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LOCAL TRANSPORTATION ASSESSMENT

336 E. CARSON STREET RESIDENTIAL PROJECT

City of Carson, California
May 31, 2023

Prepared for:

Anastasi Development
511 Torrance Boulevard
Redondo Beach, California 90277

LLG Ref. 1-22-4464-1

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LOCAL TRANSPORTATION ASSESSMENT

336 E. CARSON STREET RESIDENTIAL PROJECT

City of Carson, California
May 31, 2023

1.0 INTRODUCTION

1.1 Transportation Assessment Overview

This transportation assessment report has been prepared to identify and evaluate the potential effects on the transportation network resulting from the proposed 336 E. Carson Townhomes project (the "Project") located in the City of Carson (the "City"). The project site is located at 336 East Carson Street situated along the south side of East Carson Street between Dolores Street and Grace Avenue. The proposed project site and general vicinity are shown in ***Figure 1-1***.

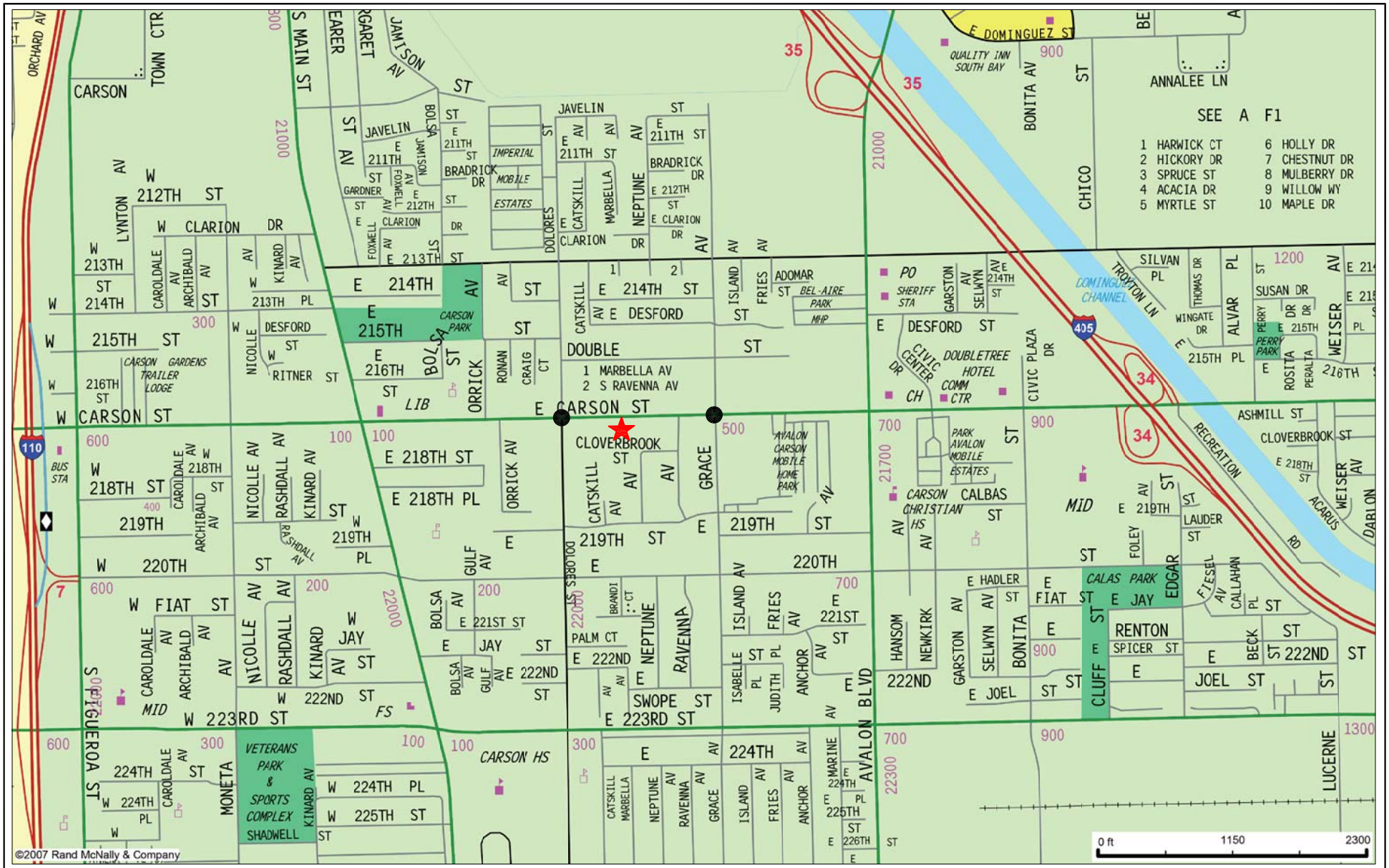
In compliance with the California Environmental Quality Act (CEQA) Sections 15064.3 and 15064.7, the City of Carson utilizes Vehicle Miles Traveled (VMT) for the purpose of analyzing transportation impacts under CEQA. In addition, the City maintains vehicle Level of Service (LOS) standards for local transportation infrastructure for purposes outside of CEQA. The City's requirements identify both CEQA based analysis requirements and non-CEQA based analysis requirements for analyzing the potential transportation impacts of proposed development projects.

Pursuant to the current statutory requirements of the CEQA Guidelines, the proposed project's transportation impacts are determined on the basis of VMT. The VMT assessment and impact conclusions are summarized separately in the "Carson Townhomes Project – Vehicle Miles Traveled Assessment," prepared by Linscott, Law and Greenspan, Engineers in March 2023.

This local transportation assessment evaluates potential project-related effects on intersection operations and LOS at three (3) key intersections (including the project driveway) in the vicinity of the project site. The study intersections were determined in consultation with City of Carson staff. This report (i) presents the proposed project's existing transportation network context, (ii) presents existing traffic volumes, (iii) forecasts future cumulative baseline conditions, (iv) forecasts project-generated traffic, (v) assesses the potential for project-related effects on the existing transportation network consistent with the non-CEQA based metrics set forth as requested by City staff, and (vi) recommends transportation network improvement measures, where necessary.

1.2 Study Methodology

The local transportation analysis criteria for this assessment were identified in consultation with City of Carson staff. The analysis criteria were determined based on the City's requirements, the proposed project description and location, and the characteristics of the surrounding transportation system. City of Carson staff confirmed the appropriateness of the analysis criteria when it approved the scoping document. The approved scoping document is attached to this report in ***Appendix A***.



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MAP SOURCE: RAND MCNALLY & COMPANY

Project Site

Study Intersection

Figure 1-1
Vicinity Map

336 East Carson Residential Project

On September 27, 2013, Governor Brown signed Senate Bill (SB) 743 (Steinberg, 2013). Among other things, SB 743 created a process to change the methodology to analyze transportation impacts under CEQA (Public Resources Code Section 21000 and following) in order to promote 1) the reduction of greenhouse gas emissions, 2) the development of multimodal transportation networks, and 3) a diversity of land uses. On December 30, 2013, the State of California Governor's Office of Planning and Research (OPR) released a preliminary evaluation of alternative methods of transportation analysis, which included analysis based on project VMT rather than impacts to intersection Level of Service. OPR issued other draft discussion documents in March 2015 and January 2016, suggesting new revisions to the CEQA Guidelines. Concurrently, OPR developed the *Technical Advisory on Evaluating Transportation Impacts in CEQA*[1] *("Technical Advisory")*, which provides non-binding recommendations on the implementation of VMT methodology and which has significantly informed the way VMT analyses are conducted in the State. In November 2017, OPR submitted the proposed amendments to the CEQA Guidelines to the State's Natural Resources Agency (including the new Guidelines Section 15064.3 which governs how analyses of potential traffic impacts should be conducted). On January 26, 2018, the Natural Resources Agency published a Notice of Rulemaking, commencing the formal rulemaking process for the amendments to the CEQA Guidelines. On December 28, 2018, the California Office of Administrative Law adopted the proposed amendments, formally implementing the use of VMT as the metric for transportation analysis under CEQA. State-wide implementation of the new metric was required by July 1, 2020. The proposed project's CEQA-compliant VMT impact analysis is presented separately in the "Carson Townhomes Project – Vehicle Miles Traveled Assessment," prepared by Linscott, Law and Greenspan, Engineers in March 2023.

The passage of SB 743 and the resulting amendment to the CEQA Guidelines does not prevent agencies from continuing to analyze delay or LOS outside of CEQA review for other transportation planning or analysis purposes (i.e., general plans, impact fee programs, corridor studies, congestion reduction, or ongoing network monitoring). These analysis requirements and LOS standards apply to discretionary approvals of new land use development projects. This assessment utilizes the latest version of the City-approved Highway Capacity Manual (HCM) methodology to evaluate intersection LOS, which is then compared to the City's LOS standards and reviewed for detrimental effects on circulation within the existing transportation network. In conjunction with City staff, a total of three (3) study intersections (including the project driveway) were selected for analysis. The City's requirements also require an analysis of a proposed project's effect on existing pedestrian, bicycle, and transit infrastructure in the vicinity of the project site as well as the provision of multi-modal facilities within the site itself.

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

2.0 PROJECT DESCRIPTION

2.1 Existing Project Site

The proposed project site is located at 336 East Carson Street in the City of Carson. The project site is situated along the south side of East Carson Street between Dolores Street and Grace Avenue. The site is bordered by East Carson Street to the north, residential uses to the south, and commercial uses to the east and west. The existing project site currently contains two commercial buildings on-site which were formerly occupied by an auto repair business. The existing buildings will be removed to accommodate the proposed project. The project vicinity is shown in *Figure 1-1*.

Vehicular access to the existing project site is currently provided via one driveway on East Carson Street. The existing driveway is located on the south side of East Carson Street along the northerly project frontage and currently accommodates full access (i.e., (i.e., left-turn and right-turn ingress and egress traffic movements). An aerial photograph of the existing site is presented in ***Figure 2-1***.

2.2 Proposed Project Description

The proposed project consists of the construction of 50 residential dwelling units, including 4 live/work units with 1,400 square feet of office space and community recreation space. Vehicular access is planned to be provided via a single driveway on East Carson Street. A total of 113 parking spaces and six bicycle spaces are planned to be provided for the project. The project build-out and occupancy year is anticipated by the year 2024. The site plan for the proposed project is illustrated in ***Figure 2-2***.

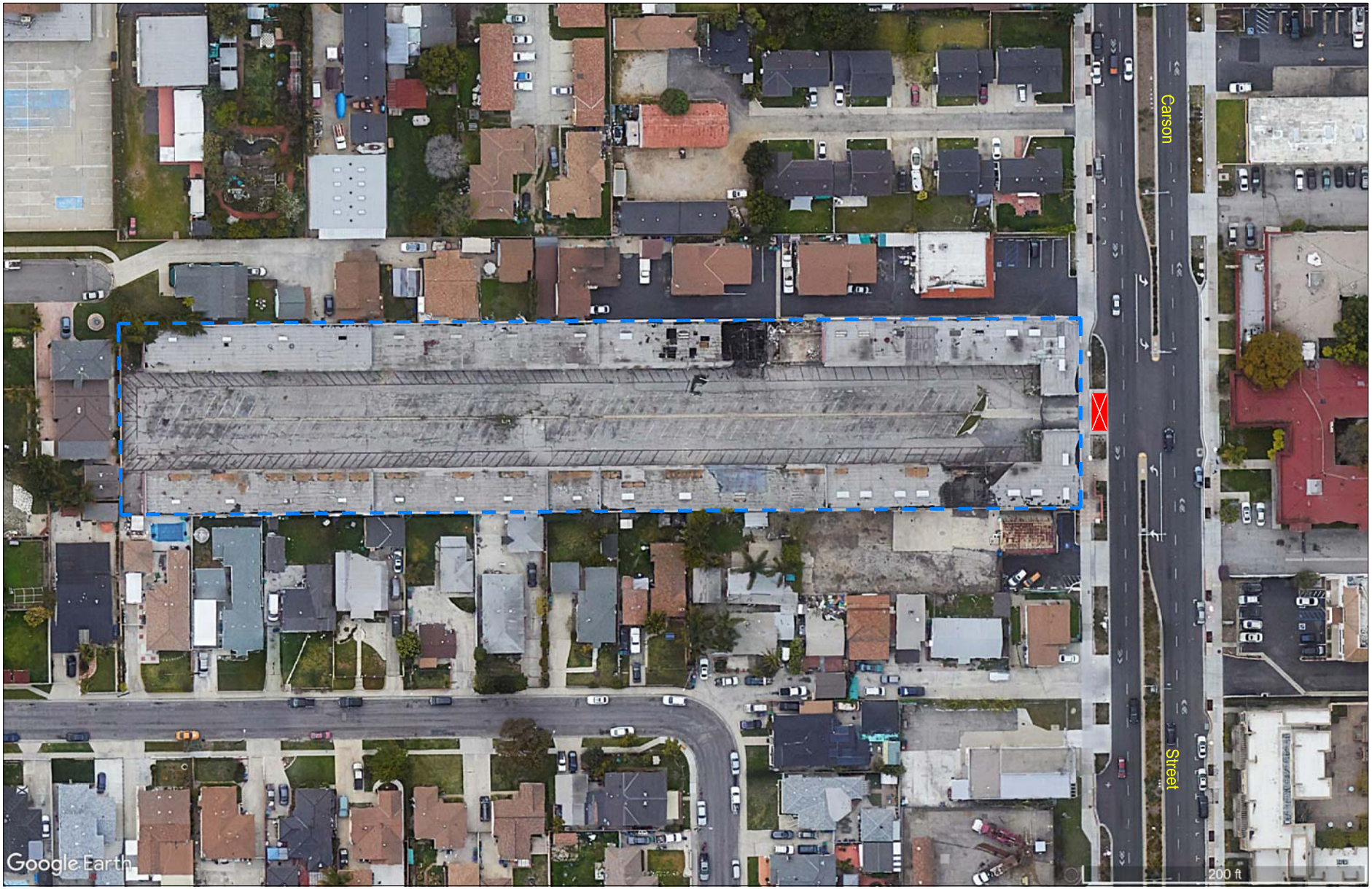
2.3 Project Site Access

2.3.1 *Vehicular Site Access*

As shown in *Figure 2*-2, vehicular access to the proposed project site is planned to be provided via one (1) driveway located on the south side of East Carson Street. The proposed driveway will be located along the northerly project frontage, approximately at the same location as the existing driveway. The project driveway will accommodate full access (i.e., left-turn and right-turn ingress and egress traffic movements). The westbound left-turn movement into the site from East Carson Street will be facilitated by the existing westbound left-turn lane/pocket and median break at this location. "No Stopping Any Time" signs are posted along the south side of East Carson Street both east and west of the proposed driveway.

2.4 Project Parking

The proposed project is planned to provide a total of 113 vehicular parking spaces, consisting of 100 covered spaces (i.e., 2 spaces per unit), 11 standard guest parking spaces, and two handicap accessible guest spaces. In addition, six bicycle spaces are planned to be provided for the project.



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Project Site

Existing Driveway

Figure 2-1
Aerial Photograph of the Existing Project Site

336 East Carson Residential Project

N MAP SOURCE: WITHEE MALCOLM A BSB DESIGN STUDIO

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Figure 2-2
Conceptual Site Plan

2.5 Project Trip Generation and Distribution

2.5.1 *Project Trip Generation Forecast*

Traffic volumes to be generated by the proposed project were forecast for the weekday AM and PM peak hours, and over a 24-hour period. Trip generation rates provided in the Institute of Transportation Engineers' (ITE) *Trip Generation Manual*[2] were utilized to forecast project traffic generation for the proposed project. ITE Land Use Code 215 (Single-Family Attached Housing) trip generation rates were used to forecast the traffic volumes expected to be generated by the proposed residential units. ITE Land Use Code 710 (General Office Building) trip generation rates were used to forecast the traffic volumes expected to be generated by the office component in the live/work units (i.e., 1,400 square feet of office space).

The trip generation forecast for the proposed project is summarized in ***Table 2-1***. As presented in *Table 2-1*, the proposed project is expected to generate 26 vehicle trips (9 inbound trips and 17 outbound trips) during the weekday AM peak hour. During the weekday PM peak hour, the proposed project is expected to generate 31 vehicle trips (17 inbound trips and 14 outbound trips). Over a 24-hour period, the proposed project is forecast to generate 375 daily trip ends during a typical weekday (188 inbound trips and 188 outbound trips).

2.5.2 *Project Trip Distribution and Assignment*

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

- The site's proximity to major traffic corridors (i.e., Carson Street, Main Street, Avalon Boulevard, etc.);
- Expected localized traffic flow patterns based on adjacent roadway channelization and presence of traffic signals;
- Existing intersection traffic volumes;
- Ingress/egress scheme planned for the proposed project;
- Nearby population and employment centers; and
- Input from City of Carson staff.

The traffic volume distribution percentages for the proposed project during AM and PM peak hours at the study intersections are illustrated in ***Figure 2-3***. The forecast AM and PM peak hour project traffic volumes at the study intersections are displayed in ***Figure 2-4***. The traffic volume assignments presented in *Figure 2-4* reflect the traffic distribution characteristics shown in *Figure 2-3* and the proposed project traffic generation forecast presented in *Table 2-1*.

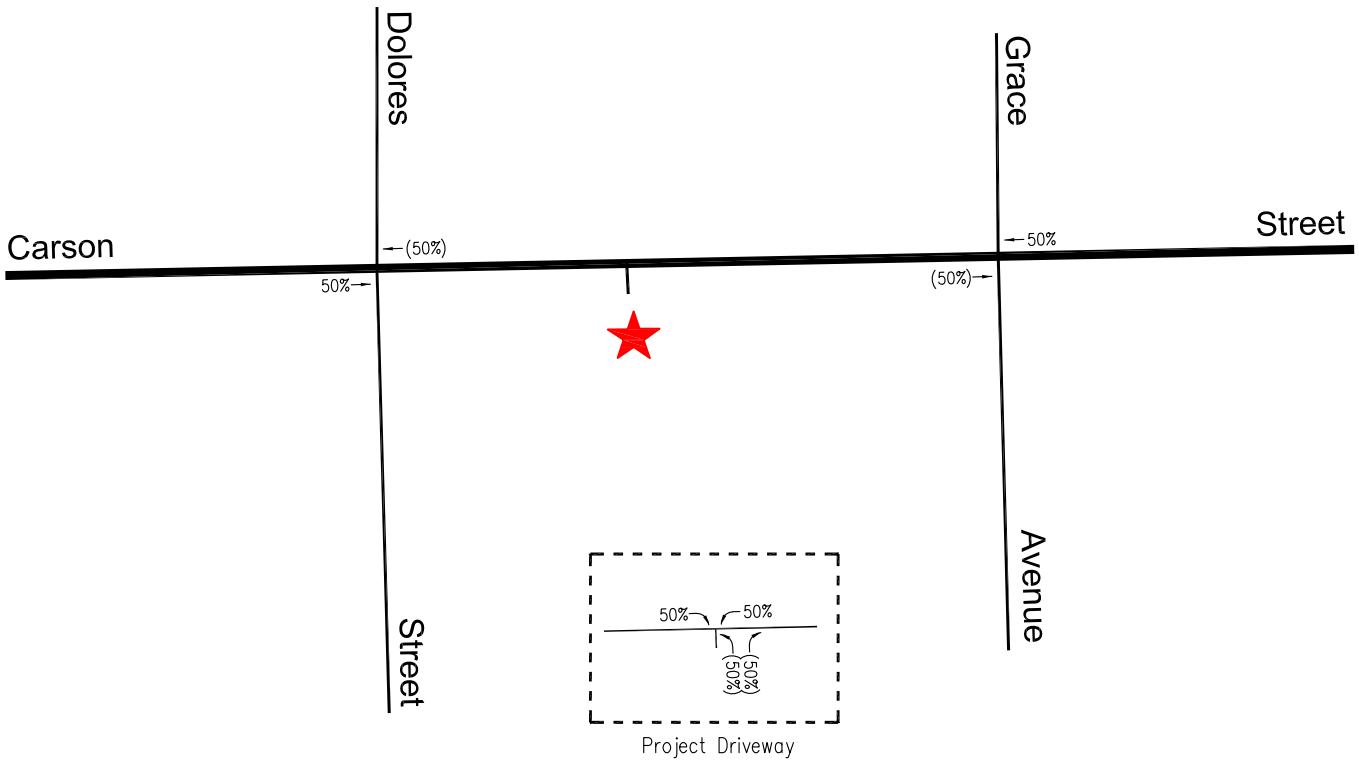
[2] Institute of Transportation Engineers *Trip Generation Manual*, 11th Edition, Washington, D.C., 2021.

