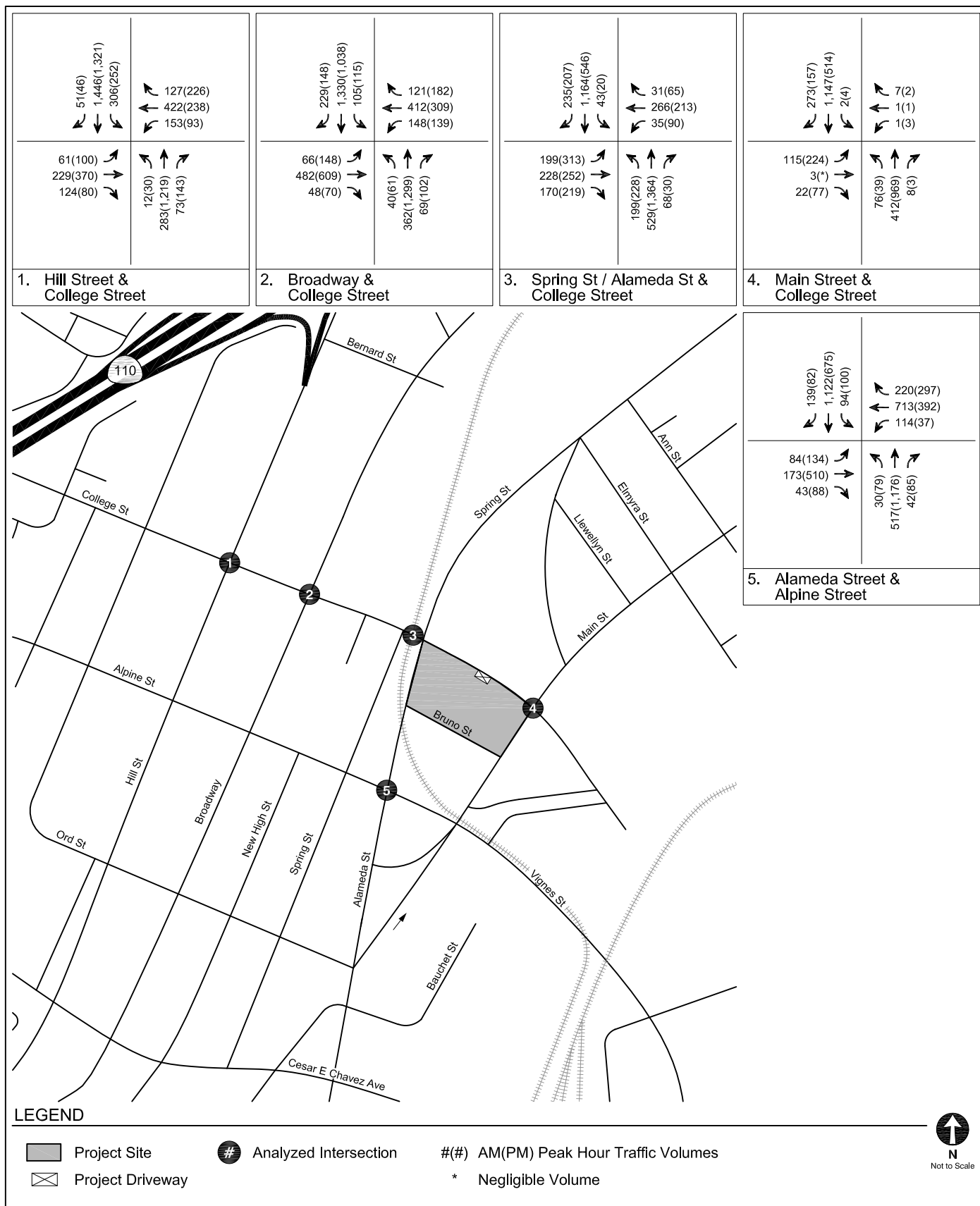
The Project would be consistent with the City's policies and procedures as it is designed as a pedestrian-friendly project that would promote pedestrian accessibility and mobility. The Project would provide separate pedestrian and bicycle access points, a passenger loading area along Bruno Street, and pavement treatment to provide a seamless connection between the internal pedestrian walkways and the public sidewalks on Bruno Street. The Project would further improve the existing pedestrian circulation and enhance pedestrian walkways by upgrading the discontinuous and substandard sidewalks along the Project Site frontages and widening the sidewalks to full widths. The Project would further enhance the pedestrian environment and walkways by planting street trees and providing publicly accessible outdoor amenities and landscaping elements. Additionally, the Project would include marketing activities, including printed/posted materials and digitally distributed information, to ensure that employees and visitors to the Project Site are aware of all mobility options available on-site and in the surrounding area. As needed, the Project would install new pedestrian amenities at the adjacent signalized intersection of Spring Street/Alameda Street & College Street (Intersection #3) that can include high-visibility continental crosswalks and ADA curb ramps to better facilitate pedestrian activity.

As discussed in Section 4B, the Project would implement various TDM strategies as part of its TDM program to promote non-automobile travel and reduce single occupancy trips to the Project Site and Project traffic throughout the Study Area. The TDM program would include, but not be limited to, reduced parking and parking incentives, education and marketing of available transportation services in the area, ride-share program mitigation measure, bicycle and pedestrian amenities, and neighborhood enhancements through upgraded crosswalks and sidewalks. The VMT Calculator estimates that the Project could achieve an overall trip reduction of 20% with implementation of the mitigation measure. The Project would comply with the requirements of the current TDM Ordinance. As previously discussed, the TDM Ordinance is



currently being updated and is expected to be completed prior to the anticipated occupancy of the Project. If adopted, the Project would be subject to the terms of the proposed TDM Ordinance and may be required to comply with additional trip-reduction strategies. As such, the Project's TDM Program would further reduce vehicle trips to/from the Project Site and throughout the Study Area. Beyond the identified strategies in the TDM Program, the Project would manage site access and circulation operations to minimize potential queues onto the adjacent public ROW.





**FUTURE WITH PROJECT CONDITIONS (YEAR 2028)
PEAK HOUR TRAFFIC VOLUMES**

**FIGURE
19**

TABLE 10
INTERSECTION LEVEL OF SERVICE DEFINITIONS

Level of Service	Description	Delay [a]	Delay [a]
		Signalized Intersections	Unsignalized Intersections
A	EXCELLENT. No vehicle waits longer than one red light and no approach phase is fully used.	≤ 10	≤ 10
B	VERY GOOD. An occasional approach phase is fully utilized; many drivers begin to feel somewhat restricted within groups of vehicles.	> 10 and ≤ 20	> 10 and ≤ 15
C	GOOD. Occasionally drivers may have to wait through more than one red light; backups may develop behind turning vehicles.	> 20 and ≤ 35	> 15 and ≤ 25
D	FAIR. Delays may be substantial during portions of the rush hours, but enough lower volume periods occur to permit clearing of developing lines, preventing excessive backups.	> 35 and ≤ 55	> 25 and ≤ 35
E	POOR. Represents the most vehicles intersection approaches can accommodate; may be long lines of waiting vehicles through several signal cycles.	> 55 and ≤ 80	> 35 and ≤ 50
F	FAILURE. Backups from nearby locations or on cross streets may restrict or prevent movement of vehicles out of the intersection approaches. Tremendous delays with continuously increasing queue lengths.	> 80	> 50

Notes:

Source: *Highway Capacity Manual, 6th Edition* (Transportation Research Board, 2016).

[a] Measured in seconds.

TABLE 11
EXISTING WITH PROJECT CONDITIONS (YEAR 2024)
INTERSECTION LEVEL OF SERVICE ANALYSIS

No	Intersection	Peak Hour	Existing Conditions		Existing with Project Conditions	
			Delay	LOS	Delay	LOS
1.	Hill Street & College Street	AM	29.6	C	29.5	C
		PM	21.7	C	22.5	C
2.	Broadway & College Street	AM	26.0	C	27.9	C
		PM	27.4	C	37.4	D
3.	Spring Street/Alameda Street & College Street	AM	18.5	B	19.5	B
		PM	21.6	C	23.8	C
4. [a]	Main Street & College Street	AM	98.9	F	177.3	F
		PM	61.7	F	105.6	F
5.	Alameda Street & Alpine Street	AM	24.5	C	24.8	C
		PM	30.1	C	30.8	C

Notes:

- [a] Intersection analysis based on the HCM Two-Way Stop Controlled unsignalized methodology. Reported results reflect the control delay for the worst-case approach. The average intersection delay is provided in Appendix G.

TABLE 12
FUTURE WITH PROJECT CONDITIONS (YEAR 2028)
INTERSECTION LEVEL OF SERVICE ANALYSIS

No	Intersection	Peak Hour	Future without Project Conditions		Future with Project Conditions	
			Delay	LOS	Delay	LOS
1.	Hill Street & College Street	AM	44.7	D	45.8	D
		PM	53.2	D	61.3	E
2.	Broadway & College Street	AM	142.6	F	201.9	F
		PM	332.3	F	397.9	F
3.	Spring Street/Alameda Street & College Street	AM	26.3	C	28.1	C
		PM	24.4	C	27.9	C
4. [a]	Main Street & College Street	AM	[b]	F	[b]	F
		PM	[b]	F	[b]	F
5.	Alameda Street & Alpine Street	AM	25.2	C	25.7	C
		PM	59.6	E	60.7	E

Notes:

- [a] Intersection analysis based on the HCM Two-Way Stop Controlled unsignalized methodology. Reported results reflect the control delay for the worst-case approach. The average intersection delay is provided in Appendix G.
- [b] The reported control delay of the worst-case approach (i.e., minor street of the intersection) exceeds 300 seconds.

**TABLE 13
FUTURE CONDITIONS (YEAR 2028)
INTERSECTION CORRIDOR QUEUES**

Intersection	Intersection Spacing	Peak Hour	Approach LOS (Fut w Proj)	95th Percentile Queue (ft)		Exceeds Capacity?	Project Contribution to Queue (ft)
				Future without Project Conditions	Future with Project Conditions		
Intersection #1. Hill Street & College Street							
Eastbound Through	310	A.M. P.M.	D [a] D [a]	-- --	-- --	-- --	-- --
Westbound Through	310	A.M. P.M.	F C [a]	490 --	513 --	YES --	23 --
Northbound Through	580	A.M. P.M.	B [a] C [a]	-- --	-- --	-- --	-- --
Southbound Through	495	A.M. P.M.	C [a] F	-- 508	-- 508	-- YES	-- 0
Intersection #2. Broadway & College Street							
Eastbound Through	310	A.M. P.M.	F F	823 1,640	1,083 1,688	YES YES	260 48
Westbound Through	410	A.M. P.M.	F F	1,208 1,070	1,320 1,238	YES YES	112 168
Northbound Through	580	A.M. P.M.	B [a] B [a]	-- --	-- --	-- --	-- --
Southbound Through	410	A.M. P.M.	C [a] C [a]	-- --	-- --	-- --	-- --
Intersection #5. Alameda Street & Alpine Street							
Eastbound Through	110	A.M. [b] P.M.	-- B [a]	-- --	-- --	-- --	-- --
Westbound Through	225	A.M. [b] P.M.	-- B [a]	-- --	-- --	-- --	-- --
Northbound Through	280	A.M. [b] P.M.	-- F	-- 880	-- 900	-- YES	-- 20
Southbound Through	310	A.M. [b] P.M.	-- E	-- 253	-- 275	-- NO	-- 22

Notes:

All lengths shown in feet based on 25 feet per vehicle. Queues based on 95th percentile queue calculated by the HCM methodology.

[a] The directional approach is not anticipated to operate at LOS E or F. As such, no further corridor queue analysis is required.

[b] As detailed in Table 12, the intersection is not anticipated to operate at LOS D or worse during this peak hour. As such, a detailed corridor queue analysis is not required.

**TABLE 14
FUTURE CONDITIONS (YEAR 2028)
INTERSECTION TURN QUEUES**

Intersection	Turn Pocket Length	Peak Hour	Queue Length		
			Future without Project Conditions	Future with Project Conditions	Project Contribution to Queue Length
Intersection #1. Hill Street & College Street					
Southbound Left-Turn	70	AM PM	185 843	263 955	78 112
Intersection #3. Spring Street/Alameda Street & College Street					
Westbound Left-Turn	50	AM PM	15 13	30 85	15 72
Southbound Left-Turn	110	AM PM	15 15	33 23	18 8
Intersection #5. Alameda Street & Alpine Street					
Eastbound Left-Turn	35	AM PM	50 95	60 100	10 5
Westbound Right-Turn	85	AM PM	108 158	108 158	0 0
Southbound Left-Turn	95	AM PM	103 308	105 308	2 0

Notes:

All lengths shown in feet based on 25 feet per vehicle. Queues based on 95th percentile queue calculated by the HCM methodology.



Section 5C

Residential Street Cut-Through Analysis

This section summarizes the residential street cut-through analysis for the Project. The residential street cut-through analysis determines potential increases in average daily traffic volumes on designated Local Streets, as classified in the Mobility Plan, that can be identified as cut-through trips generated by the Project and that can adversely affect the character and function of those streets.

Section 3.5.2 of the TAG provides a list of questions to assess whether the Project would negatively affect residential streets. The net daily trips of 1,995 generated by the Project, as detailed in Table 8, are not projected to lead to trip diversion from the adjacent and nearby streets to alternative routes along a residential Local Streets that are not located adjacent to the Project Site, the Project is not projected to add a substantial amount of automobile traffic to congested Arterial Streets that could potentially cause a shift to residential Local Streets, and there is not a nearby local residential street that provides a viable alternative route to the Project Site. Thus, no further Local Residential Street Cut-Through Analysis is necessary.



Section 5D

Project Construction Assessment

This section summarizes the construction schedule and construction analysis for the Project. The construction analysis relates to the temporary effects that may result from the construction activities associated with the Project and was performed in accordance with Section 3.4 of the TAG.

CONSTRUCTION EVALUATION CRITERIA

Section 3.4.3 of the TAG identifies the following three types of in-street construction constraints that require further analysis to assess the effects of Project construction on the existing pedestrian, bicycle, transit, or vehicle circulation:

1. Temporary transportation constraints – potential effects on the transportation system
2. Temporary loss of access – potential effects on visitors entering and leaving sites
3. Temporary loss of bus stops or rerouting of bus lines – potential effects on bus service

The factors to be considered include the magnitude and duration of the temporary loss of access and transportation facilities, the potential inconvenience caused to users of the transportation system, and consideration for public safety. Construction activities could potentially interfere with pedestrian, bicycle, transit, or vehicle circulation and accessibility to adjoining areas. As detailed in Section 3.4.4 of the TAG, the proposed construction plans should be reviewed to determine whether construction activities would require any of the following actions:

- Street, sidewalk, or lane closures
- Block existing vehicle, bicycle, or pedestrian access along a street or to parcels fronting the street
- Modification of access to transit stations, stops, or facilities during revenue hours

- Closure or movement of an existing bus stop or rerouting of an existing bus line
- Creation of transportation hazards

PROPOSED CONSTRUCTION SCHEDULE

The Project would be constructed over a period of approximately 20 months with completion by Year 2028. The construction period would include subphases of site preparation, demolition, grading, building construction, etc. Construction vehicles, worker travel, and other associated construction information were forecasted by the Project team. Based on the forecasted construction data, it was determined that the peak haul truck activity would occur during the grading subphase, and peak worker activity would occur during the building construction subphase. These two sub-phases of construction were studied in greater detail.

GRADING SUBPHASE

The peak period of haul truck activity during construction would occur during excavation and grading subphase of the Project Site. No substantial peak hour construction traffic effects are anticipated during this subphase of construction with implementation of the Construction Traffic Management Plan. It is anticipated that haul truck activity would occur outside of peak hours on weekdays and Saturdays to the extent feasible. No off-site construction-related truck travel would occur on Sundays or holidays.

Depending on soil type and condition, haul trucks would travel on approved truck routes designated within the region to landfills in either the cities of La Paz, Arizona or Corona, California, which are located approximately 286 and 65 miles east of the Project Site, respectively. Based on the proposed haul truck route plans, loaded trucks would exit the Project Site, travel southbound on Main Street toward Mission Road, access I-5 Southbound ramps at Mission Road, and merge onto Interstate 10 East. Loaded trucks with classified soil would then exit Arizona State Route 95 and travel northbound to the landfill site in La Paz, Arizona while loaded trucks with non-hazardous soil would then merge onto Interstate 15 South, exit Temescal Canyon Road and travel southbound to the landfill site in Corona, California. Empty trucks would travel the opposite direction. The proposed haul route will be reviewed and must be approved by the City.



Based on peak construction projections prepared for the Project, approximately 67,791 cubic yards of material would be excavated and removed from the Project Site over a 65-workday period. The grading subphase is estimated to require up to 80 daily haul truck trips (40 inbound, 40 outbound) and 50 daily vendor truck trips (25 inbound, 25 outbound). Larger trucks were converted into the equivalent value of passenger cars (PCE) at a rate of 2.0 due to the slower headway and delay-creating effects of heavy vehicles. Thus, up to 260 daily PCE truck trips (130 inbound, 130 outbound) are forecasted to occur during this subphase. In addition, construction workers would result in an average total of 120 daily vehicle trips (60 inbound, 60 outbound) to and from the Project Site during this subphase. Construction workers would park off-site in nearby parking lots and garages.

BUILDING CONSTRUCTION SUBPHASE

The traffic-related effects associated with construction workers depend on the number of construction workers employed during various subphases of construction, as well as the travel mode and travel time of the workers. To the extent feasible, the hours of construction typically require workers to be on-site before the weekday morning commuter peak period and allow them to leave before or after the afternoon commuter peak period (i.e., arrive at the site prior to 7:00 AM and depart before 4:00 PM or after 6:00 PM).

The estimated number of construction workers each day depends on the phase of construction. According to construction projections prepared for the Project, the building construction subphase would employ the most construction workers for all components of the building (i.e., framing, plumbing, elevators, inspections, finishing). However, since the different building components would not be constructed or installed simultaneously, this cumulative estimate likely overstates the number of workers that would be expected on the peak construction day. Furthermore, on most of the estimated workdays to complete the Project, there would be far fewer workers than on the peak day. Therefore, the following estimates of construction workers per day used for the purposes of this analysis represent a very conservative estimate.

During the building construction subphase, construction workers would result in a total of 640 average daily vehicle trips (320 inbound and 320 outbound trips) to and from the Project Site. In addition, a total of 20 vendor truck trips per day, or 40 PCE trips (20 inbound, 20 outbound) are



forecasted to occur during this subphase. During this subphase, construction workers would park on-site, in local public parking facilities or, if needed, at an off-site location and would be shuttled to the Project Site until the on-site parking facility is available. Restrictions against workers parking in the public ROW in the vicinity of (or adjacent to) the Project Site would be identified as part of the Construction Traffic Management Plan. Construction materials storage and truck staging would generally be contained on-site, with delivery of equipment and materials from the public ROW. The Construction Traffic Management Plan would describe the closure of all adjacent sidewalks and necessary lane closures for material and equipment delivery.

POTENTIAL EFFECTS ON ACCESS, TRANSIT, AND PARKING

Project construction would not create hazards for roadway travelers, bus riders, or parkers, so long as commonly practiced safety procedures for construction are followed. Such procedures and other measures (e.g., to address temporary traffic control, lane closures, sidewalk closures) would be incorporated into the Construction Traffic Management Plan. The construction-related effects associated with access and transit would not be substantial, and the implementation of the Construction Traffic Management Plan described below would further reduce those effects.

Access

Construction activities would primarily be contained within the Project Site boundaries. However, construction fences may encroach into the public ROW (e.g., sidewalks and parking lanes) adjacent to the Project Site. Additionally, construction would affect the public ROW during installation of pavement treatments and loading zones on Bruno Street, as well as improvement work on curb, gutter, etc. and trenching for utility infrastructure. Temporary traffic controls would be provided to direct traffic around any closures as required in the Construction Traffic Management Plan. Travel lanes would be maintained on all Project Site frontages throughout the construction period and emergency access would not be impeded. The parking lane and/or curb lane along all adjacent roadways adjacent to the Project Site would be utilized intermittently during construction.

Although there are no existing dedicated bicycle lanes adjacent to the Project Site, there are existing sidewalks. The use of the public ROW along all Project Site frontages would require temporary re-routing of pedestrian and bicycle traffic as the sidewalks fronting the Project Site would be closed. The Construction Traffic Management Plan would include measures to ensure pedestrian and bicycle safety along the affected sidewalks and temporary walkways (e.g., providing overhead canopy).

Transit

The Project does not propose any transit rerouting; however, temporary relocation of the adjacent bus stop serving DASH Lincoln Heights/Chinatown on Alameda Street may occur as a result of the Project construction that would affect the public ROW. Any necessary adjustments to the transit stop would be coordinated with LADOT.

Parking

On-street unmetered parking is currently allowed along all Project Site frontages. Although staging of construction trucks would primarily be contained on the Project Site, the curbside may be utilized or temporarily closed for short durations during improvement work on curb, gutter, and other street improvements.

CONSTRUCTION TRAFFIC MANAGEMENT PLAN

A detailed Construction Traffic Management Plan, including street closure information, a detour plan, haul routes, and a staging plan, would be prepared and submitted to the City for review and approval, prior to commencing construction. The Construction Traffic Management Plan would formalize how construction would be carried out and identify specific actions that would be required to reduce effects on the surrounding community. The Construction Traffic Management Plan shall be based on the nature and timing of the specific construction activities and other projects in the vicinity of the Project Site, and shall include, but not be limited to, the following elements, as appropriate:

-
- Advance, bilingual notification of adjacent property owners and occupants of upcoming construction activities, including durations and daily hours of operation
 - Prohibition of construction worker or equipment parking on adjacent streets or in predominantly residentially zoned areas
 - Temporary pedestrian, bicycle, and vehicular traffic controls (e.g., flag people) during all construction activities adjacent to Alameda Street, College Street, Main Street, and Bruno Street to ensure traffic safety on the public ROW
 - Scheduling of construction-related activities to reduce the effect on traffic flow on surrounding arterial streets
 - Containment of construction activity within the Project Site boundaries, to the extent feasible
 - Coordination with LADOT to address any transit stop modifications or relocations
 - Coordination with Metro to address any potential temporary effects along Metro ROW due to construction equipment (e.g., cranes, scaffolding, lifts)
 - Implementing safety precautions for pedestrians and bicyclists through such measures as alternate routing and protection barriers as appropriate
 - Scheduling of construction-related deliveries, haul trips, etc., so as to occur outside the commuter peak hours to the extent feasible
 - Prohibition of construction-related vehicles/equipment staging on adjacent streets, unless specifically approved as a condition of an approved haul route
 - Sufficient dampening of the construction area to control dust caused by grading and hauling and reasonable control at all times of dust caused by wind
 - Maintenance of a log, available on the job site at all times, documenting the dates of hauling and the number of trips (i.e., trucks) per day
 - Identification of a construction manager and provision of a telephone number for any inquiries or complaints from residents regarding construction activities and posting of the telephone number at the site readily visible to any interested party during site preparation, grading, and construction
 - Obtainment of the required permits for truck haul routes from the City prior to the issuance of any grading permit for the Project

It is expected that the Related Projects would also prepare Construction Traffic Management Plans for review and approval by the City prior to the start of construction activities. As part of the LADOT and/or Department of Building and Safety established process for reviewing construction management plans, potential overlapping construction activities and proposed haul routes would



be reviewed to minimize the effects of cumulative construction activities on any particular roadway.



Section 5E

Parking Analysis

This section provides an analysis of the proposed parking provisions for the Project.

PARKING SUPPLY

The Project would provide approximately 440 parking spaces and 149 bicycle parking spaces, including 26 short-term and 123 long-term spaces, on-site.

VEHICLE PARKING CODE REQUIREMENTS

The LAMC identifies City parking requirements for new developments. As detailed in Table 15, the Project's baseline parking requirement of 506 spaces is based on standard parking ratios in LAMC Section 12.21A.4(c) for commercial uses. However, the Project qualifies for parking reductions based on rates provided in LAMC Section 12.21A4(x)(3) for projects located within the East Los Angeles State Enterprise Zone, as indicated in Zoning Information (ZI) No. 2129. Furthermore, per LAMC Section 12.21.A4, projects located within 1,500 feet of a major transit station may replace up to 30% of its non-residential vehicle parking with bicycle parking at a ratio of four bicycle parking spaces to one vehicle parking space. However, the Project is not required to provide a minimum amount of parking per Assembly Bill (AB) 2097, which is a State law that prohibits public agencies or cities from imposing a minimum automobile parking requirement on most development projects, including commercial developments like the Project, located within a 0.5-mile radius of a major transit stop. Thus, as detailed in Table 15, the Project's approximately 440 vehicle parking spaces would satisfy both AB 2097 and the minimum LAMC parking requirement of 427 spaces.



BICYCLE PARKING CODE REQUIREMENTS

LAMC Section 12.21.A.16(a) details the long-term and short-term bicycle parking requirements for new developments. As detailed in Table 16, the Project would be required to provide a total of 75 bicycle parking spaces, including 26 short-term and 49 long-term spaces. The Project's proposed bicycle parking supply of 149 spaces would exceed the LAMC bicycle parking requirements.

**TABLE 15
VEHICLE PARKING CODE REQUIREMENTS**

Land Use	Size	Parking Rate	Total Spaces
<u>Standard LAMC Rates [a]</u>			
Office	224,597 sf	2.00 sp / 1,000 sf	449
Retail	4,110 sf	4.00 sp / 1,000 sf	16
Restaurant	4,095 sf	10.00 sp / 1,000 sf	41
Total Code Parking Requirement			506
<u>Enterprise Zone [b]</u>			
Office	224,597 sf	2.00 sp / 1,000 sf	449
Retail	4,110 sf	2.00 sp / 1,000 sf	8
<u>Restaurant</u>	4,095 sf	2.00 sp / 1,000 sf	<u>8</u>
<i>Subtotal</i>			465
<u>Parking Reductions per Bicycle Replacement [c]</u>			
<i>Non-Residential</i>	<i>149 bic. sp</i>	<i>1 sp / 4 bicycle sp</i>	<i>(38)</i>
Total Parking Requirement with Reductions			427
Proposed Parking per Concept Design			440

Notes:

[a] Parking rates per Section 12.21.A4(a-c) of Los Angeles Municipal Code (LAMC).

[b] Per Section 12.21.A4(x)(3), commercial office, retail, restaurant, and bar uses within an Enterprise Zone (i.e., the Project) are to provide parking at a rate of two spaces per 1,000 sf of gross floor area.

[c] Per Section 12.21.A4 of the LAMC, non-residential buildings located within 1,500 feet of a major transit stop may replace up to 30% of the required vehicle parking with bicycle parking at a ratio of four bicycle parking spaces to one vehicle parking space. The Project is located diagonally opposite from the Metro A Line Chinatown Station.

TABLE 16
BICYCLE PARKING CODE REQUIREMENTS

Land Use	Size	Short-Term Bicycle Parking Rate [a]	Short-Term Bicycle Parking Requirement	Long-Term Bicycle Parking Rate [a]	Long-Term Bicycle Parking Requirement
Office	224,597 sf	1.0 sp / 10,000 sf	22 sp	1.0 sp / 5,000 sf	45 sp
Retail	4,110 sf	1.0 sp / 2,000 sf	2 sp	1.0 sp / 2,000 sf	2 sp
Restaurant	4,095 sf	1.0 sp / 2,000 sf	2 sp	1.0 sp / 2,000 sf	2 sp
Bicycle Parking Requirement	Short-Term:		26 sp	Long-Term:	49 sp
Total Code Bicycle Parking Requirement					75 sp
Total Bicycle Parking Provided					149 sp

Notes:

[a] Bicycle requirements as calculated per Los Angeles Municipal Code (LAMC) Section 12.21.A.16(a).

Chapter 6

Summary and Conclusions

This study was undertaken to analyze the potential transportation impacts of the Project on the local transportation system. The following summarizes the results of this analysis:

- The Project Site is located at 110, 114 and 130 W. College Street, 119 W. Bruno Street, and 943, 945, 949, 953, 955, 959, 963, 971, and 973 N. Main Street. Vehicular access would be provided via College Street. Pedestrian access to the office lobby and commercial entrances would be provided from sidewalks along the Project Site frontages, including Main Street, Bruno Street, and Alameda Street.
- The Project is a five-story (plus mezzanine parking level) creative office building with approximately 224,597 sf of office uses, 4,110 sf of ground floor retail uses, and 4,095 sf of ground floor restaurant uses, as well as 1,799 sf of exterior restaurant seating area. The Project would provide approximately 440 vehicle and 149 bicycle parking spaces.
- The Project construction is anticipated to be conducted over 20 months and completed by 2028.
- After application of appropriate trip reduction credits, the Project is anticipated to generate 289 net new morning peak hour trips and 279 net new afternoon peak hour trips.
- The Project would not conflict with the City's plans, programs, ordinances, and policies and would not generate significant VMT impacts with implementation of the mitigation measure or geometric design hazard impacts. The Project would not cause a significant safety impact at any freeway off-ramp locations.
- The Project would provide adequate internal circulation to accommodate vehicular, pedestrian, and bicycle traffic without impeding through traffic movements on City streets.
- The Project would incorporate pedestrian and bicycle-friendly designs, such as pavement treatment, landscaping, on-site bicycle parking, wider sidewalks, a passenger loading area, and publicly accessible outdoor amenities.
- The Project would implement a TDM program to reduce single occupancy vehicle trips to the Project Site. In addition, the Project includes pedestrian enhancements within and along the frontage of the Project Site, such as wider pedestrian sidewalks, trees and landscaping along sidewalks, connections to the pedestrian walkways, and publicly accessible outdoor amenities.

- 
- Construction activities would occur outside of the commuter morning and afternoon peak hours to the extent feasible and would not result in substantial operational constraints to the adjacent roadway system. A Construction Traffic Management Plan would minimize temporary operational effects of construction activities.
 - Although not required pursuant to AB 2097, the Project would be in compliance with LAMC vehicle and bicycle parking requirements.



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Appendix A

Memorandum of Understanding

Attachment C

Transportation Assessment Memorandum of Understanding (MOU)

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

I. PROJECT INFORMATION

Project Name: 130 W. College Street

Project Address: 114 and 130 West College Street, 119 West Bruno Street, and 943, 949, 955, and 973 North Main Street, Los Angeles, CA

Project Description: The Project proposes an office building with approximately 224,597 square feet (sf) of office uses, 4,110 sf of ground floor retail uses, and 5,894 sf of ground floor restaurant uses, which includes 1,799 sf of exterior restaurant seating area.

LADOT Project Case Number: CEN22-54014 Project Site Plan attached? (Required) ☒ Yes ☐ No

II. TRANSPORTATION DEMAND MANAGEMENT (TDM) MEASURES

Select any of the following TDM measures, which may be eligible as a Project Design Feature¹, that are being considered for this project:

☒	Reduced Parking Supply ²	☒	Bicycle Parking and Amenities	☒	Parking Cash Out
-------------------------------------	-------------------------------------	-------------------------------------	-------------------------------	-------------------------------------	------------------

List any other TDM measures (e.g. bike share kiosks, unbundled parking, microtransit service, etc) below that are also being considered and would require LADOT staff's determination of its eligibility as a TDM measure. LADOT staff will make the final determination of the TDM measure's eligibility for this project.

- | | | | |
|---|--|---|---------|
| 1 | <u>Promotions and Marketing [a]</u> | 4 | <u></u> |
| 2 | <u>Pedestrian Network Improvements [a]</u> | 5 | <u></u> |
| 3 | <u></u> | 6 | <u></u> |

III. TRIP GENERATION

Trip Generation Rate(s) Source: ITE 10th Edition / Other ITE 11th Edition

Trip Generation Adjustment (Exact amount of credit subject to approval by LADOT)	Yes	No
Transit Usage	☒	☐
Existing Active or Previous Land Use	☐	☒
Internal Trip	☒	☐
Pass-By Trip	☒	☐
Transportation Demand Management (See above)	☒	☐

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

	IN	OUT	TOTAL
AM Trips	<u>242</u>	<u>47</u>	<u>289</u>
PM Trips	<u>61</u>	<u>219</u>	<u>279</u>

NET Daily Vehicle Trips (DVT)
2,528 DVT (ITE ed.)
2,528 DVT (VMT Calculator ver. 1.4)

¹ At this time Project Design Features are only those measures that are also shown to be needed to comply with a local ordinance, affordable housing incentive program, or State law.

² Select if reduced parking supply is pursued as a result of a parking incentive as permitted by the City's Bicycle Parking Ordinance, State Density Bonus Law, or the City's Transit Oriented Community Guidelines.

[a] The Project proposes to include these TDM measures as part of its Project Design Feature, which will be further discussed in the Transportation Assessment.

**IV. STUDY AREA AND ASSUMPTIONS**Project Buildout Year: 2028 Ambient Growth Rate: 1 % Per Yr.Related Projects List, researched by the consultant and approved by LADOT, attached? (Required) ☒ Yes ☐ No

STUDY INTERSECTIONS and/or STREET SEGMENTS:

(May be subject to LADOT revision after access, safety, and circulation evaluation.)

- | | |
|--|---|
| 1 <u>Hill Street and College Street</u> | 4 <u>Main Street and College Street</u> |
| 2 <u>Broadway and College Street</u> | 5 <u>Alameda Street and Alpine Street</u> |
| 3 <u>Spring Street/Alameda Street and College Street</u> | 6 _____ |

Provide a separate list if more than six study intersections and/or street segments.

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

If a study intersection is located within a ¼-mile of an adjacent municipality's jurisdiction, signature approval from said municipality is required prior to MOU approval.

V. ACCESS ASSESSMENT

- Does the project exceed 1,000 net DVT? ☒ Yes ☐ No
- Is the project's frontage 250 linear feet or more along an Avenue or Boulevard as classified by the City's General Plan? ☒ Yes ☐ No
- Is the project's building frontage encompassing an entire block along an Avenue or Boulevard as classified by the City's General Plan? ☒ Yes ☐ No

VI. ACCESS ASSESSMENT CRITERIA

If Yes to any of the above questions a., b., or c., the Transportation Assessment must assess the project's potential effect on pedestrian, bicycle, and transit facilities in the vicinity of the proposed project. Complete **Attachment C.1: Access Assessment Criteria** and attach to the draft Transportation Assessment to support the analysis. For the full scope of analysis, see Section 3.2 of the Transportation Assessment Guidelines.

VII. SITE PLAN AND MAP OF STUDY AREA

Please note that the site plan should be submitted to the Department of City Planning for cursory review.

Does the attached site plan and/or map of study area show	Yes	No	Not Applicable
Each study intersection and/or street segment	☒	☐	☐
*Project Vehicle Peak Hour trips at each study intersection	☒	☐	☐
*Project Vehicle Peak Hour trips at each project access point	☒	☐	☐
*Project trip distribution percentages at each study intersection	☒	☐	☐
Project driveways designed per LADOT MPP 321 (show widths and directions or lane assignment)	☒	☐	☐
Pedestrian access points and any pedestrian paths	☒	☐	☐
Pedestrian loading zones	☐	☐	☒
Delivery loading zone or area	☒	☐	☐
Bicycle parking onsite	☒	☐	☐
Bicycle parking offsite (in public right-of-way)	☐	☐	☒

*For mixed-use projects, also show the project trips and project trip distribution by land use category.

**VIII. FREEWAY SAFETY ANALYSIS SCREENING**

Will the project add 25 or more trips to any freeway off-ramp in either the AM or PM peak hour? ☒ **YES** ☐ **NO**

Provide a brief explanation or graphic identifying the number of project trips expected to be added to the nearby freeway off-ramps serving the project site. If Yes to the question above, a freeway ramp analysis is required.

IX. CONTACT INFORMATIONCONSULTANT

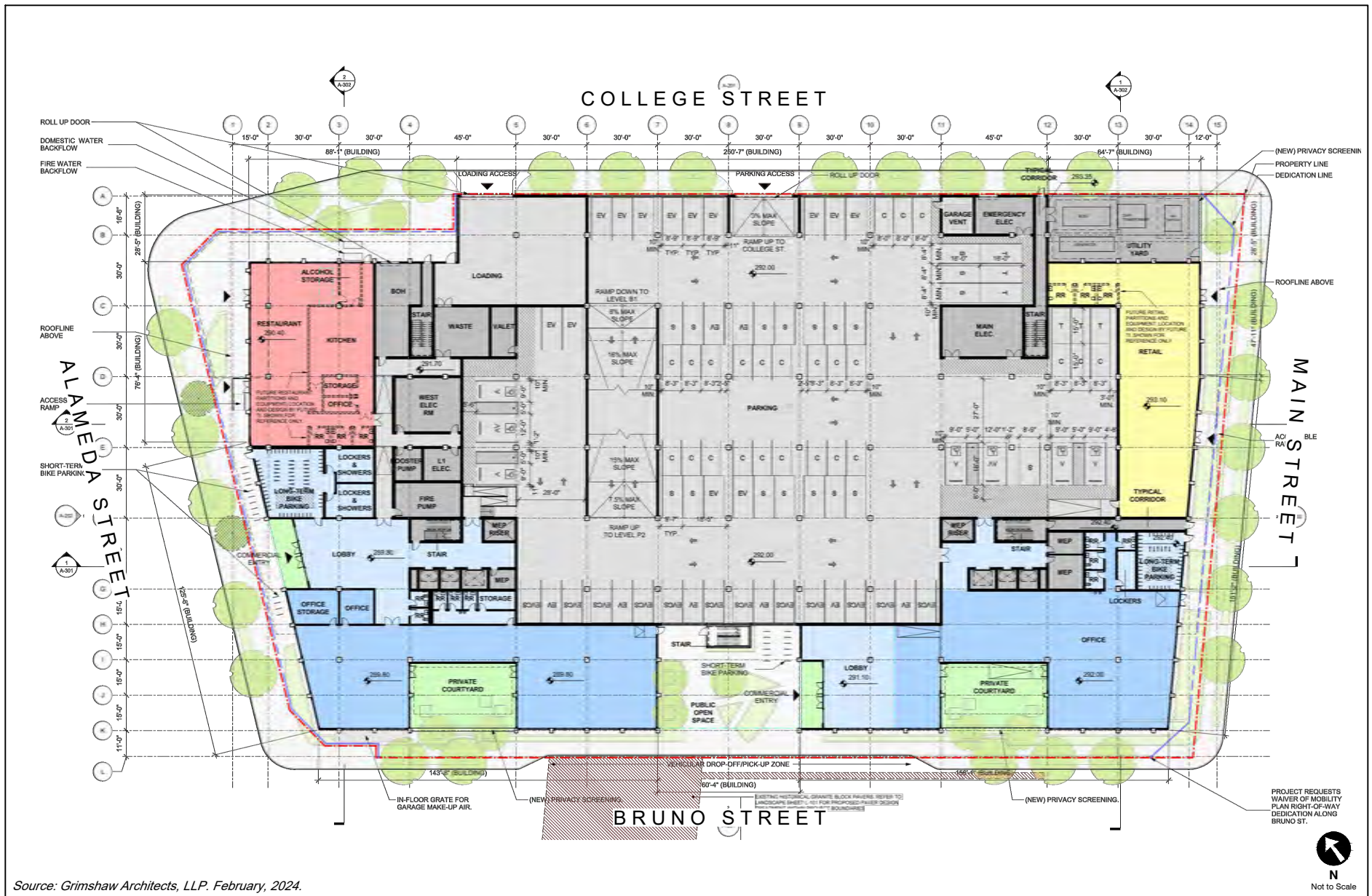
Name: Gibson Transportation Consulting, Inc.
Address: 555 W 5th St., Suite 3375, Los Angeles, CA 90013
Phone Number: (213) 683-0088
E-Mail: cle@gibsontrans.com

DEVELOPER

S&R Partners, LLC c/o Aaron Bidne, Granite Properties
5601 Granite Parkway, Suite 1200, Plano, TX 75024
(972) 731-2300
abidne@graniteprop.com

Approved by:	x	<i>Casey Tonalde</i>		2/12/2024	x	<i>Jose Cardenas</i>		3/14/2024
		Consultant's Representative		Date		LADOT Representative		**Date
Adjacent Municipality:				Approved by:				
				(if applicable)		Representative		Date

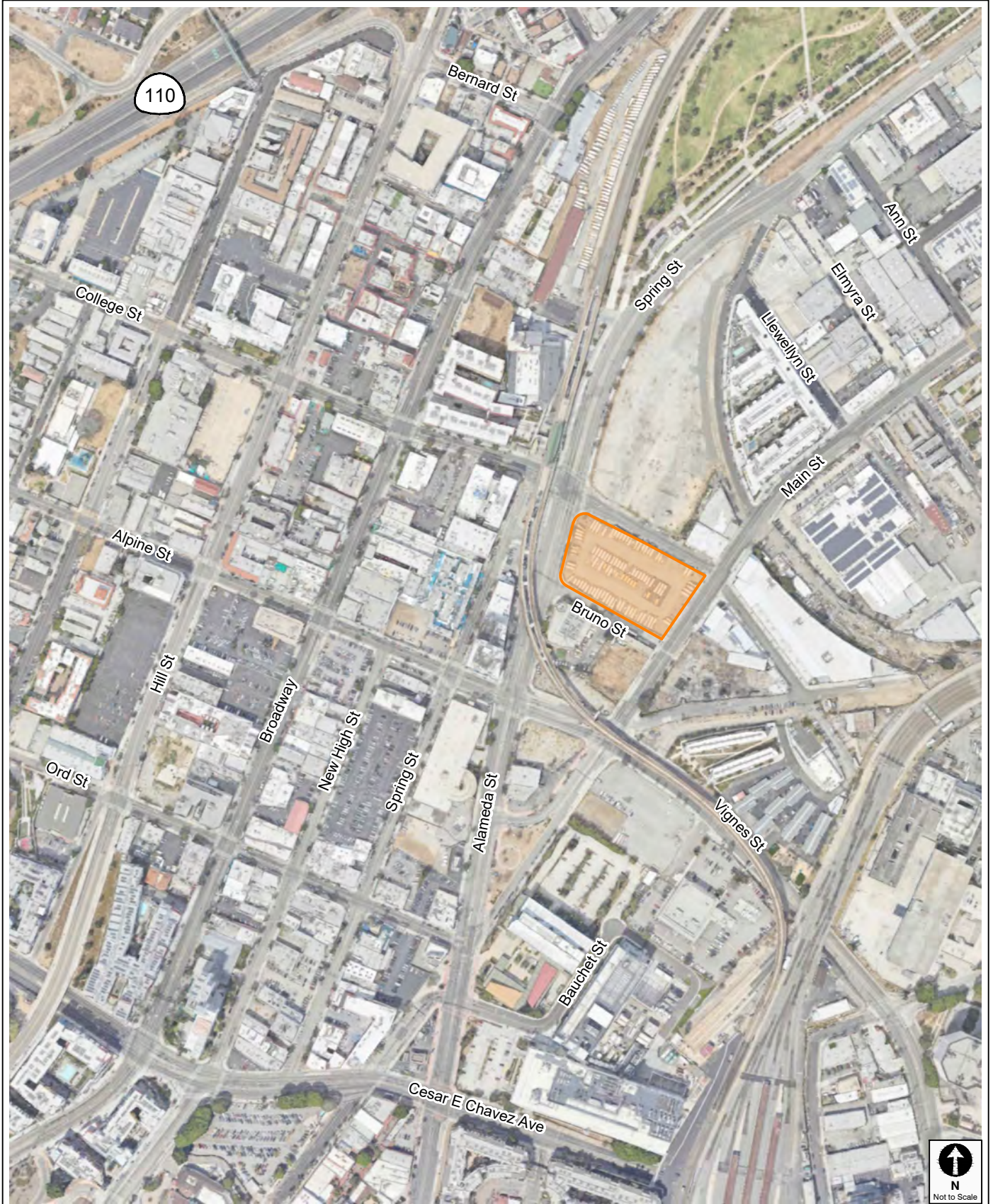
**MOUs are generally valid for two years after signing. If after two years a transportation assessment has not been submitted to LADOT, the developer's representative shall check with the appropriate LADOT office to determine if the terms of this MOU are still valid or if a new MOU is needed.



Source: Grimshaw Architects, LLP. February, 2024.

PROJECT SITE PLAN

FIGURE
1



PROJECT SITE LOCATION

FIGURE
2

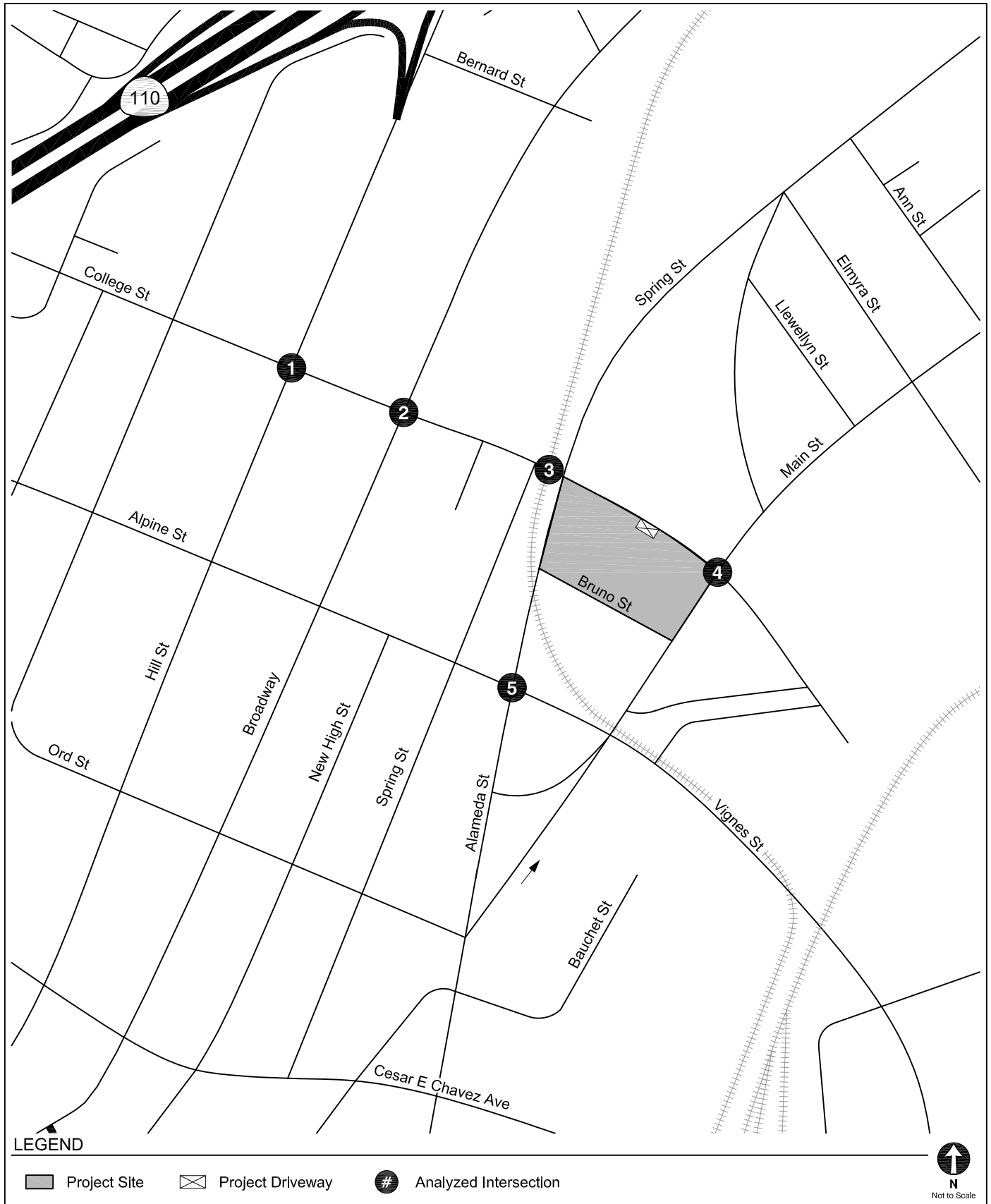
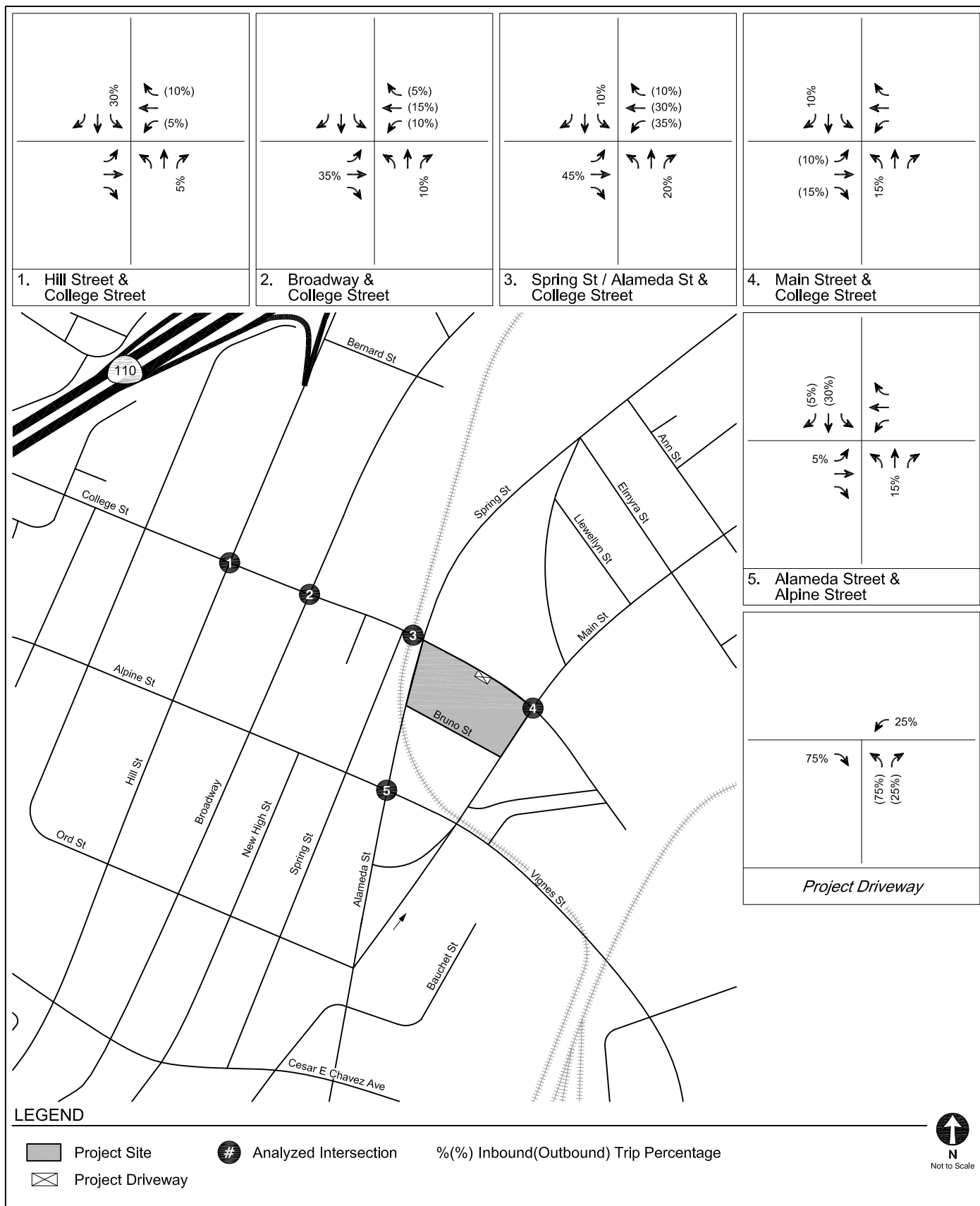
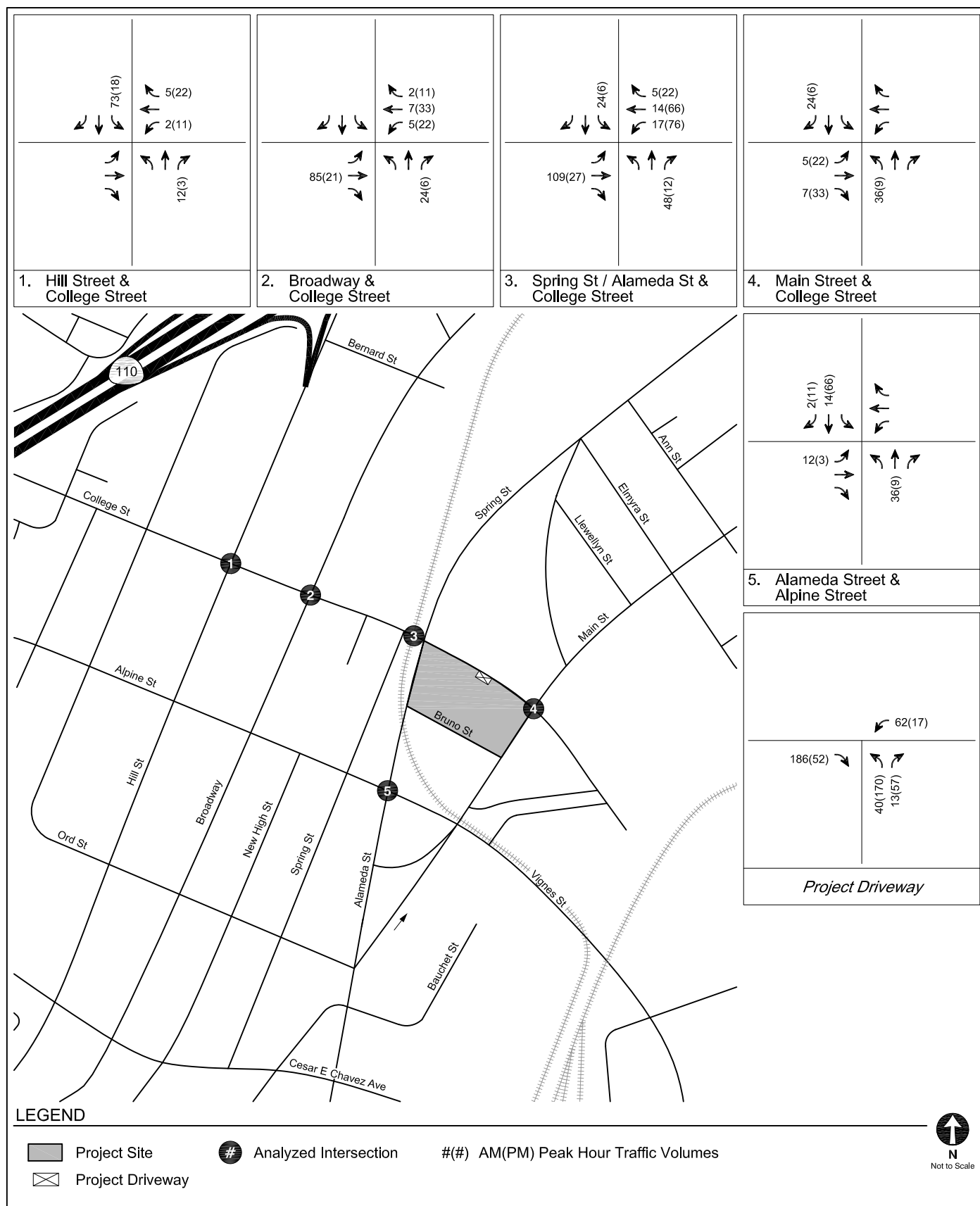


FIGURE
3



PROJECT TRIP DISTRIBUTION

FIGURE
4



PROJECT-ONLY
PEAK HOUR TRAFFIC VOLUMES

FIGURE
5

TABLE 1
130 W COLLEGE STREET
TRIP GENERATION ESTIMATES

Land Use	ITE Land Use	Size	Weekday					
			Morning Peak Hour			Afternoon Peak Hour		
			In	Out	Total	In	Out	Total
<u>Trip Generation Rates</u> [a]								
Office	710	per 1,000 sf	88%	12%	1.52	17%	83%	1.44
Strip Retail Plaza (<40k)	822	per 1,000 sf	60%	40%	2.36	50%	50%	6.59
High-Turnover Restaurant	932	per 1,000 sf	55%	45%	9.57	61%	39%	9.05
<u>Proposed Project</u>								
Office <i>Less 25% Transit/Walk-in Reduction [b]</i>	710	224.597 ksf	300 (75)	41 (10)	341 (85)	55 (14)	268 (67)	323 (81)
Strip Retail Plaza <i>Less 10% Internal Caption Reduction [c]</i> <i>Less 25% Transit/Walk-in Reduction [b]</i> <i>Less 50% Pass-by Reduction [d]</i>	822	4.11 ksf	6 (1) (1) (2)	4 0 (1) (2)	10 (1) (2) (4)	14 (1) (3) (5)	14 (1) (3) (5)	27 (2) (6) (10)
High-Turnover Restaurant [e] <i>Less 10% Internal Caption Reduction [c]</i> <i>Less 25% Transit/Walk-in Reduction [b]</i> <i>Less 20% Pass-by Reduction [d]</i>	932	5.894 ksf	28 (3) (6) (4)	28 (3) (6) (4)	56 (6) (12) (8)	29 (3) (7) (4)	24 (2) (6) (3)	53 (5) (13) (7)
Total - Project Driveway Trips			248	53	301	70	227	296
Total - Net Project Trips			242	47	289	61	219	279

Notes:

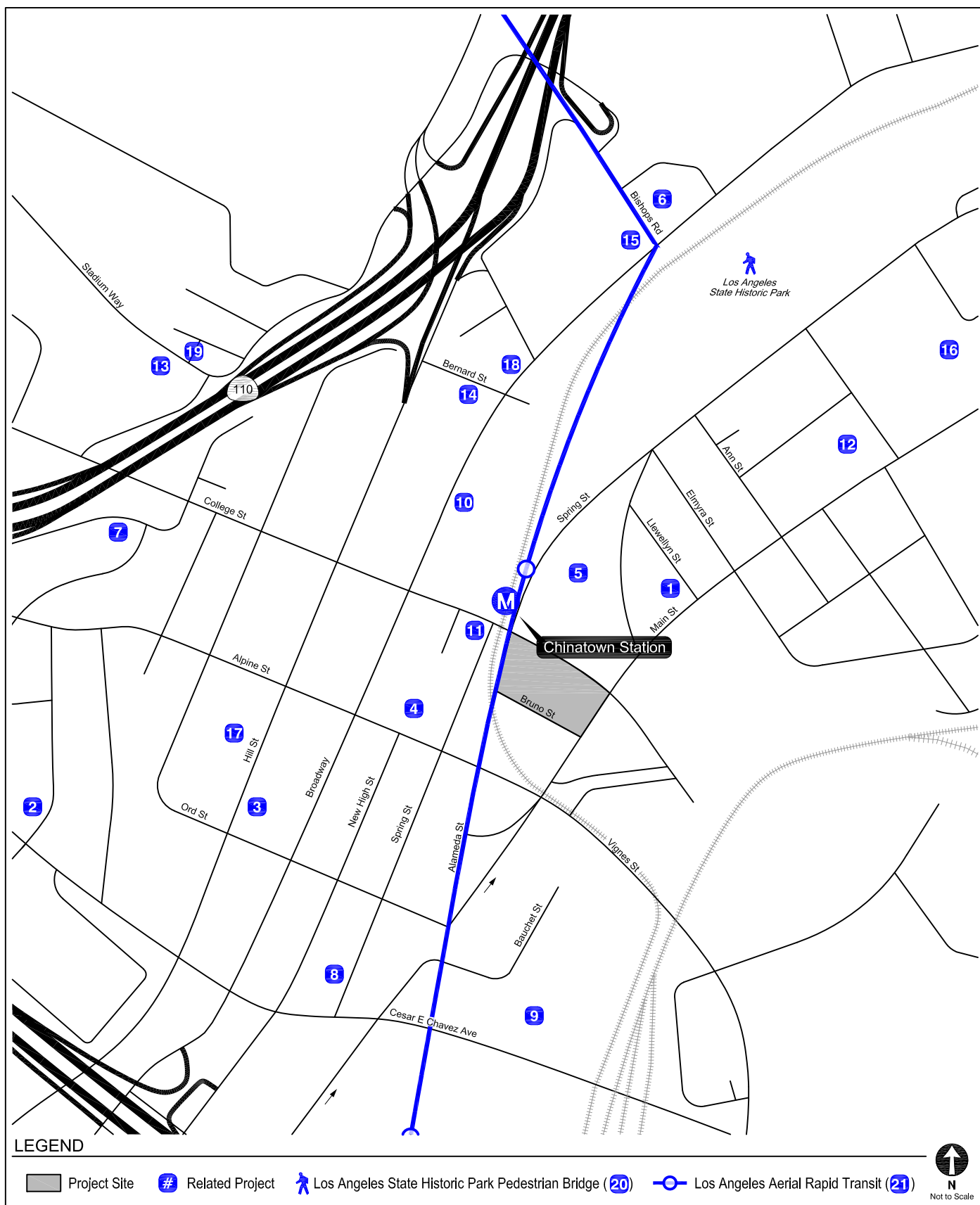
[a] Source: *Trip Generation Manual, 11th Edition*, Institute of Transportation Engineers, 2021.

[b] Per City of Los Angeles Department of Transportation's (LADOT) *Transportation Assessment Guidelines* (Updated August 2022), the Project Site is located diagonally opposite from Metro A Line Chinatown Station, therefore a 25% transit reduction was applied to account for transit usage and walking visitor arrivals from the surrounding neighborhoods and adjacent commercial developments.

[c] Internal capture reductions account for person trips made between distinct land uses within a mixed-use development (i.e., office employees visiting the commercial retail and restaurant uses).

[d] Per Attachment J of LADOT's *Transportation Assessment Guidelines*, pass-by reductions were taken into account for Project trips made as an intermediate stop on the way from an origin to a primary trip destination without route diversion.

[e] For conservative trip generation purposes, the total restaurant floor area includes 1,799 sf of exterior seating area.



LOCATIONS OF RELATED PROJECTS

FIGURE
6

**TABLE 2
130 W COLLEGE STREET
RELATED PROJECTS**

No.	Project	Address	Description	Trip Generation [a]						
				Daily	Morning Peak Hour			Afternoon Peak Hour		
					In	Out	Total	In	Out	Total
1.	1101 N Main Condos	1101 N Main St	318 condominium units	1,102	(9)	80	71	75	12	87
2.	Mixed-Use	511 N Grand Ave	299 apartment units and 8,000 sf retail	1,511	7	89	96	99	54	153
3.	Hill Mixed Use Project	708 N Hill St	162 apartment units,5,000 sf retail	980	16	57	73	57	33	90
4.	Alpine Mixed-Use	211 W Alpine St	160 apartment units and 2,499 sf retail	879	8	45	53	40	25	65
5.	College Station Mixed-Use	129 W College St, 924 N Spring St	725 apartment units and 51,600 sf commercial	6,401	165	278	443	298	196	494
6.	1201 N Broadway Mixed-Use	1201 N Broadway	118 apartment units and 8,800 sf office/commercial	569	(11)	43	32	41	5	46
7.	708 S New Depot Street Residential	708 S New Depot St	33 apartment units	219	3	14	17	13	7	20
8.	643-655 N Spring Street	643-655 N Spring St	294 apartment units, 149 hotel rooms, and 15,878 sf commercial	3,495	131	151	282	176	113	289
9.	Data Center	900 N Alameda St	179,900 sf data center	178	8	8	16	3	13	16
10.	942 Broadway	942 N Broadway	178 residential units, including 9 affordable housing units, and 35,805 sf commercial restaurant and office space	672	27	39	66	32	27	59
11.	843 N Spring St MU	843 N Spring St	100,517 sf commercial office and restaurant space	2,059	144	80	224	112	89	201
12.	Mixed-Use	1457 N Main St	244 live-work units and 9,829 sf commercial retail	900	20	47	67	53	37	90
13.	Stadium Way and Chavez Ravine Apartments	959 E Stadium Way	151 apartment units	1,051	16	65	81	64	34	98
14.	Pagoda Hotel	995 N Broadway	101 hotel rooms and 6,211 sf restaurant	1,387	56	42	98	62	48	110
15.	1101 N Broadway	1101 N Broadway	92 hotel rooms, 1,713 sf restaurant, 895 sf café/retail, and 978 sf café	929	31	24	55	38	33	71
16.	Main+ Naud Office & Retail/ Restaurant	1635 N Main St	140,000 sf office, 5,000 sf retail, 8000 sf restaurant	1,759	160	34	194	46	138	184
17.	TRJLA	717 N Hill St	411 apartments, 39 affordable housing, 17,140 sf retail	2,137	55	135	190	131	63	194
18.	Buena Vista Project	1030 N Broadway	986 apartments, 38,800 sf restaurants	6,913	141	3,269	410	254	136	390
19.	950 Stadium Way Residential	950 E Stadium Wy	57 apartment units and 8 affordable housing units	301	4	12	16	15	9	24
Infrastructure Projects										
No.	Project	Description								
20.	Los Angeles State Historic Park Pedestrian Bridge	A pedestrian bridge connection is proposed to provide access to the Los Angeles State Historic Park from Broadway. Current access to the Los Angeles State Historic Park is only available along Spring Street. There is currently no dedicated funding or design of the future pedestrian bridge connection.								
21. [b]	Los Angeles Aerial Rapid Transit (LA ART)	An aerial rapid gondola transit system is proposed to provide daily transit service to connect communities of El Pueblo, Mission Junction, Solano Canyon, and William Meade Homes. The station and junction locations include Alameda Station, Alameda Tower, Alpine Tower, Chinatown/State Park Station, Broadway Junction, Stadium Tower, and Dodger Stadium Station.								

Notes:

[a] Source: Related project information and trip generation estimates for development projects are provided by Los Angeles Department of Transportation (LADOT) or accessed from <http://planning.lacity.org> based on cases filed since February 2024 .

[b] Source: *Draft Environmental Impact Report for the Los Angeles Aerial Rapid Transit Project, Los Angeles, California* (AECOM, October 2022)

TABLE 3
130 W COLLEGE STREET
FREEWAY OFF-RAMP SAFETY SCREENING ANALYSIS

Freeway Off-Ramp	Peak Hour	Proposed Project Trips	Meets Screening Criteria? [a]
SR 110			
Northbound Off-ramp to Hill Street	AM PM	36 9	YES NO
Southbound Off-ramp to Hill Street	AM PM	36 9	YES NO
US-101			
Southbound Off-ramp to Broadway	AM PM	24 6	NO NO
Northbound Off-ramp to Alameda Street	AM PM	12 3	NO NO
Northbound Off-ramp to Vignes Street	AM PM	12 3	NO NO

Notes:

- [a] A transportation assessment for a development project must include further analysis of any freeway off-ramp where a project adds 25 or more peak hour trips. As detailed, SR 110 Northbound and Southbound Off-ramps to Hill Street during the morning peak hour would be further analyzed in the transportation study.