Table 2-1
PROJECT TRIP GENERATION FORECAST

TRIP GENERATION RATES [1]									
	ITE LAND USE		WEEKDAY	WEEKDAY AM PEAK HOUR			WEEKDAY PM PEAK HOUR		
ITE LAND USE CATEGORY	CODE	VARIABLE	DAILY	IN (%)	OUT (%)	TOTAL	IN (%)	OUT (%)	TOTAL
Single-Family Attached Housing [3]	215	Per Dwelling Unit	7.20	31%	69%	0.48	57%	43%	0.57
General Office [4]	710	Per 1,000 SF	10.84	88%	12%	1.52	17%	83%	1.44

PROJECT TRIP GENERATION FORECAST									
	ITE LAND USE		DAILY TRIP ENDS [2]	AM PEAK HOUR VOLUMES [2]			PM PEAK HOUR VOLUMES [2]		
LAND USE	CODE	SIZE	VOLUMES	IN	OUT	TOTAL	IN	OUT	TOTAL
Proposed Uses									
Single-Family Attached Housing [3]	215	50 DU	360	7	17	24	17	12	29
Live/Work Office [4]	710	1,400 GSF	15	2	0	2	0	2	2
Total Project Trips			***375***	***9***	***17***	***26***	***17***	***14***	***31***

[1] Source: ITE "Trip Generation Manual", 11th Edition, 2021.
[2] Trips are one-way traffic movements, entering or leaving.
[3] ITE Land Use Code 215 (Single-Family Attached Housing) trip generation average rates for General Urban/Suburban area.
[4] ITE Land Use Code 710 (General Office Building) trip generation average rates for General Urban/Suburban area.



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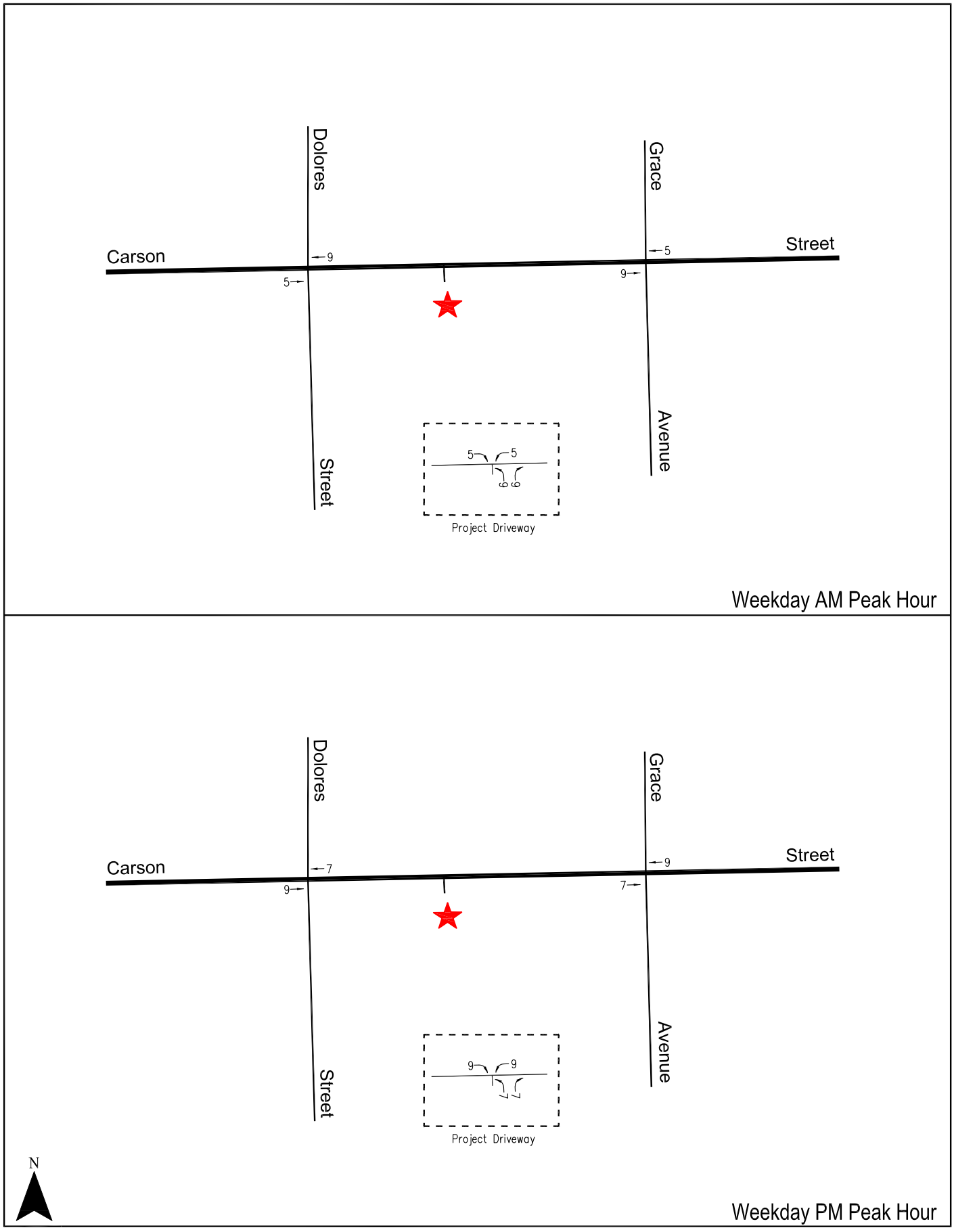
★ Project Site

XX = Inbound Percentage

(XX) = Outbound Percentage

Figure 2-3
Project Trip Distribution



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Project Site

Figure 2-4
Project Traffic Volumes

336 East Carson Residential Project

3.0 PROJECT SITE CONTEXT

The following sections provide an overview of the transportation infrastructure in the vicinity of the proposed project, including infrastructure which supports both motorized and non-motorized transportation modes.

3.1 Non-Vehicle Network

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

3.1.1 *Pedestrian System*

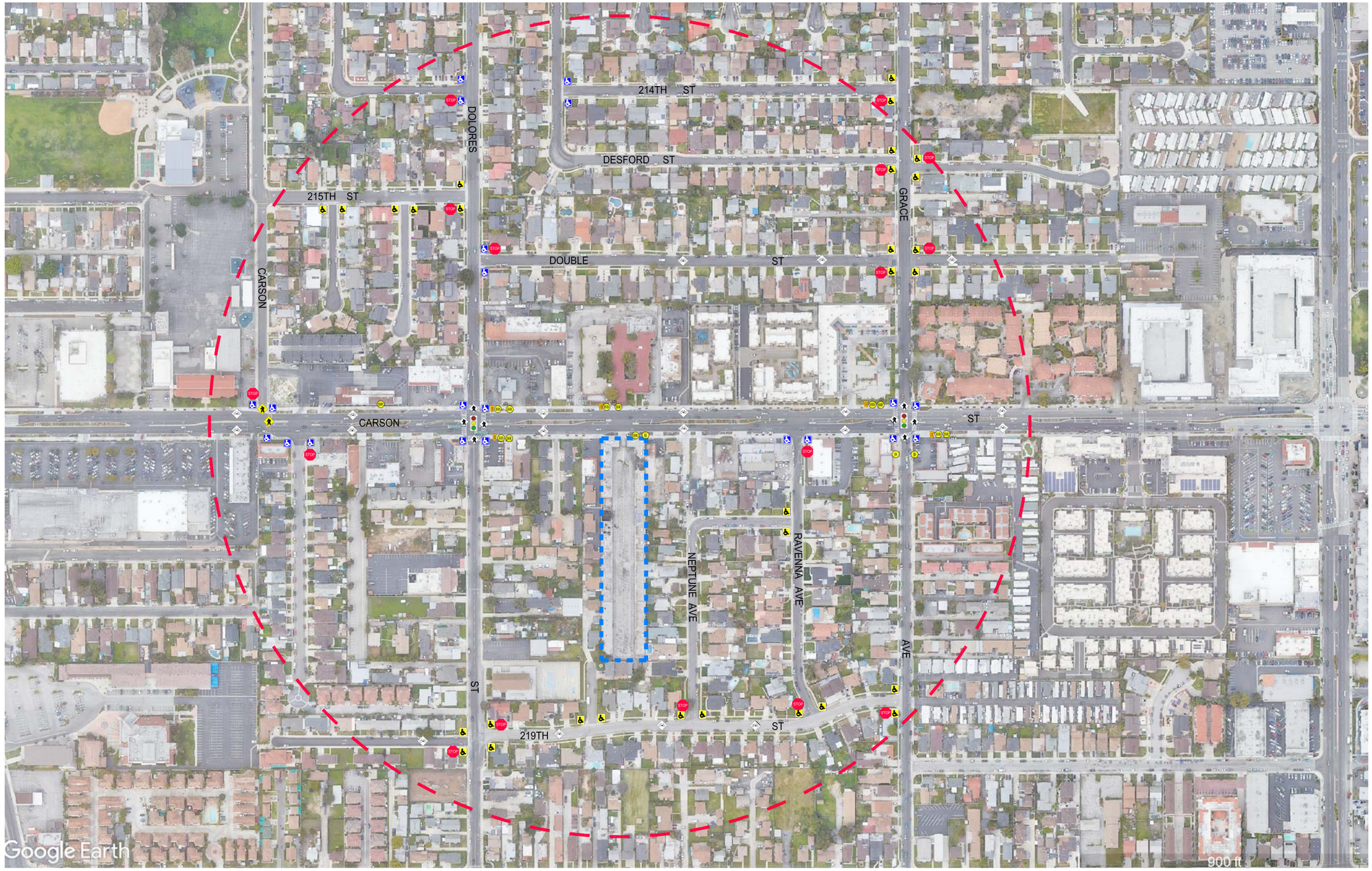
Pedestrian infrastructure consists of facilities such as sidewalks, crosswalks, pedestrian signals, curb access ramps, Americans with Disabilities Act (ADA) compliant tactile warning strips, and curb extensions, among other things. These facilities are generally provided within the study area. Public sidewalks and pedestrian facilities are provided on all streets within the project vicinity, including Carson Street, Dolores Street, and Grace Avenue. ***Figure 3-1*** shows the existing pedestrian and transit facilities near the project site.

The project frontage along Carson Street, is currently improved with sidewalk, landscaping strips along the north and south sides of the sidewalk, curb, and gutter. As described in *Section 2.3, Project Site Access*, the proposed project will require construction of a modified driveway at the existing driveway location. The driveway will be constructed to City of Carson standards and will maintain public sidewalk access across the driveway opening. The proposed project therefore will not result in the removal, degradation, or loss of access to any existing pedestrian facilities in the vicinity. Additionally, the project will provide an ADA compliant pedestrian walkway connecting the existing public sidewalks surrounding the project site to the walkways within the proposed development.

Walkability indicates walking is readily available as a safe, connected, accessible and pleasant mode of transport. Several criteria are widely accepted as key aspects of walkability of urban areas that should be satisfied. The underlying principle is that pedestrians should not be delayed, diverted, or placed in danger. These criteria include:

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

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



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NO SCALE

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- SITE
- 0.25 MILE RADIUS FROM PROJECT SITE
- SIGNAL
- ADA
- STOP SIGN
- ADA YELLOW TRUNCATED DOME
- CROSSWALK
- CROSSWALK YELLOW
- B BENCH
- BR BIKE RACK
- BS BUS STOP
- BB BUS STOP WITH BUS BENCH
- BBS BUS STOP WITH BUS BENCH & SHELTER
- BIKE ROUTE/SHARROW
- MAIL BOX
- TRASH

Figure 3-1
Existing Nearby Pedestrian & Transit Facilities

336 East Carson Residential Project

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

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

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

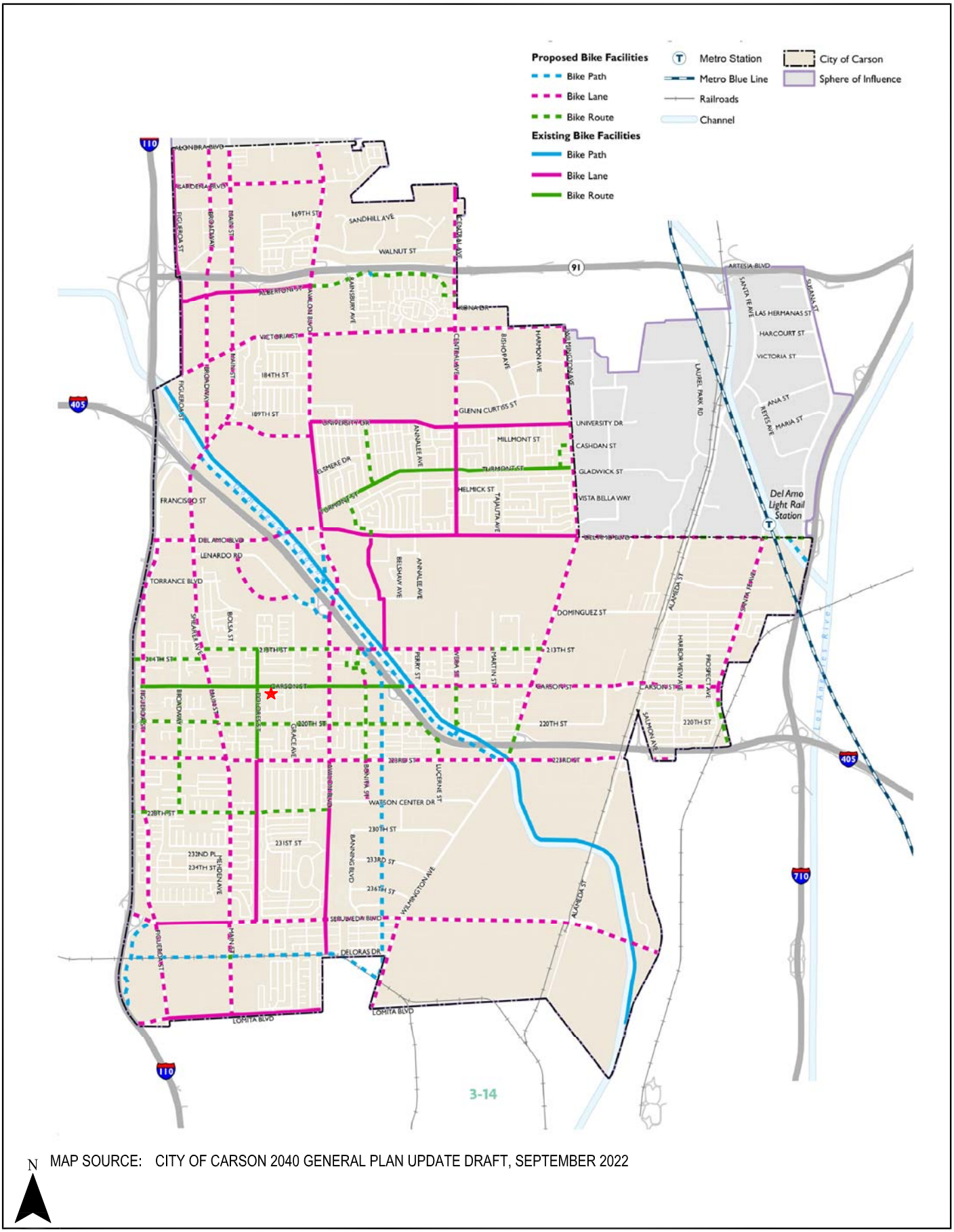
A review of the proposed project pedestrian walkways indicates that these primary characteristics are accommodated within and adjacent to the project. Proposed project features would include landscaped and lighted pedestrian walkways connecting facilities within the site, as well as connections with the adjacent public sidewalks along the project frontage. Street trees and streetscape plantings should be introduced along the same public frontages in accordance with the City's standards. In addition, project signage could include general ground level and wayfinding pedestrian signage around the perimeter of the project site, building identification signs, and other sign types. Wayfinding signs would be located at access points to the on-site amenities and facilities, parking area/s, and building entrances.

3.1.2 *Bicycle System*

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

Bicycle access to the project site will be facilitated by the City's bicycle roadway network. Existing and proposed bicycle facilities (e.g., Class I Bicycle Path, Class II Bicycle Lanes, Class III Bicycle Routes, Proposed Bicycle Routes, Bicycle Boulevards, etc.) identified in the City's General Plan Update[3] will be located within an approximate one-mile radius from the project site. The location of the proposed bicycle lane network for the City in close proximity to the project site and in the surrounding area is illustrated in ***Figure 3-2***. As shown in *Figure 3-2*, existing Class III Bicycle Routes are provided along Carson Street and Dolores Street within the project vicinity. In addition, as shown in *Figure 3-2*, Class II Bicycle Lanes are proposed for Main Street and Avalon Boulevard within the project vicinity.

[3] City of Carson 2040 General Plan Update, September 2022.



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MAP SOURCE: CITY OF CARSON 2040 GENERAL PLAN UPDATE DRAFT, SEPTEMBER 2022

★ Project Site

Figure 3-2
City of Carson Proposed Bicycle Network

336 East Carson Residential Project

3.2 Transit Network

Public bus transit service in the project vicinity is currently provided by the Los Angeles Metropolitan Transportation Authority (Metro), Long Beach Transit (LBT), and Torrance Transit (TT). A summary of the existing transit routes, including the transit route, destinations and number of buses during the AM and PM peak hours is presented in ***Table 3–1***. The existing public transit routes in the project vicinity are illustrated in ***Figure 3–3***. As summarized in *Table 3-1*, a total of five public transit routes provide service near the project site.

3.3 Vehicle Network

3.3.1 *Roadway Classifications*

The City of Carson utilizes the roadway categories recognized by regional, state and federal transportation agencies. There are four (4) categories in the roadway hierarchy, ranging from freeways with the highest capacity to two-lane undivided roadways with the lowest capacity. The roadway categories are summarized as follows:

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

- *Arterial* roadways are major streets that primarily accommodate regional, subregional, and intra-city travel. Through traffic comprises the bulk of traffic volumes on arterial roadways. In the City of Carson, this roadway type is divided into two categories: Major and Minor arterials. Major arterial roadways are designed to move relatively high volumes of traffic between the freeway and local circulation system. Intersections along major arterials are at-grade and typically signalized. Access from private property and collector streets is limited, as is on-street parking. Minor arterial roadways are similar to major arterials, but serve a more localized function. Minor arterials generally have less access and parking restrictions and a narrower right-of-way than major arterials.

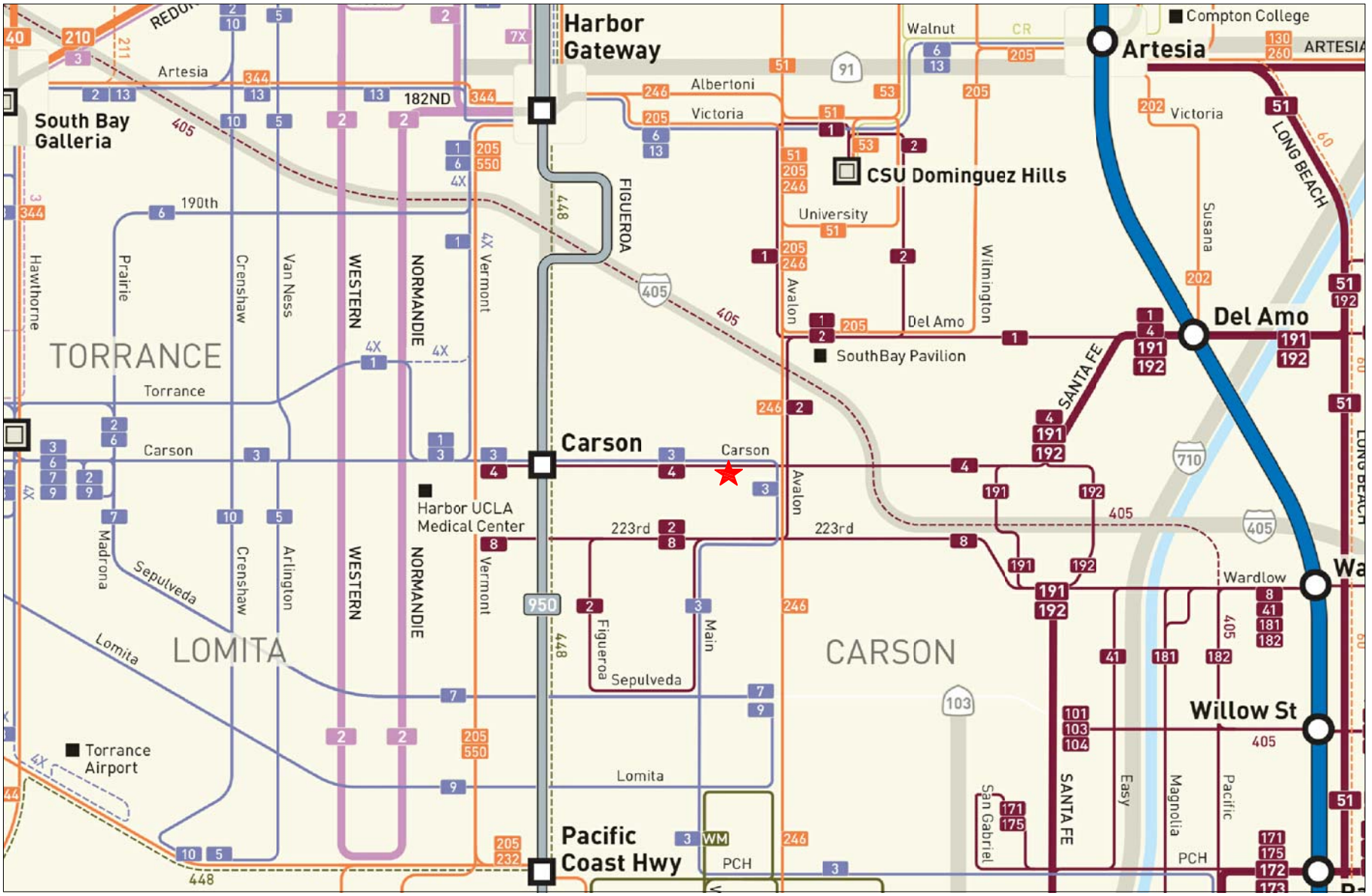
- *Collector* roadways are designed to distribute traffic from higher classified arterial streets to local access streets and adjacent properties.

- *Local* roadways are designed to be low-volume and low-speed streets that provide access to individual properties. Residential streets are generally not intended to handle through traffic.

Table 3-1
EXISTING TRANSIT ROUTES [1]

ROUTE	DESTINATIONS	ROADWAY(S) NEAR SITE	NO. OF BUSES/TRAINS DURING PEAK HOUR		
			DIR	AM	PM
Metro 246	San Pedro to Los Angeles via Wilmington and Carson	Carson Street, Dolores Street, Grace Avenue	NB SB	2 2	2 2
Metro Silver Line	El Monte to San Pedro via Downtown Los Angeles, Los Angeles and Harbor Gateway	Carson Street, I-110 Freeway Transit Center	NB SB	12 12	12 12
LBT 2	Cal State Dominguez Hills to Figueroa & Carriagedale	Carson Street, Dolores Street, Grace Avenue	NB SB	2 2	2 2
LBT 4	Carson at Vermont to Del Amo Station	Carson Street, Dolores Street, Grace Avenue	EB WB	2 2	2 2
TT 3	Redondo Beach Pier to Downtown Long Beach Station via Carson	Carson Street, Dolores Street, Grace Avenue	EB WB	2 2	3 2
TOTAL				40	41

[1] Sources: Los Angeles County Metropolitan Transportation Authority (Metro), Long Beach Transit (LBT), and Torrance Transit (TT) websites, February 2023.



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MAP SOURCE: METROPOLITAN TRANSPORTATION AUTHORITY WEBSITE

★ Project Site

Figure 3-3
Existing Transit Routes

336 East Carson Residential Project

3.3.2 *Roadway Descriptions*

Immediate access to the project site is provided via Carson Street. The current lane configurations and traffic control measures at each study intersection is presented in ***Figure 3-4***. Descriptions of the roadways which make up the study area are provided in ***Table 3-2***, including the roadway classification, number of lanes, median types, and speed limits designated by the City of Carson.

3.4 Traffic Count Data

Manual counts of vehicular turning movements were conducted at the following intersections identified for review in consultation with City staff:

1. Dolores Street/Carson Street (Signalized)

2. Grace Avenue/Carson Street (Signalized)

3. Project Driveway/Carson Street (Unsignalized)

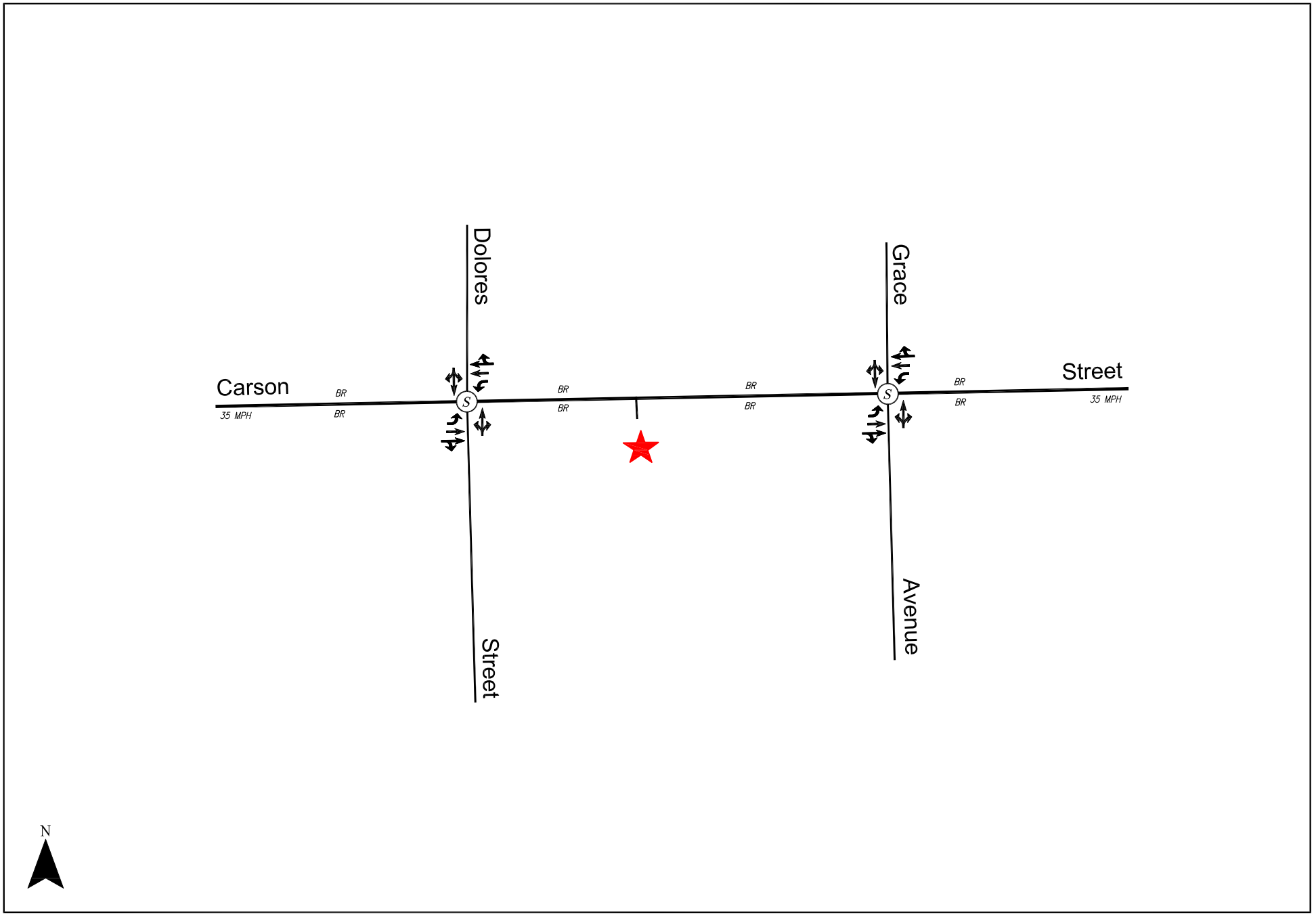
The manual traffic counts were conducted at the two signalized intersections during the weekday morning (AM) and afternoon (PM) commute periods to determine the peak hour traffic volumes. The manual counts were conducted in May 2022 by an independent traffic count subconsultant (City Traffic Counters) at the study intersections on a typical weekday from 7:00 AM to 9:00 AM and from 4:00 PM to 6:00 PM to determine the AM and PM peak commute hours, respectively. In conjunction with the manual turning movement vehicle counts, counts of bicycle and pedestrian volumes were also collected during the peak periods. It is noted that all of the traffic counts were conducted when local schools were in session. The traffic count data for the Project Driveway/Carson Street location were derived from the traffic count data for the adjacent intersections (i.e., the eastbound and westbound volumes from the Dolores Street/Carson Street and Grace Avenue/Carson Street intersections).

The existing traffic volumes at the study intersections during the weekday AM and PM peak hours are shown in ***Figure 3-5***. Summary data worksheets of the manual traffic counts at the study intersections are contained in ***Appendix B***.

3.5 Cumulative Development Projects

The forecast of future pre-project conditions was prepared in accordance to procedures outlined in Section 15130 of the CEQA Guidelines. Specifically, the CEQA Guidelines provide two (2) options for developing the future traffic volume forecast:

> "(A) A list of past, present, and probable future projects producing related or cumulative impacts, including, if necessary, those projects outside the control of the [lead] agency, or
>
> (B) A summary of projections contained in an adopted local, regional or statewide plan, or related planning document, that describes or evaluates conditions



Project Site

(S) Signalized Intersection

BR Bike Route

Figure 3-4
Existing Lane Configurations

336 East Carson Residential Project

Table 3-2
EXISTING ROADWAY DESCRIPTIONS

ROADWAY	CLASSIFICATION [1]	TRAVEL LANES		MEDIAN TYPES [4]	SPEED LIMIT
		DIRECTION [2]	NO. LANES [3]		
Dolores Street	Local	NB-SB	2	N/A	30
Carson Street	Major Highway	EB-WB	4 [5]	RMI	35
Grace Avenue	Local	NB-SB	2	N/A	30

Notes:

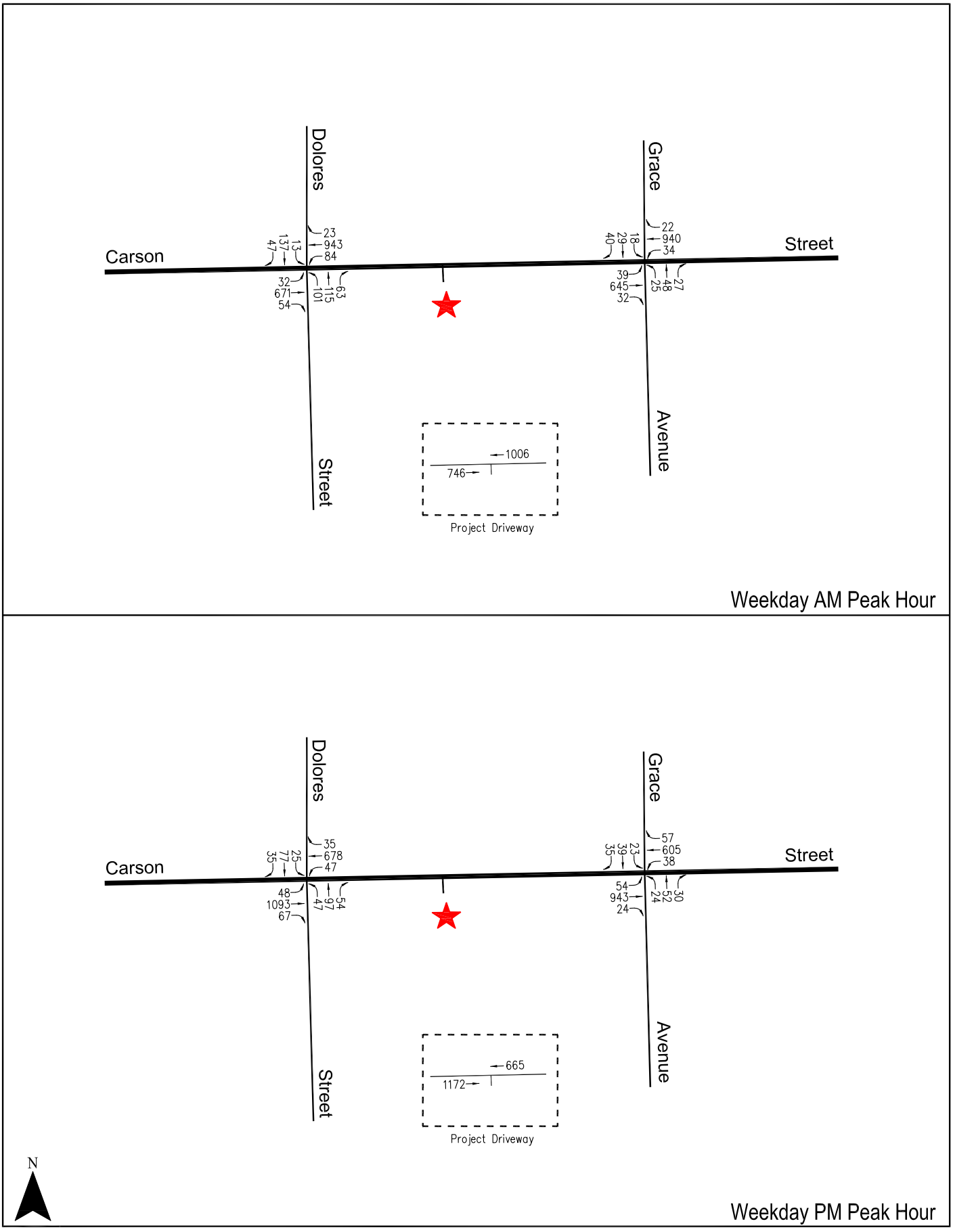
[1] Street classifications obtained from the *City of Carson Circulation Element 2022* .

[2] Direction of roadways in the project area: NB-SB = northbound and southbound; and EB-WB = eastbound and westbound.

[3] Number of lanes in both directions on the roadway. Variations in number of travel lanes due to time restricted on-street parallel parking are noted below.

[4] Median type of the road: RMI = Raised Median Island; 2WLT = 2-Way Left-Turn Lane; and N/A = Not Applicable.

[5] Class III Bike Route



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Project Site

LINSCOTT LAW & GREENSPAN engineers

Figure 3-5
Existing Traffic Volumes

336 East Carson Residential Project

contributing to the cumulative effect. Such plans may include: a general plan, regional transportation plan, or plans for the reduction of greenhouse gas emissions. A summary of projections may also be contained in an adopted or certified prior environmental document for such a plan. Such projections may be supplemented with additional information such as a regional modeling program. Any such document shall be referenced and made available to the public at a location specified by the lead agency."

Although the CEQA Guidelines do not strictly apply to the local transportation assessment required by the City of Carson, this transportation analysis provides a highly conservative estimate of future pre-project traffic volumes as it incorporates both the "A" and "B" options outlined in the CEQA Guidelines for purposes of developing the forecast.

3.5.1 *Related Projects*

A forecast of on-street traffic conditions prior to occupancy of the proposed project was prepared by incorporating the potential trips associated with other known development projects (related projects) in the area (i.e., within an approximate 0.50-mile radius from the project site). With this information, the potential impact of the proposed project can be evaluated within the context of the cumulative impacts of all ongoing development. The related projects research was based on information on file with the City of Carson and the County of Los Angeles. The list of related projects in the project site area is presented in ***Table 3-3***. The location of the related projects is shown in ***Figure 3-6***.

Traffic volumes expected to be generated by the related projects were calculated using rates provided in the Institute of Transportation Engineers' (ITE) *Trip Generation Manual*. The related projects' respective traffic generation for the weekday AM and PM peak hours, as well as on a daily basis for a typical weekday, is summarized in *Table 3-3*. The related projects traffic volumes were distributed and assigned to the street system based on the projects' locations in relation to the study intersections, their proximity to major traffic corridors, proposed land uses, nearby population and employment centers, etc. The assignment of the related projects traffic volumes to the study intersections during the weekday AM and PM peak hours are displayed in ***Figure 3-7***.

3.5.2 *Ambient Traffic Growth Factor*

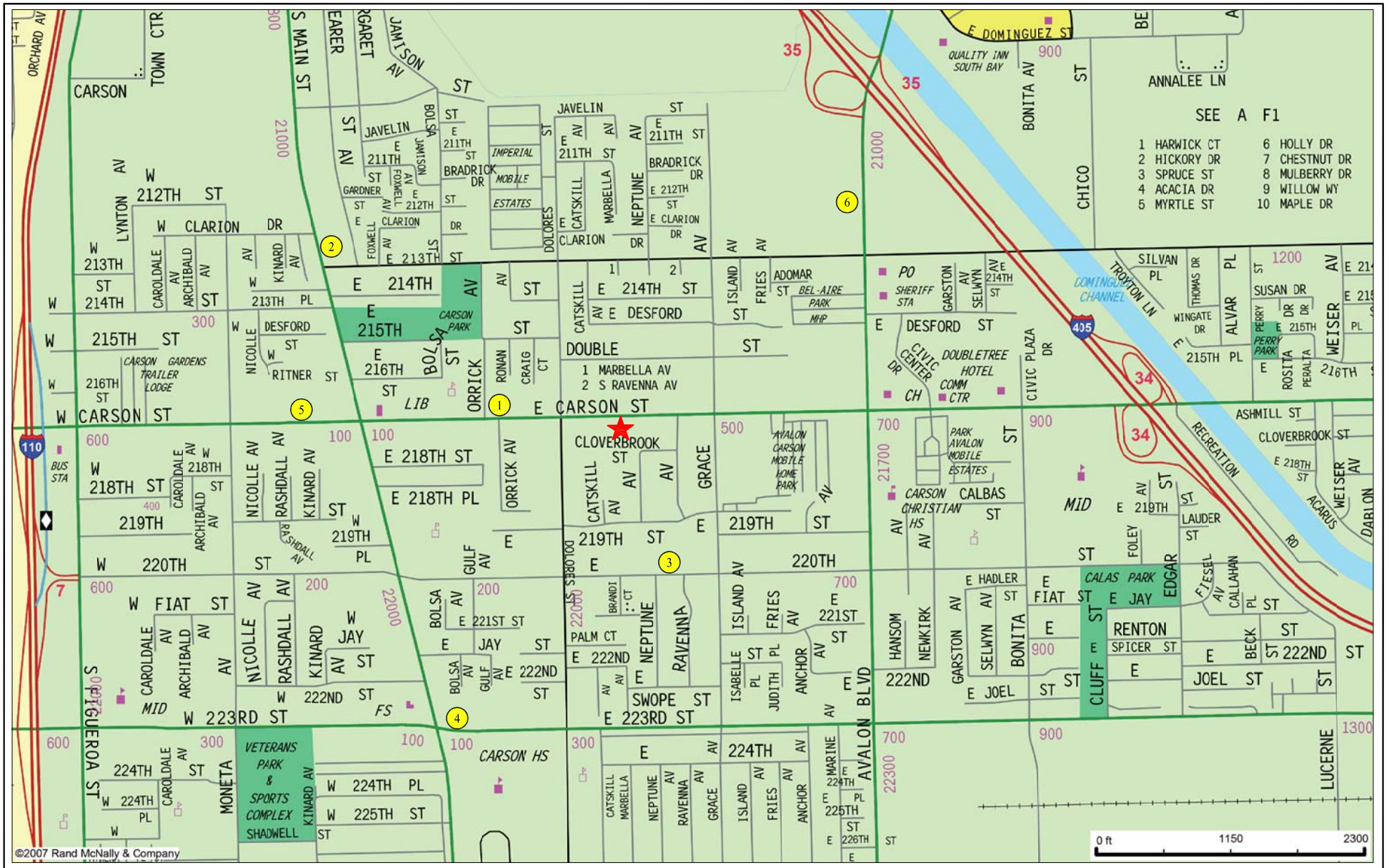
Horizon year background traffic growth estimates have been calculated using an ambient traffic growth factor. The ambient traffic growth factor is intended to include unknown related projects in the study area as well as account for typical growth in traffic volumes due to the development of projects outside the study area. Based on review of the general traffic growth factors provided in the Los Angeles County 2010 Congestion Management Program[4] (CMP) for the project study area (i.e., RSA 19, Palos Verdes), it is anticipated that existing traffic volumes in the vicinity are expected to increase at an annual rate of 0.2% per year between the years 2020 and 2025. An annual growth rate of one percent (1.0%) until the year 2024 (i.e., the anticipated project build-out year) was selected for this analysis. Therefore, application of this one percent (1.0%) ambient growth factor in addition

[4] Los Angeles County Metropolitan Transportation Authority (Metro) 2010 Congestion Management Program.