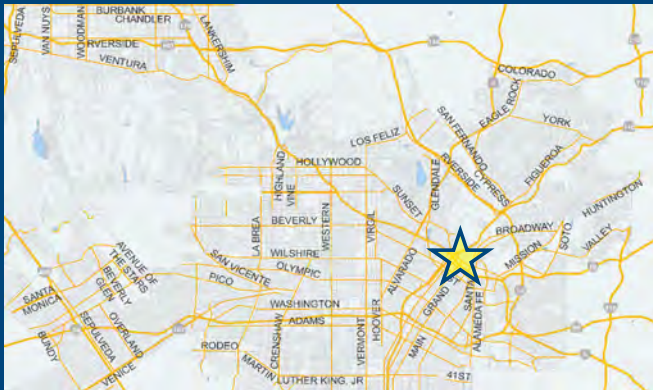
CITY OF LOS ANGELES VMT CALCULATOR Version 1.4



Project Screening Criteria: Is this project required to conduct a vehicle miles traveled analysis?

Project Information

Project: 130 W College Street
Scenario: [www](#)
Address: 130 W COLLEGE ST, 90012



Is the project replacing an existing number of residential units with a smaller number of residential units AND is located within one-half mile of a fixed-rail or fixed-guideway transit station?

☒ Yes ☐ No

Existing Land Use

Land Use Type	Value	Unit
Housing Single Family		DU
☐ Click here to add a single custom land use type (will be included in the above list)		

Proposed Project Land Use

Land Use Type	Value	Unit
Retail High-Turnover Sit-Down Restaurant	5.894	ksf
Retail General Retail	4.11	ksf
Retail High-Turnover Sit-Down Restaurant	5.894	ksf
Office General Office	224.597	ksf
☐ Click here to add a single custom land use type (will be included in the above list)		

Project Screening Summary

Existing Land Use	Proposed Project
0 Daily Vehicle Trips	2,528 Daily Vehicle Trips
0 Daily VMT	19,796 Daily VMT
Tier 1 Screening Criteria	
Project will have less residential units compared to existing residential units & is within one-half mile of a fixed-rail station. ☐	
Tier 2 Screening Criteria	
The net increase in daily trips < 250 trips	2,528 Net Daily Trips
The net increase in daily VMT ≤ 0	19,796 Net Daily VMT
The proposed project consists of only retail land uses ≤ 50,000 square feet total.	10,004 ksf
The proposed project is required to perform VMT analysis.	

Attachment C.1: Access Assessment Worksheet



Access Assessment Worksheet

This Worksheet supports the analysis needed to assess the project's potential effect on pedestrian, bicycle, and transit facilities in the vicinity of the proposed project. If the project exceeds the screening criteria in Section V of the MOU, complete and attach to the draft Transportation Assessment to support the analysis. For the full scope of analysis, see Section 3.2 of the Transportation Assessment Guidelines.:

I. PROJECT INFORMATION

Project Name: 130 W. College Street

Project Address: 114 and 130 West College Street, 119 West Bruno Street, and 943, 949, 955, and 973 North Main Street, Los Angeles, CA

Project Description: The Project proposes an office building with approximately 224,597 square feet (sf) of office uses, 4,110 sf of ground floor retail uses, and 5,894 sf of ground floor restaurant uses, which includes 1,799 sf of exterior restaurant seating area.

LADOT Project Case Number: _____

II. PEDESTRIAN/ PERSON TRIP GENERATION

Source of Pedestrian/Person Trip Generation Rate(s)? ☐ ITE 10th Edition ☐ Other:

	Land Use	Size/Unit	Daily Person Trips
Proposed	To be provided		
	Total new trips:		

Pedestrian/Person trip generation table including a description of the proposed land uses, trip credits, person trip assumptions, comparison studies used for reference, etc. attached? ☒ Yes ☐ No

III. PEDESTRIAN ATTRACTORS INVENTORY

Attach Pedestrian Map for the area (1,320 foot radius from edge of the project site) depicting:

- site pedestrian entrance(s)
- Existing or proposed passenger loading zones
- pedestrian generation/distribution values
 - Geographic Distribution: N 30 % S 30 % E 5 % W 35 %
- transit boarding and alighting of transit stops (should include Metro rail stations; Metro, DASH, and other municipal bus stops)



City of Los Angeles Transportation Assessment MOU

- Key pedestrian destinations with hours of operation:
 - schools (school times)
 - government offices with a public counter or meeting room
 - senior citizen centers
 - recreation centers or playgrounds
 - public libraries
 - medical centers or clinics
 - child care facilities
 - post offices
 - places of worship
 - grocery stores
 - other facilities that attract pedestrian trips
- pedestrian walking routes to key destinations from project site

Note: Pedestrian Count Summary, Bicycle Count Summary, Manual Traffic Count Summary will need to be attached to the Transportation Assessment

IV. FACILITIES INVENTORY

Is a High Injury Network street located within 1,320 foot radius from the edge of the project site? ☒ Yes ☐ No

If yes, list streets and include distance from the project:

<u>College St west of Spring St/Alameda St</u>	at <u>400</u> (feet)
<u>Broadway south of College Street</u>	at <u>570</u> (feet)
<u>Alpine Street between Broadway and Alameda St</u>	at <u>375</u> (feet)
<u>Alameda Street south of Alpine Street</u>	at <u>425</u> (feet)
<u>Hill Street south of College Street</u>	at <u>1,000</u> (feet)

Attach Radius Map for the area (1,320 foot radius from edge of the project site) depicting the following existing and proposed facilities:

- transit stops
- bike facilities
- traffic control devices for controlled crossings
- uncontrolled crosswalks
- location of any missing, damaged or substandard sidewalks

For a reference of planned facilities, see the [Transportation Assessment Support Map](#)

Crossing Distances



City of Los Angeles Transportation Assessment MOU

Does the project property have frontage along an arterial street (designated as either an Avenue or Boulevard?)

☒ Yes ☐ No

If yes, provide the distance between the crossing control devices (e.g. signalized crosswalk, or controlled mid-block crossing) along any arterial within 1,320 feet of the property.

_____ (feet) at <u>See Table 4</u>	_____ (feet) at _____
_____ (feet) at _____	_____ (feet) at _____
_____ (feet) at _____	_____ (feet) at _____
_____ (feet) at _____	_____ (feet) at _____
_____ (feet) at _____	_____ (feet) at _____
_____ (feet) at _____	_____ (feet) at _____

For each street along the property frontage, provide:

the roadway configuration: See Table 5

- | | |
|----------------------------|----------------------------|
| • 2-Lane | • 5-Lane w/ striped median |
| • 3-Lane w/ striped median | • 5-Lane w/ raised median |
| • 3-Lane w/ raised median | • 6-Lane |
| • 4-Lane | • Other: _____ |

and crossing distance: _____ ft total _____ ft to median _____ ft to median

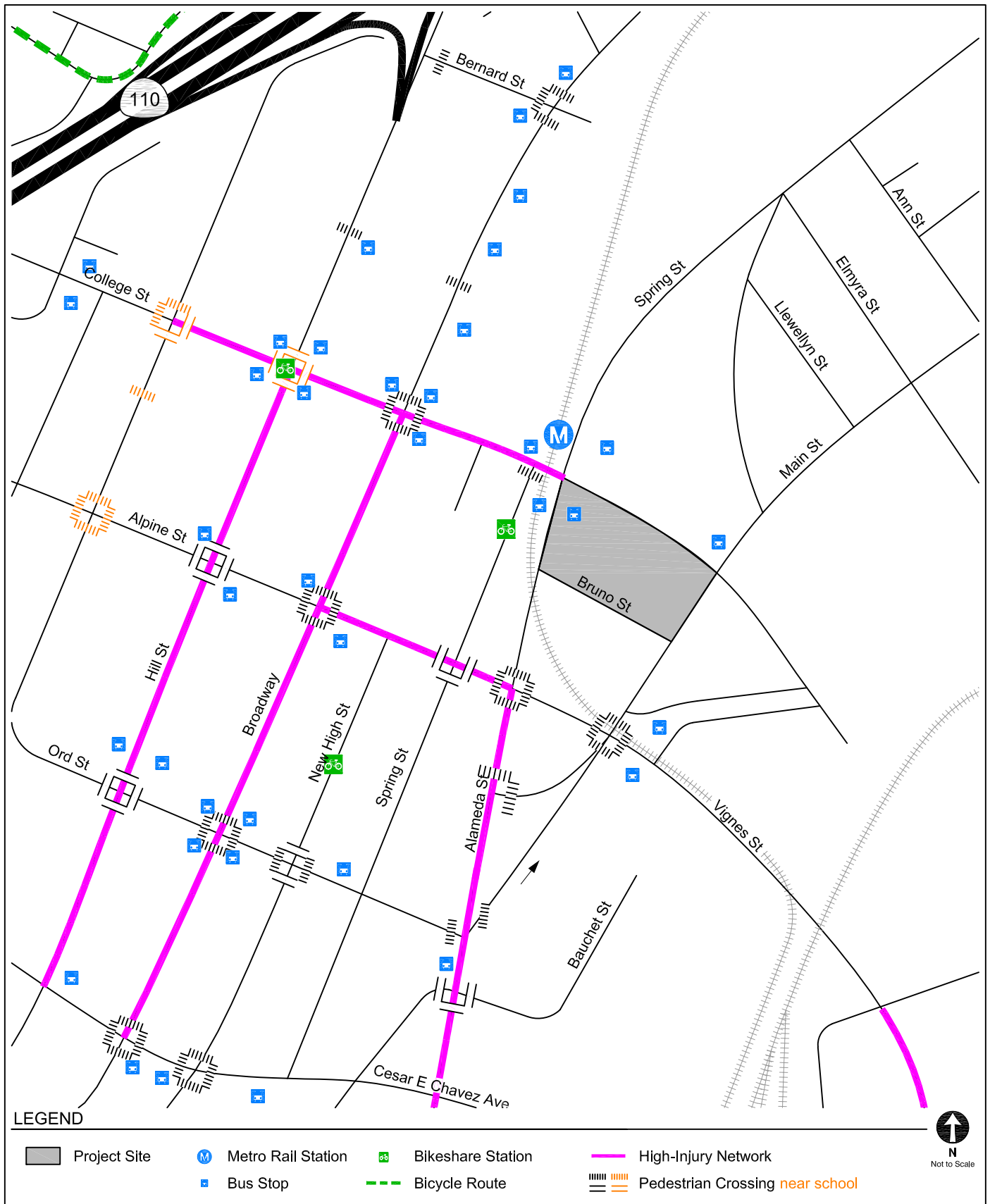
V. Project Construction

Will the project require any construction activity within the city right-of-way? ☒ Yes ☐ No

If yes, will the project require temporary closure of any of the following city facilities?

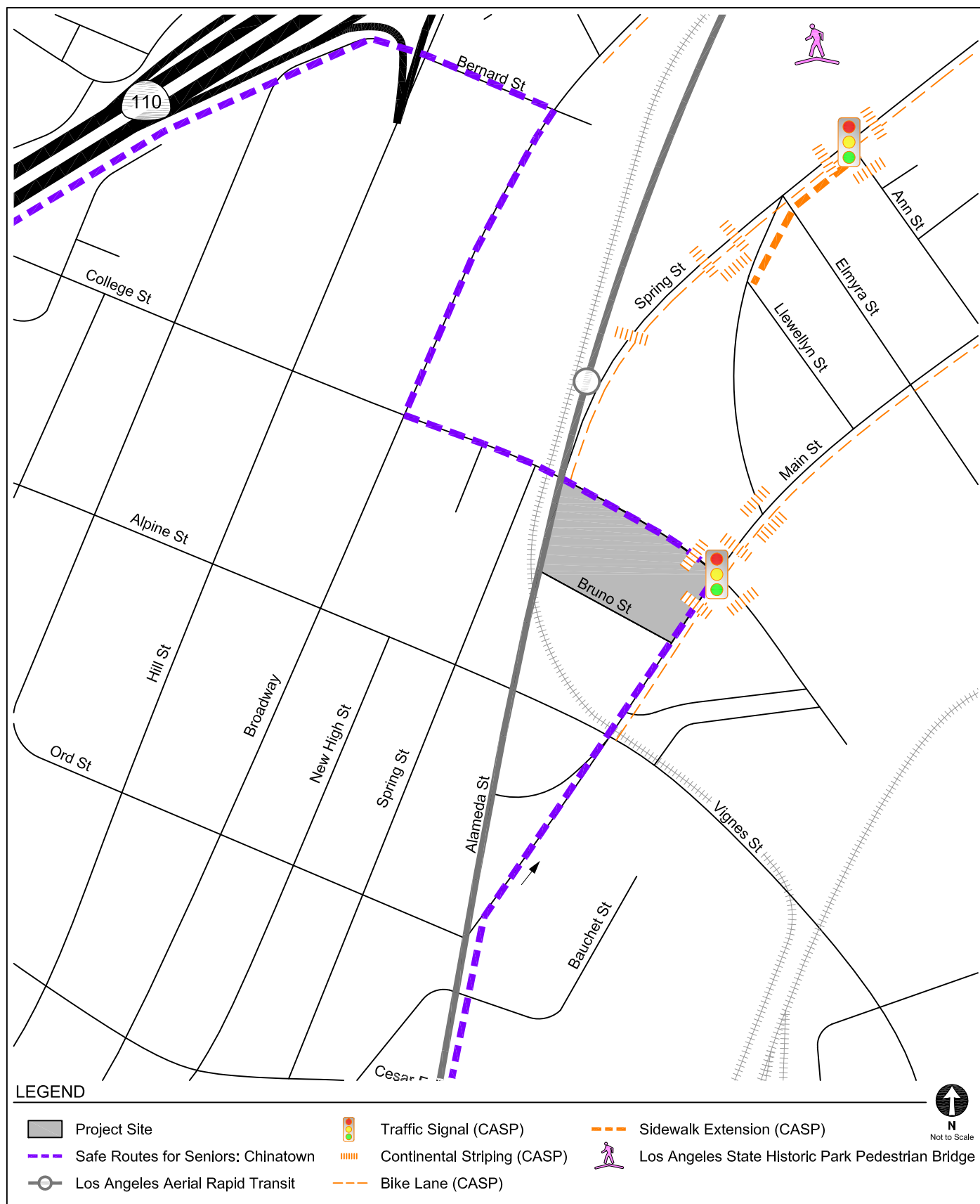
- ✓ • sidewalk
- ✓ • bike lane
- ✓ • parking lane
- ✓ • travel lane
- ✓ • bus stop
- bicycle parking (racks or corrals)
- bike share or other micro-mobility station
- car share station
- parklet
- other: _____

Additional Information to be provided.



EXISTING TRANSPORTATION FACILITIES

FIGURE
7



FUTURE TRANSPORTATION FACILITIES

FIGURE
8

TABLE 4
130 W COLLEGE STREET
DISTANCE BETWEEN EXISTING PEDESTRIAN CROSSINGS
WITHIN VICINITY OF PROJECT SITE

Street Segment	Distance (ft)	From	To
College Street	330	Hill Street	Broadway
	475	Broadway	Spring Street/Alameda Street
Alpine Street	330	Hill Street	Broadway
	385	Broadway	Spring Street
	130	Spring Street	Alameda Street
	245	Alameda Street	Main Street
Vignes Street	415	Main Street	Mid-block
Hill Street	525	Midblock	College Street
	601	College Street	Alpine Street
	725	Alpine Street	Ord Street
Broadway	585	Bernard Street	Midblock
	440	Midblock	College Street
	600	College Street	Alpine Street
	730	Alpine Street	Ord Street
Spring Street	625	College Street	Alpine Street
Alameda Street	600	College Street	Alpine Street
	310	Alpine Street	Alhambra Avenue
Main Street	1,685	Ann Street	Alpine Street
	410	Alpine Street	Alameda Street

TABLE 5
130 W COLLEGE STREET
ROADWAY CONFIGURATION AND CROSSING DISTANCE
ALONG PROJECT FRONTAGES

Street Segment	Roadway Configuration	Total Distance
College Street	2-Lane	76 feet
Main Street	4-Lane	56 feet
Bruno Street	2-Lane	36 feet
Alameda Street	5-Lane	94 feet

Appendix B

Traffic Volume Data

Turning Movement Count Report AM

Location ID: 1
 North/South: Hill Street
 East/West: College Street

Date: 05/03/23
 City: Los Angeles, CA

	Southbound			Westbound			Northbound			Eastbound			
	1	2	3	4	5	6	7	8	9	10	11	12	Totals:
Movements:	R	T	L	R	T	L	R	T	L	R	T	L	
7:00	4	313	39	10	51	17	1	32	3	6	19	1	496
7:15	8	331	41	12	71	20	3	56	2	16	16	5	581
7:30	16	332	35	9	108	20	2	47	3	23	19	13	627
7:45	10	340	27	16	90	24	2	55	1	28	51	19	663
8:00	13	365	41	12	94	23	4	62	5	36	42	17	714
8:15	18	337	28	11	107	37	5	44	0	26	34	11	658
8:30	8	303	27	12	108	24	6	58	5	28	44	11	634
8:45	10	304	37	8	115	34	1	59	12	16	42	14	652
9:00	14	323	47	13	116	24	8	50	6	26	28	6	661
9:15	10	285	46	18	94	20	7	43	4	16	33	11	587
9:30	14	281	32	18	89	20	8	49	0	12	27	6	556
9:45	16	296	41	7	102	17	4	65	5	15	19	9	596

Total Volume:	141	3810	441	146	1145	280	51	620	46	248	374	123	7425
Approach %	3%	87%	10%	9%	73%	18%	7%	86%	6%	33%	50%	17%	

Peak Hr Begin:	7:45												
PHV	49	1345	123	51	399	108	17	219	11	118	171	58	2669
PHF	0.905			0.900			0.870			0.885			

Turning Movement Count Report PM

Location ID: 1
 North/South: Hill Street
 East/West: College Street

Date: 05/03/23
 City: Los Angeles, CA

	Southbound			Westbound			Northbound			Eastbound			
	1	2	3	4	5	6	7	8	9	10	11	12	Totals:
Movements:	R	T	L	R	T	L	R	T	L	R	T	L	
15:00	11	187	31	35	37	11	10	173	10	10	52	14	581
15:15	13	230	31	31	37	15	12	195	8	31	57	16	676
15:30	10	226	27	23	32	13	14	228	9	17	82	26	707
15:45	12	232	23	32	49	8	14	275	6	20	73	21	765
16:00	7	256	20	33	33	6	17	304	18	21	85	14	814
16:15	11	245	16	39	49	11	8	248	9	19	106	17	778
16:30	13	280	20	27	46	14	16	234	5	27	105	29	816
16:45	14	306	19	27	43	13	16	201	4	23	80	27	773
17:00	6	265	18	27	55	20	16	283	6	19	91	32	838
17:15	15	330	25	28	62	9	15	269	9	21	84	21	888
17:30	10	291	20	36	57	7	16	263	12	20	68	23	823
17:45	13	305	16	39	39	11	14	318	2	16	62	19	854

Total Volume:	135	3153	266	377	539	138	168	2991	98	244	945	259	9313
Approach %	4%	89%	7%	36%	51%	13%	5%	92%	3%	17%	65%	18%	

Peak Hr Begin:	17:00												
PHV	44	1191	79	130	213	47	61	1133	29	76	305	95	3403
PHF		0.888			0.956			0.915			0.838		

Pedestrian/Bicycle Count Report

Leg:	North		East		South		West	
Class:	Peds	Bicycle	Peds	Bicycle	Peds	Bicycle	Peds	Bicycle
7:00	10	0	5	0	10	1	5	0
7:15	4	0	13	0	9	3	2	0
7:30	10	1	10	0	10	1	2	0
7:45	13	0	15	0	34	0	12	0
8:00	13	0	13	0	7	0	4	0
8:15	8	0	5	0	11	0	4	0
8:30	18	0	14	1	8	0	9	0
8:45	11	0	13	0	13	0	7	0
9:00	12	0	7	0	10	0	4	0
9:15	33	0	22	0	15	0	13	0
9:30	9	0	5	0	4	0	2	0
9:45	14	1	19	0	10	0	8	0

Leg:	North		East		South		West	
Class:	Peds	Bicycle	Peds	Bicycle	Peds	Bicycle	Peds	Bicycle
15:00	11	0	14	0	13	0	5	0
15:15	18	0	8	0	9	0	10	0
15:30	24	3	13	3	10	0	5	3
15:45	9	0	14	1	12	0	4	0
16:00	11	0	8	1	10	1	1	0
16:15	8	0	14	0	21	1	9	0
16:30	12	0	8	1	5	2	4	0
16:45	26	0	13	0	21	0	6	0
17:00	21	0	9	0	19	0	6	0
17:15	9	0	9	1	10	3	3	0
17:30	12	0	8	0	13	1	5	0
17:45	11	0	13	0	15	0	5	0

Turning Movement Count Report AM

Location ID: 2
 North/South: Broadway
 East/West: College Street

Date: 05/03/23
 City: Los Angeles, CA

	Southbound			Westbound			Northbound			Eastbound			
	1	2	3	4	5	6	7	8	9	10	11	12	Totals:
Movements:	R	T	L	R	T	L	R	T	L	R	T	L	
7:00	21	168	8	9	59	6	1	47	3	8	42	6	378
7:15	13	245	13	19	79	9	2	40	5	10	52	2	489
7:30	34	262	14	22	92	9	5	57	4	5	41	8	553
7:45	39	303	14	26	90	9	5	58	11	18	53	6	632
8:00	45	302	24	25	72	5	4	51	11	13	65	7	624
8:15	62	290	28	20	89	13	4	67	9	3	55	7	647
8:30	49	238	14	10	86	12	7	57	7	12	56	7	555
8:45	58	251	15	14	95	13	5	47	4	9	62	5	578
9:00	53	304	11	11	88	8	4	54	12	16	55	6	622
9:15	24	220	14	10	90	15	3	61	7	14	52	11	521
9:30	40	228	14	14	79	12	7	58	14	15	51	6	538
9:45	44	182	13	6	74	10	2	61	12	16	44	4	468

Total Volume:	482	2993	182	186	993	121	49	658	99	139	628	75	6605
Approach %	13%	82%	5%	14%	76%	9%	6%	82%	12%	17%	75%	9%	

Peak Hr Begin:	7:45												
PHV	195	1133	80	81	337	39	20	233	38	46	229	27	2458
PHF	0.926			0.914			0.909			0.888			

Turning Movement Count Report PM

Location ID: 2
 North/South: Broadway
 East/West: College Street

Date: 05/03/23
 City: Los Angeles, CA

	Southbound			Westbound			Northbound			Eastbound			
	1	2	3	4	5	6	7	8	9	10	11	12	Totals:
Movements:	R	T	L	R	T	L	R	T	L	R	T	L	
15:00	18	80	18	29	50	15	9	102	12	17	54	10	414
15:15	15	120	16	18	55	5	13	152	16	13	79	14	516
15:30	24	115	18	25	42	12	4	154	11	16	103	10	534
15:45	28	104	23	24	52	7	15	146	14	8	87	8	516
16:00	18	124	23	40	57	15	8	192	14	18	98	9	616
16:15	19	156	26	35	61	7	7	238	25	13	96	19	702
16:30	29	225	24	37	48	8	14	268	11	20	97	22	803
16:45	33	268	31	32	41	7	22	279	17	12	78	19	839
17:00	36	222	27	26	52	20	14	292	16	17	87	15	824
17:15	30	163	13	34	58	13	19	271	14	18	103	15	751
17:30	31	163	18	40	48	14	16	322	17	12	70	17	768
17:45	21	173	13	47	50	11	22	304	24	15	63	13	756

Total Volume:	302	1913	250	387	614	134	163	2720	191	179	1015	171	8039
Approach %	12%	78%	10%	34%	54%	12%	5%	88%	6%	13%	74%	13%	

Peak Hr Begin:	16:30												
PHV	128	878	95	129	199	48	69	1110	58	67	365	71	3217
PHF	0.829			0.895			0.960			0.905			

Pedestrian/Bicycle Count Report

Leg:	North		East		South		West	
Class:	Peds	Bicycle	Peds	Bicycle	Peds	Bicycle	Peds	Bicycle
7:00	8	2	9	0	4	0	8	1
7:15	9	1	8	2	4	0	5	0
7:30	9	0	11	0	10	0	1	0
7:45	23	0	16	0	13	1	10	0
8:00	14	0	29	0	8	0	6	0
8:15	13	0	11	0	5	0	10	2
8:30	9	0	14	0	17	1	12	1
8:45	20	1	19	0	8	0	16	0
9:00	16	0	19	0	8	1	23	0
9:15	53	0	24	0	14	0	16	0
9:30	7	0	10	0	11	0	19	0
9:45	9	0	23	0	13	0	12	0

Leg:	North		East		South		West	
Class:	Peds	Bicycle	Peds	Bicycle	Peds	Bicycle	Peds	Bicycle
15:00	34	0	17	1	16	1	39	0
15:15	24	0	28	0	31	1	36	0
15:30	20	0	21	0	19	0	30	0
15:45	13	0	16	0	31	0	24	0
16:00	15	0	26	1	13	2	26	2
16:15	30	1	11	0	20	1	30	1
16:30	24	1	21	0	13	0	23	1
16:45	24	0	14	0	27	1	27	2
17:00	25	0	9	0	20	0	19	2
17:15	20	1	8	0	9	1	28	1
17:30	16	1	12	0	11	0	30	1
17:45	16	0	10	1	16	0	22	0

Turning Movement Count Report AM

Location ID: 3
 North/South: Spring Street/Alameda Street
 East/West: College Street

Date: 05/03/23
 City: Los Angeles, CA

	Southbound			Westbound			Northbound			Eastbound			Totals:
	1	2	3	4	5	6	7	8	9	10	11	12	
Movements:	R	T	L	R	T	L	R	T	L	R	T	L	
7:00	16	79	2	8	36	4	2	41	25	27	13	9	262
7:15	11	95	2	1	57	2	4	38	35	31	16	16	308
7:30	19	154	0	2	55	6	0	61	39	34	16	13	399
7:45	12	171	0	1	57	2	1	75	52	37	15	23	446
8:00	14	212	1	2	30	4	2	75	53	43	19	28	483
8:15	20	194	1	4	47	4	6	73	67	39	12	32	499
8:30	28	235	7	9	39	5	5	82	28	35	13	27	513
8:45	24	227	4	7	67	4	6	75	21	34	16	27	512
9:00	25	189	1	4	56	3	6	62	26	26	22	24	444
9:15	27	139	0	10	59	3	8	66	23	30	12	23	400
9:30	18	131	0	9	50	7	11	59	26	35	15	22	383
9:45	17	120	3	7	46	5	1	53	28	31	15	21	347

Total Volume:	231	1946	21	64	599	49	52	760	423	402	184	265	4996
Approach %	11%	89%	1%	9%	84%	7%	4%	62%	34%	47%	22%	31%	

Peak Hr Begin:	8:00												
PHV	86	868	13	22	183	17	19	305	169	151	60	114	2007
PHF	0.895			0.712			0.844			0.903			

Turning Movement Count Report PM

Location ID: 3
 North/South: Spring Street/Alameda Street
 East/West: College Street

Date: 05/03/23
 City: Los Angeles, CA

	Southbound			Westbound			Northbound			Eastbound			Totals:
	1	2	3	4	5	6	7	8	9	10	11	12	
Movements:	R	T	L	R	T	L	R	T	L	R	T	L	
15:00	18	71	2	3	13	2	7	119	55	45	32	14	381
15:15	15	61	2	5	27	1	1	140	36	46	35	16	385
15:30	10	79	2	4	18	3	3	170	41	63	30	26	449
15:45	12	65	3	5	30	4	3	181	45	57	34	32	471
16:00	10	54	3	9	42	3	1	193	65	62	34	29	505
16:15	14	71	2	8	19	2	6	251	47	66	33	36	555
16:30	20	84	4	14	20	3	2	271	44	60	32	40	594
16:45	22	68	1	7	16	4	5	290	47	50	35	53	598
17:00	24	86	3	7	21	3	8	218	41	46	40	41	538
17:15	17	82	2	8	27	3	2	252	59	46	38	47	583
17:30	10	69	2	5	20	6	4	263	51	37	33	44	544
17:45	12	68	1	6	27	2	3	290	68	37	19	42	575

Total Volume:	184	858	27	81	280	36	45	2638	599	615	395	420	6178
Approach %	17%	80%	3%	20%	71%	9%	1%	80%	18%	43%	28%	29%	

Peak Hr Begin:	16:30												
PHV	83	320	10	36	84	13	17	1031	191	202	145	181	2313
PHF	0.914			0.875			0.906			0.957			

Pedestrian/Bicycle Count Report

Leg:	North		East		South		West	
Class:	Peds	Bicycle	Peds	Bicycle	Peds	Bicycle	Peds	Bicycle
7:00	2	0	0	0	5	0	3	0
7:15	3	0	0	0	5	0	6	0
7:30	14	0	1	2	3	2	4	0
7:45	4	2	0	1	7	1	3	0
8:00	3	0	3	0	3	0	12	0
8:15	7	2	2	0	4	0	3	0
8:30	7	1	6	0	6	0	6	0
8:45	3	0	5	0	9	0	13	1
9:00	3	0	5	0	5	0	12	0
9:15	1	1	4	0	6	0	6	0
9:30	1	0	2	0	2	0	6	1
9:45	3	1	2	0	11	0	6	0

Leg:	North		East		South		West	
Class:	Peds	Bicycle	Peds	Bicycle	Peds	Bicycle	Peds	Bicycle
15:00	7	0	3	0	5	0	12	1
15:15	5	0	1	0	6	0	7	2
15:30	5	0	4	0	7	0	10	1
15:45	10	1	2	0	4	0	10	1
16:00	4	0	2	0	8	0	9	0
16:15	9	1	5	0	8	0	8	0
16:30	3	0	0	0	5	0	14	0
16:45	10	0	4	0	4	0	12	1
17:00	5	3	11	3	4	0	13	2
17:15	5	0	6	1	8	0	7	0
17:30	7	3	0	0	0	1	10	1
17:45	12	0	1	3	3	0	12	1

Turning Movement Count Report AM

Location ID: 4
 North/South: Main Street
 East/West: College Street

Date: 05/03/23
 City: Los Angeles, CA

	Southbound			Westbound			Northbound			Eastbound			Totals:
	1	2	3	4	5	6	7	8	9	10	11	12	
Movements:	R	T	L	R	T	L	R	T	L	R	T	L	
7:00	36	173	1	0	2	1	1	58	4	5	0	13	294
7:15	56	207	1	1	0	0	0	60	7	5	3	10	350
7:30	53	229	1	3	0	1	2	71	8	4	0	12	384
7:45	49	283	1	0	0	0	2	87	11	6	1	10	450
8:00	32	250	0	2	0	0	2	91	5	2	1	16	401
8:15	43	231	0	2	1	0	2	79	14	2	1	9	384
8:30	35	166	2	0	0	2	3	68	11	11	3	8	309
8:45	63	267	2	2	0	1	0	72	10	7	2	13	439
9:00	50	189	0	1	0	1	3	77	15	5	0	11	352
9:15	55	235	0	1	0	1	2	62	14	3	1	12	386
9:30	47	184	0	0	0	4	2	57	16	3	0	11	324
9:45	44	144	1	1	0	4	3	57	15	6	1	13	289

Total Volume:	563	2558	9	13	3	15	22	839	130	59	13	138	4362
Approach %	18%	82%	0%	42%	10%	48%	2%	85%	13%	28%	6%	66%	

Peak Hr Begin:	7:30												
PHV	177	993	2	7	1	1	8	328	38	14	3	47	1619
PHF	0.880			0.563			0.935			0.842			

Turning Movement Count Report PM

Location ID: 4
 North/South: Main Street
 East/West: College Street

Date: 05/03/23
 City: Los Angeles, CA

	Southbound			Westbound			Northbound			Eastbound			
	1	2	3	4	5	6	7	8	9	10	11	12	Totals:
Movements:	R	T	L	R	T	L	R	T	L	R	T	L	
15:00	16	111	2	2	0	6	4	94	3	10	2	23	273
15:15	20	93	0	6	1	2	4	100	9	7	4	30	276
15:30	15	88	6	6	1	2	1	110	8	5	0	28	270
15:45	25	125	2	2	2	4	4	124	10	6	3	24	331
16:00	34	91	0	4	2	3	2	146	14	11	2	31	340
16:15	20	108	3	5	2	0	2	157	6	10	0	23	336
16:30	20	120	0	0	1	0	1	174	10	5	0	30	361
16:45	19	105	2	1	0	1	0	204	6	14	0	24	376
17:00	20	83	2	0	0	2	0	216	6	10	0	41	380
17:15	24	86	0	1	0	0	2	236	7	13	0	25	394
17:30	19	86	3	1	1	0	4	178	11	7	4	27	341
17:45	21	83	1	3	1	3	3	189	9	4	1	17	335

Total Volume:	253	1179	21	31	11	23	27	1928	99	102	16	323	4013
Approach %	17%	81%	1%	48%	17%	35%	1%	94%	5%	23%	4%	73%	

Peak Hr Begin:	16:30												
PHV	83	394	4	2	1	3	3	830	29	42	0	120	1511
PHF	0.859			0.750			0.880			0.794			

Pedestrian/Bicycle Count Report

Leg:	North		East		South		West	
Class:	Peds	Bicycle	Peds	Bicycle	Peds	Bicycle	Peds	Bicycle
7:00	1	0	1	0	0	0	2	0
7:15	0	0	1	0	0	0	2	0
7:30	0	0	0	0	0	0	1	0
7:45	0	0	6	0	0	0	3	0
8:00	0	0	1	0	0	0	0	0
8:15	1	0	2	0	0	0	1	0
8:30	1	0	0	0	0	0	0	0
8:45	0	0	1	0	1	0	3	0
9:00	2	0	0	0	1	0	3	0
9:15	1	0	0	0	0	0	0	0
9:30	2	0	0	0	0	0	0	0
9:45	2	0	0	0	0	0	1	0

Leg:	North		East		South		West	
Class:	Peds	Bicycle	Peds	Bicycle	Peds	Bicycle	Peds	Bicycle
15:00	0	0	0	0	0	0	0	0
15:15	0	0	3	0	1	0	1	0
15:30	1	0	2	0	1	0	1	0
15:45	1	0	1	0	1	0	0	0
16:00	1	0	2	0	1	0	0	0
16:15	2	0	0	0	1	0	2	0
16:30	1	0	0	0	1	0	3	0
16:45	1	0	0	0	1	0	2	0
17:00	1	0	1	0	1	0	2	0
17:15	0	0	2	0	4	0	1	0
17:30	0	0	1	0	1	0	0	1
17:45	1	0	4	0	0	0	2	0

Turning Movement Count Report AM

Location ID: 2
 North/South: Alameda Street
 East/West: Alpine Street

Date: 05/03/23
 City: Los Angeles, CA

	Southbound			Westbound			Northbound			Eastbound			
	1	2	3	4	5	6	7	8	9	10	11	12	Totals:
Movements:	R	T	L	R	T	L	R	T	L	R	T	L	
7:00	15	90	6	21	139	5	7	35	0	16	22	5	361
7:15	17	94	20	17	189	8	5	35	1	6	31	5	428
7:30	23	128	34	35	196	14	9	65	1	5	28	2	540
7:45	20	161	25	44	188	17	9	88	2	6	29	7	596
8:00	20	190	26	52	182	25	6	72	0	11	46	8	638
8:15	30	186	19	49	165	32	5	79	1	7	38	13	624
8:30	23	203	26	39	121	24	6	65	2	12	38	14	573
8:45	49	217	18	38	176	27	8	61	1	9	20	9	633
9:00	40	148	32	36	139	20	9	59	2	10	14	7	516
9:15	23	124	25	31	138	17	6	59	7	14	36	15	495
9:30	17	125	22	29	111	31	6	67	2	13	18	7	448
9:45	23	122	18	31	88	19	11	40	3	10	34	16	415

Total Volume:	300	1788	271	422	1832	239	87	725	22	119	354	108	6267
Approach %	13%	76%	11%	17%	73%	10%	10%	87%	3%	20%	61%	19%	

Peak Hr Begin:	8:00												
PHV	122	796	89	178	644	108	25	277	4	39	142	44	2468
PHF	0.886			0.898			0.900			0.865			

Turning Movement Count Report PM

Location ID: 2
 North/South: Alameda Street
 East/West: Alpine Street

Date: 05/03/23
 City: Los Angeles, CA

	Southbound			Westbound			Northbound			Eastbound			Totals:
	1	2	3	4	5	6	7	8	9	10	11	12	
Movements:	R	T	L	R	T	L	R	T	L	R	T	L	
15:00	7	93	22	51	78	12	18	124	3	16	37	15	476
15:15	4	88	18	51	64	8	18	118	3	14	60	15	461
15:30	11	108	27	62	61	10	10	139	6	17	62	18	531
15:45	6	98	23	54	89	6	12	147	5	16	52	25	533
16:00	10	79	18	58	76	14	10	181	5	23	64	22	560
16:15	13	106	22	55	76	8	22	234	7	22	80	16	661
16:30	7	109	25	58	95	9	18	221	4	14	102	34	696
16:45	7	92	15	53	67	8	18	272	3	26	115	28	704
17:00	16	84	26	62	81	10	18	170	12	26	136	30	671
17:15	19	86	29	68	82	8	22	220	14	16	123	21	708
17:30	8	91	18	60	92	0	23	242	4	10	88	20	656
17:45	13	72	26	54	68	5	24	282	7	9	74	22	656

Total Volume:	121	1106	269	686	929	98	213	2350	73	209	993	266	7313
Approach %	8%	74%	18%	40%	54%	6%	8%	89%	3%	14%	68%	18%	

Peak Hr Begin:	16:30												
PHV	49	371	95	241	325	35	76	883	33	82	476	113	2779
PHF	0.913			0.927			0.846			0.874			

Pedestrian/Bicycle Count Report

Leg:	North		East		South		West	
Class:	Peds	Bicycle	Peds	Bicycle	Peds	Bicycle	Peds	Bicycle
7:00	3	0	2	0	0	0	1	0
7:15	0	0	2	0	0	0	1	2
7:30	0	0	1	0	1	0	1	0
7:45	2	0	3	0	2	0	4	2
8:00	2	0	2	0	0	0	4	0
8:15	1	0	6	0	3	0	6	1
8:30	4	0	10	0	3	0	5	0
8:45	4	0	7	0	1	0	2	2
9:00	4	0	12	0	0	0	5	1
9:15	4	0	3	0	0	0	6	0
9:30	6	0	6	1	6	1	4	1
9:45	0	0	9	0	3	1	3	2

Leg:	North		East		South		West	
Class:	Peds	Bicycle	Peds	Bicycle	Peds	Bicycle	Peds	Bicycle
15:00	2	0	4	0	2	0	7	0
15:15	0	0	5	0	1	0	5	4
15:30	6	0	5	0	2	0	8	0
15:45	3	0	10	0	6	0	6	0
16:00	2	0	6	1	6	0	2	1
16:15	5	0	10	0	3	0	6	1
16:30	3	0	4	0	2	0	4	1
16:45	8	2	3	0	3	1	5	0
17:00	1	0	8	3	1	0	2	0
17:15	6	0	3	0	4	1	3	0
17:30	2	2	0	2	2	0	7	0
17:45	5	1	0	0	1	0	3	0

Appendix C

Threshold T-1 Consistency Worksheet



Plans, Policies and Programs Consistency Worksheet

The worksheet provides a structured approach to evaluate the threshold T-1 question below, that asks whether a project conflicts with a program, plan, ordinance or policy addressing the circulation system. The intention of the worksheet is to streamline the project review by highlighting the most relevant plans, policies and programs when assessing potential impacts to the City's circulation system.

Threshold T-1: Would the project conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadways, bicycle, and pedestrian facilities?

This worksheet does not include an exhaustive list of City policies, and does not include community plans, specific plans, or any area-specific regulatory overlays. The Department of City Planning project planner will need to be consulted to determine if the project would obstruct the City from carrying out a policy or program in a community plan, specific plan, streetscape plan, or regulatory overlay that was adopted to support multimodal transportation options or public safety. LADOT staff should be consulted if a project would lead to a conflict with a mobility investment in the Public Right of Way (PROW) that is currently undergoing planning, design, or delivery. This worksheet must be completed for all projects that meet the Section I. Screening Criteria. For description of the relevant planning documents, **see Attachment D.1.**

For any response to the following questions that checks the box in bold text ((i.e. ☒ Yes or ☐ No), further analysis is needed to demonstrate that the project does not conflict with a plan, policy, or program.

I. SCREENING CRITERIA FOR POLICY ANALYSIS

If the answer is 'yes' to any of the following questions, further analysis will be required:

Does the project require a discretionary action that requires the decision maker to find that the project would substantially conform to the purpose, intent and provisions of the General Plan?

☒ Yes ☐ No

Is the project known to directly conflict with a transportation plan, policy, or program adopted to support multimodal transportation options or public safety?

☐ Yes ☒ No

Is the project required to or proposing to make any voluntary modifications to the public right-of-way (i.e., dedications and/or improvements in the right-of-way, reconfigurations of curb line, etc.)?

☒ Yes ☐ No

II. PLAN CONSISTENCY ANALYSIS

A. Mobility Plan 2035 PROW Classification Standards for Dedications and Improvements

These questions address potential conflict with:

Mobility Plan 2035 Policy 2.1 – Adaptive Reuse of Streets. Design, plan, and operate streets to serve multiple purposes and provide flexibility in design to adapt to future demands.

Mobility Plan 2035 Policy 2.3 – Pedestrian Infrastructure. Recognize walking as a component of every trip, and ensure high quality pedestrian access in all site planning and public right-of-way modifications to provide a safe and comfortable walking environment.

Mobility Plan 2035 Policy 3.2 – People with Disabilities. Accommodate the needs of people with disabilities when modifying or installing infrastructure in the public right-of-way.

Mobility Plan 2035 Street Designations and Standard Roadway Dimensions

A.1 Does the project include additions or new construction along a street designated as a Boulevard I, and II, and/or Avenue I, II, or III on property zoned for R3 or less restrictive zone? ☒ Yes ☐ No

A.2 If **A.1 is yes**, is the project required to make additional dedications or improvements to the Public Right of Way as demonstrated by the street designation. ☒ Yes ☐ No ☐ N/A

A.3 If **A.2 is yes**, is the project making the dedications and improvements as necessary to meet the designated dimensions of the fronting street (Boulevard I, and II, or Avenue I, II, or III)?

☒ Yes ☐ No ☐ N/A

If the answer is to **A.1 or A.2 is NO**, or to **A.1, A.2 and A.3. is YES**, then the project does not conflict with the dedication and improvement requirements that are needed to comply with the Mobility Plan 2035 Street Designations and Standard Roadway Dimensions.

A.4 If the answer to **A.3. is NO**, is the project applicant asking to waive from the dedication standards? ☒ Yes ☐ No ☐ N/A

Lists any streets subject to dedications or voluntary dedications and include existing roadway and sidewalk widths, required roadway and sidewalk widths, and proposed roadway and sidewalk width or waivers.

While the Mobility Plan would have typically required an eight foot dedication and improvement along Bruno Street to meet the half ROW requirements, LADCP policy prohibits the City from requesting a dedication and improvement along Bruno Street adjacent to the Project Site due to the presence of historic granite pavers.

Alameda Street (Avenue I)	Half-Roadway Varies	35' Half-Roadway	Half-Roadway Varies
Frontage 1 Existing PROW'/Curb' : Existing	10' Sidewalk	15' Sidewalk	Sidewalk Varies
College Street (Modified Collector)	20' Half-Roadway	20' Half-Roadway	20' Half-Roadway
Frontage 2 Existing PROW'/Curb' : Existing	Sidewalk Varies	10' Sidewalk	10' Sidewalk
Main Street Avenue (Avenue II)	28' Half-Roadway	28' Half-Roadway	28' Half-Roadway
Frontage 3 Existing PROW'/Curb' : Existing	12' Sidewalk	15' Sidewalk	15' Sidewalk
Bruno Street (Collector)	20' Half-Roadway	20' Half-Roadway	20' Half-Roadway
Frontage 4 Existing PROW'/Curb' : Existing	Sidewalk Varies	13' Sidewalk	Sidewalk Varies

If the answer to **A.4 is NO**, the project is inconsistent with Mobility Plan 2035 street designations and must file for a waiver of street dedication and improvement.

If the answer to **A.4 is YES**, additional analysis is necessary to determine if the dedication and/or improvements are necessary to meet the City's mobility needs for the next 20 years. The following factors may contribute to determine if the dedication or improvement is necessary:

Is the project site along any of the following networks identified in the City's Mobility Plan?

- Transit Enhanced Network
- Bicycle Enhanced Network
- Bicycle Lane Network
- Pedestrian Enhanced District
- Neighborhood Enhanced Network

To see the location of the above networks, see **Transportation Assessment Support Map**.¹

Is the project within the service area of Metro Bike Share, or is there demonstrated demand for micro-mobility services?

Metro bike share stations are provided within the Study Area as shown in Figure 8 of the Transportation Assessment.

If the project dedications and improvements asking to be waived are necessary to meet the City's mobility needs, the project may be found to conflict with a plan that is adopted to protect the environment.

B. Mobility Plan 2035 PROW Policy Alignment with Project-Initiated Changes

B.1 Project-Initiated Changes to the PROW Dimensions

These questions address potential conflict with:

Mobility Plan 2035 Policy 2.1 – Adaptive Reuse of Streets. Design, plan, and operate streets to serve multiple purposes and provide flexibility in design to adapt to future demands.

Mobility Plan 2035 Policy 2.3 – Pedestrian Infrastructure. Recognize walking as a component of every trip, and ensure high quality pedestrian access in all site planning and public right-of-way modifications to provide a safe and comfortable walking environment.

Mobility Plan 2035 Policy 3.2 – People with Disabilities. Accommodate the needs of people with disabilities when modifying or installing infrastructure in the public right-of-way.

Mobility Plan 2035 Policy 2.10 – Loading Areas. Facilitate the provision of adequate on and off-site street loading areas.

Mobility Plan 2035 Street Designations and Standard Roadway Dimensions

¹ LADOT Transportation Assessment Support Map <https://arcg.is/fubbd>

B.1 Does the project physically modify the curb placement or turning radius and/or physically alter the sidewalk and parkways space that changes how people access a property?

Examples of physical changes to the public right-of-way include:

- widening the roadway,
- narrowing the sidewalk,
- adding space for vehicle turn outs or loading areas,
- removing bicycle lanes, bike share stations, or bicycle parking
- modifying existing bus stop, transit shelter, or other street furniture
- paving, narrowing, shifting or removing an existing parkway or tree well

The Project would improve the existing bus stop on Alameda Street adjacent to the Project Site, as needed.

☒ Yes ☐ No

B.2 Driveway Access

These questions address potential conflict with:

Mobility Plan 2035 Policy 2.10 – Loading Areas. Facilitate the provision of adequate on and off-site street loading areas.

Mobility Plan 2035 Program PL.1. Driveway Access. Require driveway access to buildings from non-arterial streets or alleys (where feasible) in order to minimize interference with pedestrian access and vehicular movement.

Citywide Design Guidelines - Guideline 2: Carefully incorporate vehicular access such that it does not degrade the pedestrian experience.

Site Planning Best Practices:

- Prioritize pedestrian access first and automobile access second. Orient parking and driveways toward the rear or side of buildings and away from the public right-of-way. On corner lots, parking should be oriented as far from the corner as possible.
- Minimize both the number of driveway entrances and overall driveway widths.
- Do not locate drop-off/pick-up areas between principal building entrances and the adjoining sidewalks.
- Orient vehicular access as far from street intersections as possible.
- Place drive-thru elements away from intersections and avoid placing them so that they create a barrier between the sidewalk and building entrance(s).
- Ensure that loading areas do not interfere with on-site pedestrian and vehicular circulation by separating loading areas and larger commercial vehicles from areas that are used for public parking and public entrances.

B.2 Does the project add new driveways along a street designated as an Avenue or a Boulevard that conflict with LADOT's Driveway Design Guidelines (See Sec. 321 in the Manual of Policies and Procedures) by any of the following:

- locating new driveways for residential properties on an Avenue or Boulevard, and access is otherwise possible using an alley or a collector/local street, or
- locating new driveways for industrial or commercial properties on an Avenue or Boulevard and access is possible along a collector/local street, or

- the total number of new driveways exceeds 1 driveway per every 200 feet² along on the Avenue or Boulevard frontage, or
- locating new driveways on an Avenue or Boulevard within 150 feet from the intersecting street, or
- locating new driveways on a collector or local street within 75 feet from the intersecting street, or
- locating new driveways near mid-block crosswalks, requiring relocation of the mid-block crosswalk

A separate driveway to the loading area would be provided along College Street, west of the primary vehicular driveway. This driveway would be limited to commercial loading. ☐ Yes ☒ No

If the answer to **B.1 and B.2 are both NO**, then the project would not conflict with a plan or policies that govern the PROW as a result of the project-initiated changes to the PROW.

Impact Analysis

If the answer to either **B.1 or B.2 are YES**, City plans and policies should be reviewed in light of the proposed physical changes to determine if the City would be obstructed from carrying out the plans and policies. The analysis should pay special consideration to substantial changes to the Public Right of Way that may either degrade existing facilities for people walking and bicycling (e.g., removing a bicycle lane), or preclude the City from completing complete street infrastructure as identified in the Mobility Plan 2035, especially if the physical changes are along streets that are on the High Injury Network (HIN). The analysis should also consider if the project is in a Transit Oriented Community (TOC) area, and would degrade or inhibit trips made by biking, walking and/ or transit ridership. The streets that need special consideration are those that are included on the following networks identified in the Mobility Plan 2035, or the HIN:

- Transit Enhanced Network
- Bicycle Enhanced Network
- Bicycle Lane Network
- Pedestrian Enhanced District
- Neighborhood Enhanced Network
- High Injury Network

To see the location of the above networks, see **Transportation Assessment Support Map**.³

Once the project is reviewed relevant to plans and policies, and existing facilities that may be impacted by the project, the analysis will need to answer the following two questions in concluding if there is an impact due to plan inconsistency.

B.2.1 Would the physical changes in the public right of way or new driveways that conflict with LADOT's Driveway Design Guidelines degrade the experience of vulnerable roadway users such as modify, remove, or otherwise negatively impact existing bicycle, transit, and/or pedestrian infrastructure?

☐ Yes ☒ No ☐ N/A

² for a project frontage that exceeds 400 feet along an Avenue or Boulevard, the incremental additional driveway above 2 is more than 1 driveway for every 400 additional feet.

³ LADOT Transportation Assessment Support Map <https://arcg.is/fubbd>

B.2.2 Would the physical modifications or new driveways that conflict with LADOT's Driveway Design Guidelines preclude the City from advancing the safety of vulnerable roadway users?

☐ Yes ☒ No ☐ N/A

If either of the answers to either **B.2.1 or B.2.2 are YES**, the project may conflict with the Mobility Plan 2035, and therefore conflict with a plan that is adopted to protect the environment. If either of the answers to both **B.2.1. or B.2.2. are NO**, then the project would not be shown to conflict with plans or policies that govern the Public Right-of-Way.

C. Network Access

C. 1 Alley, Street and Stairway Access

These questions address potential conflict with:

Mobility Plan Policy 3.9 Increased Network Access: Discourage the vacation of public rights-of-way.

C.1.1 Does the project propose to vacate or otherwise restrict public access to a street, alley, or public stairway?

☐ Yes ☒ No

C.1.2 If the answer to C.1.1 is Yes, will the project provide or maintain public access to people walking and biking on the street, alley or stairway?

☐ Yes ☐ No ☒ N/A

C.2 New Cul-de-sacs

These questions address potential conflict with:

Mobility Plan 2035 Policy 3.10 Cul-de-sacs: Discourage the use of cul-de-sacs that do not provide access for active transportation options.

C.2.1 Does the project create a cul-de-sac or is the project located adjacent to an existing cul-de-sac?

☐ Yes ☒ No

C.2.2 If yes, will the cul-de-sac maintain convenient and direct public access to people walking and biking to the adjoining street network?

☐ Yes ☐ No ☒ N/A

If the answers to either C.1.2 or C.2.2 are YES, then the project would not conflict with a plan or policies that ensures access for all modes of travel. If the answer to either **C.1.2 or C.2.2 are NO**, the project may conflict with a plan or policies that governs multimodal access to a property. Further analysis must assess to the degree that pedestrians and bicyclists have sufficient public access to the transportation network.

D. Parking Supply and Transportation Demand Management

These questions address potential conflict with:

Mobility Plan 2035 Policy 3.8 – *Bicycle Parking, Provide bicyclists with convenient, secure and well maintained bicycle parking facilities.*

Mobility Plan 2035 Policy 4.8 – *Transportation Demand Management Strategies. Encourage greater utilization of Transportation Demand Management Strategies to reduce dependence on single-occupancy vehicles.*

Mobility Plan 2035 Policy 4.13 – *Parking and Land Use Management: Balance on-street and off-street parking supply with other transportation and land use objectives.*

D.1 Would the project propose a supply of onsite parking that exceeds the baseline amount⁴ as required in the Los Angeles Municipal Code or a Specific plan, whichever requirement prevails?

☐ Yes ☒ No

D.2 If the answer to D.1. is YES, would the project propose to actively manage the demand of parking by independently pricing the supply to all users (e.g. parking cash-out), or for residential properties, unbundle the supply from the lease or sale of residential units?

☐ Yes ☐ No ☒ N/A

If the answer to **D.2. is NO** the project may conflict with parking management policies. Further analysis is needed to demonstrate how the supply of parking above city requirements will not result in additional (induced) drive-alone trips as compared to an alternative that provided no more parking than the baseline required by the LAMC or Specific Plan. If there is potential for the supply of parking to result in induced demand for drive-alone trips, the project should further explore transportation demand management (TDM) measures to further off-set the induced demands of driving and vehicle miles travelled (VMT) that may result from higher amounts of on-site parking. The TDM measures should specifically focus on strategies that encourage dynamic and context-sensitive pricing solutions and ensure the parking is efficiently allocated, such as providing real time information. Research has demonstrated that charging a user cost for parking or providing a 'cash-out' option in return for not using it is the most effective strategy to reduce the instances of drive-alone trips and increase non-auto mode share to further reduce VMT. To ensure the parking is efficiently managed and reduce the need to build parking for future uses, further strategies should include sharing parking with other properties and/or the general public.

D.3. Would the project provide the minimum on and off-site bicycle parking spaces as required by Section 12.21 A.16 of the LAMC?

☒ Yes ☐ No

⁴ The baseline parking is defined here as the default parking requirements in section 12.21 A.4 of the Los Angeles Municipal Code or any applicable Specific Plan, whichever prevails, for each applicable use not taking into consideration other parking incentives to reduce the amount of required parking.

D.4. Does the Project include more than 25,000 square feet of gross floor area construction of new non-residential gross floor?

☒ Yes ☐ No

D.5 If the answer to D.4. is YES, does the project comply with the City's TDM Ordinance in Section 12.26 J of the LAMC?

☒ Yes ☐ No ☐ N/A

If the answer to **D.3. or D.5. is NO** the project conflicts with LAMC code requirements of bicycle parking and TDM measures. If the project includes uses that require bicycle parking (Section 12.21 A.16) or TDM (Section 12.26 J), and the project does not comply with those Sections of the LAMC, further analysis is required to ensure that the project supports the intent of the two LAMC sections. To meet the intent of bicycle parking requirements, the analysis should identify how the project commits to providing safe access to those traveling by bicycle and accommodates storing their bicycle in locations that demonstrates priority over vehicle access.

Similarly, to meet the intent of the TDM requirements of Section 12.26 J of the LAMC, the analysis should identify how the project commits to providing effective strategies in either physical facilities or programs that encourage non-drive alone trips to and from the project site and changes in work schedule that move trips out of the peak period or eliminate them altogether (as in the case in telecommuting or compressed work weeks).

E. Consistency with Regional Plans

This section addresses potential inconsistencies with greenhouse gas (GHG) reduction targets forecasted in the Southern California Association of Governments (SCAG) Regional Transportation Plan (RTP) / Sustainable Communities Strategy (SCS).

E.1 Does the Project or Plan apply one the City's efficiency-based impact thresholds (i.e. VMT per capita, VMT per employee, or VMT per service population) as discussed in Section 2.2.3 of the TAG?

☒ Yes ☐ No

E.2 If the Answer to E.1 is YES, does the Project or Plan result in a significant VMT impact?

The Project would not result in a significant VMT impact with implementation of the mitigation measures.

☐ Yes ☒ No ☐ N/A

E.3 If the Answer to E.1 is NO, does the Project result in a net increase in VMT?

☐ Yes ☐ No ☒ N/A

If the Answer to E.2 or E.3 is NO, then the Project or Plan is shown to align with the long-term VMT and GHG reduction goals of SCAG's RTP/SCS.

E.4 If the Answer to E.2 or E.3 is YES, then further evaluation would be necessary to determine whether such a project or land use plan would be shown to be consistent with VMT and GHG reduction goals of the SCAG RTP/SCS. For the purpose of making a finding that a project is consistent with the GHG reduction targets forecasted in the SCAG RTP/SCS, the project analyst should consult Section 2.2.4 of the Transportation Assessment Guidelines (TAG). Section 2.2.4 provides the methodology for evaluating a land use project's cumulative impacts to VMT, and the appropriate reliance on SCAG's most recently adopted RTP/SCS in reaching that conclusion.

The analysis methods therein can further support findings that the project is consistent with the general use designation, density, building intensity, and applicable policies specified for the project area in either a sustainable communities strategy or an alternative planning strategy for which the State Air Resources Board, pursuant to Section 65080(b)(2)(H) of the Government Code, has accepted a metropolitan planning organization's determination that the sustainable communities strategy or the alternative planning strategy would, if implemented, achieve the greenhouse gas emission reduction targets.

References

BOE Street Standard Dimensions S-470-1 http://eng2.lacity.org/techdocs/stdplans/s-400/S-470-1_20151021_150849.pdf

LADCP Citywide Design Guidelines. https://planning.lacity.org/odocument/f6608be7-d5fe-4187-bea6-20618eec5049/Citywide_Design_Guidelines.pdf

LADOT Transportation Assessment Support Map <https://arcg.is/fubbd>

Mobility Plan 2035 https://planning.lacity.org/odocument/523f2a95-9d72-41d7-aba5-1972f84c1d36/Mobility_Plan_2035.pdf

SCAG. Connect SoCal, 2020-2045 RTP/SCS, <https://www.connectsocal.org/Pages/default.aspx>

ATTACHMENT D.1: CITY PLAN, POLICIES AND GUIDELINES

The Transportation Element of the City's General Plan, Mobility Plan 2035, established the "Complete Streets Design Guide" as the City's document to guide the operations and design of streets and other public rights-of-way. It lays out a vision for designing safer, more vibrant streets that are accessible to people, no matter what their mode choice. As a living document, it is intended to be frequently updated as City departments identify and implement street standards and experiment with different configurations to promote complete streets. The guide is meant to be a toolkit that provides numerous examples of what is possible in the public right-of-way and that provides guidance on context-sensitive design.

The Plan for A Healthy Los Angeles (March 2015) includes policies directing several City departments to develop plans that promote active transportation and safety.

The City of Los Angeles Community Plans, which make up the Land Use Element of the City's General Plan, guide the physical development of neighborhoods by establishing the goals and policies for land use. The 35 Community Plans provide specific, neighborhood-level detail for land uses and the transportation network, relevant policies, and implementation strategies necessary to achieve General Plan and community-specific objectives.

The stated goal of Vision Zero is to eliminate traffic-related deaths in Los Angeles by 2025 through a number of strategies, including modifying the design of streets to increase the safety of vulnerable road users. Extensive crash data analysis is conducted on an ongoing basis to prioritize intersections and corridors for implementation of projects that will have the greatest effect on overall fatality reduction. The City designs and deploys Vision Zero Corridor Plans as part of the implementation of Vision Zero. If a project is proposed whose site lies on the High Injury Network (HIN), the applicant should consult with LADOT to inform the project's site plan and to determine appropriate improvements, whether by funding their implementation in full or by making a contribution toward their implementation.

The Citywide Design Guidelines (October 24, 2019) includes sections relevant to development projects where improvements are proposed within the public realm. Specifically, Guidelines one through three provide building design strategies that support the pedestrian experience. The Guidelines provide best practices in designing that apply in three spatial categories of site planning, building design and public right of way. The Guidelines should be followed to ensure that the project design supports pedestrian safety, access and comfort as they access to and from the building and the immediate public right of way.

The City's Transportation Demand Management (TDM) Ordinance (LA Municipal Code 12.26.J) requires certain projects to incorporate strategies that reduce drive-alone vehicle trips and improve access to destinations and services. The ordinance is revised and updated periodically and should be reviewed for application to specific projects as they are reviewed.

The City's LAMC Section 12.37 (Waivers of Dedication and Improvement) requires certain projects to dedicate and/or implement improvements within the public right-of-way to meet the street designation standards of the Mobility Plan 2035.

The Bureau of Engineering (BOE) Street Standard Dimensions S-470-1 provides the specific street widths and public right of way dimensions associated with the City's street standards.

Appendix D

***LADCP Policy
Historic-Cultural Monument #211***

DEPARTMENT OF
CITY PLANNING
OFFICE OF HISTORIC RESOURCES
200 N. SPRING STREET, ROOM 620
LOS ANGELES, CA 90012-4801
(213) 978-1200

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August 14, 2007

Moe Pegues, Construction Inspector
City of Los Angeles Department of Public Works
111 N. Hope St., 6th Floor
Los Angeles, CA 90012

Mr. Pegues:

This letter is to inform you that Bruno Street, located between Alameda and Main Street in the vicinity of Chinatown, is Historic-Cultural Monument (HCM) #211: "Granite-Block Paving." This street was designated in 1979 for its hand-hewn granite paving, typical of many late 19th century streets in Los Angeles. This designated landmark is particularly unique of all the City of Los Angeles' HCMs and is a wonderful reminder of the area's history.

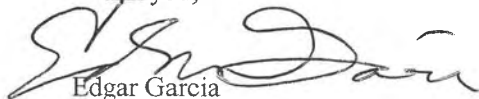
The street's current condition, with patches of granite paving as well as asphalt, can not be altered without proper review by the Office of Historic Resources. Under no circumstances is the granite paving to be removed or covered in asphalt.

After several inspections by myself and our office, we have determined that the most recent work on Bruno Street by the Homeboy Industries construction project team to be satisfactory. In the future we will seek to better coordinate with the Department of Public Works and property owners regarding work on Bruno Street. It is the hope of our office that Bruno Street's granite paving will be one day be fully restored from Main St. to Alameda and serve to better and beautify the area.

One remaining issue is the need to store excess granite pavers that were removed but unable to be reincorporated. Currently, Homeboys Industries is kindly storing them. We are seeking the help of other city agencies to locate a safe and appropriate storage area and welcome any help or suggestions from your office.

You can contact me with any questions or concerns.

Thank you,



Edgar Garcia

Edgar Garcia, Preservation Planner
Office of Historic Resources
Los Angeles Department of City Planning
200 N. Spring Street, #620
Los Angeles, CA 90012

Tel: 213-978-1189
Fax: 213-978-0017
E-mail: edgar.garcia@lacity.org

CITY OF LOS ANGELES
INTER-DEPARTMENTAL CORRESPONDENCE

Date: March 22, 1978

To: Cultural Heritage Board
Attention: Ileana Welch, Coordinator

From: Forrest Scott, Staff Architect, Municipal Arts Department

Subject: RECOMMEND DECLARATION OF COBBLESTONE STREET IN AND ADJACENT TO
BRUNO STREET EAST OF ALAMEDA STREET

We have obtained information indicating that the above subject area is one of the few remaining cobblestone streets in the City of Los Angeles. It appears, on field investigation, that there are three varieties of cobblestones in and adjacent to the street making it an interesting area for consideration.

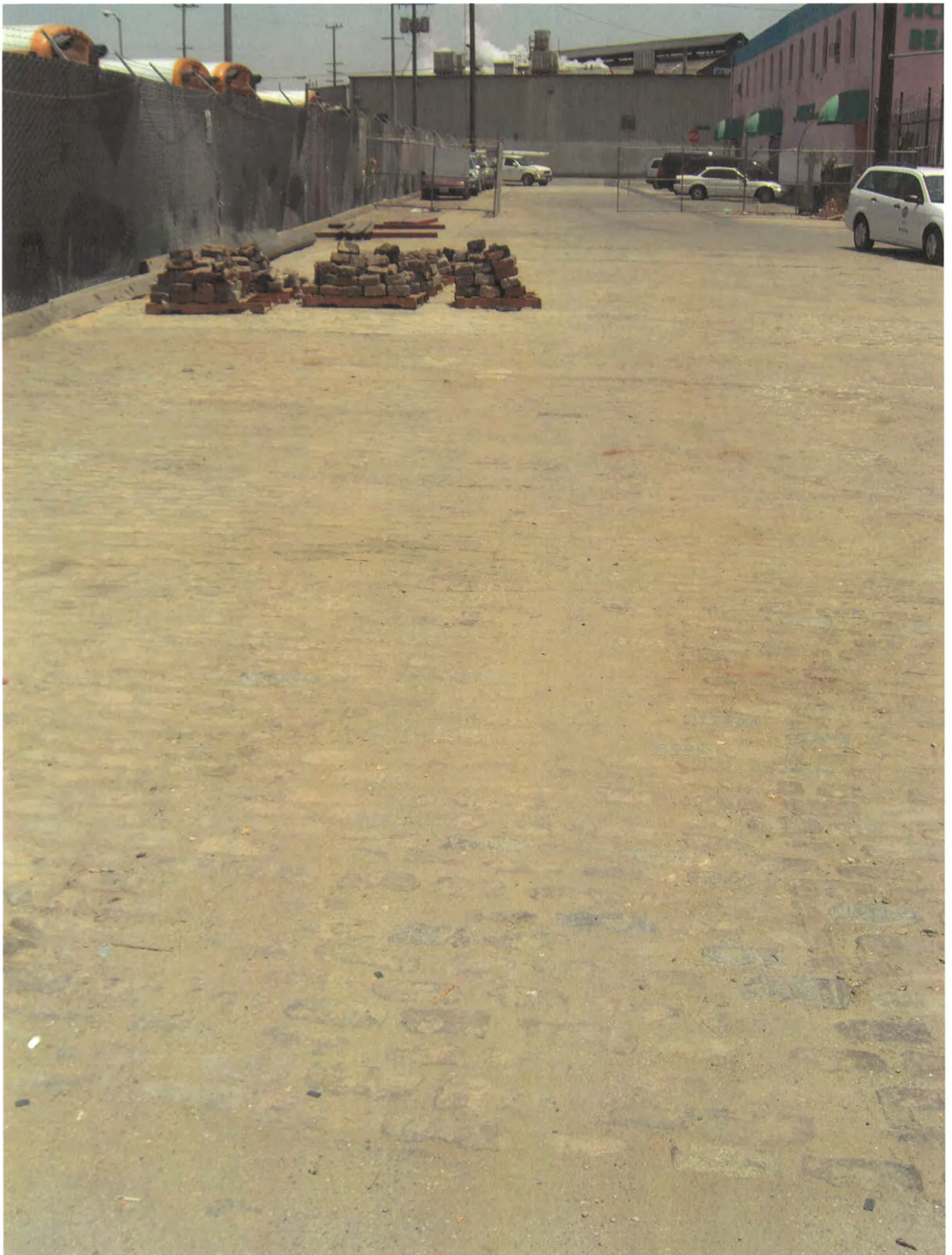
We have enclosed a site plan and photographs for review. If the Board wishes to consider this as a declaration, we will request the City Engineer's personnel be present at a Cultural Heritage Board meeting since they may be able to answer questions regarding the matter.