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

MAP NO.	PROJECT STATUS	PROJECT NAME/NUMBER ADDRESS/LOCATION	LAND USE DATA		PROJECT DATA SOURCE	DAILY TRIP ENDS [2] VOLUMES	AM PEAK HOUR VOLUMES [2]			PM PEAK HOUR VOLUMES [2]		
			LAND-USE	SIZE			IN	OUT	TOTAL	IN	OUT	TOTAL
1	Proposed	Rascals Teriyaki Grill 205 E. Carson Street	Restaurant	2,564 GSF	[3]	275	14	11	25	14	9	23
2	Proposed	Carson Lofts 21240-21250 S. Main Street	Apartments	19 DU	[4]	128	2	6	8	6	4	10
3	Proposed	Cambria Court Residential Project 427 E. 220th Street	Condominiums	35 DU	[4]	236	3	11	14	11	7	18
4	Proposed	123 E. 223rd Street	Condominiums	9 DU	[4]	61	1	3	4	3	2	5
5	Proposed	215 W. Carson Street	Apartments	35 DU	[4]	236	3	11	14	11	7	18
6	Proposed	Imperial Avalon Specific Plan 21207 South Avalon Boulevard	Apartments Single-Family Detached Housing Senior Adult Housing Quality Restaurant Coffee/Donut Shop Without Drive-Through	1,033 DU 28 DU 83 DU 8,470 GSF 1,882 GSF	[5]	5,477	123	281	404	287	173	460
TOTAL						**6,413**	**146**	**323**	**469**	**332**	**202**	**534**

[1] Source: City of Carson Community Development Planning department, except as noted below and by applying trip rates as provided in the ITE "Trip Generation", 11th Edition, 2021.
[2] Trips are one-way traffic movements, entering or leaving.
[3] ITE Land Use Code 932 (High-Turnover (Sit-Down) Restaurant) trip generation average rates.
[4] ITE Land Use Code 220 (Multifamily Housing [Low-Rise] Not Close to Rail Transit) trip generation average rates.
[5] Source: Imperial Avalon Specific Plan DEIR Transportation Impact Study, Fehr & Peers, August 13, 2021.



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MAP SOURCE: RAND MCNALLY & COMPANY

Project Site

XX Related Project

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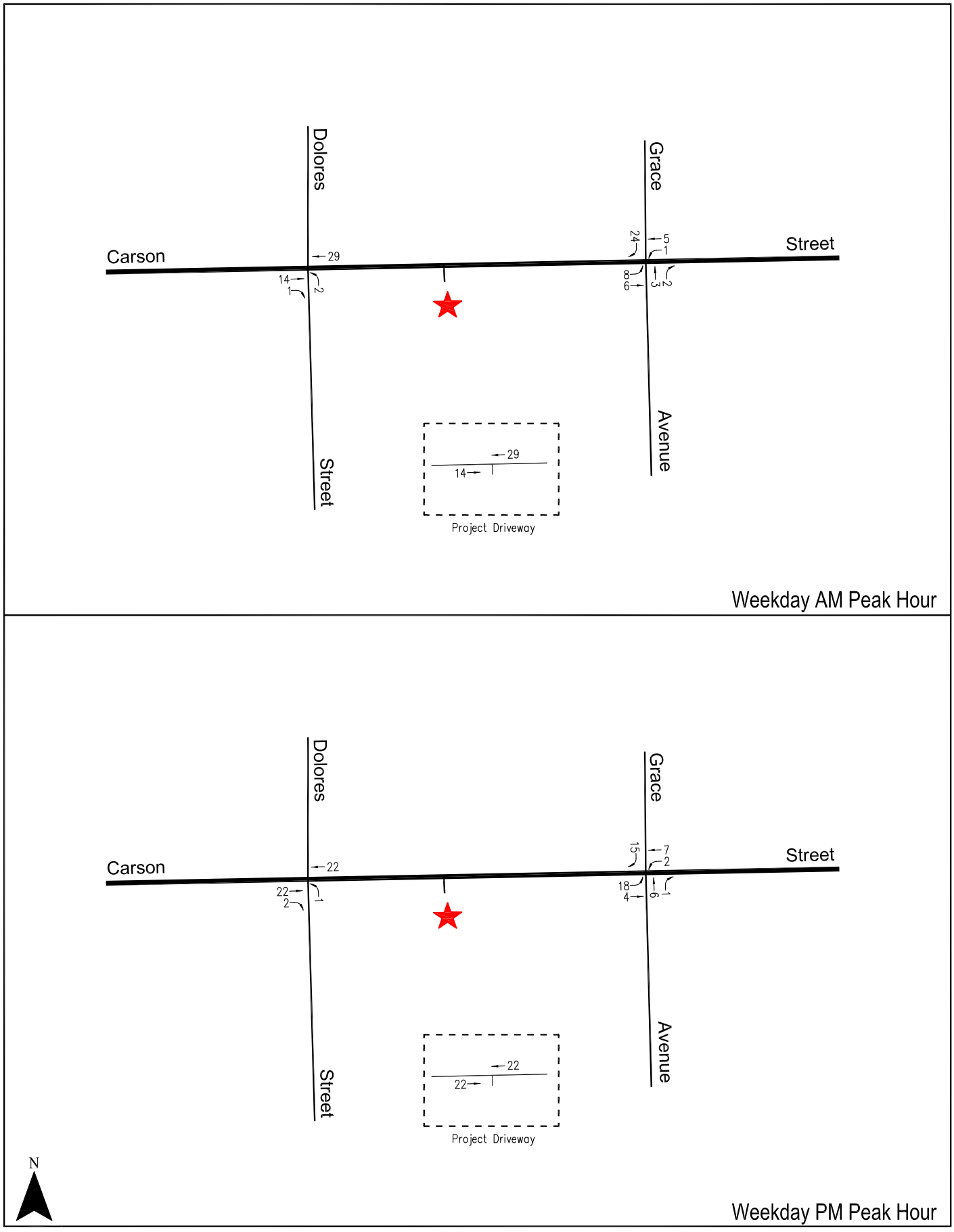
Figure 3-6
Location of Related Projects

336 East Carson Residential Project



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Project Site

Figure 3-7
Related Projects Traffic Volumes

336 East Carson Residential Project

to the forecast traffic generated by the related projects allows for a conservative forecast of future traffic volumes in the project study area as incorporation of both (i.e., an ambient traffic growth rate and a detailed list of cumulative development projects) is expected to overstate potential future traffic volumes. The cumulative development projects should already be incorporated as part of the growth rate projection per the adopted, local and regional planning documents (i.e., which account for the future population, housing, and employment [socio-economic data] projections).

4.0 INTERSECTION OPERATIONAL ANALYSIS

As part of the discretionary review and approval process, the City has the authority to require a LOS analysis in order to assess the proposed project's consistency with the City's General Plan LOS goals. Specifically, the City requires an operational analysis of intersections in the vicinity of a proposed project in order to evaluate site access and circulation constraints that may be caused or worsened by project-generated traffic. The following section presents the intersection operational (i.e., Level of Service) analyses prepared for the proposed project pursuant to the General Plan LOS standards and transportation infrastructure goals.

4.1 Analysis Methodology

In order to estimate the proposed project's effect on intersection operations, a multi-step process has been utilized. The first step is trip generation, which estimates the total arriving and departing traffic volumes on a peak hour and daily basis. The second step of the forecasting process is trip distribution, which identifies the origins and destinations of inbound and outbound project traffic volumes. These origins and destinations are typically based on demographics and existing/anticipated travel patterns in the study area. The third step is traffic assignment, which involves the allocation of project traffic to study area streets and intersections. Traffic distribution patterns are indicated by general percentage orientation, while traffic assignment allocates specific volume forecasts to individual roadway links and intersection turning movements throughout the study area. The proposed project's forecast trip generation, distribution, and assignment is presented in *Section 2.5* herein. With the forecasting process complete and project traffic assignments developed, the effect of the proposed project is isolated by comparing operational conditions at the selected study intersections using existing and expected future traffic volumes without and with forecast project traffic.

The study intersection LOS was analyzed using the Highway Capacity Manual[5] (HCM) method of analysis. The HCM methodology determines the average control delay (expressed in seconds per vehicle [s/veh]) at the intersection. Average control delay for any particular movement is a function of the capacity of the approach and the degree of saturation. The intersection delay is subsequently assigned a LOS value to describe intersection operations. Level of Service varies from LOS A (free flow conditions) to LOS F (jammed condition). The average control delay for signalized intersections represents the delay attributed to the traffic control facility as compared to a reference travel time in the absence of traffic control, geometric delay, incidents, and the influence of other vehicles. A detailed description of the HCM method and corresponding Level of Service for the signalized study intersections is provided in ***Appendix C***.

For the unsignalized location, the HCM methodology for unsignalized/two-way stop-controlled (TWSC) intersections was utilized for the analysis. The TWSC methodology estimates the average control delay for each minor-street movement (or shared movement) as well as major-street left-

[5] *Highway Capacity Manual 6th Edition*, Transportation Research Board of the National Academies of Sciences-Engineering-Medicine, 2016.

turns and determines the LOS for each constrained movement. A description of the HCM method and corresponding Level of Service for the unsignalized intersection is also provided in *Appendix C*.

The HCM method calculations were prepared using the *Synchro 11* software package which implements the HCM operational methodology. A *Synchro* network was created based on existing conditions field reviews at the study intersections. In addition, specifics such as traffic volume data, lane configurations, available vehicle storage lengths, crosswalk locations, posted speed limits, traffic signal timing and phasing, etc., were coded to complete the existing network. The parameters and assumptions utilized in the analysis were based on the direction provided by City staff.

4.2 Criteria for Intersection Operational Analysis

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

The City of Carson General Plan has established the minimum acceptable Level of Service (LOS) D for peak hour intersection operations. A traffic operations issue is identified if the addition of the traffic generated from the proposed project results in Triggers an intersection operating at acceptable LOS (i.e., LOS D or better) to operate at unacceptable LOS (i.e., LOS E or F)

Where intersections are found to operate at unacceptable LOS, and the addition of project-generated traffic causes an exceedance of the City's criteria, improvements should be identified to increase performance to pre-project conditions under each scenario.

4.3 Analysis Scenarios

Pursuant to the City's Guidelines and in coordination with City staff, LOS calculations have been prepared for the following scenarios:

[a] Year 2023 Existing conditions.

[b] Year 2023 Existing with project conditions.

[c] Condition [a] plus 1.0 percent (1.0 %) per year annual ambient traffic growth through year 2024 and with completion and occupancy of the related projects (i.e., future cumulative [opening year] without project conditions).

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

[e] Condition [d] with implementation of intersection improvement measures, if necessary.

The weekday AM and PM peak hour LOS analysis prepared for the study intersections is summarized in ***Table 4-1***. The calculation data worksheets for the analyzed intersections are provided in *Appendix C*.

4.4 Year 2023 Existing Conditions

4.4.1 *Year 2023 Existing Conditions*

As indicated in column [1] of *Table 4-1*, all of the study intersections currently operate at LOS B or better during the weekday AM and PM peak hours. The existing traffic volumes at the study intersections during the weekday AM and PM peak hours are displayed in *Figure 3-5*.

4.4.2 *Year 2023 Existing With Project Conditions*

As shown in column [2] of *Table 4-1*, application of the City's threshold criteria to the "Existing With Project" scenario indicates that the project-related effects in the delay at the study intersections are not expected to exceed the City's threshold criteria. Incremental delays, but not exceeding the City's criteria, are noted at the study intersections. The existing with project traffic volumes at the study intersections during the weekday AM and PM peak hours are illustrated in ***Figure 4-1***.

4.5 Future Year 2024 Cumulative Conditions

4.5.1 *Future Year 2024 Cumulative Without Project Conditions*

The future year 2024 (opening year) cumulative baseline conditions were forecast based on the addition of traffic generated by the completion and occupancy of the related projects, as well as the growth in traffic due to the combined effects of continuing development, intensification of existing developments and other factors (i.e., ambient growth). The delays at the study intersections are incrementally increased with the addition of ambient traffic and traffic generated by the related projects listed in *Table 3-3*.

As presented in column [3] of *Table 4-1*, all of the study intersections are expected to operate at LOS D or better during the weekday AM and PM peak hours with the addition of growth in ambient traffic and related projects traffic under the future year 2024 without project conditions. The future year 2024 without project (existing plus ambient growth and related projects) traffic volumes at the study intersections during the weekday AM and PM peak hours are illustrated in ***Figure 4-2***.

4.5.2 *Future Year 2024 Cumulative With Project Conditions*

As shown in column [4] of *Table 4-1*, application of the City's threshold criteria to the "Future Year 2024 With Project" scenario indicates that the project-related effects in the delay at the study intersections are not expected to exceed the City's threshold criteria. Incremental delays, but not exceeding the City's criteria, are noted at the study intersections. The future year 2024 with project traffic volumes at the study intersections during the weekday AM and PM peak hours are illustrated in ***Figure 4-3***.

Table 4-1
SUMMARY OF INTERSECTION OPERATIONAL ANALYSIS [a]
DELAYS AND LEVELS OF SERVICE
WEEKDAY AM AND PM PEAK HOURS

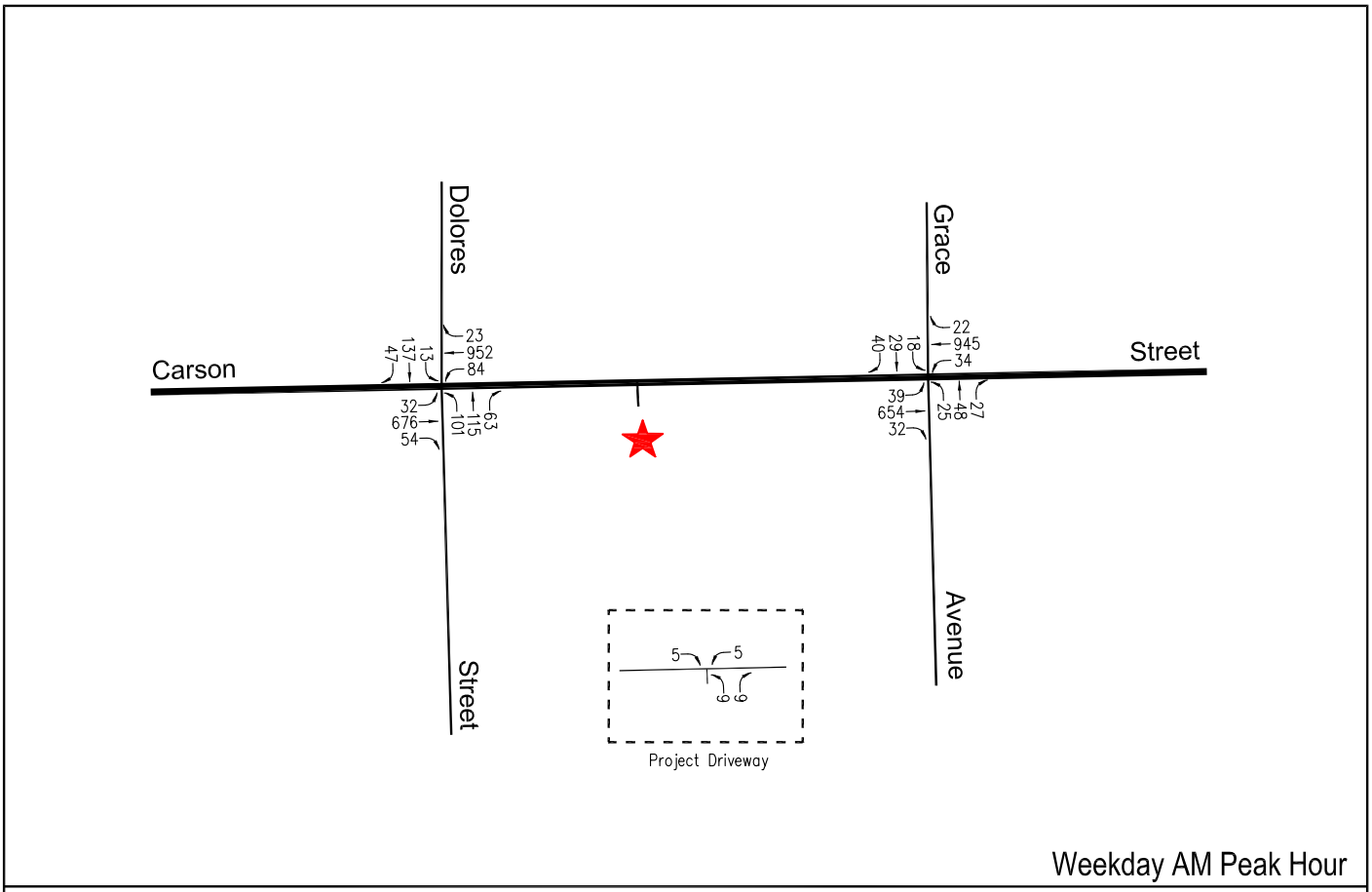
				[1]		[2]			[3]		[4]		
NO.	INTERSECTION	TRAFFIC CONTROL	PEAK HOUR	YEAR 2023 EXISTING Delay [b]	LOS [c]	YEAR 2023 EXISTING W/ PROJECT Delay [b]	LOS [c]	CHANGE Delay [b] [(2)-(1)]	YEAR 2024 FUTURE W/O PROJECT Delay [b]	LOS [c]	YEAR 2024 FUTURE W/ PROJECT Delay [b]	LOS [c]	CHANGE Delay [b] [(4)-(3)]
1	Dolores Street/ Carson Street	Signalized	AM	13.4	B	13.4	B	0.0	13.4	B	13.4	B	0.0
			PM	11.1	B	11.1	B	0.0	11.1	B	11.1	B	0.0
2	Grace Avenue/ Carson Street	Signalized	AM	8.2	A	8.2	A	0.0	9.1	A	9.1	A	0.0
			PM	7.7	A	7.7	A	0.0	8.2	A	8.2	A	0.0
3	Project Driveway/ Carson Street	Unsignalized	AM	--	--	22.3	C	0.0	--	--	23.5	C	0.0
			PM	--	--	32.4	D	0.0	--	--	34.7	D	0.0

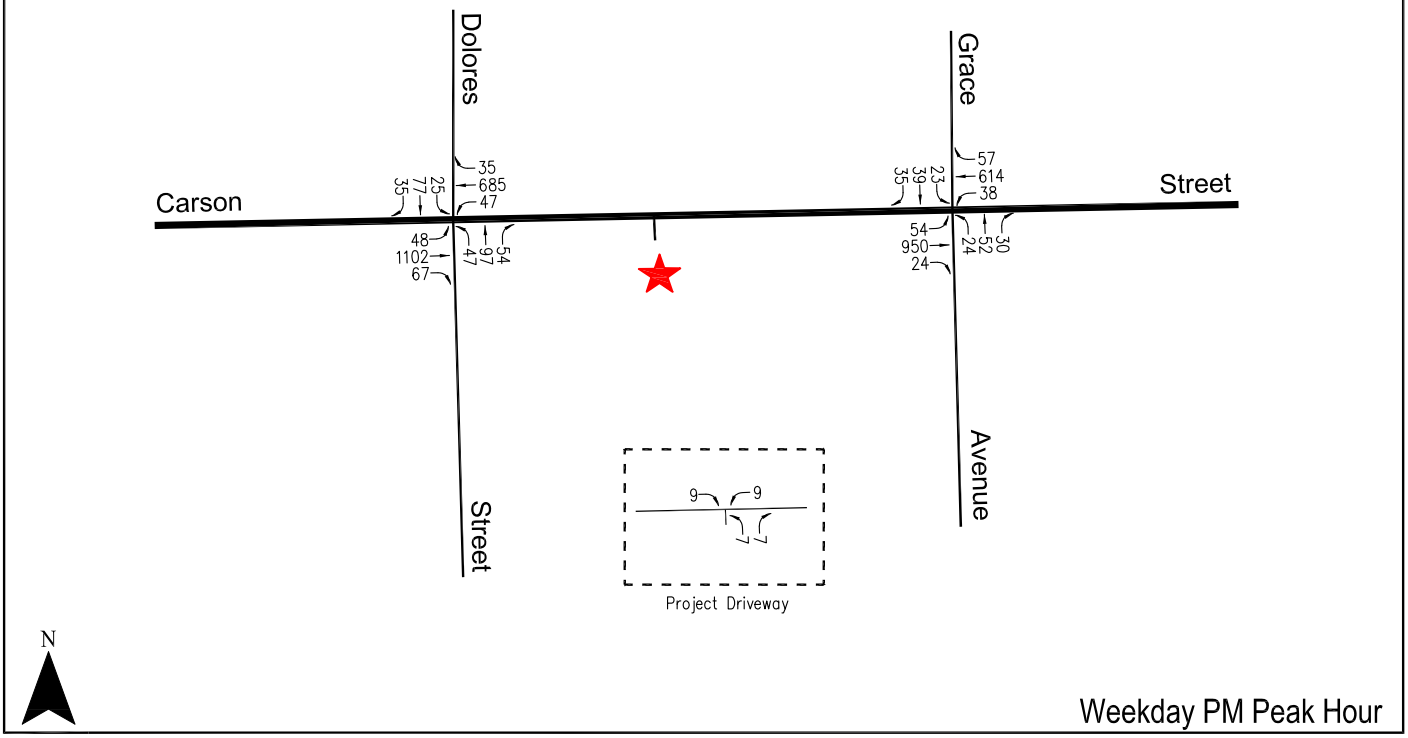
[a] Intersection analysis based on the Highway Capacity Manual, 6th Edition operational analysis methodologies.