FNS/rb

cc: Art Dennis, Div. Engr.
Street Opening & Widening

Encls.







211. GRANITE-BLOCK PAVING, Bruno Street between Alameda and North Main streets. This short, local industrial street, just north of Civic Center and southwest of Chinatown, is unique and historical. The street is the last surviving



Appendix E

VMT Analysis Worksheets

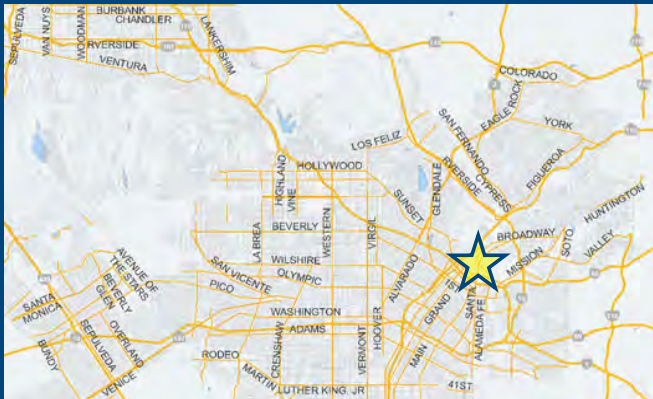
CITY OF LOS ANGELES VMT CALCULATOR Version 1.4



Project Screening Criteria: Is this project required to conduct a vehicle miles traveled analysis?

Project Information

Project: 130 W College Street
Scenario: [www](#)
Address: 130 W COLLEGE ST, 90012



Is the project replacing an existing number of residential units with a smaller number of residential units AND is located within one-half mile of a fixed-rail or fixed-guideway transit station?

☒ Yes ☐ No

Existing Land Use

Land Use Type: Housing | Single Family Value: Unit DU

[Click here to add a single custom land use type \(will be included in the above list\)](#)

Proposed Project Land Use

Land Use Type	Value	Unit
Retail High-Turnover Sit-Down Restaurant	5.894	ksf
Retail General Retail	4.11	ksf
Retail High-Turnover Sit-Down Restaurant	5.894	ksf
Office General Office	224.597	ksf

[Click here to add a single custom land use type \(will be included in the above list\)](#)

Project Screening Summary

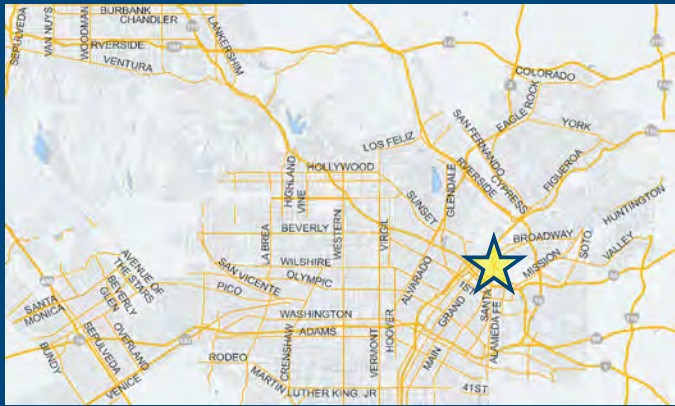
Existing Land Use	Proposed Project
0 Daily Vehicle Trips	2,528 Daily Vehicle Trips
0 Daily VMT	19,796 Daily VMT
Tier 1 Screening Criteria	
Project will have less residential units compared to existing residential units & is within one-half mile of a fixed-rail station. ☐	
Tier 2 Screening Criteria	
The net increase in daily trips < 250 trips	2,528 Net Daily Trips
The net increase in daily VMT ≤ 0	19,796 Net Daily VMT
The proposed project consists of only retail land uses ≤ 50,000 square feet total.	10,004 ksf
The proposed project is required to perform VMT analysis.	

CITY OF LOS ANGELES VMT CALCULATOR Version 1.4



Project Information

Project: 130 W College Street
Scenario:
Address: 130 W COLLEGE ST, 90012



TDM Strategies

Select each section to show individual strategies

Use ☒ to denote if the TDM strategy is part of the proposed project or is a mitigation strategy

	Proposed Project	With Mitigation
Max Home Based TDM Achieved?	No	No
Max Work Based TDM Achieved?	No	No
A Parking		
B Transit		
C Education & Encouragement		
D Commute Trip Reductions		
Required Commute Trip Reduction Program	100 percent of employees eligible	
☐ Proposed Prj ☐ Mitigation		
Alternative Work Schedules and Telecommute Program	1% percentage of employees participating	
☐ Proposed Prj ☐ Mitigation		
Employer Sponsored Vanpool or Shuttle	high degree of implementation	small employer size
☐ Proposed Prj ☐ Mitigation	100 percent of employees eligible	
Ride-Share Program	100 percent of employees eligible	
☐ Proposed Prj ☒ Mitigation		
E Shared Mobility		
F Bicycle Infrastructure		
G Neighborhood Enhancement		

Analysis Results

Proposed Project	With Mitigation
2,124 Daily Vehicle Trips	1,995 Daily Vehicle Trips
16,568 Daily VMT	15,445 Daily VMT
0.0 Household VMT per Capita	0.0 Household VMT per Capita
8.1 Work VMT per Employee	6.8 Work VMT per Employee

Significant VMT Impact?

Household: No Threshold = 6.0 15% Below APC	Household: No Threshold = 6.0 15% Below APC
Work: Yes Threshold = 7.6 15% Below APC	Work: No Threshold = 7.6 15% Below APC

CITY OF LOS ANGELES VMT CALCULATOR

Report 1: Project & Analysis Overview

Date: March 8, 2024

Project Name: 130 W College Street

Project Scenario:

Project Address: 130 W COLLEGE ST, 90012



Version 1.4

Project Information			
Land Use Type		Value	Units
Housing	Single Family	0	DU
	Multi Family	0	DU
	Townhouse	0	DU
	Hotel	0	Rooms
	Motel	0	Rooms
Affordable Housing	Family	0	DU
	Senior	0	DU
	Special Needs	0	DU
	Permanent Supportive	0	DU
Retail	General Retail	4.110	ksf
	Furniture Store	0.000	ksf
	Pharmacy/Drugstore	0.000	ksf
	Supermarket	0.000	ksf
	Bank	0.000	ksf
	Health Club	0.000	ksf
	High-Turnover Sit-Down Restaurant	5.894	ksf
	Fast-Food Restaurant	0.000	ksf
	Quality Restaurant	0.000	ksf
	Auto Repair	0.000	ksf
	Home Improvement	0.000	ksf
	Free-Standing Discount	0.000	ksf
	Movie Theater	0	Seats
Office	General Office	224.597	ksf
	Medical Office	0.000	ksf
Industrial	Light Industrial	0.000	ksf
	Manufacturing	0.000	ksf
	Warehousing/Self-Storage	0.000	ksf
School	University	0	Students
	High School	0	Students
	Middle School	0	Students
	Elementary	0	Students
	Private School (K-12)	0	Students

Project and Analysis Overview

CITY OF LOS ANGELES VMT CALCULATOR

Report 1: Project & Analysis Overview

Date: March 8, 2024

Project Name: 130 W College Street

Project Scenario:

Project Address: 130 W COLLEGE ST, 90012



Version 1.4

Other	0	Trips
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CITY OF LOS ANGELES VMT CALCULATOR

Report 1: Project & Analysis Overview

Date: March 8, 2024

Project Name: 130 W College Street

Project Scenario:

Project Address: 130 W COLLEGE ST, 90012



Version 1.4

Analysis Results			
Total Employees: 930			
Total Population: 0			
Proposed Project		With Mitigation	
2,124	Daily Vehicle Trips	1,995	Daily Vehicle Trips
16,568	Daily VMT	15,445	Daily VMT
0	Household VMT per Capita	0	Household VMT per Capita
8.1	Work VMT per Employee	6.8	Work VMT per Employee
Significant VMT Impact?			
APC: Central			
Impact Threshold: 15% Below APC Average			
Household = 6.0			
Work = 7.6			
Proposed Project		With Mitigation	
VMT Threshold	Impact	VMT Threshold	Impact
Household > 6.0	No	Household > 6.0	No
Work > 7.6	Yes	Work > 7.6	No

CITY OF LOS ANGELES VMT CALCULATOR

Report 2: TDM Inputs

Date: March 8, 2024

Project Name: 130 W College Street

Project Scenario:

Project Address: 130 W COLLEGE ST, 90012



Version 1.4

TDM Strategy Inputs				
Strategy Type		Description	Proposed Project	Mitigations
Parking	Reduce parking supply	City code parking provision (spaces)	506	506
		Actual parking provision (spaces)	440	440
	Unbundle parking	Monthly cost for parking (\$)	\$0	\$0
	Parking cash-out	Employees eligible (%)	100%	100%
	Price workplace parking	Daily parking charge (\$)	\$0.00	\$0.00
		Employees subject to priced parking (%)	0%	0%
	Residential area parking permits	Cost of annual permit (\$)	\$0	\$0
(cont. on following page)				

CITY OF LOS ANGELES VMT CALCULATOR

Report 2: TDM Inputs

Date: March 8, 2024

Project Name: 130 W College Street

Project Scenario:

Project Address: 130 W COLLEGE ST, 90012



Version 1.4

TDM Strategy Inputs, Cont.				
Strategy Type		Description	Proposed Project	Mitigations
Transit	Reduce transit headways	Reduction in headways (increase in frequency) (%)	0%	0%
		Existing transit mode share (as a percent of total daily trips) (%)	0%	0%
		Lines within project site improved (<50%, >=50%)	0	0
	Implement neighborhood shuttle	Degree of implementation (low, medium, high)	0	0
		Employees and residents eligible (%)	0%	0%
	Transit subsidies	Employees and residents eligible (%)	0%	0%
		Amount of transit subsidy per passenger (daily equivalent) (\$)	\$0.00	\$0.00
Education & Encouragement	Voluntary travel behavior change program	Employees and residents participating (%)	0%	0%
	Promotions and marketing	Employees and residents participating (%)	100%	100%
(cont. on following page)				

CITY OF LOS ANGELES VMT CALCULATOR

Report 2: TDM Inputs

Date: March 8, 2024

Project Name: 130 W College Street

Project Scenario:

Project Address: 130 W COLLEGE ST, 90012



Version 1.4

TDM Strategy Inputs, Cont.				
Strategy Type		Description	Proposed Project	Mitigations
Commute Trip Reductions	Required commute trip reduction program	Employees participating (%)	0%	0%
	Alternative Work Schedules and Telecommute	Employees participating (%)	0%	0%
		Type of program	0	0
		Degree of implementation (low, medium, high)	0	0
	Employer sponsored vanpool or shuttle	Employees eligible (%)	0%	0%
		Employer size (small, medium, large)	0	0
	Ride-share program	Employees eligible (%)	0%	100%
Shared Mobility	Car share	Car share project setting (Urban, Suburban, All Other)	0	0
	Bike share	Within 600 feet of existing bike share station - OR- implementing new bike share station (Yes/No)	0	0
	School carpool program	Level of implementation (Low, Medium, High)	0	0
(cont. on following page)				

CITY OF LOS ANGELES VMT CALCULATOR

Report 2: TDM Inputs

Date: March 8, 2024

Project Name: 130 W College Street

Project Scenario:

Project Address: 130 W COLLEGE ST, 90012



Version 1.4

TDM Strategy Inputs, Cont.				
Strategy Type		Description	Proposed Project	Mitigations
Bicycle Infrastructure	Implement/Improve on-street bicycle facility	Provide bicycle facility along site (Yes/No)	0	0
	Include Bike parking per LAMC	Meets City Bike Parking Code (Yes/No)	Yes	Yes
	Include secure bike parking and showers	Includes indoor bike parking/lockers, showers, & repair station (Yes/No)	Yes	Yes
Neighborhood Enhancement	Traffic calming improvements	Streets with traffic calming improvements (%)	0%	0%
		Intersections with traffic calming improvements (%)	0%	0%
	Pedestrian network improvements	Included (within project and connecting off-site/within project only)	within project and connecting off-site	within project and connecting off-site

CITY OF LOS ANGELES VMT CALCULATOR

Report 3: TDM Outputs

Date: March 8, 2024
 Project Name: 130 W College Street
 Project Scenario:
 Project Address: 130 W COLLEGE ST, 90012



TDM Adjustments by Trip Purpose & Strategy														
Place type: Urban														
		Home Based Work Production		Home Based Work Attraction		Home Based Other Production		Home Based Other Attraction		Non-Home Based Other Production		Non-Home Based Other Attraction		Source
		Proposed	Mitigated	Proposed	Mitigated	Proposed	Mitigated	Proposed	Mitigated	Proposed	Mitigated	Proposed	Mitigated	
Parking	Reduce parking supply	7%	7%	7%	7%	7%	7%	7%	7%	7%	7%	7%	7%	TDM Strategy Appendix, Parking sections 1 - 5
	Unbundle parking	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
	Parking cash-out	0%	0%	8%	8%	0%	0%	0%	0%	0%	0%	0%	0%	
	Price workplace parking	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
	Residential area parking permits	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	
Transit	Reduce transit headways	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	TDM Strategy Appendix, Transit sections 1 - 3
	Implement neighborhood shuttle	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
	Transit subsidies	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
Education & Encouragement	Voluntary travel behavior change program	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	TDM Strategy Appendix, Education & Encouragement sections 1 - 2
	Promotions and marketing	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	0%	
Commute Trip Reductions	Required commute trip reduction program	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	TDM Strategy Appendix, Commute Trip Reductions sections 1 - 4
	Alternative Work Schedules and Telecommute Program	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
	Employer sponsored vanpool or shuttle	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
	Ride-share program	0%	0%	0%	15%	0%	0%	0%	0%	0%	0%	0%	0%	
Shared Mobility	Car-share	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	TDM Strategy Appendix, Shared Mobility sections 1 - 3
	Bike share	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	
	School carpool program	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	

CITY OF LOS ANGELES VMT CALCULATOR

Report 3: TDM Outputs

Date: March 8, 2024

Project Name: 130 W College Street

Project Scenario:

Project Address: 130 W COLLEGE ST, 90012



Version 1.4

TDM Adjustments by Trip Purpose & Strategy, Cont.

Place type: Urban

		<i>Home Based Work Production</i>		<i>Home Based Work Attraction</i>		<i>Home Based Other Production</i>		<i>Home Based Other Attraction</i>		<i>Non-Home Based Other Production</i>		<i>Non-Home Based Other Attraction</i>		Source
		Proposed	Mitigated	Proposed	Mitigated	Proposed	Mitigated	Proposed	Mitigated	Proposed	Mitigated	Proposed	Mitigated	
Bicycle Infrastructure	Implement/ Improve on-street bicycle facility	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	TDM Strategy Appendix, Bicycle Infrastructure sections 1 - 3
	Include Bike parking per LAMC	0.6%	0.6%	0.6%	0.6%	0.6%	0.6%	0.6%	0.6%	0.6%	0.6%	0.6%	0.6%	
	Include secure bike parking and showers	0.6%	0.6%	0.6%	0.6%	0.6%	0.6%	0.6%	0.6%	0.6%	0.6%	0.6%	0.6%	
Neighborhood Enhancement	Traffic calming improvements	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	TDM Strategy Appendix, Neighborhood Enhancement
	Pedestrian network improvements	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	

Final Combined & Maximum TDM Effect

		<i>Home Based Work Production</i>		<i>Home Based Work Attraction</i>		<i>Home Based Other Production</i>		<i>Home Based Other Attraction</i>		<i>Non-Home Based Other Production</i>		<i>Non-Home Based Other Attraction</i>	
		Proposed	Mitigated	Proposed	Mitigated	Proposed	Mitigated	Proposed	Mitigated	Proposed	Mitigated	Proposed	Mitigated
COMBINED TOTAL		13%	13%	20%	32%	13%	13%	13%	13%	13%	13%	13%	10%
MAX. TDM EFFECT		13%	13%	20%	32%	13%	13%	13%	13%	13%	13%	13%	13%

= Minimum (X%, 1-[(1-A)*(1-B)...])
where X%=

PLACE	urban	75%
TYPE	compact infill	40%
MAX:	suburban center	20%
	suburban	15%

Note: (1-[(1-A)*(1-B)...]) reflects the dampened combined effectiveness of TDM Strategies (e.g., A, B,...). See the TDM Strategy Appendix (*Transportation Assessment Guidelines Attachment G*) for further discussion of dampening.

CITY OF LOS ANGELES VMT CALCULATOR

Report 4: MXD Methodology

Date: March 8, 2024

Project Name: 130 W College Street

Project Scenario:

Project Address: 130 W COLLEGE ST, 90012



Version 1.4

MXD Methodology - Project Without TDM

	Unadjusted Trips	MXD Adjustment	MXD Trips	Average Trip Length	Unadjusted VMT	MXD VMT
Home Based Work Production	0	0.0%	0	6.5	0	0
Home Based Other Production	0	0.0%	0	5.3	0	0
Non-Home Based Other Production	435	-6.0%	409	8.4	3,654	3,436
Home-Based Work Attraction	1,323	-18.8%	1,074	8.7	11,510	9,344
Home-Based Other Attraction	914	-30.5%	635	6.4	5,850	4,064
Non-Home Based Other Attraction	435	-5.7%	410	7.2	3,132	2,952

MXD Methodology with TDM Measures

	<i>Proposed Project</i>			<i>Project with Mitigation Measures</i>		
	TDM Adjustment	Project Trips	Project VMT	TDM Adjustment	Mitigated Trips	Mitigated VMT
Home Based Work Production	-13.2%	0	0	-13.2%	0	0
Home Based Other Production	-13.2%	0	0	-13.2%	0	0
Non-Home Based Other Production	-13.2%	355	2,984	-13.2%	355	2,984
Home-Based Work Attraction	-19.8%	861	7,490	-31.9%	732	6,367
Home-Based Other Attraction	-13.2%	552	3,530	-13.2%	552	3,530
Non-Home Based Other Attraction	-13.2%	356	2,564	-13.2%	356	2,564

MXD VMT Methodology Per Capita & Per Employee

Total Population: 0

Total Employees: 930

APC: Central

	<i>Proposed Project</i>	<i>Project with Mitigation Measures</i>
<i>Total Home Based Production VMT</i>	0	0
<i>Total Home Based Work Attraction VMT</i>	7,490	6,367
<i>Total Home Based VMT Per Capita</i>	0.0	0.0
<i>Total Work Based VMT Per Employee</i>	8.1	6.8

Appendix F

Freeway Safety Analysis Worksheets

HCM 6th TWSC

1: SR 110 NB Off-Ramp & SR 110 SB Off-Ramp

06/18/2024

Intersection						
Int Delay, s/veh	3.9					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	176	0	0	1650	0
Future Vol, veh/h	0	176	0	0	1650	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	191	0	0	1793	0
Major/Minor	Minor2		Major2			
Conflicting Flow All	-	897	-	-	-	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.94	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.32	-	-	-	-
Pot Cap-1 Maneuver	0	283	-	-	-	0
Stage 1	0	-	-	-	-	0
Stage 2	0	-	-	-	-	0
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	283	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Approach	EB		SB			
HCM Control Delay, s	40.7		0			
HCM LOS	E					
Minor Lane/Major Mvmt	EBLn1	SBT				
Capacity (veh/h)	283	-				
HCM Lane V/C Ratio	0.676	-				
HCM Control Delay (s)	40.7	-				
HCM Lane LOS	E	-				
HCM 95th %tile Q(veh)	4.5	-				

Intersection

Int Delay, s/veh 6.9

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	212	0	0	1686	0
Future Vol, veh/h	0	212	0	0	1686	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	230	0	0	1833	0

Major/Minor	Minor2	Major2
Conflicting Flow All	- 917	- 0
Stage 1	- -	- -
Stage 2	- -	- -
Critical Hdwy	- 6.94	- -
Critical Hdwy Stg 1	- -	- -
Critical Hdwy Stg 2	- -	- -
Follow-up Hdwy	- 3.32	- -
Pot Cap-1 Maneuver	0 274	- 0
Stage 1	0 -	- 0
Stage 2	0 -	- 0
Platoon blocked, %		-
Mov Cap-1 Maneuver	- 274	- -
Mov Cap-2 Maneuver	- -	- -
Stage 1	- -	- -
Stage 2	- -	- -

Approach	EB	SB
HCM Control Delay, s	61.4	0
HCM LOS	F	

Minor Lane/Major Mvmt	EBLn1	SBT
Capacity (veh/h)	274	-
HCM Lane V/C Ratio	0.841	-
HCM Control Delay (s)	61.4	-
HCM Lane LOS	F	-
HCM 95th %tile Q(veh)	7	-

Appendix G

LOS Analysis Worksheets

HCM 6th Signalized Intersection Summary

1: Hill St & College St

06/18/2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	59	173	119	109	403	52	11	221	17	124	1358	49
Future Volume (veh/h)	59	173	119	109	403	52	11	221	17	124	1358	49
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	64	188	129	118	438	57	12	240	18	135	1476	53
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	111	342	287	166	614	89	130	1699	127	605	1773	64
Arrive On Green	0.30	0.30	0.30	0.10	0.10	0.10	0.51	0.51	0.51	0.51	0.51	0.51
Sat Flow, veh/h	188	1137	955	367	2038	295	340	3353	250	1121	3499	125
Grp Volume(v), veh/h	174	0	207	294	0	319	12	126	132	135	748	781
Grp Sat Flow(s),veh/h/ln	749	0	1530	1051	0	1649	340	1777	1825	1121	1777	1848
Q Serve(g_s), s	6.4	0.0	9.8	15.8	0.0	16.8	2.8	3.4	3.4	6.5	32.3	32.5
Cycle Q Clear(g_c), s	23.1	0.0	9.8	25.6	0.0	16.8	35.3	3.4	3.4	10.0	32.3	32.5
Prop In Lane	0.37		0.62	0.40		0.18	1.00		0.14	1.00		0.07
Lane Grp Cap(c), veh/h	280	0	461	372	0	497	130	900	925	605	900	936
V/C Ratio(X)	0.62	0.00	0.45	0.79	0.00	0.64	0.09	0.14	0.14	0.22	0.83	0.83
Avail Cap(c_a), veh/h	280	0	461	372	0	497	130	900	925	605	900	936
HCM Platoon Ratio	1.00	1.00	1.00	0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	0.78	0.00	0.78	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	30.6	0.0	25.4	42.4	0.0	35.9	34.1	11.8	11.8	14.5	18.9	19.0
Incr Delay (d2), s/veh	4.2	0.0	0.7	8.6	0.0	2.2	1.4	0.3	0.3	0.9	8.8	8.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	7.0	0.0	6.4	12.0	0.0	11.7	0.5	2.5	2.6	3.1	20.6	21.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	34.8	0.0	26.1	51.0	0.0	38.1	35.5	12.1	12.1	15.3	27.7	27.6
LnGrp LOS	C	A	C	D	A	D	D	B	B	B	C	C
Approach Vol, veh/h		381			613			270			1664	
Approach Delay, s/veh		30.1			44.3			13.2			26.7	
Approach LOS		C			D			B			C	
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		54.0		36.0		54.0		36.0				
Change Period (Y+Rc), s		* 8.4		* 8.9		* 8.4		* 8.9				
Max Green Setting (Gmax), s		* 46		* 27		* 46		* 27				
Max Q Clear Time (g_c+I1), s		34.5		27.6		37.3		25.1				
Green Ext Time (p_c), s		7.8		0.0		1.0		0.5				
Intersection Summary												
HCM 6th Ctrl Delay				29.6								
HCM 6th LOS				C								
Notes												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												

HCM 6th Signalized Intersection Summary

2: Broadway & College St

06/18/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	27	231	46	39	340	82	38	235	20	81	1144	197
Future Volume (veh/h)	27	231	46	39	340	82	38	235	20	81	1144	197
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	29	251	50	42	370	89	41	255	22	88	1243	214
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	66	483	102	77	492	125	287	1954	167	601	1678	749
Arrive On Green	0.07	0.07	0.07	0.07	0.07	0.07	0.08	0.59	0.59	0.47	0.47	0.47
Sat Flow, veh/h	86	2264	479	144	2306	586	1781	3313	284	1102	3554	1585
Grp Volume(v), veh/h	161	0	169	258	0	243	41	136	141	88	1243	214
Grp Sat Flow(s),veh/h/ln	1213	0	1616	1439	0	1597	1781	1777	1819	1102	1777	1585
Q Serve(g_s), s	0.2	0.0	9.0	7.4	0.0	13.4	0.9	3.1	3.1	4.1	25.5	7.4
Cycle Q Clear(g_c), s	13.6	0.0	9.0	16.4	0.0	13.4	0.9	3.1	3.1	4.1	25.5	7.4
Prop In Lane	0.18		0.30	0.16		0.37	1.00		0.16	1.00		1.00
Lane Grp Cap(c), veh/h	306	0	345	353	0	341	287	1048	1073	601	1678	749
V/C Ratio(X)	0.53	0.00	0.49	0.73	0.00	0.71	0.14	0.13	0.13	0.15	0.74	0.29
Avail Cap(c_a), veh/h	336	0	375	385	0	371	335	1048	1073	601	1678	749
HCM Platoon Ratio	0.33	0.33	0.33	0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.86	0.00	0.86	0.80	0.00	0.80	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	36.4	0.0	37.1	40.5	0.0	39.1	13.2	8.2	8.2	13.6	19.3	14.5
Incr Delay (d2), s/veh	1.2	0.0	0.9	5.1	0.0	4.6	0.2	0.3	0.3	0.5	3.0	1.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	6.6	0.0	6.9	10.4	0.0	9.8	0.6	2.1	2.2	1.9	15.9	4.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	37.6	0.0	38.0	45.6	0.0	43.8	13.4	8.4	8.5	14.1	22.3	15.4
LnGrp LOS	D	A	D	D	A	D	B	A	A	B	C	B
Approach Vol, veh/h	330		501			318			1545			
Approach Delay, s/veh	37.8		44.7			9.1			20.9			
Approach LOS	D		D			A			C			
Timer - Assigned Phs	1	2	4		6		8					
Phs Duration (G+Y+Rc), s	10.6	51.1	28.3		61.7		28.3					
Change Period (Y+Rc), s	3.6	* 8.6	* 9.1		* 8.6		* 9.1					
Max Green Setting (Gmax), s	40.4	* 38	* 21		* 51		* 21					
Max Q Clear Time (g_c+I), s	12.9	27.5	18.4		5.1		15.6					
Green Ext Time (p_c), s	0.0	7.0	0.8		1.7		0.9					

Intersection Summary

HCM 6th Ctrl Delay 26.0

HCM 6th LOS C

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

HCM 6th Signalized Intersection Summary

3: Alameda St/Spring St & College St

06/18/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	115	61	153	17	185	22	171	308	19	13	877	87
Future Volume (veh/h)	115	61	153	17	185	22	171	308	19	13	877	87
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	125	66	166	18	201	24	186	335	21	14	953	95
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	243	460	390	325	404	48	421	2127	133	567	2241	223
Arrive On Green	0.08	0.08	0.08	0.25	0.25	0.25	0.18	1.00	1.00	0.47	0.47	0.47
Sat Flow, veh/h	1156	1870	1585	1148	1639	196	1781	3397	212	1025	4721	469
Grp Volume(v), veh/h	125	66	166	18	0	225	186	175	181	14	687	361
Grp Sat Flow(s),veh/h/ln	1156	1870	1585	1148	0	1835	1781	1777	1832	1025	1702	1786
Q Serve(g_s), s	9.6	3.0	9.0	1.1	0.0	9.5	4.5	0.0	0.0	0.7	11.9	12.0
Cycle Q Clear(g_c), s	19.1	3.0	9.0	4.1	0.0	9.5	4.5	0.0	0.0	0.7	11.9	12.0
Prop In Lane	1.00		1.00	1.00		0.11	1.00		0.12	1.00		0.26
Lane Grp Cap(c), veh/h	243	460	390	325	0	452	421	1112	1147	567	1616	848
V/C Ratio(X)	0.51	0.14	0.43	0.06	0.00	0.50	0.44	0.16	0.16	0.02	0.42	0.43
Avail Cap(c_a), veh/h	368	663	562	437	0	630	428	1112	1147	567	1616	848
HCM Platoon Ratio	0.33	0.33	0.33	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00
Upstream Filter(I)	0.87	0.87	0.87	1.00	0.00	1.00	0.98	0.98	0.98	1.00	1.00	1.00
Uniform Delay (d), s/veh	44.6	32.5	35.3	28.3	0.0	29.1	9.3	0.0	0.0	12.6	15.6	15.6
Incr Delay (d2), s/veh	1.5	0.1	0.6	0.1	0.0	0.9	0.7	0.3	0.3	0.1	0.8	1.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	5.5	2.4	6.7	0.6	0.0	7.6	2.6	0.2	0.2	0.3	8.1	8.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	46.1	32.6	35.9	28.4	0.0	30.0	10.0	0.3	0.3	12.7	16.4	17.1
LnGrp LOS	D	C	D	C	A	C	A	A	A	B	B	B
Approach Vol, veh/h	357			243			542			1062		
Approach Delay, s/veh	38.9			29.9			3.6			16.6		
Approach LOS	D			C			A			B		
Timer - Assigned Phs	1	2	4		6		8					
Phs Duration (G+Y+Rc), s	13.6	48.1	28.3		61.7		28.3					
Change Period (Y+Rc), s	5.7	* 5.4	6.1		* 5.4		6.1					
Max Green Setting (Gmax), s	30.3	* 30	30.9		* 47		31.9					
Max Q Clear Time (g_c+10, s)	10.5	14.0	11.5		2.0		21.1					
Green Ext Time (p_c), s	0.1	9.7	1.3		2.9		1.0					

Intersection Summary

HCM 6th Ctrl Delay	18.5
HCM 6th LOS	B

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

HCM 6th TWSC

4: Main & College St

06/18/2024

Intersection												
Int Delay, s/veh	4.4											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	47	3	14	1	1	7	38	331	8	2	1003	179
Future Vol, veh/h	47	3	14	1	1	7	38	331	8	2	1003	179
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	51	3	15	1	1	8	41	360	9	2	1090	195
Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	1455	1643	643	998	1736	185	1285	0	0	369	0	0
Stage 1	1192	1192	-	447	447	-	-	-	-	-	-	-
Stage 2	263	451	-	551	1289	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.94	4.14	-	-	4.14	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.52	4.02	3.32	2.22	-	-	2.22	-	-
Pot Cap-1 Maneuver	91	99	416	198	87	826	536	-	-	1186	-	-
Stage 1	199	259	-	560	572	-	-	-	-	-	-	-
Stage 2	719	569	-	486	232	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	82	89	416	171	78	826	536	-	-	1186	-	-
Mov Cap-2 Maneuver	82	89	-	171	78	-	-	-	-	-	-	-
Stage 1	180	257	-	506	517	-	-	-	-	-	-	-
Stage 2	643	514	-	460	231	-	-	-	-	-	-	-
Approach	EB		WB		NB		SB					
HCM Control Delay, s	98.9		16.2		1.7		0					
HCM LOS	F		C									
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR					
Capacity (veh/h)	536	-	-	100	332	1186	-	-				
HCM Lane V/C Ratio	0.077	-	-	0.696	0.029	0.002	-	-				
HCM Control Delay (s)	12.3	0.5	-	98.9	16.2	8	0	-				
HCM Lane LOS	B	A	-	F	C	A	A	-				
HCM 95th %tile O(veh)	0.2	-	-	3.5	0.1	0	-	-				

HCM 6th Signalized Intersection Summary

5: Alameda St & Alpine

06/18/2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	44	143	39	109	650	180	4	280	25	90	804	123
Future Volume (veh/h)	44	143	39	109	650	180	4	280	25	90	804	123
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	48	155	42	118	707	196	4	304	27	98	874	134
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	338	1163	306	692	2018	900	146	1090	627	334	1371	209
Arrive On Green	0.42	0.42	0.42	0.09	0.57	0.57	0.31	0.31	0.31	0.10	0.10	0.10
Sat Flow, veh/h	617	2783	732	1781	3554	1585	559	3554	1585	1049	4470	682
Grp Volume(v), veh/h	48	97	100	118	707	196	4	304	27	98	665	343
Grp Sat Flow(s),veh/h/ln	617	1777	1739	1781	1777	1585	559	1777	1585	1049	1702	1748
Q Serve(g_s), s	4.4	3.0	3.2	3.0	9.7	5.5	0.6	5.8	0.9	8.0	16.9	17.0
Cycle Q Clear(g_c), s	4.4	3.0	3.2	3.0	9.7	5.5	17.6	5.8	0.9	13.8	16.9	17.0
Prop In Lane	1.00		0.42	1.00		1.00	1.00		1.00	1.00		0.39
Lane Grp Cap(c), veh/h	338	742	726	692	2018	900	146	1090	627	334	1044	536
V/C Ratio(X)	0.14	0.13	0.14	0.17	0.35	0.22	0.03	0.28	0.04	0.29	0.64	0.64
Avail Cap(c_a), veh/h	338	742	726	771	2018	900	146	1090	627	334	1044	536
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.33	0.33	0.33
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.92	0.92	0.92
Uniform Delay (d), s/veh	16.5	16.1	16.2	10.9	10.5	9.6	35.3	23.7	16.7	37.0	35.6	35.7
Incr Delay (d2), s/veh	0.2	0.1	0.1	0.1	0.5	0.6	0.3	0.6	0.1	2.1	2.7	5.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	1.1	2.2	2.2	2.1	6.5	3.4	0.2	4.5	0.6	4.4	12.5	13.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	16.7	16.2	16.3	11.0	11.0	10.1	35.6	24.3	16.9	39.1	38.4	41.0
LnGrp LOS	B	B	B	B	B	B	D	C	B	D	D	D
Approach Vol, veh/h		245			1021			335			1106	
Approach Delay, s/veh		16.3			10.8			23.8			39.2	
Approach LOS		B			B			C			D	
Timer - Assigned Phs		2		4	5	6		8				
Phs Duration (G+Y+Rc), s		57.0		33.0	13.5	43.5		33.0				
Change Period (Y+Rc), s		* 5.9		* 5.4	* 5.5	* 5.9		* 5.4				
Max Green Setting (Gmax), s		* 51		* 28	* 12	* 28		* 28				
Max Q Clear Time (g_c+I1), s		11.7		19.6	5.0	6.4		19.0				
Green Ext Time (p_c), s		13.3		2.4	0.1	1.5		6.8				
Intersection Summary												
HCM 6th Ctrl Delay				24.5								
HCM 6th LOS				C								
Notes												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												
User approved changes to right turn type.												

HCM 6th Signalized Intersection Summary

1: Hill St & College St

06/18/2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	96	308	77	47	215	131	29	1144	62	80	1203	44
Future Volume (veh/h)	96	308	77	47	215	131	29	1144	62	80	1203	44
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	104	335	84	51	234	142	32	1243	67	87	1308	48
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	159	490	134	94	405	272	186	1848	99	196	1884	69
Arrive On Green	0.27	0.27	0.27	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54
Sat Flow, veh/h	380	1822	499	164	1506	1013	402	3429	185	420	3496	128
Grp Volume(v), veh/h	251	0	272	214	0	213	32	643	667	87	664	692
Grp Sat Flow(s),veh/h/ln	1089	0	1612	1163	0	1520	402	1777	1837	420	1777	1847
Q Serve(g_s), s	12.8	0.0	13.3	2.8	0.0	8.1	5.7	23.6	23.6	17.0	24.8	24.8
Cycle Q Clear(g_c), s	20.9	0.0	13.3	16.1	0.0	8.1	30.6	23.6	23.6	40.7	24.8	24.8
Prop In Lane	0.41		0.31	0.24		0.67	1.00		0.10	1.00		0.07
Lane Grp Cap(c), veh/h	349	0	434	362	0	409	186	957	990	196	957	995
V/C Ratio(X)	0.72	0.00	0.63	0.59	0.00	0.52	0.17	0.67	0.67	0.44	0.69	0.69
Avail Cap(c_a), veh/h	394	0	485	412	0	458	186	957	990	196	957	995
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	0.83	0.00	0.83	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	33.2	0.0	28.9	17.4	0.0	17.1	26.6	15.0	15.0	29.7	15.3	15.3
Incr Delay (d2), s/veh	5.5	0.0	2.1	1.5	0.0	0.9	2.0	3.8	3.7	7.1	4.1	4.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	9.6	0.0	9.0	4.3	0.0	4.3	1.2	14.9	15.3	3.7	15.5	16.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	38.7	0.0	31.0	18.9	0.0	17.9	28.6	18.8	18.7	36.9	19.4	19.3
LnGrp LOS	D	A	C	B	A	B	C	B	B	D	B	B
Approach Vol, veh/h		523			427			1342			1443	
Approach Delay, s/veh		34.7			18.4			19.0			20.4	
Approach LOS		C			B			B			C	
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		56.9		33.1		56.9		33.1				
Change Period (Y+Rc), s		* 8.4		* 8.9		* 8.4		* 8.9				
Max Green Setting (Gmax), s		* 46		* 27		* 46		* 27				
Max Q Clear Time (g_c+I1), s		42.7		18.1		32.6		22.9				
Green Ext Time (p_c), s		2.3		1.8		7.5		1.3				
Intersection Summary												
HCM 6th Ctrl Delay				21.7								
HCM 6th LOS				C								
Notes												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												

HCM 6th Signalized Intersection Summary

2: Broadway & College St

06/18/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔↔			↔↔		↗	↕↕		↗	↕↕	↗
Traffic Volume (veh/h)	72	369	68	48	201	130	59	1121	70	96	887	129
Future Volume (veh/h)	72	369	68	48	201	130	59	1121	70	96	887	129
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	78	401	74	52	218	141	64	1218	76	104	964	140
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	94	447	98	79	307	235	346	1940	121	221	1611	719
Arrive On Green	0.31	0.31	0.31	0.08	0.08	0.08	0.08	0.57	0.57	0.45	0.45	0.45
Sat Flow, veh/h	184	1923	423	123	1322	1013	1781	3397	212	426	3554	1585
Grp Volume(v), veh/h	268	0	285	199	0	212	64	636	658	104	964	140
Grp Sat Flow(s),veh/h/ln	904	0	1626	939	0	1520	1781	1777	1832	426	1777	1585
Q Serve(g_s), s	8.8	0.0	14.2	5.5	0.0	12.1	1.5	21.5	21.6	19.4	18.3	4.8
Cycle Q Clear(g_c), s	20.9	0.0	14.2	19.7	0.0	12.1	1.5	21.5	21.6	30.4	18.3	4.8
Prop In Lane	0.29		0.26	0.26		0.67	1.00		0.12	1.00		1.00
Lane Grp Cap(c), veh/h	262	0	378	268	0	353	346	1015	1046	221	1611	719
V/C Ratio(X)	1.03	0.00	0.75	0.74	0.00	0.60	0.18	0.63	0.63	0.47	0.60	0.19
Avail Cap(c_a), veh/h	262	0	378	268	0	353	394	1015	1046	221	1611	719
HCM Platoon Ratio	1.33	1.33	1.33	0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.58	0.00	0.58	0.95	0.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	34.4	0.0	28.8	40.3	0.0	37.5	11.9	12.9	12.9	26.6	18.5	14.8
Incr Delay (d2), s/veh	49.2	0.0	5.0	10.1	0.0	2.7	0.3	2.9	2.9	7.0	1.6	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	18.1	0.0	8.4	9.3	0.0	8.8	1.0	13.4	13.7	4.2	12.0	3.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	83.6	0.0	33.8	50.4	0.0	40.2	12.2	15.8	15.8	33.7	20.1	15.4
LnGrp LOS	F	A	C	D	A	D	B	B	B	C	C	B
Approach Vol, veh/h	553		411			1358			1208			
Approach Delay, s/veh	57.9		45.1			15.6			20.7			
Approach LOS	E		D			B			C			
Timer - Assigned Phs	1	2	4		6		8					
Phs Duration (G+Y+Rc), s	10.6	49.4	30.0		60.0		30.0					
Change Period (Y+Rc), s	3.6	* 8.6	* 9.1		* 8.6		* 9.1					
Max Green Setting (Gmax), s	9.4	* 38	* 21		* 51		* 21					
Max Q Clear Time (g_c+I), s	13.5	32.4	21.7		23.6		22.9					
Green Ext Time (p_c), s	0.0	3.9	0.0		10.8		0.0					

Intersection Summary

HCM 6th Ctrl Delay 27.4

HCM 6th LOS C

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

HCM 6th Signalized Intersection Summary

3: Alameda St/Spring St & College St

06/18/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	183	146	204	13	85	36	193	1041	17	10	323	84
Future Volume (veh/h)	183	146	204	13	85	36	193	1041	17	10	323	84
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	199	159	222	14	92	39	210	1132	18	11	351	91
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	330	482	408	258	321	136	626	2200	35	265	1887	470
Arrive On Green	0.08	0.08	0.08	0.26	0.26	0.26	0.06	0.41	0.41	0.46	0.46	0.46
Sat Flow, veh/h	1259	1870	1585	1002	1247	529	1781	3580	57	489	4077	1015
Grp Volume(v), veh/h	199	159	222	14	0	131	210	562	588	11	291	151
Grp Sat Flow(s),veh/h/ln	1259	1870	1585	1002	0	1775	1781	1777	1860	489	1702	1688
Q Serve(g_s), s	14.0	7.2	12.1	1.0	0.0	5.3	5.1	21.2	21.2	1.3	4.5	4.8
Cycle Q Clear(g_c), s	19.3	7.2	12.1	8.3	0.0	5.3	5.1	21.2	21.2	8.9	4.5	4.8
Prop In Lane	1.00		1.00	1.00		0.30	1.00		0.03	1.00		0.60
Lane Grp Cap(c), veh/h	330	482	408	258	0	457	626	1092	1143	265	1576	781
V/C Ratio(X)	0.60	0.33	0.54	0.05	0.00	0.29	0.34	0.51	0.51	0.04	0.18	0.19
Avail Cap(c_a), veh/h	452	663	562	344	0	609	633	1092	1143	265	1576	781
HCM Platoon Ratio	0.33	0.33	0.33	1.00	1.00	1.00	0.67	0.67	0.67	1.00	1.00	1.00
Upstream Filter(I)	0.45	0.45	0.45	1.00	0.00	1.00	0.62	0.62	0.62	1.00	1.00	1.00
Uniform Delay (d), s/veh	42.0	33.9	36.1	30.9	0.0	26.8	9.9	16.4	16.4	17.8	14.2	14.3
Incr Delay (d2), s/veh	0.8	0.2	0.5	0.1	0.0	0.3	0.2	1.1	1.0	0.3	0.3	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	7.2	5.5	7.7	0.5	0.0	4.1	3.5	13.4	13.9	0.3	3.1	3.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	42.8	34.0	36.6	31.0	0.0	27.1	10.1	17.5	17.5	18.1	14.5	14.8
LnGrp LOS	D	C	D	C	A	C	B	B	B	B	B	B
Approach Vol, veh/h	580			145			1360			453		
Approach Delay, s/veh	38.0			27.5			16.4			14.7		
Approach LOS	D			C			B			B		
Timer - Assigned Phs	1	2	4		6		8					
Phs Duration (G+Y+Rc), s	13.7	47.1	29.3		60.7		29.3					
Change Period (Y+Rc), s	5.7	* 5.4	6.1		* 5.4		6.1					
Max Green Setting (Gmax), s	30.3	* 30	30.9		* 47		31.9					
Max Q Clear Time (g_c+I1), s	17.1	10.9	10.3		23.2		21.3					
Green Ext Time (p_c), s	0.1	4.8	0.7		10.4		1.8					

Intersection Summary

HCM 6th Ctrl Delay	21.6
HCM 6th LOS	C

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

HCM 6th TWSC

4: Main & College St

06/18/2024

Intersection												
Int Delay, s/veh	7.1											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	121	0	42	3	1	2	29	838	3	4	398	84
Future Vol, veh/h	121	0	42	3	1	2	29	838	3	4	398	84
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	132	0	46	3	1	2	32	911	3	4	433	91
Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	1007	1465	262	1202	1509	457	524	0	0	914	0	0
Stage 1	487	487	-	977	977	-	-	-	-	-	-	-
Stage 2	520	978	-	225	532	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.94	4.14	-	-	4.14	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.52	4.02	3.32	2.22	-	-	2.22	-	-
Pot Cap-1 Maneuver	195	127	737	140	119	551	1039	-	-	742	-	-
Stage 1	531	549	-	269	327	-	-	-	-	-	-	-
Stage 2	507	327	-	757	524	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	182	118	737	124	111	551	1039	-	-	742	-	-
Mov Cap-2 Maneuver	182	118	-	124	111	-	-	-	-	-	-	-
Stage 1	498	545	-	252	306	-	-	-	-	-	-	-
Stage 2	472	306	-	704	520	-	-	-	-	-	-	-
Approach	EB		WB		NB		SB					
HCM Control Delay, s	61.7		28		0.6		0.1					
HCM LOS	F		D									
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR					
Capacity (veh/h)	1039	-	-	226	163	742	-	-				
HCM Lane V/C Ratio	0.03	-	-	0.784	0.04	0.006	-	-				
HCM Control Delay (s)	8.6	0.3	-	61.7	28	9.9	0	-				
HCM Lane LOS	A	A	-	F	D	A	A	-				
HCM 95th %tile O(veh)	0.1	-	-	5.7	0.1	0	-	-				

HCM 6th Signalized Intersection Summary

5: Alameda St & Alpine

06/18/2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	114	481	83	35	328	243	33	892	77	96	375	49
Future Volume (veh/h)	114	481	83	35	328	243	33	892	77	96	375	49
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	124	523	90	38	357	264	36	970	84	104	408	53
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	415	1267	217	478	2018	900	287	1090	627	105	1406	179
Arrive On Green	0.42	0.42	0.42	0.09	0.57	0.57	0.31	0.31	0.31	0.10	0.10	0.10
Sat Flow, veh/h	803	3034	520	1781	3554	1585	931	3554	1585	535	4585	584
Grp Volume(v), veh/h	124	305	308	38	357	264	36	970	84	104	301	160
Grp Sat Flow(s),veh/h/ln	803	1777	1777	1781	1777	1585	931	1777	1585	535	1702	1765
Q Serve(g_s), s	9.6	10.9	11.0	0.9	4.3	7.8	2.8	23.4	3.0	4.2	7.4	7.6
Cycle Q Clear(g_c), s	9.6	10.9	11.0	0.9	4.3	7.8	10.4	23.4	3.0	27.6	7.4	7.6
Prop In Lane	1.00		0.29	1.00		1.00	1.00		1.00	1.00		0.33
Lane Grp Cap(c), veh/h	415	742	742	478	2018	900	287	1090	627	105	1044	541
V/C Ratio(X)	0.30	0.41	0.41	0.08	0.18	0.29	0.13	0.89	0.13	0.99	0.29	0.30
Avail Cap(c_a), veh/h	415	742	742	557	2018	900	287	1090	627	105	1044	541
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.33	0.33	0.33
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.98	0.98	0.98
Uniform Delay (d), s/veh	18.0	18.4	18.4	11.2	9.3	10.1	28.3	29.8	17.4	53.7	31.4	31.4
Incr Delay (d2), s/veh	0.4	0.4	0.4	0.1	0.2	0.8	0.9	10.9	0.4	84.9	0.7	1.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	3.2	7.8	7.9	0.6	2.9	4.9	1.2	16.8	2.1	8.6	5.9	6.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	18.4	18.8	18.8	11.3	9.5	10.9	29.2	40.7	17.8	138.7	32.0	32.8
LnGrp LOS	B	B	B	B	A	B	C	D	B	F	C	C
Approach Vol, veh/h		737			659			1090			565	
Approach Delay, s/veh		18.7			10.2			38.6			51.9	
Approach LOS		B			B			D			D	
Timer - Assigned Phs		2		4	5	6		8				
Phs Duration (G+Y+Rc), s		57.0		33.0	13.5	43.5		33.0				
Change Period (Y+Rc), s		* 5.9		* 5.4	* 5.5	* 5.9		* 5.4				
Max Green Setting (Gmax), s		* 51		* 28	* 12	* 28		* 28				
Max Q Clear Time (g_c+I1), s		9.8		25.4	2.9	13.0		29.6				
Green Ext Time (p_c), s		7.7		1.9	0.0	4.1		0.0				
Intersection Summary												
HCM 6th Ctrl Delay				30.1								
HCM 6th LOS				C								
Notes												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												
User approved changes to right turn type.												

HCM 6th Signalized Intersection Summary

1: Hill St & College St

06/18/2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	59	173	119	111	403	57	11	221	29	197	1358	49
Future Volume (veh/h)	59	173	119	111	403	57	11	221	29	197	1358	49
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	64	188	129	121	438	62	12	240	32	214	1476	53
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	110	340	287	168	601	95	130	1599	211	595	1773	64
Arrive On Green	0.30	0.30	0.30	0.10	0.10	0.10	0.51	0.51	0.51	0.51	0.51	0.51
Sat Flow, veh/h	183	1128	952	370	1997	315	340	3156	416	1107	3499	125
Grp Volume(v), veh/h	174	0	207	298	0	323	12	134	138	214	748	781
Grp Sat Flow(s),veh/h/ln	732	0	1531	1037	0	1645	340	1777	1795	1107	1777	1848
Q Serve(g_s), s	6.4	0.0	9.9	16.3	0.0	17.0	2.8	3.6	3.7	11.5	32.3	32.5
Cycle Q Clear(g_c), s	23.5	0.0	9.9	26.1	0.0	17.0	35.3	3.6	3.7	15.2	32.3	32.5
Prop In Lane	0.37		0.62	0.41		0.19	1.00		0.23	1.00		0.07
Lane Grp Cap(c), veh/h	275	0	461	369	0	495	130	900	910	595	900	936
V/C Ratio(X)	0.63	0.00	0.45	0.81	0.00	0.65	0.09	0.15	0.15	0.36	0.83	0.83
Avail Cap(c_a), veh/h	275	0	461	369	0	495	130	900	910	595	900	936
HCM Platoon Ratio	1.00	1.00	1.00	0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	0.75	0.00	0.75	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	30.8	0.0	25.4	42.8	0.0	36.0	34.1	11.8	11.9	15.9	18.9	19.0
Incr Delay (d2), s/veh	4.6	0.0	0.7	9.7	0.0	2.3	1.4	0.3	0.4	1.7	8.8	8.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	7.1	0.0	6.5	12.1	0.0	11.7	0.5	2.6	2.7	5.5	20.6	21.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	35.3	0.0	26.1	52.4	0.0	38.3	35.5	12.2	12.2	17.6	27.7	27.6
LnGrp LOS	D	A	C	D	A	D	D	B	B	B	C	C
Approach Vol, veh/h		381			621			284			1743	
Approach Delay, s/veh		30.3			45.1			13.2			26.4	
Approach LOS		C			D			B			C	
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		54.0		36.0		54.0		36.0				
Change Period (Y+Rc), s		* 8.4		* 8.9		* 8.4		* 8.9				
Max Green Setting (Gmax), s		* 46		* 27		* 46		* 27				
Max Q Clear Time (g_c+I1), s		34.5		28.1		37.3		25.5				
Green Ext Time (p_c), s		8.0		0.0		1.1		0.4				
Intersection Summary												
HCM 6th Ctrl Delay				29.5								
HCM 6th LOS				C								
Notes												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												

HCM 6th Signalized Intersection Summary

2: Broadway & College St

06/18/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔↔			↔↔		↗	↔↔		↗	↔↔	↗
Traffic Volume (veh/h)	27	316	46	44	347	84	38	235	44	81	1144	197
Future Volume (veh/h)	27	316	46	44	347	84	38	235	44	81	1144	197
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	29	343	50	48	377	91	41	255	48	88	1243	214
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	63	572	90	79	497	132	277	1709	317	568	1611	719
Arrive On Green	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.57	0.57	0.45	0.45	0.45
Sat Flow, veh/h	74	2462	387	137	2142	570	1781	2993	555	1076	3554	1585
Grp Volume(v), veh/h	211	0	211	261	0	255	41	150	153	88	1243	214
Grp Sat Flow(s),veh/h/ln	291	0	1632	1250	0	1599	1781	1777	1770	1076	1777	1585
Q Serve(g_s), s	1.8	0.0	11.2	7.9	0.0	14.0	0.9	3.6	3.7	4.4	26.5	7.7
Cycle Q Clear(g_c), s	15.8	0.0	11.2	19.2	0.0	14.0	0.9	3.6	3.7	4.4	26.5	7.7
Prop In Lane	0.14		0.24	0.18		0.36	1.00		0.31	1.00		1.00
Lane Grp Cap(c), veh/h	345	0	379	338	0	371	277	1015	1011	568	1611	719
V/C Ratio(X)	0.61	0.00	0.56	0.77	0.00	0.69	0.15	0.15	0.15	0.15	0.77	0.30
Avail Cap(c_a), veh/h	345	0	379	338	0	371	324	1015	1011	568	1611	719
HCM Platoon Ratio	0.33	0.33	0.33	0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.84	0.00	0.84	0.79	0.00	0.79	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	37.2	0.0	37.1	40.8	0.0	38.4	14.3	9.0	9.1	14.6	20.7	15.5
Incr Delay (d2), s/veh	2.6	0.0	1.5	8.5	0.0	4.2	0.2	0.3	0.3	0.6	3.6	1.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	8.6	0.0	8.4	10.9	0.0	10.1	0.7	2.5	2.5	2.0	16.6	5.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	39.9	0.0	38.6	49.3	0.0	42.5	14.5	9.3	9.4	15.2	24.3	16.6
LnGrp LOS	D	A	D	D	A	D	B	A	A	B	C	B
Approach Vol, veh/h	422		516				344			1545		
Approach Delay, s/veh	39.2		45.9				10.0			22.7		
Approach LOS	D		D				A			C		
Timer - Assigned Phs	1	2	4		6		8					
Phs Duration (G+Y+Rc), s	10.6	49.4	30.0		60.0		30.0					
Change Period (Y+Rc), s	3.6	* 8.6	* 9.1		* 8.6		* 9.1					
Max Green Setting (Gmax), s	40.4	* 38	* 21		* 51		* 21					
Max Q Clear Time (g_c+I2), s	12.9	28.5	21.2		5.7		17.8					
Green Ext Time (p_c), s	0.0	6.6	0.0		1.9		0.8					

Intersection Summary

HCM 6th Ctrl Delay 27.9

HCM 6th LOS C

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

HCM 6th Signalized Intersection Summary

3: Alameda St/Spring St & College St

06/18/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	115	170	153	34	199	27	171	308	67	37	877	87
Future Volume (veh/h)	115	170	153	34	199	27	171	308	67	37	877	87
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	125	185	166	37	216	29	186	335	73	40	953	95
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	248	490	415	254	423	57	410	1775	382	528	2166	215
Arrive On Green	0.09	0.09	0.09	0.26	0.26	0.26	0.18	1.00	1.00	0.46	0.46	0.46
Sat Flow, veh/h	1135	1870	1585	1030	1615	217	1781	2909	626	978	4721	469
Grp Volume(v), veh/h	125	185	166	37	0	245	186	203	205	40	687	361
Grp Sat Flow(s),veh/h/ln	1135	1870	1585	1030	0	1831	1781	1777	1758	978	1702	1786
Q Serve(g_s), s	9.8	8.4	8.9	2.8	0.0	10.3	4.6	0.0	0.0	2.1	12.3	12.4
Cycle Q Clear(g_c), s	20.0	8.4	8.9	11.2	0.0	10.3	4.6	0.0	0.0	2.1	12.3	12.4
Prop In Lane	1.00		1.00	1.00		0.12	1.00		0.36	1.00		0.26
Lane Grp Cap(c), veh/h	248	490	415	254	0	480	410	1084	1072	528	1562	819
V/C Ratio(X)	0.50	0.38	0.40	0.15	0.00	0.51	0.45	0.19	0.19	0.08	0.44	0.44
Avail Cap(c_a), veh/h	353	663	562	337	0	629	417	1084	1072	528	1562	819
HCM Platoon Ratio	0.33	0.33	0.33	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00
Upstream Filter(I)	0.76	0.76	0.76	1.00	0.00	1.00	0.97	0.97	0.97	1.00	1.00	1.00
Uniform Delay (d), s/veh	44.6	34.2	34.4	32.3	0.0	28.3	10.0	0.0	0.0	13.7	16.5	16.5
Incr Delay (d2), s/veh	1.2	0.4	0.5	0.3	0.0	0.8	0.8	0.4	0.4	0.3	0.9	1.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	5.5	7.0	6.5	1.3	0.0	8.0	2.8	0.2	0.2	0.9	8.4	9.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	45.8	34.5	34.9	32.5	0.0	29.1	10.7	0.4	0.4	14.0	17.4	18.2
LnGrp LOS	D	C	C	C	A	C	B	A	A	B	B	B
Approach Vol, veh/h	476			282			594			1088		
Approach Delay, s/veh	37.6			29.6			3.6			17.6		
Approach LOS	D			C			A			B		
Timer - Assigned Phs	1	2	4		6		8					
Phs Duration (G+Y+Rc), s	13.6	46.7	29.7		60.3		29.7					
Change Period (Y+Rc), s	5.7	* 5.4	6.1		* 5.4		6.1					
Max Green Setting (Gmax), s	30.3	* 30	30.9		* 47		31.9					
Max Q Clear Time (g_c+I), s	10.6	14.4	13.2		2.0		22.0					
Green Ext Time (p_c), s	0.1	9.7	1.4		3.4		1.5					

Intersection Summary

HCM 6th Ctrl Delay 19.5

HCM 6th LOS B

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

HCM 6th TWSC

4: Main & College St

06/18/2024

Intersection												
Int Delay, s/veh	8.7											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	52	3	21	1	1	7	74	331	8	2	1003	203
Future Vol, veh/h	52	3	21	1	1	7	74	331	8	2	1003	203
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	57	3	23	1	1	8	80	360	9	2	1090	221
Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	1546	1734	656	1076	1840	185	1311	0	0	369	0	0
Stage 1	1205	1205	-	525	525	-	-	-	-	-	-	-
Stage 2	341	529	-	551	1315	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.94	4.14	-	-	4.14	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.52	4.02	3.32	2.22	-	-	2.22	-	-
Pot Cap-1 Maneuver	78	87	408	174	75	826	524	-	-	1186	-	-
Stage 1	195	255	-	504	528	-	-	-	-	-	-	-
Stage 2	647	525	-	486	226	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	65	70	408	135	60	826	524	-	-	1186	-	-
Mov Cap-2 Maneuver	65	70	-	135	60	-	-	-	-	-	-	-
Stage 1	158	253	-	407	427	-	-	-	-	-	-	-
Stage 2	517	424	-	450	224	-	-	-	-	-	-	-
Approach	EB		WB		NB		SB					
HCM Control Delay, s	177.3		18.5		3.1		0					
HCM LOS	F		C									
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR					
Capacity (veh/h)	524	-	-	85	277	1186	-	-				
HCM Lane V/C Ratio	0.154	-	-	0.972	0.035	0.002	-	-				
HCM Control Delay (s)	13.1	0.9	-	177.3	18.5	8	0	-				
HCM Lane LOS	B	A	-	F	C	A	A	-				
HCM 95th %tile O(veh)	0.5	-	-	5.4	0.1	0	-	-				

HCM 6th Signalized Intersection Summary

5: Alameda St & Alpine

06/18/2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	56	143	39	109	650	180	4	316	25	90	818	125
Future Volume (veh/h)	56	143	39	109	650	180	4	316	25	90	818	125
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	61	155	42	118	707	196	4	343	27	98	889	136
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	338	1163	306	692	2018	900	143	1090	627	315	1371	209
Arrive On Green	0.42	0.42	0.42	0.09	0.57	0.57	0.31	0.31	0.31	0.10	0.10	0.10
Sat Flow, veh/h	617	2783	732	1781	3554	1585	550	3554	1585	1012	4471	681
Grp Volume(v), veh/h	61	97	100	118	707	196	4	343	27	98	676	349
Grp Sat Flow(s),veh/h/ln	617	1777	1739	1781	1777	1585	550	1777	1585	1012	1702	1748
Q Serve(g_s), s	5.7	3.0	3.2	3.0	9.7	5.5	0.6	6.7	0.9	8.3	17.2	17.3
Cycle Q Clear(g_c), s	5.7	3.0	3.2	3.0	9.7	5.5	17.9	6.7	0.9	15.0	17.2	17.3
Prop In Lane	1.00		0.42	1.00		1.00	1.00		1.00	1.00		0.39
Lane Grp Cap(c), veh/h	338	742	726	692	2018	900	143	1090	627	315	1044	536
V/C Ratio(X)	0.18	0.13	0.14	0.17	0.35	0.22	0.03	0.31	0.04	0.31	0.65	0.65
Avail Cap(c_a), veh/h	338	742	726	771	2018	900	143	1090	627	315	1044	536
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.33	0.33	0.33
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.92	0.92	0.92
Uniform Delay (d), s/veh	16.9	16.1	16.2	10.9	10.5	9.6	35.5	23.9	16.7	38.0	35.8	35.8
Incr Delay (d2), s/veh	0.3	0.1	0.1	0.1	0.5	0.6	0.4	0.8	0.1	2.3	2.9	5.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	1.5	2.2	2.2	2.1	6.5	3.4	0.2	5.1	0.6	4.4	12.7	13.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	17.2	16.2	16.3	11.0	11.0	10.1	35.9	24.7	16.9	40.3	38.6	41.4
LnGrp LOS	B	B	B	B	B	B	D	C	B	D	D	D
Approach Vol, veh/h	258		1021				374		1123			
Approach Delay, s/veh	16.5		10.8				24.3		39.6			
Approach LOS	B		B				C		D			
Timer - Assigned Phs	2		4		5	6	8					
Phs Duration (G+Y+Rc), s	57.0		33.0		13.5	43.5	33.0					
Change Period (Y+Rc), s	* 5.9		* 5.4		* 5.5	* 5.9	* 5.4					
Max Green Setting (Gmax), s	* 51		* 28		* 12	* 28	* 28					
Max Q Clear Time (g_c+I1), s	11.7		19.9		5.0	7.7	19.3					
Green Ext Time (p_c), s	13.3		2.6		0.1	1.6	6.7					
Intersection Summary												
HCM 6th Ctrl Delay	24.8											
HCM 6th LOS	C											
Notes												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												
User approved changes to right turn type.												