[b] Reported control delay values in seconds per vehicle.

[c] Intersection Levels of Service are based on the following criteria:

Signalized Intersection Control Delay (s/veh)	Unsignalized Intersection Control Delay (s/veh)	LOS
<= 10	<= 10	A
> 10-20	> 10-15	B
> 20-35	> 15-25	C
> 35-55	> 25-35	D
> 55-80	> 35-50	E
> 80	> 50	F





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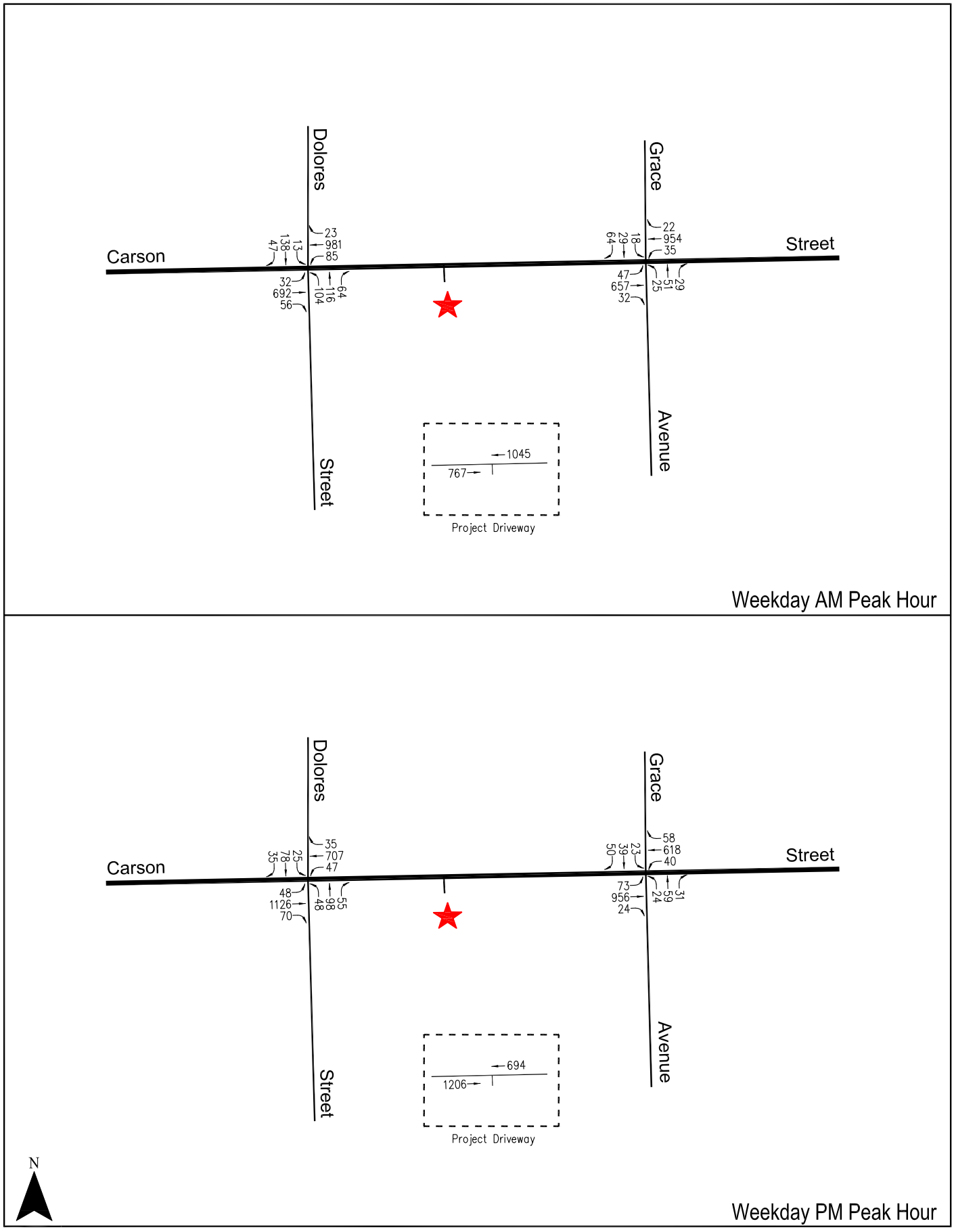
LINSCOTT LAW & GREENSPAN engineers

★ Project Site

Figure 4-1
Existing With Project Traffic Volumes

336 East Carson Residential Project



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Project Site

Figure 4-2
Future Year 2024 Without Project Traffic Volumes

336 East Carson Residential Project

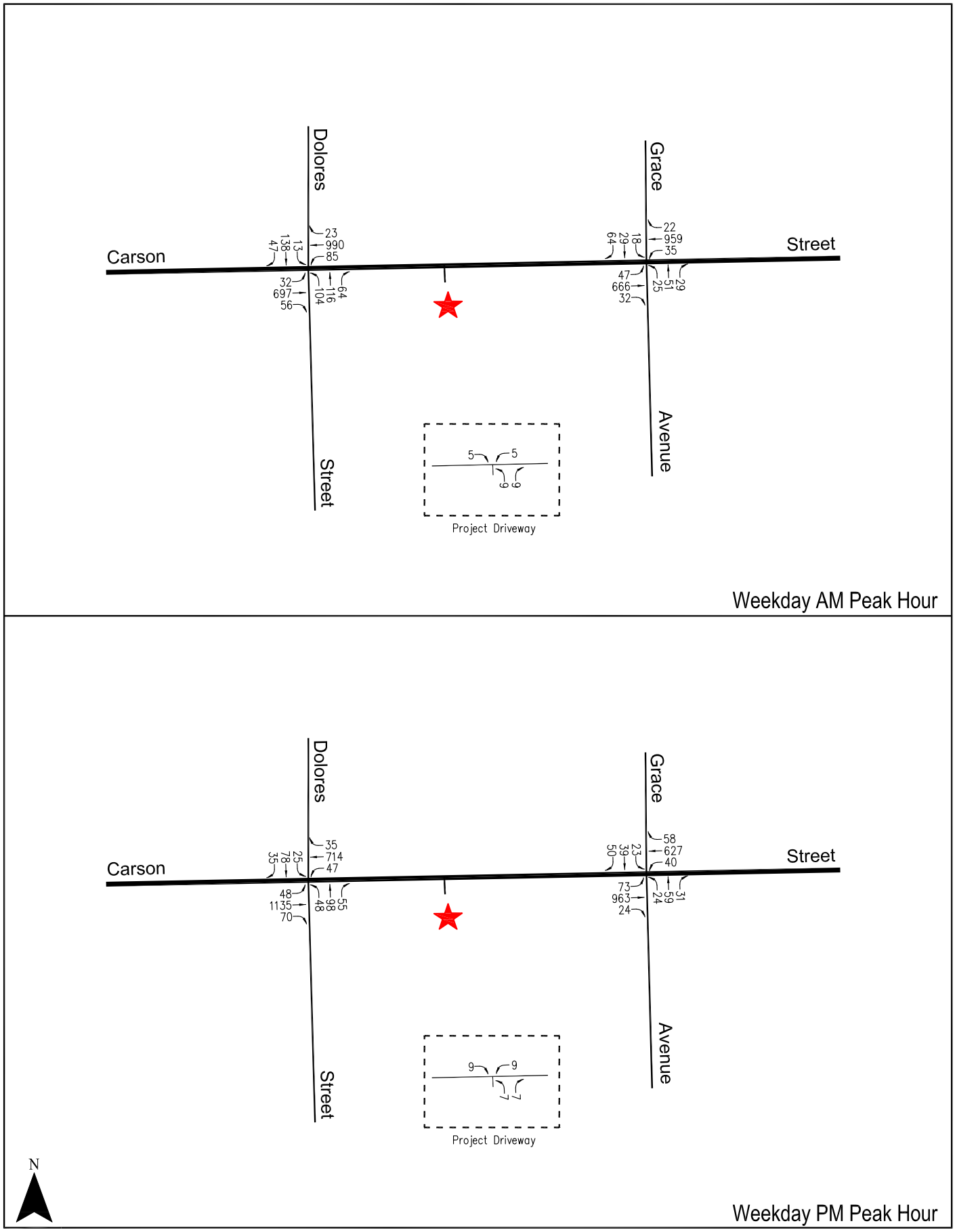

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Figure 4-3
Future Year 2024 With Project Traffic Volumes

336 East Carson Residential Project

5.0 SUMMARY AND CONCLUSIONS

- ***Project Description*** - The proposed project site is located at 336 East Carson Street in the City of Carson. The proposed project consists of the construction of 50 residential dwelling units, including 4 live/work units with 1,400 square feet of office space and community recreation space. The project build-out and occupancy year is anticipated by the year 2024.

- ***Project Site Access***– Vehicular access is planned to be provided via a single driveway on East Carson Street. The project driveway is planned to accommodate full access (i.e., left-turn and right-turn ingress and egress traffic movements).

- ***Project Parking –*** A total of 113 parking spaces is planned to be provided for the project. Six bicycle spaces are planned to be provided for the project.

- ***Project Trip Generation*** – The proposed project is expected to generate 26 vehicle trips (9 inbound trips and 17 outbound trips) during the weekday AM peak hour. During the weekday PM peak hour, the proposed project is expected to generate 31 vehicle trips (17 inbound trips and 14 outbound trips). Over a 24-hour period, the proposed project is forecast to generate 375 daily trip ends during a typical weekday (188 inbound trips and 188 outbound trips).

- ***Intersection Operational Analysis*** – Three intersections, including the proposed project driveway, were reviewed for consistency with the City of Carson's adopted Level of Service (LOS) standards. The study intersections were evaluated using the City-approved Highway Capacity Manual (HCM) methodology to determine the LOS under existing and future year 2024 cumulative without and with project conditions. Based on application of the City's threshold criteria, the project-related effects in the delay at the study intersections are not expected to exceed the City's threshold criteria.

APPENDIX A

SCOPING DOCUMENT

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Transportation
Parking

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Woodland Hills

MEMORANDUM

To:	Nick Lowe City of Carson Public Works	Date:	December 22, 2022
From:	Francesca S. Bravo Linscott, Law & Greenspan, Engineers	LLG Ref:	1-22-4464-1
Subject:	336 East Carson Street Residential Project – Transportation Assessment Scope of Work		

Linscott, Law & Greenspan, Engineers (LLG) is pleased to submit the following Transportation Impact Analysis Scope of Work for the 336 East Carson Street Residential Project for your review and approval.

Transportation Impact Analysis Scope of Work

A. Project Location: The project site is located at 336 East Carson Street situated along the on the south side of East Carson Street between Dolores Street and Ravenna Avenue. The existing project site currently contains two commercial buildings on-site forrmerly occupied by an auto repair business and will be removed to accommodate the proposed project. See attached ***Figure 1-1, Vicinity Map***.

B. Project Description: The proposed project consists of the construction of 50 residential dwelling units, including 4 live/work units with 1,400 square feet of office space. Vehicular access is planned to be provided via a single driveway on East Carson Street. The project build-out and occupancy year is anticipated by the year 2024. See attached ***Figure 2-2 – Site Plan***.

C. Project Study Area: The following three (3) study locations have been identified for intersection operational evaluation. These study locations will be reviewed as part of the site access studies required for the project (refer to Item H herein). See attached *Figure 1-1 –Vicinity Map.* The existing traffic control of each study location is presented below.

Study Locations

1. Dolores Street/Carson Street (Signalized)
2. Project Driveway/Carson Street (Unsignalized)
3. Grace Avenue/Carson Street (Signalized)

D. Project Traffic Generation: Traffic volumes to be generated by the proposed project were forecast for the weekday AM and PM peak hours, and over a 24-hour period. Trip generation rates provided in the Institute of Transportation Engineers' (ITE) *Trip Generation Manual*[1] were utilized to forecast project traffic generation for the proposed project. ITE Land Use Code 215 (Single-Family Attached Housing) trip generation rates were used to forecast the traffic volumes expected to be generated by the proposed residential units. ITE Land

[1] Institute of Transportation Engineers *Trip Generation Manual*, 11th Edition, Washington, D.C., 2021.

Use Code 710 (General Office Building) trip generation rates were used to forecast the traffic volumes expected to be generated by the office component in the live/work units (i.e., 1,400 square feet of office space).

The trip generation forecast for the proposed project is summarized in ***Table 2-1***. As presented in *Table 2-1*, the proposed project is expected to generate 26 vehicle trips (9 inbound trips and 17 outbound trips) during the weekday AM peak hour. During the weekday PM peak hour, the proposed project is expected to generate 31 vehicle trips (17 inbound trips and 14 outbound trips). Over a 24-hour period, the proposed project is forecast to generate 375 daily trip ends during a typical weekday (188 inbound trips and 188 outbound trips).

E. Project Trip Distribution Pattern: See attached ***Figure 7-1 – Project Trip Distribution***.

F. VMT Assessment: It is understood that the City of Carson has not formally adopted VMT methodology, screening criteria, or thresholds for VMT analysis of land use development projects within its jurisdiction. It is further understood that the City intends to generally follow the methodology set forth in the Los Angeles County Public Works Transportation Impact Guidelines (dated July 23, 2020).

Consistent with the recommendations provided by the Governor's Office of Planning and Research (OPR) in the "Technical Advisory on Evaluating Transportation Impacts in CEQA" (December 2018), the County's Guidelines recognize four screening criteria which may be applied to screen proposed projects out of detailed VMT analysis. Proposed projects are not required to satisfy all of the screening criteria in order to screen out of further VMT analysis; satisfaction of one criterion is sufficient for screening purposes. Projects, or project components, which are screened out of detailed VMT assessment based on these criteria are presumed to have less than significant transportation impacts.

<u>Proximity to Transit Screening Criteria</u>

CEQA Guidelines Section 15064.3(b)(1) states in part: "Generally, projects within one-half mile of either an existing major transit stop or a stop along an existing high-quality transit corridor should be presumed to cause a less than significant transportation impact." In keeping with the statutory presumption of less than significant impacts due to nearby high-quality transit, the County's Guidelines include a screening criterion based on proximity to transit. Consistent with the recommendations provided by OPR, the County also notes certain project-specific or location-specific information which might indicate that the presumption is not appropriate. If the answers to the following questions are all no, then the presumption is assumed appropriate and the project can be screened out of further analysis.

- Does the project have a Floor Area Ratio (FAR) less than 0.75?
- Does the project provide more parking than required by the County Code?

- Is the project inconsistent with the SCAG RTP/SCS?
- Does the project replace residential units set aside for lower income households with a smaller number of market-rate residential units?

The Avalon Boulevard/Carson Street intersection is currently served by two or more bus routes with a frequency of service interval of 15 minutes or less during the morning and afternoon peak commute periods, which qualifies as a major transit stop[2]. The proposed project site is located within a one-half mile distance of the Avalon Boulevard/Carson Street intersection, and therefore meets the statutory requirements to presume less than significant transportation impacts.

The proposed was further reviewed in order to determine if any project-specific or site-specific information indicates that the presumption would not be valid. A detailed review of each question is provided below.

- Does the project have a Floor Area Ratio (FAR) less than 0.75?

  No. Based on information provided by the project Applicant, the project will have an FAR of 1.02, which is greater than 0.75.

- Does the project provide more parking than required by the County Code?

  No. The project's parking supply was compared to the City of Carson's Municipal Code, as the County's Code is not applicable to the project site. Pursuant to Section 9162.21 of the Carson Municipal Code, condominiums/townhomes within a Mixed-Use District are required to provide two covered parking spaces for each unit with 1 or more bedrooms and 1 guest parking space for every 4 units. For the live/work units, two covered parking spaces for each unit under 2,500 square feet and 1 guest parking space for every 4 units are required. Therefore, the Municipal Code parking requirement for the proposed project is 113 parking spaces. The proposed project will provide a total of 113 parking spaces, therefore the project does provide more parking spaces or loading spaces than required by the City of Carson Municipal Code.

- Is the project inconsistent with the SCAG RTP/SCS?

  No. The project site is currently zoned as Mixed-Use-Carson Street (MU-CS). Per the Carson Municipal Code, this designation allows pedestrian-oriented, mixed-use (commercial/residential) development which may include market rate, affordable or senior housing and transit-oriented development. Since the project is consistent with the City's adopted zoning, and is not expected to result in substantial changes to the existing

[2] Public Resources Code Section 21064.3: ""Major transit stop" means a site containing any of the following: (a) An existing rail or bus rapid transit station. (b) A ferry terminal served by either a bus or rail transit service. (c) The intersection of two or more major bus routes with a frequency of service interval of 15 minutes or less during the morning and afternoon peak commute periods."

transportation network/infrastructure, it is assumed to be consistent with the land use and transportation network assumptions incorporated in the Southern California Council of Government's (SCAG) Regional Transportation Plan and Sustainable Communities Strategy (RTP/SCS).

- Does the project replace residential units set aside for lower income households with a smaller number of market-rate residential units?

  No. The project will result in the addition of residential housing units as compared to the two existing single-family homes and 2-unit multi-family building.

Based on this review, it is concluded that the answer to all of the four questions is no. According to the County's Guidelines, the project satisfies the proximity to transit screening criteria. Therefore, the project meets the condition to presume less than significant transportation impacts stated in CEQA Guidelines Section 15064.3 and therefore screens out of VMT analysis. A separate VMT assessment memorandum will be prepared for the project for review and approval.

G. Site Access Studies:

Level of Service calculations will be prepared for the study locations for the weekday AM and PM peak hour conditions for the following scenarios:

- Existing conditions
- Existing With Project Conditions
- Opening Year Without Project (Year 2024) conditions
- Opening Year With Project (Year 2024) conditions

Utilize City approved capacity analysis methodologies (i.e., Highway Capacity Manual method) for the Level of Service calculations. The results of these analyses will be reviewed in order to determine the project's effect on LOS at nearby intersections.

The City of Carson General Plan has established the minimum acceptable Level of Service (LOS) D for roadway segment and peak hour intersection operations. A traffic operations issue is identified if the addition of the traffic generated from the proposed project results in an intersection operating at acceptable LOS (i.e., LOS D or better) to operate at unacceptable LOS (i.e., LOS E or F).

LINSCOTT LAW & GREENSPAN engineers

Pending your review of the above information, we will proceed with the transportation impact analysis. Please feel free to contact us at 626.796.2322 if you have any questions, comments, or suggested revisions regarding the above. Thank you.

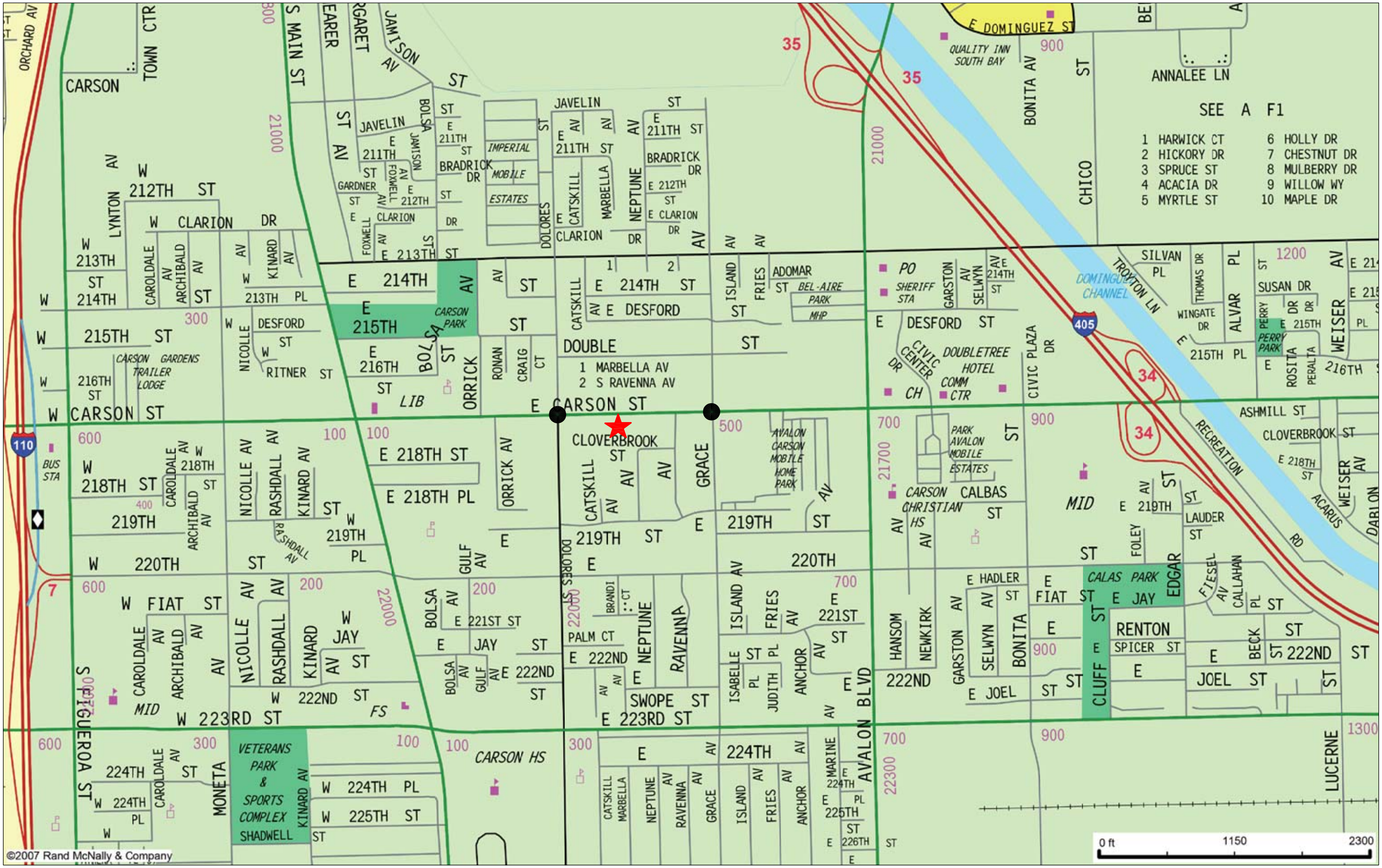
Approved by:

Nicholas Lowe _____ 1/30/2022

City of Carson Date

Attachments

c: File



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MAP SOURCE: RAND MCNALLY & COMPANY

★ Project Site

● Study Intersection

Linscott Law & Greenspan engineers

Figure 1-1
Vicinity Map

336 East Carson Townhomes Project

N

MAP SOURCE: WITHEE MALCOLM A BSB DESIGN STUDIO

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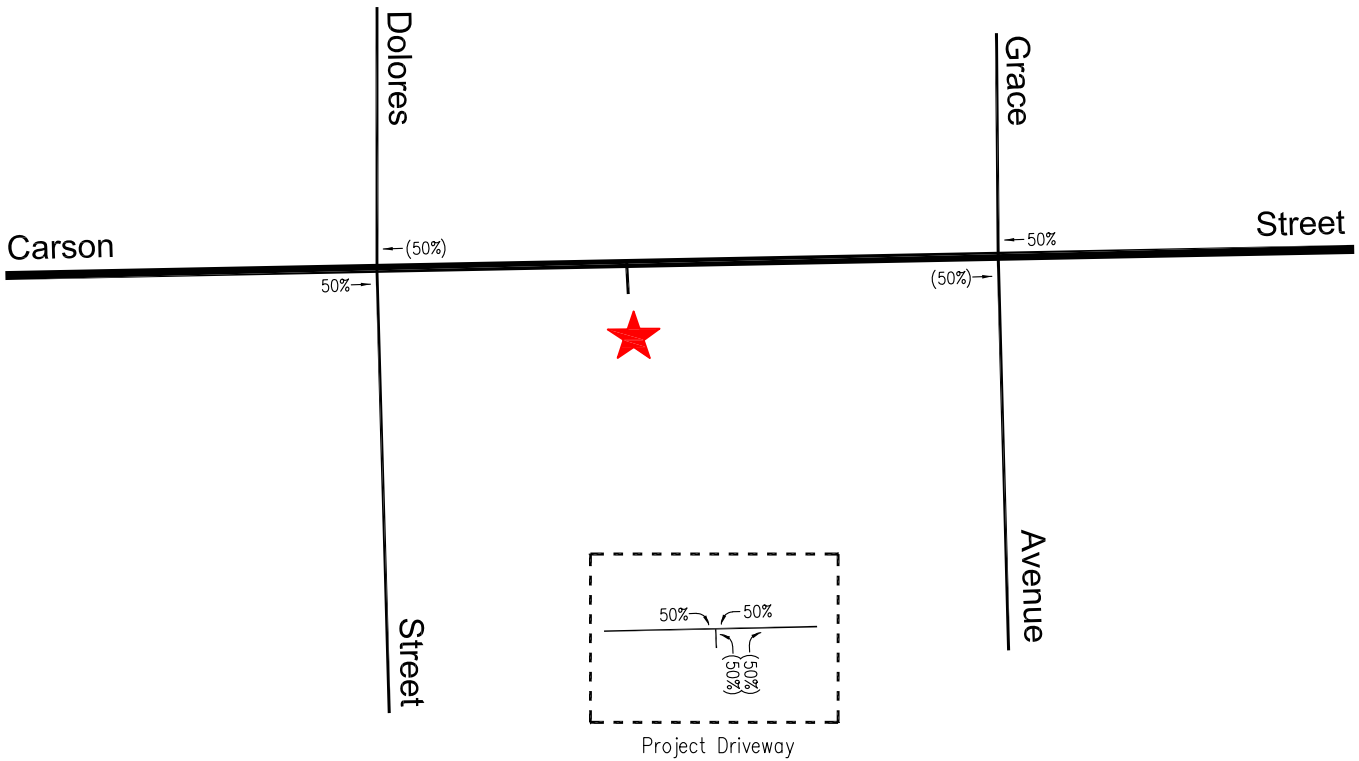
LINSCOTT LAW & GREENSPAN engineers

Figure 2-2
Conceptual Site Plan



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LINSCOTT LAW & GREENSPAN engineers

★ Project Site

XX = Inbound Percentage

(XX) = Outbound Percentage

Figure 7-1
Project Trip Distribution

336 East Carson Townhomes Project

Table 2-1
PROJECT TRIP GENERATION FORECAST

TRIP GENERATION RATES [1]									
	ITE			WEEKDAY AM PEAK HOUR			WEEKDAY PM PEAK HOUR		
ITE LAND USE CATEGORY	LAND USE CODE	VARIABLE	WEEKDAY DAILY	IN (%)	OUT (%)	TOTAL	IN (%)	OUT (%)	TOTAL
Single-Family Attached Housing [3]	215	Per Dwelling Unit	7.20	31%	69%	0.48	57%	43%	0.57
General Office [4]	710	Per 1,000 SF	10.84	88%	12%	1.52	17%	83%	1.44

PROJECT TRIP GENERATION FORECAST									
	ITE		DAILY	AM PEAK HOUR VOLUMES [2]			PM PEAK HOUR VOLUMES [2]		
LAND USE	LAND USE CODE	SIZE	TRIP ENDS [2] VOLUMES	IN	OUT	TOTAL	IN	OUT	TOTAL
Proposed Uses									
Single-Family Attached Housing [3]	215	50 DU	360	7	17	24	17	12	29
Live/Work Office [4]	710	1,400 GSF	15	2	0	2	0	2	2
Total Project Trips			***375***	***9***	***17***	***26***	***17***	***14***	***31***

[1] Source: ITE "Trip Generation Manual", 11th Edition, 2021.
[2] Trips are one-way traffic movements, entering or leaving.
[3] ITE Land Use Code 215 (Single-Family Attached Housing) trip generation average rates for General Urban/Suburban area.
[4] ITE Land Use Code 710 (General Office Building) trip generation average rates for General Urban/Suburban area.

APPENDIX B

TRAFFIC, PEDESTRIAN, AND BICYCLE COUNT DATA

CITY TRAFFIC COUNTERS

WWW.CTCOUNTERS.COM

File Name : DoloresSt_CarsonSt
Site Code : 00000000
Start Date : 5/18/2022
Page No : 1

Groups Printed- Vehicles

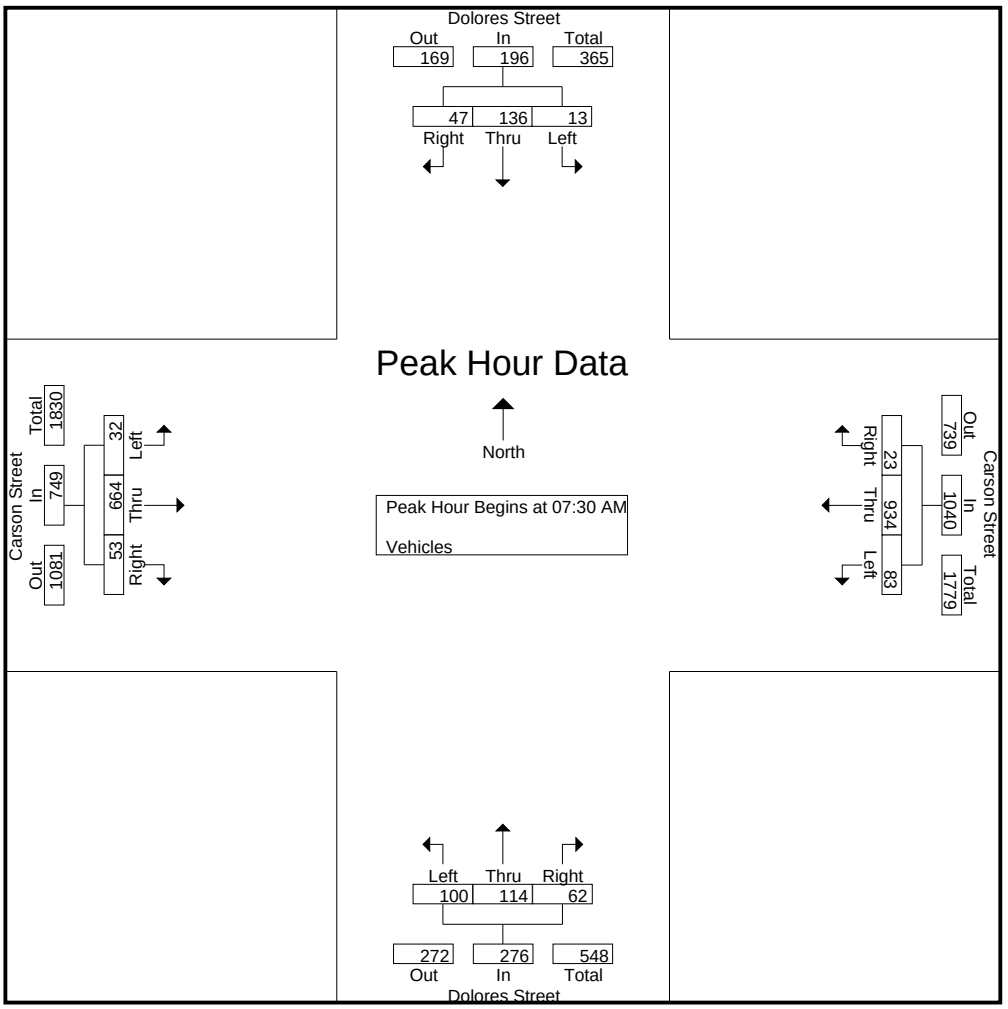
	Dolores Street Southbound			Carson Street Westbound			Dolores Street Northbound			Carson Street Eastbound			
Start Time	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Int. Total
07:00 AM	5	9	6	12	178	5	6	7	8	1	75	8	320
07:15 AM	5	10	6	7	248	2	12	8	9	6	80	5	398
07:30 AM	2	21	11	16	249	3	16	12	11	5	142	9	497
07:45 AM	3	32	15	25	228	6	18	35	15	4	172	13	566
Total	15	72	38	60	903	16	52	62	43	16	469	35	1781
08:00 AM	6	45	13	24	233	5	38	28	21	7	176	22	618
08:15 AM	2	38	8	18	224	9	28	39	15	16	174	9	580
08:30 AM	5	17	5	9	177	3	13	25	13	8	125	7	407
08:45 AM	7	7	4	5	193	6	12	15	13	11	130	5	408
Total	20	107	30	56	827	23	91	107	62	42	605	43	2013
04:00 PM	6	21	10	16	146	11	10	23	12	11	259	18	543
04:15 PM	5	19	7	17	161	10	8	29	17	9	242	18	542
04:30 PM	4	17	5	7	144	6	9	28	17	15	285	15	552
04:45 PM	4	22	10	16	169	14	12	20	10	15	237	20	549
Total	19	79	32	56	620	41	39	100	56	50	1023	71	2186
05:00 PM	10	24	10	11	188	9	13	26	14	8	285	16	614
05:15 PM	7	13	10	13	170	6	13	22	12	10	275	15	566
05:30 PM	3	26	13	15	147	6	18	21	18	9	259	14	549
05:45 PM	12	23	4	7	149	10	13	20	8	10	219	12	487
Total	32	86	37	46	654	31	57	89	52	37	1038	57	2216
Grand Total	86	344	137	218	3004	111	239	358	213	145	3135	206	8196
Apprch %	15.2	60.7	24.2	6.5	90.1	3.3	29.5	44.2	26.3	4.2	89.9	5.9	
Total %	1	4.2	1.7	2.7	36.7	1.4	2.9	4.4	2.6	1.8	38.3	2.5	

CITY TRAFFIC COUNTERS

WWW.CTCOUNTERS.COM

File Name : DoloresSt_CarsonSt
Site Code : 00000000
Start Date : 5/18/2022
Page No : 2

	Dolores Street Southbound				Carson Street Westbound				Dolores Street Northbound				Carson Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	2	21	11	34	16	**249**	3	**268**	16	12	11	39	5	142	9	156	497
07:45 AM	3	32	**15**	50	**25**	228	6	259	18	35	15	68	4	172	13	189	566
08:00 AM	**6**	**45**	13	**64**	24	233	5	262	**38**	28	**21**	**87**	7	**176**	**22**	**205**	**618**
08:15 AM	2	38	8	48	18	224	**9**	251	28	**39**	15	82	**16**	174	9	199	580
Total Volume	13	136	47	196	83	934	23	1040	100	114	62	276	32	664	53	749	2261
% App. Total	6.6	69.4	24		8	89.8	2.2		36.2	41.3	22.5		4.3	88.7	7.1		
PHF	.542	.756	.783	.766	.830	.938	.639	.970	.658	.731	.738	.793	.500	.943	.602	.913	.915

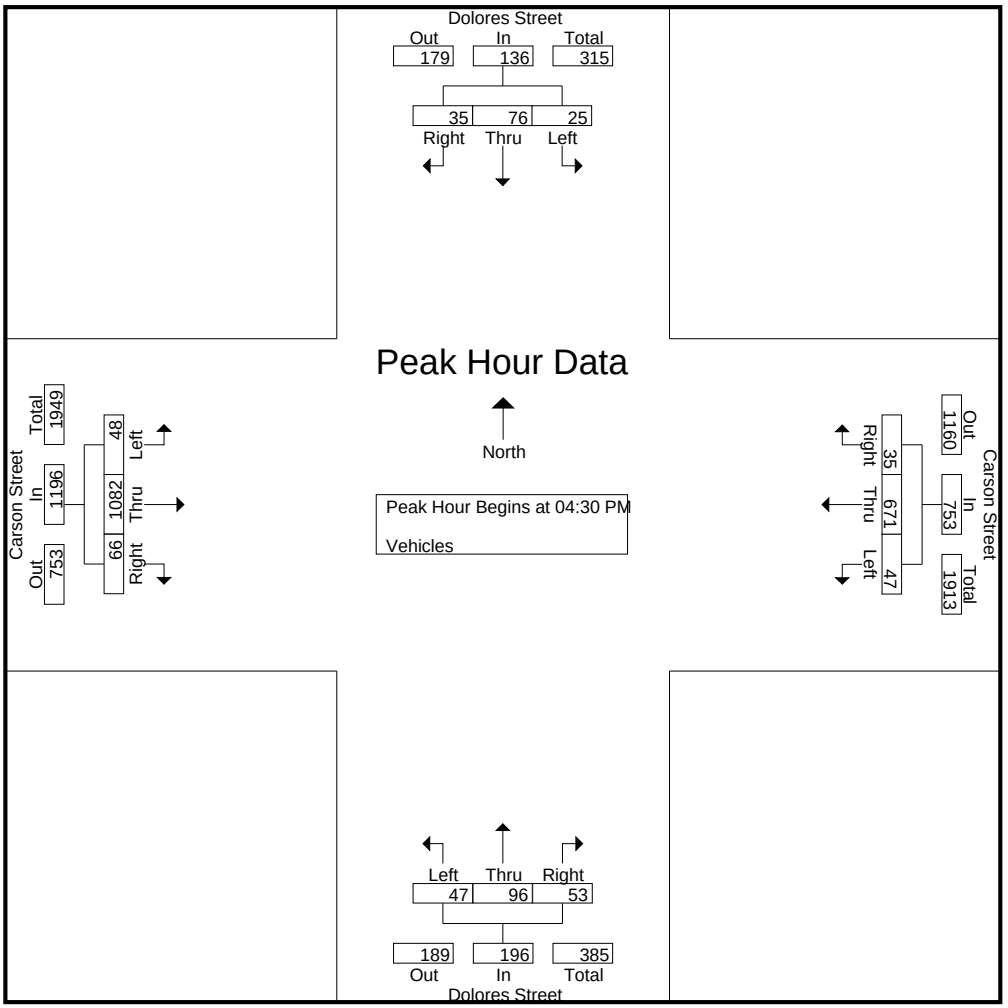


CITY TRAFFIC COUNTERS

WWW.CTCOUNTERS.COM

File Name : DoloresSt_CarsonSt
Site Code : 00000000
Start Date : 5/18/2022
Page No : 3

	Dolores Street Southbound				Carson Street Westbound				Dolores Street Northbound				Carson Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:30 PM																	
04:30 PM	4	17	5	26	7	144	6	157	9	**28**	**17**	**54**	**15**	**285**	15	**315**	552
04:45 PM	4	22	**10**	36	**16**	169	**14**	199	12	20	10	42	15	237	**20**	272	549
05:00 PM	**10**	**24**	10	**44**	11	**188**	9	**208**	**13**	26	14	53	8	285	16	309	**614**
05:15 PM	7	13	10	30	13	170	6	189	13	22	12	47	10	275	15	300	566
Total Volume	25	76	35	136	47	671	35	753	47	96	53	196	48	1082	66	1196	2281
% App. Total	18.4	55.9	25.7		6.2	89.1	4.6		24	49	27		4	90.5	5.5		
PHF	.625	.792	.875	.773	.734	.892	.625	.905	.904	.857	.779	.907	.800	.949	.825	.949	.929



CITY TRAFFIC COUNTERS

WWW.CTCOUNTERS.COM

File Name : DoloresSt_CarsonSt_BP
Site Code : 00000000
Start Date : 5/18/2022
Page No : 1