HCM 6th Signalized Intersection Summary

1: Hill St & College St

06/18/2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	96	308	77	58	215	153	29	1144	65	98	1203	44
Future Volume (veh/h)	96	308	77	58	215	153	29	1144	65	98	1203	44
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	104	335	84	63	234	166	32	1243	71	107	1308	48
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	156	496	137	103	365	297	181	1818	104	190	1860	68
Arrive On Green	0.28	0.28	0.28	0.55	0.55	0.55	0.53	0.53	0.53	0.53	0.53	0.53
Sat Flow, veh/h	362	1798	495	188	1326	1079	402	3417	195	418	3496	128
Grp Volume(v), veh/h	249	0	274	231	0	232	32	646	668	107	664	692
Grp Sat Flow(s),veh/h/ln	1042	0	1613	1085	0	1508	402	1777	1835	418	1777	1847
Q Serve(g_s), s	12.8	0.0	13.3	5.5	0.0	9.0	5.8	24.0	24.1	22.8	25.1	25.2
Cycle Q Clear(g_c), s	21.7	0.0	13.3	18.9	0.0	9.0	31.0	24.0	24.1	46.9	25.1	25.2
Prop In Lane	0.42		0.31	0.27		0.72	1.00		0.11	1.00		0.07
Lane Grp Cap(c), veh/h	344	0	445	350	0	416	181	945	977	190	945	983
V/C Ratio(X)	0.72	0.00	0.62	0.66	0.00	0.56	0.18	0.68	0.68	0.56	0.70	0.70
Avail Cap(c_a), veh/h	379	0	486	388	0	454	181	945	977	190	945	983
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	0.72	0.00	0.72	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	33.1	0.0	28.4	18.3	0.0	16.6	27.4	15.5	15.5	32.8	15.7	15.8
Incr Delay (d2), s/veh	6.1	0.0	2.0	2.6	0.0	0.9	2.1	4.0	3.9	11.5	4.4	4.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	9.6	0.0	9.0	4.7	0.0	4.5	1.2	15.2	15.6	5.1	15.8	16.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	39.2	0.0	30.4	20.9	0.0	17.6	29.5	19.5	19.4	44.2	20.1	20.0
LnGrp LOS	D	A	C	C	A	B	C	B	B	D	C	B
Approach Vol, veh/h		523			463			1346			1463	
Approach Delay, s/veh		34.6			19.2			19.7			21.8	
Approach LOS		C			B			B			C	
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		56.3		33.7		56.3		33.7				
Change Period (Y+Rc), s		* 8.4		* 8.9		* 8.4		* 8.9				
Max Green Setting (Gmax), s		* 46		* 27		* 46		* 27				
Max Q Clear Time (g_c+I1), s		48.9		20.9		33.0		23.7				
Green Ext Time (p_c), s		0.0		1.5		7.4		1.1				
Intersection Summary												
HCM 6th Ctrl Delay				22.5								
HCM 6th LOS				C								
Notes												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												

HCM 6th Signalized Intersection Summary

2: Broadway & College St

06/18/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔↔			↔↔		↔	↔↔		↔	↔↔	↔
Traffic Volume (veh/h)	72	390	68	70	234	141	59	1121	76	96	887	129
Future Volume (veh/h)	72	390	68	70	234	141	59	1121	76	96	887	129
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	78	424	74	76	254	153	64	1218	83	104	964	140
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	81	423	93	88	278	215	346	1928	131	219	1611	719
Arrive On Green	0.46	0.46	0.46	0.08	0.08	0.08	0.08	0.57	0.57	0.45	0.45	0.45
Sat Flow, veh/h	128	1823	402	150	1196	924	1781	3376	230	423	3554	1585
Grp Volume(v), veh/h	276	0	300	229	0	254	64	640	661	104	964	140
Grp Sat Flow(s),veh/h/ln	723	0	1630	735	0	1536	1781	1777	1829	423	1777	1585
Q Serve(g_s), s	6.3	0.0	14.1	6.8	0.0	14.6	1.5	21.7	21.8	19.7	18.3	4.8
Cycle Q Clear(g_c), s	20.9	0.0	14.1	20.9	0.0	14.6	1.5	21.7	21.8	30.9	18.3	4.8
Prop In Lane	0.28		0.25	0.33		0.60	1.00		0.13	1.00		1.00
Lane Grp Cap(c), veh/h	219	0	378	224	0	357	346	1015	1045	219	1611	719
V/C Ratio(X)	1.26	0.00	0.79	1.02	0.00	0.71	0.18	0.63	0.63	0.47	0.60	0.19
Avail Cap(c_a), veh/h	219	0	378	224	0	357	394	1015	1045	219	1611	719
HCM Platoon Ratio	2.00	2.00	2.00	0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.53	0.00	0.53	0.91	0.00	0.91	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	27.5	0.0	22.3	44.7	0.0	38.6	11.9	12.9	13.0	26.9	18.5	14.8
Incr Delay (d2), s/veh	134.7	0.0	6.1	63.1	0.0	6.0	0.3	3.0	2.9	7.2	1.6	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	18.7	0.0	7.1	14.2	0.0	10.5	1.0	13.5	13.8	4.2	12.0	3.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	162.1	0.0	28.4	107.8	0.0	44.6	12.2	15.9	15.9	34.1	20.1	15.4
LnGrp LOS	F	A	C	F	A	D	B	B	B	C	C	B
Approach Vol, veh/h	576		483			1365			1208			
Approach Delay, s/veh	92.4		74.6			15.7			20.8			
Approach LOS	F		E			B			C			
Timer - Assigned Phs	1	2	4		6		8					
Phs Duration (G+Y+Rc), s	10.6	49.4	30.0		60.0		30.0					
Change Period (Y+Rc), s	3.6	* 8.6	* 9.1		* 8.6		* 9.1					
Max Green Setting (Gmax), s	9.4	* 38	* 21		* 51		* 21					
Max Q Clear Time (g_c+I), s	13.5	32.9	22.9		23.8		22.9					
Green Ext Time (p_c), s	0.0	3.6	0.0		10.8		0.0					

Intersection Summary

HCM 6th Ctrl Delay 37.4

HCM 6th LOS D

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

HCM 6th Signalized Intersection Summary

3: Alameda St/Spring St & College St

06/18/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	183	173	204	89	151	58	193	1041	29	16	323	84
Future Volume (veh/h)	183	173	204	89	151	58	193	1041	29	16	323	84
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	199	188	222	97	164	63	210	1132	32	17	351	91
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	320	577	489	290	397	153	573	1989	56	229	1678	418
Arrive On Green	0.10	0.10	0.10	0.31	0.31	0.31	0.06	0.38	0.38	0.41	0.41	0.41
Sat Flow, veh/h	1154	1870	1585	976	1287	494	1781	3529	100	482	4077	1015
Grp Volume(v), veh/h	199	188	222	97	0	227	210	570	594	17	291	151
Grp Sat Flow(s),veh/h/ln	1154	1870	1585	976	0	1781	1781	1777	1852	482	1702	1688
Q Serve(g_s), s	15.3	8.4	11.9	7.8	0.0	9.1	5.7	22.9	22.9	2.3	4.9	5.2
Cycle Q Clear(g_c), s	24.4	8.4	11.9	16.2	0.0	9.1	5.7	22.9	22.9	11.5	4.9	5.2
Prop In Lane	1.00		1.00	1.00		0.28	1.00		0.05	1.00		0.60
Lane Grp Cap(c), veh/h	320	577	489	290	0	550	573	1001	1044	229	1402	695
V/C Ratio(X)	0.62	0.33	0.45	0.33	0.00	0.41	0.37	0.57	0.57	0.07	0.21	0.22
Avail Cap(c_a), veh/h	372	663	562	324	0	612	579	1001	1044	229	1402	695
HCM Platoon Ratio	0.33	0.33	0.33	1.00	1.00	1.00	0.67	0.67	0.67	1.00	1.00	1.00
Upstream Filter(I)	0.33	0.33	0.33	1.00	0.00	1.00	0.61	0.61	0.61	1.00	1.00	1.00
Uniform Delay (d), s/veh	43.4	31.7	33.3	30.8	0.0	24.6	12.4	19.3	19.4	22.3	17.0	17.1
Incr Delay (d2), s/veh	0.8	0.1	0.2	0.7	0.0	0.5	0.2	1.4	1.4	0.6	0.3	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	6.9	6.0	7.1	3.3	0.0	6.9	4.1	14.4	14.9	0.5	3.5	3.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	44.2	31.8	33.5	31.4	0.0	25.1	12.6	20.8	20.7	22.9	17.4	17.8
LnGrp LOS	D	C	C	C	A	C	B	C	C	C	B	B
Approach Vol, veh/h	609			324			1374			459		
Approach Delay, s/veh	36.5			27.0			19.5			17.7		
Approach LOS	D			C			B			B		
Timer - Assigned Phs	1	2	4		6		8					
Phs Duration (G+Y+Rc), s	13.7	42.5	33.9		56.1		33.9					
Change Period (Y+Rc), s	5.7	* 5.4	6.1		* 5.4		6.1					
Max Green Setting (Gmax), s	30.3	* 30	30.9		* 47		31.9					
Max Q Clear Time (g_c+I), s	17.5	13.5	18.2		24.9		26.4					
Green Ext Time (p_c), s	0.0	4.5	1.4		10.1		1.4					

Intersection Summary

HCM 6th Ctrl Delay	23.8
HCM 6th LOS	C

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

HCM 6th TWSC
4: Main & College St

06/18/2024

Intersection												
Int Delay, s/veh	15											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	143	0	75	3	1	2	38	838	3	4	398	90
Future Vol, veh/h	143	0	75	3	1	2	38	838	3	4	398	90
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	155	0	82	3	1	2	41	911	3	4	433	98
Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	1028	1486	266	1220	1534	457	531	0	0	914	0	0
Stage 1	490	490	-	995	995	-	-	-	-	-	-	-
Stage 2	538	996	-	225	539	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.94	4.14	-	-	4.14	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.52	4.02	3.32	2.22	-	-	2.22	-	-
Pot Cap-1 Maneuver	188	123	732	136	115	551	1033	-	-	742	-	-
Stage 1	529	547	-	262	321	-	-	-	-	-	-	-
Stage 2	495	320	-	757	520	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	173	112	732	113	105	551	1033	-	-	742	-	-
Mov Cap-2 Maneuver	173	112	-	113	105	-	-	-	-	-	-	-
Stage 1	486	543	-	241	295	-	-	-	-	-	-	-
Stage 2	451	294	-	667	516	-	-	-	-	-	-	-
Approach	EB		WB		NB		SB					
HCM Control Delay, s	105.6		29.9		0.7		0.1					
HCM LOS	F		D									
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR					
Capacity (veh/h)	1033	-	-	235	151	742	-	-				
HCM Lane V/C Ratio	0.04	-	-	1.008	0.043	0.006	-	-				
HCM Control Delay (s)	8.6	0.3	-	105.6	29.9	9.9	0	-				
HCM Lane LOS	A	A	-	F	D	A	A	-				
HCM 95th %tile O(veh)	0.1	-	-	9.6	0.1	0	-	-				

HCM 6th Signalized Intersection Summary

5: Alameda St & Alpine

06/18/2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	117	481	83	35	328	243	33	901	77	96	441	60
Future Volume (veh/h)	117	481	83	35	328	243	33	901	77	96	441	60
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	127	523	90	38	357	264	36	979	84	104	479	65
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	415	1267	217	478	2018	900	259	1090	627	103	1398	186
Arrive On Green	0.42	0.42	0.42	0.09	0.57	0.57	0.31	0.31	0.31	0.10	0.10	0.10
Sat Flow, veh/h	803	3034	520	1781	3554	1585	862	3554	1585	531	4557	608
Grp Volume(v), veh/h	127	305	308	38	357	264	36	979	84	104	356	188
Grp Sat Flow(s),veh/h/ln	803	1777	1777	1781	1777	1585	862	1777	1585	531	1702	1761
Q Serve(g_s), s	9.8	10.9	11.0	0.9	4.3	7.8	3.1	23.7	3.0	3.9	8.8	9.0
Cycle Q Clear(g_c), s	9.8	10.9	11.0	0.9	4.3	7.8	12.1	23.7	3.0	27.6	8.8	9.0
Prop In Lane	1.00		0.29	1.00		1.00	1.00		1.00	1.00		0.35
Lane Grp Cap(c), veh/h	415	742	742	478	2018	900	259	1090	627	103	1044	540
V/C Ratio(X)	0.31	0.41	0.41	0.08	0.18	0.29	0.14	0.90	0.13	1.01	0.34	0.35
Avail Cap(c_a), veh/h	415	742	742	557	2018	900	259	1090	627	103	1044	540
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.33	0.33	0.33
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.97	0.97	0.97
Uniform Delay (d), s/veh	18.1	18.4	18.4	11.2	9.3	10.1	29.5	29.9	17.4	53.8	32.0	32.1
Incr Delay (d2), s/veh	0.4	0.4	0.4	0.1	0.2	0.8	1.1	11.6	0.4	90.5	0.9	1.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	3.2	7.8	7.9	0.6	2.9	4.9	1.3	17.1	2.1	8.7	7.2	7.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	18.5	18.8	18.8	11.3	9.5	10.9	30.7	41.5	17.8	144.3	32.8	33.8
LnGrp LOS	B	B	B	B	A	B	C	D	B	F	C	C
Approach Vol, veh/h		740			659			1099			648	
Approach Delay, s/veh		18.8			10.2			39.3			51.0	
Approach LOS		B			B			D			D	
Timer - Assigned Phs		2		4	5	6		8				
Phs Duration (G+Y+Rc), s		57.0		33.0	13.5	43.5		33.0				
Change Period (Y+Rc), s		* 5.9		* 5.4	* 5.5	* 5.9		* 5.4				
Max Green Setting (Gmax), s		* 51		* 28	* 12	* 28		* 28				
Max Q Clear Time (g_c+I1), s		9.8		25.7	2.9	13.0		29.6				
Green Ext Time (p_c), s		7.7		1.6	0.0	4.2		0.0				
Intersection Summary												
HCM 6th Ctrl Delay				30.8								
HCM 6th LOS				C								
Notes												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												
User approved changes to right turn type.												

HCM 6th Signalized Intersection Summary

1: Hill St & College St

06/18/2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	61	229	124	151	422	122	12	283	61	233	1446	51
Future Volume (veh/h)	61	229	124	151	422	122	12	283	61	233	1446	51
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	66	249	135	164	459	133	13	308	66	253	1572	55
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	77	348	253	162	452	160	112	1479	313	531	1775	62
Arrive On Green	0.30	0.30	0.30	0.10	0.10	0.10	0.51	0.51	0.51	0.51	0.51	0.51
Sat Flow, veh/h	80	1155	842	343	1500	532	310	2919	617	1009	3503	122
Grp Volume(v), veh/h	201	0	249	354	0	402	13	186	188	253	795	832
Grp Sat Flow(s),veh/h/ln	526	0	1551	769	0	1606	310	1777	1759	1009	1777	1848
Q Serve(g_s), s	5.0	0.0	12.0	15.1	0.0	22.1	3.5	5.2	5.3	16.6	36.0	36.3
Cycle Q Clear(g_c), s	27.1	0.0	12.0	27.1	0.0	22.1	39.9	5.2	5.3	22.0	36.0	36.3
Prop In Lane	0.33		0.54	0.46		0.33	1.00		0.35	1.00		0.07
Lane Grp Cap(c), veh/h	211	0	467	290	0	484	112	900	891	531	900	937
V/C Ratio(X)	0.95	0.00	0.53	1.22	0.00	0.83	0.12	0.21	0.21	0.48	0.88	0.89
Avail Cap(c_a), veh/h	211	0	467	290	0	484	112	900	891	531	900	937
HCM Platoon Ratio	1.00	1.00	1.00	0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	0.09	0.00	0.09	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	33.5	0.0	26.2	47.5	0.0	38.3	37.8	12.2	12.3	18.3	19.8	19.9
Incr Delay (d2), s/veh	48.3	0.0	1.2	102.5	0.0	1.2	2.1	0.5	0.5	3.0	12.3	12.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	11.7	0.0	7.9	19.6	0.0	11.1	0.6	3.8	3.8	7.4	23.3	24.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	81.9	0.0	27.3	150.0	0.0	39.5	39.9	12.8	12.8	21.4	32.1	32.2
LnGrp LOS	F	A	C	F	A	D	D	B	B	C	C	C
Approach Vol, veh/h		450			756			387			1880	
Approach Delay, s/veh		51.7			91.3			13.7			30.7	
Approach LOS		D			F			B			C	
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		54.0		36.0		54.0		36.0				
Change Period (Y+Rc), s		* 8.4		* 8.9		* 8.4		* 8.9				
Max Green Setting (Gmax), s		* 46		* 27		* 46		* 27				
Max Q Clear Time (g_c+I1), s		38.3		29.1		41.9		29.1				
Green Ext Time (p_c), s		5.9		0.0		0.8		0.0				
Intersection Summary												
HCM 6th Ctrl Delay				44.7								
HCM 6th LOS				D								
Notes												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												

HCM 6th Signalized Intersection Summary

2: Broadway & College St

06/18/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔↔			↔↔		↔	↔↔		↔	↔↔	↔
Traffic Volume (veh/h)	66	397	48	143	405	119	40	362	45	105	1330	229
Future Volume (veh/h)	66	397	48	143	405	119	40	362	45	105	1330	229
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	72	432	52	155	440	129	43	393	49	114	1446	249
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	51	390	65	89	286	121	241	1817	225	509	1611	719
Arrive On Green	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.57	0.57	0.45	0.45	0.45
Sat Flow, veh/h	0	1679	281	128	1231	523	1781	3182	394	947	3554	1585
Grp Volume(v), veh/h	251	0	305	327	0	397	43	218	224	114	1446	249
Grp Sat Flow(s),veh/h/ln	309	0	1651	274	0	1608	1781	1777	1799	947	1777	1585
Q Serve(g_s), s	0.0	0.0	16.4	4.5	0.0	20.9	1.0	5.4	5.5	6.7	33.8	9.2
Cycle Q Clear(g_c), s	20.9	0.0	16.4	20.9	0.0	20.9	1.0	5.4	5.5	6.7	33.8	9.2
Prop In Lane	0.29		0.17	0.47		0.33	1.00		0.22	1.00		1.00
Lane Grp Cap(c), veh/h	123	0	383	123	0	373	241	1015	1028	509	1611	719
V/C Ratio(X)	2.04	0.00	0.80	2.67	0.00	1.06	0.18	0.22	0.22	0.22	0.90	0.35
Avail Cap(c_a), veh/h	123	0	383	123	0	373	289	1015	1028	509	1611	719
HCM Platoon Ratio	0.33	0.33	0.33	0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.73	0.00	0.73	0.71	0.00	0.71	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	40.8	0.0	39.5	50.7	0.0	41.6	17.5	9.4	9.5	15.3	22.7	16.0
Incr Delay (d2), s/veh	486.2	0.0	8.3	767.7	0.0	56.8	0.3	0.5	0.5	1.0	8.3	1.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	32.9	0.0	12.1	48.3	0.0	20.9	0.7	3.8	3.9	2.8	21.3	6.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	527.0	0.0	47.8	818.5	0.0	98.3	17.9	9.9	9.9	16.3	31.0	17.3
LnGrp LOS	F	A	D	F	A	F	B	A	A	B	C	B
Approach Vol, veh/h	556		724			485			1809			
Approach Delay, s/veh	263.9		424.0			10.6			28.2			
Approach LOS	F		F			B			C			
Timer - Assigned Phs	1	2	4		6		8					
Phs Duration (G+Y+Rc), s	10.6	49.4	30.0		60.0		30.0					
Change Period (Y+Rc), s	3.6	* 8.6	* 9.1		* 8.6		* 9.1					
Max Green Setting (Gmax), s	40.4	* 38	* 21		* 51		* 21					
Max Q Clear Time (g_c+I), s	13.0	35.8	22.9		7.5		22.9					
Green Ext Time (p_c), s	0.0	2.3	0.0		2.9		0.0					

Intersection Summary

HCM 6th Ctrl Delay 142.6

HCM 6th LOS F

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

HCM 6th Signalized Intersection Summary

3: Alameda St/Spring St & College St

06/18/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	199	119	170	18	252	26	199	529	20	19	1164	235
Future Volume (veh/h)	199	119	170	18	252	26	199	529	20	19	1164	235
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	216	129	185	20	274	28	216	575	22	21	1265	255
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	320	655	555	387	585	60	278	1821	70	381	1561	315
Arrive On Green	0.12	0.12	0.12	0.35	0.35	0.35	0.18	1.00	1.00	0.37	0.37	0.37
Sat Flow, veh/h	1077	1870	1585	1066	1669	171	1781	3490	133	821	4261	859
Grp Volume(v), veh/h	216	129	185	20	0	302	216	292	305	21	1011	509
Grp Sat Flow(s),veh/h/ln	1077	1870	1585	1066	0	1840	1781	1777	1846	821	1702	1716
Q Serve(g_s), s	17.9	5.6	9.7	1.2	0.0	11.5	6.7	0.0	0.0	1.5	24.1	24.1
Cycle Q Clear(g_c), s	29.4	5.6	9.7	6.8	0.0	11.5	6.7	0.0	0.0	1.5	24.1	24.1
Prop In Lane	1.00		1.00	1.00		0.09	1.00		0.07	1.00		0.50
Lane Grp Cap(c), veh/h	320	655	555	387	0	645	278	927	964	381	1247	628
V/C Ratio(X)	0.68	0.20	0.33	0.05	0.00	0.47	0.78	0.32	0.32	0.06	0.81	0.81
Avail Cap(c_a), veh/h	324	663	562	387	0	645	278	927	964	381	1247	628
HCM Platoon Ratio	0.33	0.33	0.33	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00
Upstream Filter(I)	0.14	0.14	0.14	1.00	0.00	1.00	0.92	0.92	0.92	1.00	1.00	1.00
Uniform Delay (d), s/veh	44.5	28.3	30.1	23.3	0.0	22.7	17.9	0.0	0.0	18.5	25.7	25.7
Incr Delay (d2), s/veh	0.8	0.0	0.0	0.1	0.0	0.5	12.0	0.8	0.8	0.3	5.8	10.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	6.6	3.6	5.2	0.6	0.0	8.6	5.6	0.4	0.4	0.6	15.6	16.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	45.3	28.4	30.2	23.3	0.0	23.3	29.9	0.8	0.8	18.8	31.5	36.6
LnGrp LOS	D	C	C	C	A	C	C	A	A	B	C	D
Approach Vol, veh/h	530			322			813			1541		
Approach Delay, s/veh	35.9			23.3			8.5			33.0		
Approach LOS	D			C			A			C		
Timer - Assigned Phs	1	2	4		6		8					
Phs Duration (G+Y+Rc), s	14.0	38.4	37.6		52.4		37.6					
Change Period (Y+Rc), s	5.7	* 5.4	6.1		* 5.4		6.1					
Max Green Setting (Gmax), s	30.3	* 30	30.9		* 47		31.9					
Max Q Clear Time (g_c+I), s	19.7	26.1	13.5		2.0		31.4					
Green Ext Time (p_c), s	0.0	3.2	1.7		5.3		0.1					

Intersection Summary

HCM 6th Ctrl Delay 26.3

HCM 6th LOS C

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

HCM 6th TWSC

4: Main & College St

06/18/2024

Intersection												
Int Delay, s/veh	51.2											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	110	3	15	1	1	7	40	412	8	2	1147	249
Future Vol, veh/h	110	3	15	1	1	7	40	412	8	2	1147	249
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	120	3	16	1	1	8	43	448	9	2	1247	271
Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	1698	1930	759	1168	2061	229	1518	0	0	457	0	0
Stage 1	1387	1387	-	539	539	-	-	-	-	-	-	-
Stage 2	311	543	-	629	1522	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.94	4.14	-	-	4.14	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.52	4.02	3.32	2.22	-	-	2.22	-	-
Pot Cap-1 Maneuver	~ 60	66	349	149	54	774	436	-	-	1100	-	-
Stage 1	150	208	-	494	520	-	-	-	-	-	-	-
Stage 2	674	518	-	437	179	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	~ 52	56	349	121	46	774	436	-	-	1100	-	-
Mov Cap-2 Maneuver	~ 52	56	-	121	46	-	-	-	-	-	-	-
Stage 1	130	205	-	429	451	-	-	-	-	-	-	-
Stage 2	578	450	-	404	176	-	-	-	-	-	-	-
Approach	EB		WB		NB		SB					
HCM Control Delay, s\$	789.3		21.3		1.9		0.1					
HCM LOS	F		C									
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR					
Capacity (veh/h)	436	-	-	58	230	1100	-	-				
HCM Lane V/C Ratio	0.1	-	-	2.399	0.043	0.002	-	-				
HCM Control Delay (s)	14.2	0.8	-	\$ 789.3	21.3	8.3	0.1	-				
HCM Lane LOS	B	A	-	F	C	A	A	-				
HCM 95th %tile Q(veh)	0.3	-	-	13.9	0.1	0	-	-				
Notes												
~: Volume exceeds capacity		\$: Delay exceeds 300s		+: Computation Not Defined		*: All major volume in platoon						

HCM 6th Signalized Intersection Summary

5: Alameda St & Alpine

06/18/2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	72	173	43	114	713	220	30	481	42	94	1108	137
Future Volume (veh/h)	72	173	43	114	713	220	30	481	42	94	1108	137
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	78	188	47	124	775	239	33	523	46	102	1204	149
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	312	1183	289	668	2018	900	105	1090	627	238	1411	175
Arrive On Green	0.42	0.42	0.42	0.09	0.57	0.57	0.31	0.31	0.31	0.31	0.31	0.31
Sat Flow, veh/h	556	2832	691	1781	3554	1585	403	3554	1585	843	4602	569
Grp Volume(v), veh/h	78	116	119	124	775	239	33	523	46	102	890	463
Grp Sat Flow(s),veh/h/ln	556	1777	1746	1781	1777	1585	403	1777	1585	843	1702	1768
Q Serve(g_s), s	8.6	3.7	3.8	3.2	10.8	6.9	5.5	10.8	1.6	10.1	22.1	22.1
Cycle Q Clear(g_c), s	8.6	3.7	3.8	3.2	10.8	6.9	27.6	10.8	1.6	20.8	22.1	22.1
Prop In Lane	1.00		0.40	1.00		1.00	1.00		1.00	1.00		0.32
Lane Grp Cap(c), veh/h	312	742	729	668	2018	900	105	1090	627	238	1044	542
V/C Ratio(X)	0.25	0.16	0.16	0.19	0.38	0.27	0.32	0.48	0.07	0.43	0.85	0.85
Avail Cap(c_a), veh/h	312	742	729	747	2018	900	105	1090	627	238	1044	542
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.67	0.67	0.67
Uniform Delay (d), s/veh	17.7	16.3	16.4	10.9	10.8	9.9	43.0	25.4	16.9	33.8	29.3	29.3
Incr Delay (d2), s/veh	0.4	0.1	0.1	0.1	0.6	0.7	7.7	1.5	0.2	3.8	6.1	11.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	2.0	2.6	2.7	2.2	7.3	4.3	1.7	8.2	1.1	4.1	13.8	15.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	18.2	16.4	16.5	11.1	11.3	10.6	50.7	26.9	17.2	37.6	35.4	40.4
LnGrp LOS	B	B	B	B	B	B	D	C	B	D	D	D
Approach Vol, veh/h	313		1138				602				1455	
Approach Delay, s/veh	16.9		11.1				27.4				37.2	
Approach LOS	B		B				C				D	
Timer - Assigned Phs	2		4		5	6	8					
Phs Duration (G+Y+Rc), s	57.0		33.0		13.5	43.5	33.0					
Change Period (Y+Rc), s	* 5.9		* 5.4		* 5.5	* 5.9	* 5.4					
Max Green Setting (Gmax), s	* 51		* 28		* 12	* 28	* 28					
Max Q Clear Time (g_c+I1), s	12.8		29.6		5.2	10.6	24.1					
Green Ext Time (p_c), s	15.1		0.0		0.2	2.0	3.2					
Intersection Summary												
HCM 6th Ctrl Delay			25.2									
HCM 6th LOS			C									
Notes												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												
User approved changes to right turn type.												

HCM 6th Signalized Intersection Summary

1: Hill St & College St

06/18/2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	100	370	80	82	238	204	30	1219	140	234	1321	46
Future Volume (veh/h)	100	370	80	82	238	204	30	1219	140	234	1321	46
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	109	402	87	89	259	222	33	1325	152	254	1436	50
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	138	534	133	111	307	344	138	1629	186	136	1775	62
Arrive On Green	0.30	0.30	0.30	0.50	0.50	0.50	0.51	0.51	0.51	0.51	0.51	0.51
Sat Flow, veh/h	272	1772	442	192	1018	1141	355	3214	367	358	3503	122
Grp Volume(v), veh/h	278	0	320	279	0	291	33	729	748	254	727	759
Grp Sat Flow(s),veh/h/ln	863	0	1623	855	0	1497	355	1777	1804	358	1777	1848
Q Serve(g_s), s	14.2	0.0	15.4	11.7	0.0	12.9	7.7	30.9	31.4	14.2	30.8	30.9
Cycle Q Clear(g_c), s	27.1	0.0	15.4	27.1	0.0	12.9	38.7	30.9	31.4	45.6	30.8	30.9
Prop In Lane	0.39		0.27	0.32		0.76	1.00		0.20	1.00		0.07
Lane Grp Cap(c), veh/h	316	0	489	310	0	451	138	900	914	136	900	937
V/C Ratio(X)	0.88	0.00	0.65	0.90	0.00	0.65	0.24	0.81	0.82	1.86	0.81	0.81
Avail Cap(c_a), veh/h	316	0	489	310	0	451	138	900	914	136	900	937
HCM Platoon Ratio	1.00	1.00	1.00	1.67	1.67	1.67	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	0.09	0.00	0.09	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	35.0	0.0	27.4	25.2	0.0	18.8	34.8	18.6	18.7	42.1	18.5	18.6
Incr Delay (d2), s/veh	23.9	0.0	3.1	3.6	0.0	0.3	4.1	7.8	8.1	414.8	7.7	7.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	12.8	0.0	10.3	6.7	0.0	4.5	1.5	19.7	20.2	33.7	19.6	20.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	58.9	0.0	30.5	28.9	0.0	19.1	38.8	26.4	26.8	456.9	26.2	26.1
LnGrp LOS	E	A	C	C	A	B	D	C	C	F	C	C
Approach Vol, veh/h		598			570			1510			1740	
Approach Delay, s/veh		43.7			23.9			26.8			89.1	
Approach LOS		D			C			C			F	
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		54.0		36.0		54.0		36.0				
Change Period (Y+Rc), s		* 8.4		* 8.9		* 8.4		* 8.9				
Max Green Setting (Gmax), s		* 46		* 27		* 46		* 27				
Max Q Clear Time (g_c+I1), s		47.6		29.1		40.7		29.1				
Green Ext Time (p_c), s		0.0		0.0		3.8		0.0				
Intersection Summary												
HCM 6th Ctrl Delay				53.2								
HCM 6th LOS				D								
Notes												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												

HCM 6th Signalized Intersection Summary

2: Broadway & College St

06/18/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔↔			↔↔		↔	↔↔		↔	↔↔	↔
Traffic Volume (veh/h)	148	588	70	117	276	171	61	1299	96	115	1038	148
Future Volume (veh/h)	148	588	70	117	276	171	61	1299	96	115	1038	148
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	161	639	76	127	300	186	66	1412	104	125	1128	161
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	58	325	62	60	189	189	304	1917	141	169	1611	719
Arrive On Green	0.31	0.31	0.31	0.08	0.08	0.08	0.08	0.57	0.57	0.45	0.45	0.45
Sat Flow, veh/h	8	1401	265	0	813	812	1781	3357	246	345	3554	1585
Grp Volume(v), veh/h	402	0	474	257	0	356	66	745	771	125	1128	161
Grp Sat Flow(s),veh/h/ln	20	0	1654	69	0	1556	1781	1777	1826	345	1777	1585
Q Serve(g_s), s	0.3	0.0	20.9	0.0	0.0	20.6	1.5	27.9	28.2	23.2	22.9	5.6
Cycle Q Clear(g_c), s	20.9	0.0	20.9	20.9	0.0	20.6	1.5	27.9	28.2	40.8	22.9	5.6
Prop In Lane	0.40		0.16	0.49		0.52	1.00		0.13	1.00		1.00
Lane Grp Cap(c), veh/h	61	0	384	76	0	361	304	1015	1043	169	1611	719
V/C Ratio(X)	6.63	0.00	1.23	3.38	0.00	0.99	0.22	0.73	0.74	0.74	0.70	0.22
Avail Cap(c_a), veh/h	61	0	384	76	0	361	351	1015	1043	169	1611	719
HCM Platoon Ratio	1.33	1.33	1.33	0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.09	0.00	0.09	0.83	0.00	0.83	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	41.5	0.0	31.1	47.7	0.0	41.4	13.4	14.3	14.3	36.8	19.7	15.0
Incr Delay (d2), s/veh	2538.3	0.0	107.7	1099.3	0.0	39.4	0.4	4.7	4.7	25.1	2.6	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	65.6	0.0	24.1	42.8	0.0	17.8	1.1	16.9	17.5	7.1	14.5	3.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	2579.8	0.0	138.8	1147.0	0.0	80.8	13.7	19.0	19.0	61.9	22.3	15.7
LnGrp LOS	F	A	F	F	A	F	B	B	B	E	C	B
Approach Vol, veh/h	876		613			1582			1414			
Approach Delay, s/veh	1258.4		527.2			18.8			25.0			
Approach LOS	F		F			B			C			
Timer - Assigned Phs	1	2	4		6		8					
Phs Duration (G+Y+Rc), s	10.6	49.4	30.0		60.0		30.0					
Change Period (Y+Rc), s	3.6	* 8.6	* 9.1		* 8.6		* 9.1					
Max Green Setting (Gmax), s	40.4	* 38	* 21		* 51		* 21					
Max Q Clear Time (g_c+I), s	13.5	42.8	22.9		30.2		22.9					
Green Ext Time (p_c), s	0.1	0.0	0.0		11.7		0.0					

Intersection Summary

HCM 6th Ctrl Delay 332.3

HCM 6th LOS F

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

HCM 6th Signalized Intersection Summary

3: Alameda St/Spring St & College St

06/18/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	313	225	219	14	147	43	228	1364	18	14	546	207
Future Volume (veh/h)	313	225	219	14	147	43	228	1364	18	14	546	207
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	340	245	238	15	160	47	248	1483	20	15	593	225
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	398	663	562	293	492	145	402	1859	25	142	1329	493
Arrive On Green	0.12	0.12	0.12	0.35	0.35	0.35	0.09	0.52	0.52	0.36	0.36	0.36
Sat Flow, veh/h	1175	1870	1585	912	1389	408	1781	3590	48	349	3670	1360
Grp Volume(v), veh/h	340	245	238	15	0	207	248	733	770	15	549	269
Grp Sat Flow(s),veh/h/ln	1175	1870	1585	912	0	1797	1781	1777	1862	349	1702	1626
Q Serve(g_s), s	24.3	10.9	12.6	1.2	0.0	7.6	7.6	30.5	30.6	3.3	11.0	11.4
Cycle Q Clear(g_c), s	31.9	10.9	12.6	12.0	0.0	7.6	7.6	30.5	30.6	19.9	11.0	11.4
Prop In Lane	1.00		1.00	1.00		0.23	1.00		0.03	1.00		0.84
Lane Grp Cap(c), veh/h	398	663	562	293	0	637	402	920	964	142	1233	589
V/C Ratio(X)	0.85	0.37	0.42	0.05	0.00	0.33	0.62	0.80	0.80	0.11	0.45	0.46
Avail Cap(c_a), veh/h	398	663	562	293	0	637	402	920	964	142	1233	589
HCM Platoon Ratio	0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.09	0.09	0.09	1.00	0.00	1.00	0.21	0.21	0.21	1.00	1.00	1.00
Uniform Delay (d), s/veh	44.3	30.5	31.2	26.9	0.0	21.2	15.9	17.8	17.8	31.8	21.8	21.9
Incr Delay (d2), s/veh	1.8	0.0	0.0	0.1	0.0	0.3	0.6	1.6	1.5	1.5	1.2	2.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.8	6.6	6.4	0.5	0.0	5.7	4.3	14.4	15.1	0.6	7.9	8.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	46.1	30.5	31.2	26.9	0.0	21.5	16.5	19.4	19.4	33.3	23.0	24.5
LnGrp LOS	D	C	C	C	A	C	B	B	B	C	C	C
Approach Vol, veh/h	823			222			1751			833		
Approach Delay, s/veh	37.2			21.9			19.0			23.7		
Approach LOS	D			C			B			C		
Timer - Assigned Phs	1	2	4		6		8					
Phs Duration (G+Y+Rc), s	34.0	38.0	38.0		52.0		38.0					
Change Period (Y+Rc), s	5.7	* 5.4	6.1		* 5.4		6.1					
Max Green Setting (Gmax), s	30.3	* 30	30.9		* 47		31.9					
Max Q Clear Time (g_c+I), s	19.6	21.9	14.0		32.6		33.9					
Green Ext Time (p_c), s	0.0	4.7	1.1		9.9		0.0					

Intersection Summary

HCM 6th Ctrl Delay	24.4
HCM 6th LOS	C

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

HCM 6th TWSC 4: Main & College St

06/18/2024

Intersection												
Int Delay, s/veh	63.8											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	202	0	44	3	1	2	30	969	3	4	514	151
Future Vol, veh/h	202	0	44	3	1	2	30	969	3	4	514	151
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	220	0	48	3	1	2	33	1053	3	4	559	164
Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	1242	1771	362	1409	1852	528	723	0	0	1056	0	0
Stage 1	649	649	-	1121	1121	-	-	-	-	-	-	-
Stage 2	593	1122	-	288	731	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.94	4.14	-	-	4.14	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.52	4.02	3.32	2.22	-	-	2.22	-	-
Pot Cap-1 Maneuver	~ 131	82	635	99	73	495	875	-	-	655	-	-
Stage 1	425	464	-	220	280	-	-	-	-	-	-	-
Stage 2	459	279	-	695	425	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	~ 119	74	635	84	66	495	875	-	-	655	-	-
Mov Cap-2 Maneuver	~ 119	74	-	84	66	-	-	-	-	-	-	-
Stage 1	386	459	-	200	255	-	-	-	-	-	-	-
Stage 2	414	254	-	636	420	-	-	-	-	-	-	-
Approach	EB		WB		NB		SB					
HCM Control Delay, s\$	494.9		40.1		0.7		0.1					
HCM LOS	F		E									
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR					
Capacity (veh/h)	875	-	-	139	109	655	-	-				
HCM Lane V/C Ratio	0.037	-	-	1.924	0.06	0.007	-	-				
HCM Control Delay (s)	9.3	0.4	-	\$ 494.9	40.1	10.5	0.1	-				
HCM Lane LOS	A	A	-	F	E	B	A	-				
HCM 95th %tile Q(veh)	0.1	-	-	20.9	0.2	0	-	-				
Notes												
~: Volume exceeds capacity		\$: Delay exceeds 300s		+: Computation Not Defined		*: All major volume in platoon						

HCM 6th Signalized Intersection Summary

5: Alameda St & Alpine

06/18/2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	131	510	88	37	392	297	79	1167	85	100	609	71
Future Volume (veh/h)	131	510	88	37	392	297	79	1167	85	100	609	71
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	142	554	96	40	426	323	86	1268	92	109	662	77
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	378	1266	219	463	2018	900	203	1090	627	80	1424	164
Arrive On Green	0.42	0.42	0.42	0.09	0.57	0.57	0.31	0.31	0.31	0.10	0.10	0.10
Sat Flow, veh/h	713	3030	523	1781	3554	1585	720	3554	1585	400	4643	535
Grp Volume(v), veh/h	142	324	326	40	426	323	86	1268	92	109	484	255
Grp Sat Flow(s),veh/h/ln	713	1777	1776	1781	1777	1585	720	1777	1585	400	1702	1774
Q Serve(g_s), s	13.0	11.7	11.8	1.0	5.3	10.0	10.1	27.6	3.4	0.0	12.1	12.2
Cycle Q Clear(g_c), s	13.0	11.7	11.8	1.0	5.3	10.0	22.4	27.6	3.4	27.6	12.1	12.2
Prop In Lane	1.00		0.29	1.00		1.00	1.00		1.00	1.00		0.30
Lane Grp Cap(c), veh/h	378	742	742	463	2018	900	203	1090	627	80	1044	544
V/C Ratio(X)	0.38	0.44	0.44	0.09	0.21	0.36	0.42	1.16	0.15	1.36	0.46	0.47
Avail Cap(c_a), veh/h	378	742	742	542	2018	900	203	1090	627	80	1044	544
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.33	0.33	0.33
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.92	0.92	0.92
Uniform Delay (d), s/veh	19.0	18.7	18.7	11.3	9.6	10.6	35.1	31.2	17.5	54.2	33.5	33.5
Incr Delay (d2), s/veh	0.6	0.4	0.4	0.1	0.2	1.1	6.4	83.9	0.5	220.6	1.4	2.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	3.8	8.3	8.3	0.7	3.6	6.3	3.8	35.2	2.3	12.3	9.4	10.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	19.7	19.1	19.1	11.4	9.8	11.7	41.5	115.1	17.9	274.9	34.8	36.2
LnGrp LOS	B	B	B	B	A	B	D	F	B	F	C	D
Approach Vol, veh/h		792			789			1446			848	
Approach Delay, s/veh		19.2			10.6			104.5			66.1	
Approach LOS		B			B			F			E	
Timer - Assigned Phs		2		4	5	6		8				
Phs Duration (G+Y+Rc), s		57.0		33.0	13.5	43.5		33.0				
Change Period (Y+Rc), s		* 5.9		* 5.4	* 5.5	* 5.9		* 5.4				
Max Green Setting (Gmax), s		* 51		* 28	* 12	* 28		* 28				
Max Q Clear Time (g_c+I1), s		12.0		29.6	3.0	15.0		29.6				
Green Ext Time (p_c), s		9.5		0.0	0.0	4.3		0.0				
Intersection Summary												
HCM 6th Ctrl Delay				59.6								
HCM 6th LOS				E								
Notes												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												
User approved changes to right turn type.												