Groups Printed- Pedestrians and Bikes

	Dolores Street South Leg		Carson Street West Leg		Dolores Street North Leg		Carson Street East Leg		
Start Time	Bikes	Peds	Bikes	Peds	Bikes	Peds	Bikes	Peds	Int. Total
07:00 AM	1	2	1	3	0	3	0	1	11
07:15 AM	0	2	0	1	0	2	0	0	5
07:30 AM	0	3	0	1	0	1	0	0	5
07:45 AM	1	4	0	4	0	7	0	4	20
Total	2	11	1	9	0	13	0	5	41
08:00 AM	2	3	2	3	2	2	0	0	14
08:15 AM	0	2	0	0	0	2	0	0	4
08:30 AM	2	2	0	1	0	4	0	0	9
08:45 AM	1	2	0	1	0	1	0	0	5
Total	5	9	2	5	2	9	0	0	32
04:00 PM	1	3	1	10	1	8	0	3	27
04:15 PM	0	3	1	3	1	2	1	3	14
04:30 PM	2	3	0	2	0	1	0	0	8
04:45 PM	1	5	0	1	0	2	1	1	11
Total	4	14	2	16	2	13	2	7	60
05:00 PM	2	5	0	2	0	1	1	3	14
05:15 PM	2	3	1	0	1	2	1	0	10
05:30 PM	2	3	1	3	0	2	1	0	12
05:45 PM	0	4	0	2	0	1	0	3	10
Total	6	15	2	7	1	6	3	6	46
Grand Total	17	49	7	37	5	41	5	18	179
Apprch %	25.8	74.2	15.9	84.1	10.9	89.1	21.7	78.3	
Total %	9.5	27.4	3.9	20.7	2.8	22.9	2.8	10.1	

CITY TRAFFIC COUNTERS

WWW.CTCOUNTERS.COM

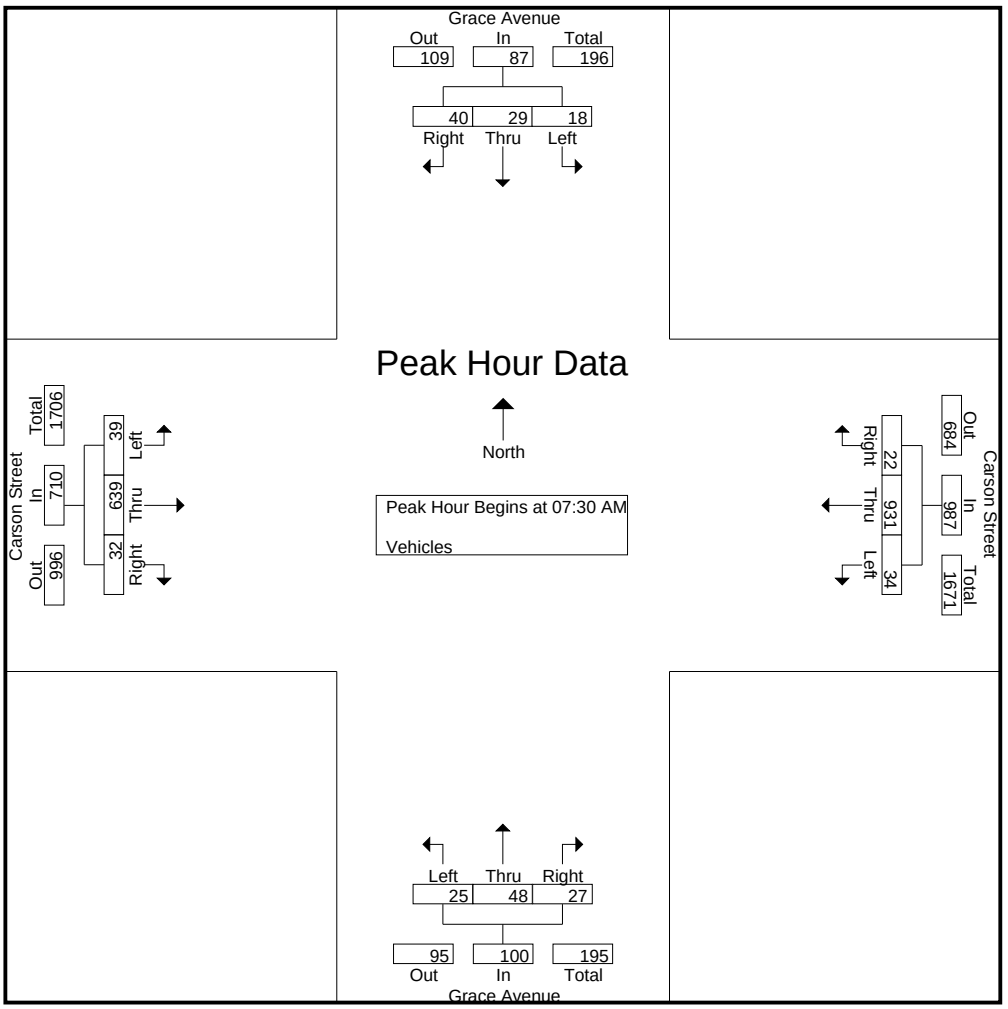
File Name : GraceAve_CarsonSt
Site Code : 00000000
Start Date : 5/18/2022
Page No : 1

Groups Printed- Vehicles

	Grace Avenue Southbound			Carson Street Westbound			Grace Avenue Northbound			Carson Street Eastbound			
Start Time	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Int. Total
07:00 AM	3	4	8	2	189	2	4	4	4	2	80	3	305
07:15 AM	1	5	7	4	221	4	4	3	8	5	95	3	360
07:30 AM	5	4	9	8	259	10	5	11	5	11	142	6	475
07:45 AM	5	9	12	9	237	3	11	13	8	15	153	9	484
Total	14	22	36	23	906	19	24	31	25	33	470	21	1624
08:00 AM	4	9	11	12	237	3	5	12	9	6	173	13	494
08:15 AM	4	7	8	5	198	6	4	12	5	7	171	4	431
08:30 AM	1	3	7	3	155	3	4	9	9	9	110	5	318
08:45 AM	1	1	5	3	176	11	6	6	3	5	117	6	340
Total	10	20	31	23	766	23	19	39	26	27	571	28	1583
04:00 PM	10	8	9	13	133	11	4	16	11	13	225	10	463
04:15 PM	10	5	13	4	148	12	4	12	5	18	220	3	454
04:30 PM	9	6	12	3	114	9	3	12	7	8	247	5	435
04:45 PM	5	11	13	14	151	17	9	15	14	18	196	5	468
Total	34	30	47	34	546	49	20	55	37	57	888	23	1820
05:00 PM	6	10	6	14	163	17	2	13	6	19	252	8	516
05:15 PM	6	4	7	6	158	11	2	10	5	8	245	6	468
05:30 PM	6	14	9	4	127	11	11	13	5	8	241	5	454
05:45 PM	3	1	7	16	123	12	2	8	8	16	209	3	408
Total	21	29	29	40	571	51	17	44	24	51	947	22	1846
Grand Total	79	101	143	120	2789	142	80	169	112	168	2876	94	6873
Apprch %	24.5	31.3	44.3	3.9	91.4	4.7	22.2	46.8	31	5.4	91.7	3	
Total %	1.1	1.5	2.1	1.7	40.6	2.1	1.2	2.5	1.6	2.4	41.8	1.4	

File Name : GraceAve_CarsonSt
Site Code : 00000000
Start Date : 5/18/2022
Page No : 2

	Grace Avenue Southbound				Carson Street Westbound				Grace Avenue Northbound				Carson Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	**5**	4	9	18	8	**259**	**10**	**277**	5	11	5	21	11	142	6	159	475
07:45 AM	5	**9**	**12**	**26**	9	237	3	249	**11**	**13**	8	**32**	**15**	153	9	177	484
08:00 AM	4	9	11	24	**12**	237	3	252	5	12	**9**	26	6	**173**	**13**	**192**	**494**
08:15 AM	4	7	8	19	5	198	6	209	4	12	5	21	7	171	4	182	431
Total Volume	18	29	40	87	34	931	22	987	25	48	27	100	39	639	32	710	1884
% App. Total	20.7	33.3	46		3.4	94.3	2.2		25	48	27		5.5	90	4.5		
PHF	.900	.806	.833	.837	.708	.899	.550	.891	.568	.923	.750	.781	.650	.923	.615	.924	.953



CITY TRAFFIC COUNTERS

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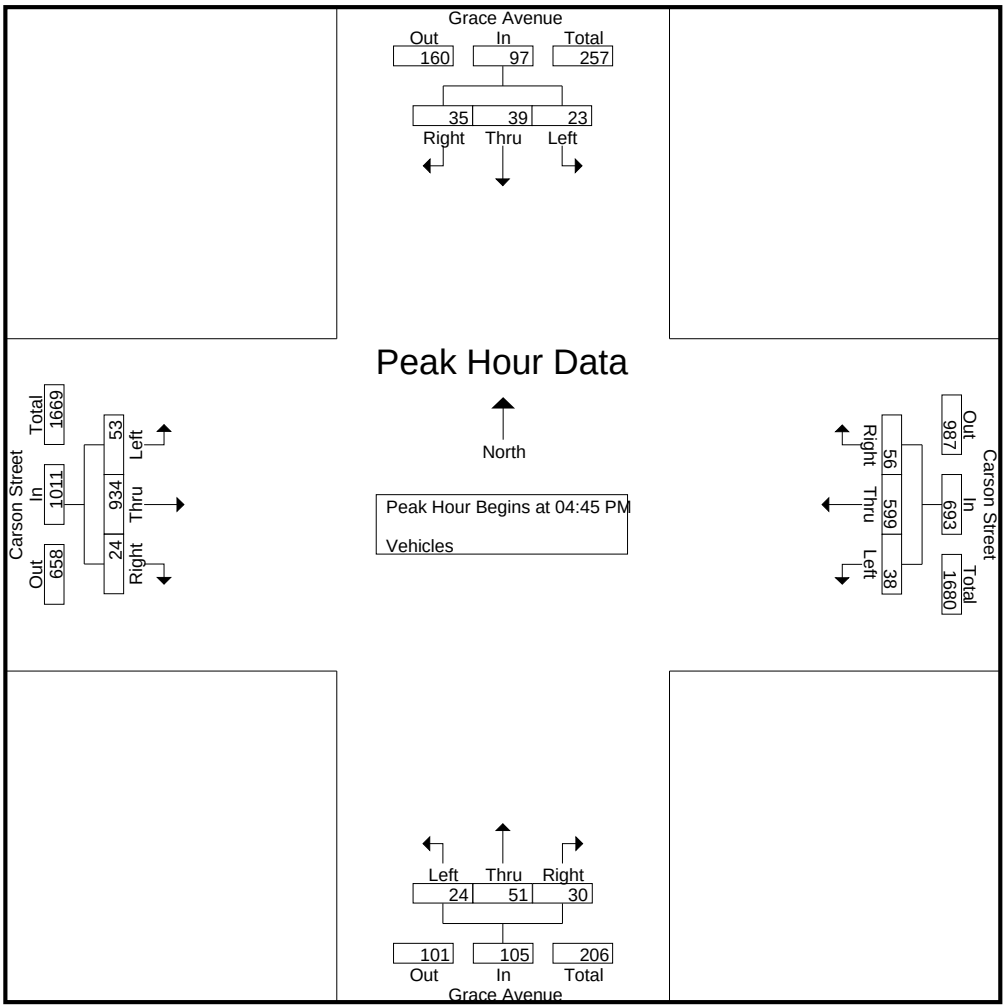
File Name : GraceAve_CarsonSt
Site Code : 00000000
Start Date : 5/18/2022
Page No : 3

	Grace Avenue Southbound				Carson Street Westbound				Grace Avenue Northbound				Carson Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	5	11	**13**	**29**	**14**	151	**17**	182	9	**15**	**14**	**38**	18	196	5	219	468
05:00 PM	**6**	10	6	22	14	**163**	17	**194**	2	13	6	21	**19**	**252**	**8**	**279**	**516**
05:15 PM	6	4	7	17	6	158	11	175	2	10	5	17	8	245	6	259	468
05:30 PM	6	**14**	9	29	4	127	11	142	**11**	13	5	29	8	241	5	254	454
Total Volume	23	39	35	97	38	599	56	693	24	51	30	105	53	934	24	1011	1906
% App. Total	23.7	40.2	36.1		5.5	86.4	8.1		22.9	48.6	28.6		5.2	92.4	2.4		
PHF	.958	.696	.673	.836	.679	.919	.824	.893	.545	.850	.536	.691	.697	.927	.750	.906	.923



CITY TRAFFIC COUNTERS

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File Name : GraceAve_CarsonSt_BP
Site Code : 00000000
Start Date : 5/18/2022
Page No : 1

Groups Printed- Pedestrians and Bikes

	Grace Avenue South Leg		Carson Street West Leg		Grace Avenue North Leg		Carson Street East Leg		
Start Time	Bikes	Peds	Bikes	Peds	Bikes	Peds	Bikes	Peds	Int. Total
07:00 AM	4	1	0	2	1	0	0	0	8
07:15 AM	0	0	0	1	1	0	0	0	2
07:30 AM	0	3	0	0	0	0	0	0	3
07:45 AM	1	3	0	2	0	1	0	1	8
Total	5	7	0	5	2	1	0	1	21
08:00 AM	0	1	0	0	1	1	0	5	8
08:15 AM	0	1	0	3	0	0	1	0	5
08:30 AM	0	1	0	0	0	4	0	1	6
08:45 AM	0	2	0	3	1	0	0	0	6
Total	0	5	0	6	2	5	1	6	25
04:00 PM	0	2	0	2	1	2	0	3	10
04:15 PM	0	0	0	0	0	3	1	3	7
04:30 PM	0	0	0	1	0	0	0	0	1
04:45 PM	0	0	0	0	0	1	0	2	3
Total	0	2	0	3	1	6	1	8	21
05:00 PM	1	0	0	1	1	0	0	0	3
05:15 PM	0	3	0	2	0	4	0	1	10
05:30 PM	0	0	0	1	0	0	0	0	1
05:45 PM	1	1	1	1	0	2	0	2	8
Total	2	4	1	5	1	6	0	3	22
Grand Total	7	18	1	19	6	18	2	18	89
Apprch %	28	72	5	95	25	75	10	90	
Total %	7.9	20.2	1.1	21.3	6.7	20.2	2.2	20.2	

APPENDIX C

HCM AND LEVELS OF SERVICE EXPLANATION
HCM DATA WORKSHEETS – WEEKDAY AM AND PM PEAK HOURS

LEVEL OF SERVICE FOR SIGNALIZED INTERSECTIONS

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

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

Level of Service Criteria for Signalized Intersections

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

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

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

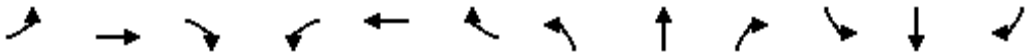
LOS B describes operations with control delay greater than 10 and up to 20 seconds per vehicle. This level generally occurs with good progression, short cycle lengths, or both. More vehicles stop than with LOS A, causing higher levels of delay.

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

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

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

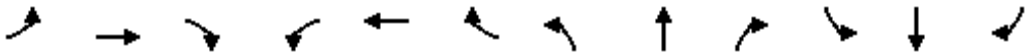
LOS F describes operations with control delay in excess of 80 seconds per vehicle. This level, considered to be unacceptable to most drivers, often occurs with oversaturation, that is, when arrival flow rates exceed the capacity of the lane groups. It may also occur at high *v/c* ratios with many individual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



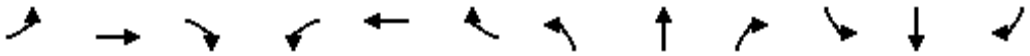
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	32	671	54	84	943	23	101	115	63	13	137	47
Future Volume (veh/h)	32	671	54	84	943	23	101	115	63	13	137	47
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	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	35	729	59	91	1025	25	110	125	68	14	149	51
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	419	2225	180	455	2369	58	151	150	75	45	311	101
Arrive On Green	0.67	0.67	0.67	1.00	1.00	1.00	0.24	0.24	0.24	0.24	0.24	0.24
Sat Flow, veh/h	537	3329	269	687	3545	86	460	625	314	55	1294	422
Grp Volume(v), veh/h	35	389	399	91	514	536	303	0	0	214	0	0
Grp Sat Flow(s),veh/h/ln	537	1777	1822	687	1777	1855	1398	0	0	1771	0	0
Q Serve(g_s), s	2.8	11.2	11.2	2.8	0.0	0.0	13.2	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	2.8	11.2	11.2	13.9	0.0	0.0	25.5	0.0	0.0	12.4	0.0	0.0
Prop In Lane	1.00		0.15	1.00		0.05	0.36		0.22	0.07		0.24
Lane Grp Cap(c), veh/h	419	1188	1218	455	1188	1240	376	0	0	457	0	0
V/C Ratio(X)	0.08	0.33	0.33	0.20	0.43	0.43	0.80	0.00	0.00	0.47	0.00	0.00
Avail Cap(c_a), veh/h	419	1188	1218	455	1188	1240	479	0	0	575	0	0
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	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	7.1	8.4	8.4	1.0	0.0	0.0	44.7	0.0	0.0	39.4	0.0	0.0
Incr Delay (d2), s/veh	0.4	0.7	0.7	1.0	1.2	1.1	7.7	0.0	0.0	0.7	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.6	7.6	7.7	0.2	0.7	0.7	14.6	0.0	0.0	9.4	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	7.4	9.2	9.2	2.0	1.2	1.1	52.4	0.0	0.0	40.1	0.0	0.0
LnGrp LOS	A	A	A	A	A	A	D	A	A	D	A	A
Approach Vol, veh/h		823			1141			303			214	
Approach Delay, s/veh		9.1			1.2			52.4			40.1	
Approach LOS		A			A			D			D	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		86.2		33.8		86.2		33.8				
Change Period (Y+Rc), s		6.0		5.0		6.0		5.0				
Max Green Setting (Gmax), s		72.0		37.0		72.0		37.0				
Max Q Clear Time (g_c+I1), s		13.2		27.5		15.9		14.4				
Green Ext Time (p_c), s		9.5		1.3		15.3		1.2				

Intersection Summary												
HCM 6th Ctrl Delay			13.4									
HCM 6th LOS			B									



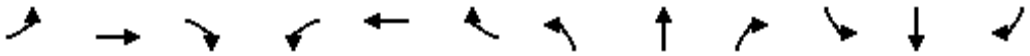
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	48	1093	67	47	678	35	47	97	54	25	77	35
Future Volume (veh/h)	48	1093	67	47	678	35	47	97	54	25	77	35
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		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	52	1188	73	51	737	38	51	105	59	27	84	38
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	586	2570	158	335	2598	134	85	135	69	64	159	64
Arrive On Green	0.76	0.76	0.76	1.00	1.00	1.00	0.15	0.15	0.15	0.15	0.15	0.15
Sat Flow, veh/h	696	3401	209	440	3438	177	311	888	453	190	1042	422
Grp Volume(v), veh/h	52	620	641	51	381	394	215	0	0	149	0	0
Grp Sat Flow(s),veh/h/ln	696	1777	1833	440	1777	1838	1651	0	0	1655	0	0
Q Serve(g_s), s	2.4	15.7	15.8	2.9	0.0	0.0	5.4	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	2.4	15.7	15.8	18.6	0.0	0.0	15.1	0.0	0.0	9.7	0.0	0.0
Prop In Lane	1.00		0.11	1.00		0.10	0.24		0.27	0.18		0.26
Lane Grp Cap(c), veh/h	586	1343	1385	335	1343	1389	289	0	0	288	0	0
V/C Ratio(X)	0.09	0.46	0.46	0.15	0.28	0.28	0.74	0.00	0.00	0.52	0.00	0.00
Avail Cap(c_a), veh/h	586	1343	1385	335	1343	1389	540	0	0	543	0	0
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	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	3.9	5.5	5.5	1.6	0.0	0.0	49.4	0.0	0.0	47.1	0.0	0.0
Incr Delay (d2), s/veh	0.3	1.1	1.1	1.0	0.5	0.5	3.8	0.0	0.0	1.4	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.6	9.0	9.2	0.3	0.4	0.4	10.8	0.0	0.0	7.6	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	4.2	6.6	6.6	2.6	0.5	0.5	53.1	0.0	0.0	48.5	0.0	0.0
LnGrp LOS	A	A	A	A	A	A	D	A	A	D	A	A
Approach Vol, veh/h		1313			826			215			149	
Approach Delay, s/veh		6.5			0.6			53.1			48.5	
Approach LOS		A			A			D			D	
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		96.7		23.3		96.7		23.3				
Change Period (Y+Rc), s		6.0		5.0		6.0		5.0				
Max Green Setting (Gmax), s		72.0		37.0		72.0		37.0				
Max Q Clear Time (g_c+I1), s		17.8		17.1		20.6		11.7				
Green Ext Time (p_c), s		19.3		1.2		9.9		0.8				
Intersection Summary												
HCM 6th Ctrl Delay			11.1									
HCM 6th LOS			B									