HCM 6th Signalized Intersection Summary

1: Hill St & College St

06/26/2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	61	229	124	153	422	127	12	283	73	306	1446	51
Future Volume (veh/h)	61	229	124	153	422	127	12	283	73	306	1446	51
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	66	249	135	166	459	138	13	308	79	333	1572	55
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	76	345	253	162	445	164	112	1424	359	523	1775	62
Arrive On Green	0.30	0.30	0.30	0.10	0.10	0.10	0.51	0.51	0.51	0.51	0.51	0.51
Sat Flow, veh/h	76	1146	840	343	1478	546	310	2810	709	997	3503	122
Grp Volume(v), veh/h	201	0	249	358	0	405	13	193	194	333	795	832
Grp Sat Flow(s),veh/h/ln	512	0	1551	764	0	1604	310	1777	1743	997	1777	1848
Q Serve(g_s), s	4.8	0.0	12.0	15.1	0.0	22.3	3.5	5.4	5.6	25.1	36.0	36.3
Cycle Q Clear(g_c), s	27.1	0.0	12.0	27.1	0.0	22.3	39.9	5.4	5.6	30.6	36.0	36.3
Prop In Lane	0.33		0.54	0.46		0.34	1.00		0.41	1.00		0.07
Lane Grp Cap(c), veh/h	207	0	467	289	0	483	112	900	883	523	900	937
V/C Ratio(X)	0.97	0.00	0.53	1.24	0.00	0.84	0.12	0.21	0.22	0.64	0.88	0.89
Avail Cap(c_a), veh/h	207	0	467	289	0	483	112	900	883	523	900	937
HCM Platoon Ratio	1.00	1.00	1.00	0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	0.09	0.00	0.09	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	33.6	0.0	26.2	47.6	0.0	38.4	37.8	12.3	12.3	20.8	19.8	19.9
Incr Delay (d2), s/veh	53.4	0.0	1.2	110.8	0.0	1.3	2.1	0.5	0.6	5.8	12.3	12.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	12.0	0.0	8.0	20.5	0.0	11.2	0.6	3.9	4.0	10.5	23.3	24.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	87.1	0.0	27.4	158.4	0.0	39.7	39.9	12.8	12.9	26.6	32.1	32.2
LnGrp LOS	F	A	C	F	A	D	D	B	B	C	C	C
Approach Vol, veh/h	450			763			400			1960		
Approach Delay, s/veh	54.0			95.3			13.7			31.2		
Approach LOS	D			F			B			C		
Timer - Assigned Phs	2			4			6			8		
Phs Duration (G+Y+Rc), s	54.0			36.0			54.0			36.0		
Change Period (Y+Rc), s	* 8.4			* 8.9			* 8.4			* 8.9		
Max Green Setting (Gmax), s	* 46			* 27			* 46			* 27		
Max Q Clear Time (g_c+I1), s	38.3			29.1			41.9			29.1		
Green Ext Time (p_c), s	6.0			0.0			0.9			0.0		
Intersection Summary												
HCM 6th Ctrl Delay	45.8											
HCM 6th LOS	D											
Notes												

HCM 6th Signalized Intersection Summary

2: Broadway & College St

06/26/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	66	482	48	148	412	121	40	362	69	105	1330	229
Future Volume (veh/h)	66	482	48	148	412	121	40	362	69	105	1330	229
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	72	524	52	161	448	132	43	393	75	114	1446	249
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	50	399	58	75	271	118	241	1703	322	499	1611	719
Arrive On Green	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.57	0.57	0.45	0.45	0.45
Sat Flow, veh/h	0	1716	250	64	1165	509	1781	2982	564	925	3554	1585
Grp Volume(v), veh/h	303	0	345	324	0	417	43	233	235	114	1446	249
Grp Sat Flow(s),veh/h/ln	309	0	1657	128	0	1610	1781	1777	1769	925	1777	1585
Q Serve(g_s), s	0.0	0.0	18.6	2.3	0.0	20.9	1.0	5.8	5.9	6.9	33.8	9.2
Cycle Q Clear(g_c), s	20.9	0.0	18.6	20.9	0.0	20.9	1.0	5.8	5.9	6.9	33.8	9.2
Prop In Lane	0.24		0.15	0.50		0.32	1.00		0.32	1.00		1.00
Lane Grp Cap(c), veh/h	121	0	385	90	0	374	241	1015	1010	499	1611	719
V/C Ratio(X)	2.50	0.00	0.90	3.61	0.00	1.12	0.18	0.23	0.23	0.23	0.90	0.35
Avail Cap(c_a), veh/h	121	0	385	90	0	374	289	1015	1010	499	1611	719
HCM Platoon Ratio	0.33	0.33	0.33	0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.65	0.00	0.65	0.69	0.00	0.69	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	40.7	0.0	40.5	51.6	0.0	41.6	17.5	9.5	9.5	15.3	22.7	16.0
Incr Delay (d2), s/veh	690.3	0.0	16.4	1192.9	0.0	74.5	0.3	0.5	0.5	1.1	8.3	1.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	48.3	0.0	14.1	52.8	0.0	23.7	0.7	4.0	4.1	2.8	21.3	6.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	731.0	0.0	56.9	1244.5	0.0	116.1	17.9	10.1	10.1	16.4	31.0	17.3
LnGrp LOS	F	A	E	F	A	F	B	B	B	B	C	B
Approach Vol, veh/h	648		741				511			1809		
Approach Delay, s/veh	371.9		609.0				10.7			28.2		
Approach LOS	F		F				B			C		
Timer - Assigned Phs	1	2	4		6		8					
Phs Duration (G+Y+Rc), s	10.6	49.4	30.0		60.0		30.0					
Change Period (Y+Rc), s	3.6	* 8.6	* 9.1		* 8.6		* 9.1					
Max Green Setting (Gmax), s	40.4	* 38	* 21		* 51		* 21					
Max Q Clear Time (g_c+I), s	13.0	35.8	22.9		7.9		22.9					
Green Ext Time (p_c), s	0.0	2.3	0.0		3.1		0.0					

Intersection Summary

HCM 6th Ctrl Delay 201.9

HCM 6th LOS F

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

HCM 6th Signalized Intersection Summary

3: Alameda St/Spring St & College St

06/26/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	199	228	170	35	266	31	199	529	68	43	1164	235
Future Volume (veh/h)	199	228	170	35	266	31	199	529	68	43	1164	235
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	216	248	185	38	289	34	216	575	74	47	1265	255
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	309	663	562	302	582	68	276	1640	211	363	1543	311
Arrive On Green	0.12	0.12	0.12	0.35	0.35	0.35	0.12	0.69	0.69	0.36	0.36	0.36
Sat Flow, veh/h	1057	1870	1585	955	1642	193	1781	3167	407	782	4261	859
Grp Volume(v), veh/h	216	248	185	38	0	323	216	322	327	47	1011	509
Grp Sat Flow(s),veh/h/ln	1057	1870	1585	955	0	1836	1781	1777	1797	782	1702	1716
Q Serve(g_s), s	18.3	11.0	9.6	2.9	0.0	12.4	6.6	6.7	6.7	3.7	24.2	24.2
Cycle Q Clear(g_c), s	30.7	11.0	9.6	13.9	0.0	12.4	6.6	6.7	6.7	3.7	24.2	24.2
Prop In Lane	1.00		1.00	1.00		0.11	1.00		0.23	1.00		0.50
Lane Grp Cap(c), veh/h	309	663	562	302	0	651	276	920	931	363	1233	621
V/C Ratio(X)	0.70	0.37	0.33	0.13	0.00	0.50	0.78	0.35	0.35	0.13	0.82	0.82
Avail Cap(c_a), veh/h	309	663	562	302	0	651	276	920	931	363	1233	621
HCM Platoon Ratio	0.33	0.33	0.33	1.00	1.00	1.00	1.33	1.33	1.33	1.00	1.00	1.00
Upstream Filter(I)	0.09	0.09	0.09	1.00	0.00	1.00	0.91	0.91	0.91	1.00	1.00	1.00
Uniform Delay (d), s/veh	45.4	30.5	29.9	27.6	0.0	22.8	19.4	7.8	7.8	19.5	26.0	26.0
Incr Delay (d2), s/veh	0.6	0.0	0.0	0.2	0.0	0.6	12.4	1.0	1.0	0.7	6.2	11.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	6.3	6.6	5.0	1.2	0.0	9.1	6.0	4.3	4.4	1.3	15.7	17.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	46.0	30.5	29.9	27.8	0.0	23.3	31.8	8.8	8.8	20.2	32.2	37.6
LnGrp LOS	D	C	C	C	A	C	C	A	A	C	C	D
Approach Vol, veh/h	649			361			865			1567		
Approach Delay, s/veh	35.5			23.8			14.5			33.6		
Approach LOS	D			C			B			C		
Timer - Assigned Phs	1	2	4		6		8					
Phs Duration (G+Y+Rc), s	34.0	38.0	38.0		52.0		38.0					
Change Period (Y+Rc), s	5.7	* 5.4	6.1		* 5.4		6.1					
Max Green Setting (Gmax), s	30.3	* 30	30.9		* 47		31.9					
Max Q Clear Time (g_c+I), s	19.6	26.2	15.9		8.7		32.7					
Green Ext Time (p_c), s	0.0	3.1	1.8		5.8		0.0					

Intersection Summary

HCM 6th Ctrl Delay	28.1
HCM 6th LOS	C

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

HCM 6th TWSC

4: Main & College St

06/26/2024

Intersection												
Int Delay, s/veh	86.4											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	115	3	22	1	1	7	76	412	8	2	1147	273
Future Vol, veh/h	115	3	22	1	1	7	76	412	8	2	1147	273
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	125	3	24	1	1	8	83	448	9	2	1247	297
Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	1791	2023	772	1248	2167	229	1544	0	0	457	0	0
Stage 1	1400	1400	-	619	619	-	-	-	-	-	-	-
Stage 2	391	623	-	629	1548	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.94	4.14	-	-	4.14	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.52	4.02	3.32	2.22	-	-	2.22	-	-
Pot Cap-1 Maneuver	~ 51	57	342	130	46	774	426	-	-	1100	-	-
Stage 1	148	205	-	443	478	-	-	-	-	-	-	-
Stage 2	605	476	-	437	174	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	~ 39	41	342	90	33	774	426	-	-	1100	-	-
Mov Cap-2 Maneuver	~ 39	41	-	90	33	-	-	-	-	-	-	-
Stage 1	~ 109	202	-	327	353	-	-	-	-	-	-	-
Stage 2	441	352	-	393	171	-	-	-	-	-	-	-
Approach	EB		WB		NB		SB					
HCM Control Delay, \$	1260.3		26.4		3.6		0.1					
HCM LOS	F		D									
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR					
Capacity (veh/h)	426	-	-	45	178	1100	-	-				
HCM Lane V/C Ratio	0.194	-	-	3.382	0.055	0.002	-	-				
HCM Control Delay (s)	15.5	1.5		\$ 1260.3	26.4	8.3	0.1	-				
HCM Lane LOS	C	A	-	F	D	A	A	-				
HCM 95th %tile Q(veh)	0.7	-	-	16.8	0.2	0	-	-				
Notes												
~: Volume exceeds capacity		\$: Delay exceeds 300s		+: Computation Not Defined		*: All major volume in platoon						

HCM 6th Signalized Intersection Summary

5: Alameda St & Alpine

06/26/2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	84	173	43	114	713	220	30	517	42	94	1122	139
Future Volume (veh/h)	84	173	43	114	713	220	30	517	42	94	1122	139
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	91	188	47	124	775	239	33	562	46	102	1220	151
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	312	1183	289	668	2018	900	102	1090	627	223	1411	175
Arrive On Green	0.42	0.42	0.42	0.09	0.57	0.57	0.31	0.31	0.31	0.31	0.31	0.31
Sat Flow, veh/h	556	2832	691	1781	3554	1585	396	3554	1585	813	4602	570
Grp Volume(v), veh/h	91	116	119	124	775	239	33	562	46	102	902	469
Grp Sat Flow(s),veh/h/ln	556	1777	1746	1781	1777	1585	396	1777	1585	813	1702	1768
Q Serve(g_s), s	10.3	3.7	3.8	3.2	10.8	6.9	5.1	11.7	1.6	10.6	22.5	22.5
Cycle Q Clear(g_c), s	10.3	3.7	3.8	3.2	10.8	6.9	27.6	11.7	1.6	22.4	22.5	22.5
Prop In Lane	1.00		0.40	1.00		1.00	1.00		1.00	1.00		0.32
Lane Grp Cap(c), veh/h	312	742	729	668	2018	900	102	1090	627	223	1044	542
V/C Ratio(X)	0.29	0.16	0.16	0.19	0.38	0.27	0.32	0.52	0.07	0.46	0.86	0.86
Avail Cap(c_a), veh/h	312	742	729	747	2018	900	102	1090	627	223	1044	542
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.66	0.66	0.66
Uniform Delay (d), s/veh	18.2	16.3	16.4	10.9	10.8	9.9	43.3	25.7	16.9	34.9	29.4	29.4
Incr Delay (d2), s/veh	0.5	0.1	0.1	0.1	0.6	0.7	8.1	1.7	0.2	4.4	6.5	11.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	2.4	2.6	2.7	2.2	7.3	4.3	1.7	8.8	1.1	4.2	14.0	15.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	18.8	16.4	16.5	11.1	11.3	10.6	51.4	27.4	17.2	39.3	36.0	41.2
LnGrp LOS	B	B	B	B	B	B	D	C	B	D	D	D
Approach Vol, veh/h	326		1138				641				1473	
Approach Delay, s/veh	17.1		11.1				27.9				37.9	
Approach LOS	B		B				C				D	
Timer - Assigned Phs	2		4		5	6	8					
Phs Duration (G+Y+Rc), s	57.0		33.0		13.5	43.5	33.0					
Change Period (Y+Rc), s	* 5.9		* 5.4		* 5.5	* 5.9	* 5.4					
Max Green Setting (Gmax), s	* 51		* 28		* 12	* 28	* 28					
Max Q Clear Time (g_c+I1), s	12.8		29.6		5.2	12.3	24.5					
Green Ext Time (p_c), s	15.1		0.0		0.2	2.0	2.9					
Intersection Summary												
HCM 6th Ctrl Delay	25.7											
HCM 6th LOS	C											
Notes												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												
User approved changes to right turn type.												

HCM 6th TWSC
6: Project Driveway & College St

06/26/2024

Intersection

Int Delay, s/veh 1.7

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	158	186	62	296	40	13
Future Vol, veh/h	158	186	62	296	40	13
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	172	202	67	322	43	14

Major/Minor	Major1	Major2	Minor1
Conflicting Flow All	0	0	374
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	-	-	4.12
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	-	-	2.218
Pot Cap-1 Maneuver	-	-	1184
Stage 1	-	-	-
Stage 2	-	-	-
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	-	-	1184
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	0	1.4	15
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	417	-	-	1184	-
HCM Lane V/C Ratio	0.138	-	-	0.057	-
HCM Control Delay (s)	15	-	-	8.2	0
HCM Lane LOS	C	-	-	A	A
HCM 95th %tile Q(veh)	0.5	-	-	0.2	-

HCM 6th Signalized Intersection Summary

1: Hill St & College St

06/26/2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	100	370	80	93	238	226	30	1219	143	252	1321	46
Future Volume (veh/h)	100	370	80	93	238	226	30	1219	143	252	1321	46
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	109	402	87	101	259	246	33	1325	155	274	1436	50
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	129	519	132	114	269	355	138	1625	189	136	1775	62
Arrive On Green	0.30	0.30	0.30	0.50	0.50	0.50	0.51	0.51	0.51	0.51	0.51	0.51
Sat Flow, veh/h	243	1725	438	199	893	1179	355	3207	373	357	3503	122
Grp Volume(v), veh/h	276	0	322	295	0	311	33	731	749	274	727	759
Grp Sat Flow(s),veh/h/ln	783	0	1623	782	0	1490	355	1777	1803	357	1777	1848
Q Serve(g_s), s	12.8	0.0	15.6	11.5	0.0	14.3	7.7	31.0	31.6	14.0	30.8	30.9
Cycle Q Clear(g_c), s	27.1	0.0	15.6	27.1	0.0	14.3	38.7	31.0	31.6	45.6	30.8	30.9
Prop In Lane	0.40		0.27	0.34		0.79	1.00		0.21	1.00		0.07
Lane Grp Cap(c), veh/h	292	0	489	289	0	449	138	900	914	136	900	937
V/C Ratio(X)	0.94	0.00	0.66	1.02	0.00	0.69	0.24	0.81	0.82	2.02	0.81	0.81
Avail Cap(c_a), veh/h	292	0	489	289	0	449	138	900	914	136	900	937
HCM Platoon Ratio	1.00	1.00	1.00	1.67	1.67	1.67	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	0.09	0.00	0.09	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	36.0	0.0	27.4	27.1	0.0	19.2	34.8	18.6	18.7	42.1	18.5	18.6
Incr Delay (d2), s/veh	38.1	0.0	3.3	21.4	0.0	0.4	4.1	7.9	8.1	483.7	7.7	7.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	14.1	0.0	10.4	9.0	0.0	4.8	1.5	19.8	20.3	38.2	19.6	20.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	74.0	0.0	30.7	48.5	0.0	19.6	38.8	26.5	26.9	525.8	26.2	26.1
LnGrp LOS	E	A	C	F	A	B	D	C	C	F	C	C
Approach Vol, veh/h		598			606			1513			1760	
Approach Delay, s/veh		50.7			33.7			27.0			104.0	
Approach LOS		D			C			C			F	
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		54.0		36.0		54.0		36.0				
Change Period (Y+Rc), s		* 8.4		* 8.9		* 8.4		* 8.9				
Max Green Setting (Gmax), s		* 46		* 27		* 46		* 27				
Max Q Clear Time (g_c+I1), s		47.6		29.1		40.7		29.1				
Green Ext Time (p_c), s		0.0		0.0		3.8		0.0				
Intersection Summary												
HCM 6th Ctrl Delay				61.3								
HCM 6th LOS				E								
Notes												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												

HCM 6th Signalized Intersection Summary

2: Broadway & College St

06/26/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔↔			↔↔		↗	↔↔		↗	↔↔	↗
Traffic Volume (veh/h)	148	609	70	139	309	182	61	1299	102	115	1038	148
Future Volume (veh/h)	148	609	70	139	309	182	61	1299	102	115	1038	148
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	161	662	76	151	336	198	66	1412	111	125	1128	161
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	56	325	60	61	187	179	304	1907	149	167	1611	719
Arrive On Green	0.31	0.31	0.31	0.08	0.08	0.08	0.08	0.57	0.57	0.45	0.45	0.45
Sat Flow, veh/h	0	1400	256	0	805	769	1781	3339	261	342	3554	1585
Grp Volume(v), veh/h	408	0	491	283	0	402	66	749	774	125	1128	161
Grp Sat Flow(s),veh/h/ln	0	0	1656	11	0	1564	1781	1777	1823	342	1777	1585
Q Serve(g_s), s	0.0	0.0	20.9	0.0	0.0	20.9	1.5	28.1	28.5	22.9	22.9	5.6
Cycle Q Clear(g_c), s	20.9	0.0	20.9	20.9	0.0	20.9	1.5	28.1	28.5	40.8	22.9	5.6
Prop In Lane	0.39		0.15	0.53		0.49	1.00		0.14	1.00		1.00
Lane Grp Cap(c), veh/h	56	0	385	64	0	363	304	1015	1041	167	1611	719
V/C Ratio(X)	7.32	0.00	1.28	4.42	0.00	1.11	0.22	0.74	0.74	0.75	0.70	0.22
Avail Cap(c_a), veh/h	56	0	385	64	0	363	351	1015	1041	167	1611	719
HCM Platoon Ratio	1.33	1.33	1.33	0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.09	0.00	0.09	0.79	0.00	0.79	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	41.6	0.0	31.1	51.2	0.0	41.6	13.4	14.3	14.4	37.0	19.7	15.0
Incr Delay (d2), s/veh	2845.3	0.0	126.4	1566.8	0.0	74.8	0.4	4.8	4.8	26.0	2.6	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	67.5	0.0	26.9	49.5	0.0	23.4	1.1	17.0	17.6	7.1	14.5	3.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	2886.8	0.0	157.5	1617.9	0.0	116.3	13.7	19.1	19.2	63.0	22.3	15.7
LnGrp LOS	F	A	F	F	A	F	B	B	B	E	C	B
Approach Vol, veh/h	899		685			1589			1414			
Approach Delay, s/veh	1396.4		735.9			18.9			25.1			
Approach LOS	F		F			B			C			
Timer - Assigned Phs	1	2	4		6		8					
Phs Duration (G+Y+Rc), s	10.6	49.4	30.0		60.0		30.0					
Change Period (Y+Rc), s	3.6	* 8.6	* 9.1		* 8.6		* 9.1					
Max Green Setting (Gmax), s	40.4	* 38	* 21		* 51		* 21					
Max Q Clear Time (g_c+I), s	13.5	42.8	22.9		30.5		22.9					
Green Ext Time (p_c), s	0.1	0.0	0.0		11.7		0.0					

Intersection Summary

HCM 6th Ctrl Delay 397.9

HCM 6th LOS F

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

HCM 6th Signalized Intersection Summary

3: Alameda St/Spring St & College St

06/26/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	313	252	219	90	213	65	228	1364	30	20	546	207
Future Volume (veh/h)	313	252	219	90	213	65	228	1364	30	20	546	207
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	340	274	238	98	232	71	248	1483	33	22	593	225
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	320	663	562	274	487	149	402	1840	41	139	1329	493
Arrive On Green	0.12	0.12	0.12	0.35	0.35	0.35	0.09	0.52	0.52	0.36	0.36	0.36
Sat Flow, veh/h	1076	1870	1585	888	1374	421	1781	3554	79	345	3670	1360
Grp Volume(v), veh/h	340	274	238	98	0	303	248	741	775	22	549	269
Grp Sat Flow(s),veh/h/ln	1076	1870	1585	888	0	1795	1781	1777	1856	345	1702	1626
Q Serve(g_s), s	20.1	12.2	12.6	8.7	0.0	11.8	7.6	31.0	31.1	5.1	11.0	11.4
Cycle Q Clear(g_c), s	31.9	12.2	12.6	21.0	0.0	11.8	7.6	31.0	31.1	22.2	11.0	11.4
Prop In Lane	1.00		1.00	1.00		0.23	1.00		0.04	1.00		0.84
Lane Grp Cap(c), veh/h	320	663	562	274	0	636	402	920	961	139	1233	589
V/C Ratio(X)	1.06	0.41	0.42	0.36	0.00	0.48	0.62	0.80	0.81	0.16	0.45	0.46
Avail Cap(c_a), veh/h	320	663	562	274	0	636	402	920	961	139	1233	589
HCM Platoon Ratio	0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.09	0.09	0.09	1.00	0.00	1.00	0.19	0.19	0.19	1.00	1.00	1.00
Uniform Delay (d), s/veh	48.1	31.1	31.2	30.9	0.0	22.6	15.9	17.9	18.0	33.0	21.8	21.9
Incr Delay (d2), s/veh	34.6	0.0	0.0	0.8	0.0	0.6	0.5	1.5	1.5	2.4	1.2	2.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	18.0	7.3	6.4	3.4	0.0	8.6	4.2	14.5	15.1	0.9	7.9	8.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	82.7	31.1	31.2	31.7	0.0	23.1	16.4	19.5	19.4	35.4	23.0	24.5
LnGrp LOS	F	C	C	C	A	C	B	B	B	D	C	C
Approach Vol, veh/h	852			401			1764			840		
Approach Delay, s/veh	51.7			25.2			19.0			23.8		
Approach LOS	D			C			B			C		
Timer - Assigned Phs	1	2	4		6		8					
Phs Duration (G+Y+Rc), s	34.0	38.0	38.0		52.0		38.0					
Change Period (Y+Rc), s	5.7	* 5.4	6.1		* 5.4		6.1					
Max Green Setting (Gmax), s	30.3	* 30	30.9		* 47		31.9					
Max Q Clear Time (g_c+I), s	19.6	24.2	23.0		33.1		33.9					
Green Ext Time (p_c), s	0.0	3.5	1.5		9.7		0.0					

Intersection Summary

HCM 6th Ctrl Delay 27.9

HCM 6th LOS C

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

HCM 6th TWSC

4: Main & College St

06/26/2024

Intersection												
Int Delay, s/veh	100.1											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	224	0	77	3	1	2	39	969	3	4	514	157
Future Vol, veh/h	224	0	77	3	1	2	39	969	3	4	514	157
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	243	0	84	3	1	2	42	1053	3	4	559	171
Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	1264	1793	365	1427	1877	528	730	0	0	1056	0	0
Stage 1	653	653	-	1139	1139	-	-	-	-	-	-	-
Stage 2	611	1140	-	288	738	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.94	4.14	-	-	4.14	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.52	4.02	3.32	2.22	-	-	2.22	-	-
Pot Cap-1 Maneuver	~ 126	80	632	96	71	495	870	-	-	655	-	-
Stage 1	423	462	-	214	274	-	-	-	-	-	-	-
Stage 2	448	274	-	695	422	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	~ 112	70	632	75	62	495	870	-	-	655	-	-
Mov Cap-2 Maneuver	~ 112	70	-	75	62	-	-	-	-	-	-	-
Stage 1	374	457	-	189	242	-	-	-	-	-	-	-
Stage 2	392	242	-	596	417	-	-	-	-	-	-	-
Approach	EB		WB		NB		SB					
HCM Control Delay, s	\$ 659		43.5		0.8		0.1					
HCM LOS	F		E									
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR					
Capacity (veh/h)	870	-	-	142	100	655	-	-				
HCM Lane V/C Ratio	0.049	-	-	2.304	0.065	0.007	-	-				
HCM Control Delay (s)	9.3	0.5	-	\$ 659	43.5	10.5	0.1	-				
HCM Lane LOS	A	A	-	F	E	B	A	-				
HCM 95th %tile Q(veh)	0.2	-	-	27.6	0.2	0	-	-				
Notes												
~: Volume exceeds capacity		\$: Delay exceeds 300s		+: Computation Not Defined		*: All major volume in platoon						

HCM 6th Signalized Intersection Summary

5: Alameda St & Alpine

06/26/2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	134	510	88	37	392	297	79	1176	85	100	675	82
Future Volume (veh/h)	134	510	88	37	392	297	79	1176	85	100	675	82
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	146	554	96	40	426	323	86	1278	92	109	734	89
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	378	1266	219	463	2018	900	183	1090	627	80	1416	170
Arrive On Green	0.42	0.42	0.42	0.09	0.57	0.57	0.31	0.31	0.31	0.10	0.10	0.10
Sat Flow, veh/h	713	3030	523	1781	3554	1585	665	3554	1585	396	4619	556
Grp Volume(v), veh/h	146	324	326	40	426	323	86	1278	92	109	540	283
Grp Sat Flow(s),veh/h/ln	713	1777	1776	1781	1777	1585	665	1777	1585	396	1702	1770
Q Serve(g_s), s	13.5	11.7	11.8	1.0	5.3	10.0	11.3	27.6	3.4	0.0	13.5	13.7
Cycle Q Clear(g_c), s	13.5	11.7	11.8	1.0	5.3	10.0	25.0	27.6	3.4	27.6	13.5	13.7
Prop In Lane	1.00		0.29	1.00		1.00	1.00		1.00	1.00		0.31
Lane Grp Cap(c), veh/h	378	742	742	463	2018	900	183	1090	627	80	1044	543
V/C Ratio(X)	0.39	0.44	0.44	0.09	0.21	0.36	0.47	1.17	0.15	1.36	0.52	0.52
Avail Cap(c_a), veh/h	378	742	742	542	2018	900	183	1090	627	80	1044	543
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.33	0.33	0.33
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.91	0.91	0.91
Uniform Delay (d), s/veh	19.2	18.7	18.7	11.3	9.6	10.6	36.9	31.2	17.5	54.2	34.1	34.2
Incr Delay (d2), s/veh	0.6	0.4	0.4	0.1	0.2	1.1	8.4	87.7	0.5	220.1	1.7	3.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	4.0	8.3	8.3	0.7	3.6	6.3	4.0	36.0	2.3	12.3	10.3	11.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	19.8	19.1	19.1	11.4	9.8	11.7	45.4	118.9	17.9	274.4	35.8	37.4
LnGrp LOS	B	B	B	B	A	B	D	F	B	F	D	D
Approach Vol, veh/h		796			789			1456			932	
Approach Delay, s/veh		19.2			10.6			108.1			64.2	
Approach LOS		B			B			F			E	
Timer - Assigned Phs		2		4	5	6		8				
Phs Duration (G+Y+Rc), s		57.0		33.0	13.5	43.5		33.0				
Change Period (Y+Rc), s		* 5.9		* 5.4	* 5.5	* 5.9		* 5.4				
Max Green Setting (Gmax), s		* 51		* 28	* 12	* 28		* 28				
Max Q Clear Time (g_c+I1), s		12.0		29.6	3.0	15.5		29.6				
Green Ext Time (p_c), s		9.5		0.0	0.0	4.2		0.0				
Intersection Summary												
HCM 6th Ctrl Delay				60.7								
HCM 6th LOS				E								
Notes												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												
User approved changes to right turn type.												

HCM 6th TWSC
6: Project Driveway & College St

06/26/2024

Intersection

Int Delay, s/veh 5.5

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	257	52	17	204	170	57
Future Vol, veh/h	257	52	17	204	170	57
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	279	57	18	222	185	62

Major/Minor	Major1	Major2	Minor1
Conflicting Flow All	0	0	336
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	-	-	4.12
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	-	-	2.218
Pot Cap-1 Maneuver	-	-	1223
Stage 1	-	-	-
Stage 2	-	-	-
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	-	-	1223
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.6	17.8
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	524	-	-	1223	-
HCM Lane V/C Ratio	0.471	-	-	0.015	-
HCM Control Delay (s)	17.8	-	-	8	0
HCM Lane LOS	C	-	-	A	A
HCM 95th %tile Q(veh)	2.5	-	-	0	-