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	32	676	54	84	952	23	101	115	63	13	137	47
Future Volume (veh/h)	32	676	54	84	952	23	101	115	63	13	137	47
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	35	735	59	91	1035	25	110	125	68	14	149	51
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	416	2227	179	453	2370	57	151	150	75	45	311	101
Arrive On Green	0.67	0.67	0.67	1.00	1.00	1.00	0.24	0.24	0.24	0.24	0.24	0.24
Sat Flow, veh/h	532	3332	267	684	3546	86	460	625	314	55	1294	422
Grp Volume(v), veh/h	35	392	402	91	519	541	303	0	0	214	0	0
Grp Sat Flow(s),veh/h/ln	532	1777	1822	684	1777	1855	1398	0	0	1771	0	0
Q Serve(g_s), s	2.8	11.3	11.3	2.8	0.0	0.0	13.2	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	2.8	11.3	11.3	14.1	0.0	0.0	25.5	0.0	0.0	12.4	0.0	0.0
Prop In Lane	1.00		0.15	1.00		0.05	0.36		0.22	0.07		0.24
Lane Grp Cap(c), veh/h	416	1188	1218	453	1188	1240	376	0	0	457	0	0
V/C Ratio(X)	0.08	0.33	0.33	0.20	0.44	0.44	0.80	0.00	0.00	0.47	0.00	0.00
Avail Cap(c_a), veh/h	416	1188	1218	453	1188	1240	479	0	0	575	0	0
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	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	7.1	8.5	8.5	1.0	0.0	0.0	44.7	0.0	0.0	39.4	0.0	0.0
Incr Delay (d2), s/veh	0.4	0.7	0.7	1.0	1.2	1.1	7.7	0.0	0.0	0.7	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.6	7.6	7.8	0.2	0.7	0.7	14.6	0.0	0.0	9.4	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	7.5	9.2	9.2	2.0	1.2	1.1	52.4	0.0	0.0	40.1	0.0	0.0
LnGrp LOS	A	A	A	A	A	A	D	A	A	D	A	A
Approach Vol, veh/h		829			1151			303			214	
Approach Delay, s/veh		9.1			1.2			52.4			40.1	
Approach LOS		A			A			D			D	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		86.2		33.8		86.2		33.8				
Change Period (Y+Rc), s		6.0		5.0		6.0		5.0				
Max Green Setting (Gmax), s		72.0		37.0		72.0		37.0				
Max Q Clear Time (g_c+I1), s		13.3		27.5		16.1		14.4				
Green Ext Time (p_c), s		9.6		1.3		15.5		1.2				

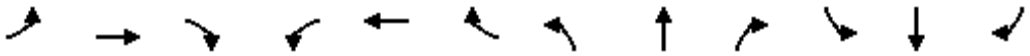
Intersection Summary												
HCM 6th Ctrl Delay			13.4									
HCM 6th LOS			B									



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	48	1102	67	47	685	35	47	97	54	25	77	35
Future Volume (veh/h)	48	1102	67	47	685	35	47	97	54	25	77	35
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	52	1198	73	51	745	38	51	105	59	27	84	38
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	582	2571	157	331	2600	133	85	135	69	64	159	64
Arrive On Green	0.76	0.76	0.76	1.00	1.00	1.00	0.15	0.15	0.15	0.15	0.15	0.15
Sat Flow, veh/h	691	3403	207	436	3440	175	311	888	453	190	1042	422
Grp Volume(v), veh/h	52	625	646	51	385	398	215	0	0	149	0	0
Grp Sat Flow(s),veh/h/ln	691	1777	1833	436	1777	1839	1651	0	0	1655	0	0
Q Serve(g_s), s	2.4	15.9	16.0	2.9	0.0	0.0	5.4	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	2.4	15.9	16.0	18.9	0.0	0.0	15.1	0.0	0.0	9.7	0.0	0.0
Prop In Lane	1.00		0.11	1.00		0.10	0.24		0.27	0.18		0.26
Lane Grp Cap(c), veh/h	582	1343	1385	331	1343	1390	289	0	0	288	0	0
V/C Ratio(X)	0.09	0.47	0.47	0.15	0.29	0.29	0.74	0.00	0.00	0.52	0.00	0.00
Avail Cap(c_a), veh/h	582	1343	1385	331	1343	1390	540	0	0	543	0	0
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	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	3.9	5.5	5.5	1.7	0.0	0.0	49.4	0.0	0.0	47.1	0.0	0.0
Incr Delay (d2), s/veh	0.3	1.2	1.1	1.0	0.5	0.5	3.8	0.0	0.0	1.4	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.6	9.1	9.3	0.3	0.4	0.4	10.8	0.0	0.0	7.6	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	4.2	6.7	6.7	2.6	0.5	0.5	53.1	0.0	0.0	48.5	0.0	0.0
LnGrp LOS	A	A	A	A	A	A	D	A	A	D	A	A
Approach Vol, veh/h		1323			834			215			149	
Approach Delay, s/veh		6.6			0.7			53.1			48.5	
Approach LOS		A			A			D			D	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		96.7		23.3		96.7		23.3				
Change Period (Y+Rc), s		6.0		5.0		6.0		5.0				
Max Green Setting (Gmax), s		72.0		37.0		72.0		37.0				
Max Q Clear Time (g_c+I1), s		18.0		17.1		20.9		11.7				
Green Ext Time (p_c), s		19.5		1.2		10.0		0.8				

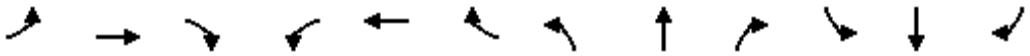
Intersection Summary												
HCM 6th Ctrl Delay			11.1									
HCM 6th LOS			B									



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	32	692	56	85	981	23	104	116	64	13	138	47
Future Volume (veh/h)	32	692	56	85	981	23	104	116	64	13	138	47
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	35	752	61	92	1066	25	113	126	70	14	150	51
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	403	2210	179	440	2356	55	154	150	77	45	317	103
Arrive On Green	0.66	0.66	0.66	1.00	1.00	1.00	0.24	0.24	0.24	0.24	0.24	0.24
Sat Flow, veh/h	517	3329	270	671	3549	83	464	615	316	55	1296	420
Grp Volume(v), veh/h	35	401	412	92	534	557	309	0	0	215	0	0
Grp Sat Flow(s),veh/h/ln	517	1777	1822	671	1777	1855	1395	0	0	1771	0	0
Q Serve(g_s), s	2.9	11.8	11.8	3.1	0.0	0.0	13.7	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	2.9	11.8	11.8	14.8	0.0	0.0	26.1	0.0	0.0	12.3	0.0	0.0
Prop In Lane	1.00		0.15	1.00		0.04	0.37		0.23	0.07		0.24
Lane Grp Cap(c), veh/h	403	1179	1209	440	1179	1232	382	0	0	465	0	0
V/C Ratio(X)	0.09	0.34	0.34	0.21	0.45	0.45	0.81	0.00	0.00	0.46	0.00	0.00
Avail Cap(c_a), veh/h	403	1179	1209	440	1179	1232	477	0	0	576	0	0
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	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	7.3	8.8	8.8	1.1	0.0	0.0	44.4	0.0	0.0	38.9	0.0	0.0
Incr Delay (d2), s/veh	0.4	0.8	0.8	1.1	1.3	1.2	8.1	0.0	0.0	0.7	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.6	7.9	8.1	0.3	0.7	0.7	14.9	0.0	0.0	9.4	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	7.7	9.5	9.5	2.2	1.3	1.2	52.6	0.0	0.0	39.6	0.0	0.0
LnGrp LOS	A	A	A	A	A	A	D	A	A	D	A	A
Approach Vol, veh/h		848			1183			309			215	
Approach Delay, s/veh		9.5			1.3			52.6			39.6	
Approach LOS		A			A			D			D	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		85.7		34.3		85.7		34.3				
Change Period (Y+Rc), s		6.0		5.0		6.0		5.0				
Max Green Setting (Gmax), s		72.0		37.0		72.0		37.0				
Max Q Clear Time (g_c+I1), s		13.8		28.1		16.8		14.3				
Green Ext Time (p_c), s		10.0		1.3		16.2		1.2				

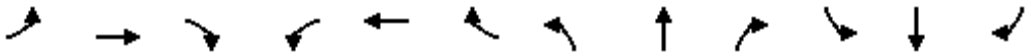
Intersection Summary												
HCM 6th Ctrl Delay			13.4									
HCM 6th LOS			B									



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	48	1126	70	47	707	35	48	98	55	25	78	35
Future Volume (veh/h)	48	1126	70	47	707	35	48	98	55	25	78	35
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	52	1224	76	51	768	38	52	107	60	27	85	38
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	569	2559	159	320	2595	128	86	138	70	65	162	65
Arrive On Green	0.75	0.75	0.75	1.00	1.00	1.00	0.16	0.16	0.16	0.16	0.16	0.16
Sat Flow, veh/h	676	3398	211	424	3446	170	312	886	452	188	1046	419
Grp Volume(v), veh/h	52	639	661	51	396	410	219	0	0	150	0	0
Grp Sat Flow(s),veh/h/ln	676	1777	1832	424	1777	1840	1650	0	0	1653	0	0
Q Serve(g_s), s	2.5	16.6	16.7	3.2	0.0	0.0	5.7	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	2.5	16.6	16.7	19.9	0.0	0.0	15.4	0.0	0.0	9.7	0.0	0.0
Prop In Lane	1.00		0.12	1.00		0.09	0.24		0.27	0.18		0.25
Lane Grp Cap(c), veh/h	569	1338	1380	320	1338	1385	293	0	0	292	0	0
V/C Ratio(X)	0.09	0.48	0.48	0.16	0.30	0.30	0.75	0.00	0.00	0.51	0.00	0.00
Avail Cap(c_a), veh/h	569	1338	1380	320	1338	1385	540	0	0	543	0	0
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	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	4.0	5.7	5.7	1.8	0.0	0.0	49.2	0.0	0.0	46.8	0.0	0.0
Incr Delay (d2), s/veh	0.3	1.2	1.2	1.1	0.6	0.5	3.8	0.0	0.0	1.4	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.6	9.4	9.7	0.4	0.4	0.4	10.9	0.0	0.0	7.6	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	4.3	6.9	6.9	2.9	0.6	0.5	53.0	0.0	0.0	48.2	0.0	0.0
LnGrp LOS	A	A	A	A	A	A	D	A	A	D	A	A
Approach Vol, veh/h		1352			857			219			150	
Approach Delay, s/veh		6.8			0.7			53.0			48.2	
Approach LOS		A			A			D			D	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		96.4		23.6		96.4		23.6				
Change Period (Y+Rc), s		6.0		5.0		6.0		5.0				
Max Green Setting (Gmax), s		72.0		37.0		72.0		37.0				
Max Q Clear Time (g_c+I1), s		18.7		17.4		21.9		11.7				
Green Ext Time (p_c), s		20.2		1.2		10.4		0.8				

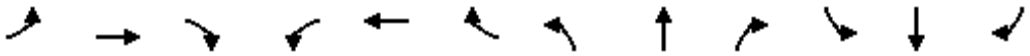
Intersection Summary												
HCM 6th Ctrl Delay			11.1									
HCM 6th LOS			B									



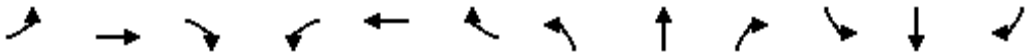
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	32	697	56	85	990	23	104	116	64	13	138	47
Future Volume (veh/h)	32	697	56	85	990	23	104	116	64	13	138	47
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	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	35	758	61	92	1076	25	113	126	70	14	150	51
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	400	2211	178	437	2356	55	154	150	77	45	317	103
Arrive On Green	0.66	0.66	0.66	1.00	1.00	1.00	0.24	0.24	0.24	0.24	0.24	0.24
Sat Flow, veh/h	512	3331	268	668	3550	82	464	615	316	55	1296	420
Grp Volume(v), veh/h	35	404	415	92	539	562	309	0	0	215	0	0
Grp Sat Flow(s),veh/h/ln	512	1777	1822	668	1777	1856	1395	0	0	1771	0	0
Q Serve(g_s), s	3.0	11.9	11.9	3.1	0.0	0.0	13.7	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	3.0	11.9	11.9	15.0	0.0	0.0	26.1	0.0	0.0	12.3	0.0	0.0
Prop In Lane	1.00		0.15	1.00		0.04	0.37		0.23	0.07		0.24
Lane Grp Cap(c), veh/h	400	1179	1210	437	1179	1232	382	0	0	465	0	0
V/C Ratio(X)	0.09	0.34	0.34	0.21	0.46	0.46	0.81	0.00	0.00	0.46	0.00	0.00
Avail Cap(c_a), veh/h	400	1179	1210	437	1179	1232	477	0	0	576	0	0
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	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	7.3	8.8	8.8	1.1	0.0	0.0	44.4	0.0	0.0	38.9	0.0	0.0
Incr Delay (d2), s/veh	0.4	0.8	0.8	1.1	1.3	1.2	8.1	0.0	0.0	0.7	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.6	8.0	8.1	0.3	0.8	0.8	14.9	0.0	0.0	9.4	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	7.7	9.6	9.6	2.2	1.3	1.2	52.6	0.0	0.0	39.6	0.0	0.0
LnGrp LOS	A	A	A	A	A	A	D	A	A	D	A	A
Approach Vol, veh/h		854			1193			309			215	
Approach Delay, s/veh		9.5			1.3			52.6			39.6	
Approach LOS		A			A			D			D	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		85.7		34.3		85.7		34.3				
Change Period (Y+Rc), s		6.0		5.0		6.0		5.0				
Max Green Setting (Gmax), s		72.0		37.0		72.0		37.0				
Max Q Clear Time (g_c+I1), s		13.9		28.1		17.0		14.3				
Green Ext Time (p_c), s		10.1		1.3		16.4		1.2				

Intersection Summary												
HCM 6th Ctrl Delay			13.4									
HCM 6th LOS			B									



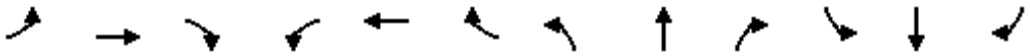
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	48	1135	70	47	714	35	48	98	55	25	78	35
Future Volume (veh/h)	48	1135	70	47	714	35	48	98	55	25	78	35
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		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	52	1234	76	51	776	38	52	107	60	27	85	38
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	565	2561	158	317	2597	127	86	138	70	65	162	65
Arrive On Green	0.75	0.75	0.75	1.00	1.00	1.00	0.16	0.16	0.16	0.16	0.16	0.16
Sat Flow, veh/h	671	3400	209	420	3448	169	312	886	452	188	1046	419
Grp Volume(v), veh/h	52	644	666	51	400	414	219	0	0	150	0	0
Grp Sat Flow(s),veh/h/ln	671	1777	1833	420	1777	1840	1650	0	0	1653	0	0
Q Serve(g_s), s	2.5	16.8	16.9	3.3	0.0	0.0	5.7	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	2.5	16.8	16.9	20.2	0.0	0.0	15.4	0.0	0.0	9.7	0.0	0.0
Prop In Lane	1.00		0.11	1.00		0.09	0.24		0.27	0.18		0.25
Lane Grp Cap(c), veh/h	565	1338	1380	317	1338	1386	293	0	0	292	0	0
V/C Ratio(X)	0.09	0.48	0.48	0.16	0.30	0.30	0.75	0.00	0.00	0.51	0.00	0.00
Avail Cap(c_a), veh/h	565	1338	1380	317	1338	1386	540	0	0	543	0	0
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	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	4.0	5.7	5.7	1.9	0.0	0.0	49.2	0.0	0.0	46.8	0.0	0.0
Incr Delay (d2), s/veh	0.3	1.2	1.2	1.1	0.6	0.6	3.8	0.0	0.0	1.4	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.6	9.5	9.8	0.4	0.4	0.4	10.9	0.0	0.0	7.6	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	4.3	7.0	7.0	3.0	0.6	0.6	53.0	0.0	0.0	48.2	0.0	0.0
LnGrp LOS	A	A	A	A	A	A	D	A	A	D	A	A
Approach Vol, veh/h		1362			865			219			150	
Approach Delay, s/veh		6.9			0.7			53.0			48.2	
Approach LOS		A			A			D			D	
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		96.4		23.6		96.4		23.6				
Change Period (Y+Rc), s		6.0		5.0		6.0		5.0				
Max Green Setting (Gmax), s		72.0		37.0		72.0		37.0				
Max Q Clear Time (g_c+I1), s		18.9		17.4		22.2		11.7				
Green Ext Time (p_c), s		20.5		1.2		10.5		0.8				
Intersection Summary												
HCM 6th Ctrl Delay			11.1									
HCM 6th LOS			B									



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	39	645	32	34	940	22	25	48	27	18	29	40
Future Volume (veh/h)	39	645	32	34	940	22	25	48	27	18	29	40
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	42	701	35	37	1022	24	27	52	29	20	32	43
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	476	2681	134	658	2762	65	64	76	38	57	56	63
Arrive On Green	0.05	1.00	1.00	0.02	0.78	0.78	0.08	0.08	0.08	0.08	0.08	0.08
Sat Flow, veh/h	1781	3444	172	1781	3549	83	330	948	469	254	696	785
Grp Volume(v), veh/h	42	361	375	37	512	534	108	0	0	95	0	0
Grp Sat Flow(s),veh/h/ln	1781	1777	1839	1781	1777	1855	1748	0	0	1735	0	0
Q Serve(g_s), s	0.6	0.0	0.0	0.5	10.8	10.8	0.8	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.6	0.0	0.0	0.5	10.8	10.8	7.1	0.0	0.0	6.2	0.0	0.0
Prop In Lane	1.00		0.09	1.00		0.04	0.25		0.27	0.21		0.45
Lane Grp Cap(c), veh/h	476	1383	1432	658	1383	1444	177	0	0	175	0	0
V/C Ratio(X)	0.09	0.26	0.26	0.06	0.37	0.37	0.61	0.00	0.00	0.54	0.00	0.00
Avail Cap(c_a), veh/h	661	1383	1432	844	1383	1444	494	0	0	487	0	0
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	2.8	0.0	0.0	2.5	4.1	4.1	54.0	0.0	0.0	53.7	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.0	0.8	0.7	3.3	0.0	0.0	2.6	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.3	0.0	0.0	0.2	6.1	6.3	6.0	0.0	0.0	5.2	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	2.9	0.0	0.0	2.5	4.9	4.9	57.4	0.0	0.0	56.3	0.0	0.0
LnGrp LOS	A	A	A	A	A	A	E	A	A	E	A	A
Approach Vol, veh/h		778			1083			108			95	
Approach Delay, s/veh		0.2			4.8			57.4			56.3	
Approach LOS		A			A			E			E	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	6.5	98.9		14.6	6.5	98.9		14.6				
Change Period (Y+Rc), s	3.5	5.5		5.0	4.0	5.5		5.0				
Max Green Setting (Gmax), s	15.5	57.5		33.0	15.0	57.5		33.0				
Max Q Clear Time (g_c+I1), s	2.6	12.8		9.1	2.5	2.0		8.2				
Green Ext Time (p_c), s	0.0	4.7		0.5	0.0	3.0		0.5				

Intersection Summary			
HCM 6th Ctrl Delay		8.2	
HCM 6th LOS		A	



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	54	943	24	38	605	57	24	52	30	23	39	35
Future Volume (veh/h)	54	943	24	38	605	57	24	52	30	23	39	35
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	59	1025	26	41	658	62	26	57	33	25	42	38
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	632	2734	69	512	2526	238	61	82	42	62	68	53
Arrive On Green	0.06	1.00	1.00	0.02	0.77	0.77	0.09	0.09	0.09	0.09	0.09	0.09
Sat Flow, veh/h	1781	3541	90	1781	3283	309	287	960	496	295	797	619
Grp Volume(v), veh/h	59	514	537	41	356	364	116	0	0	105	0	0
Grp Sat Flow(s),veh/h/ln	1781	1777	1854	1781	1777	1815	1742	0	0	1711	0	0
Q Serve(g_s), s	0.8	0.0	0.0	0.6	6.9	6.9	0.6	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.8	0.0	0.0	0.6	6.9	6.9	7.7	0.0	0.0	7.0	0.0	0.0
Prop In Lane	1.00		0.05	1.00		0.17	0.22		0.28	0.24		0.36
Lane Grp Cap(c), veh/h	632	1372	1432	512	1367	1396	185	0	0	183	0	0
V/C Ratio(X)	0.09	0.37	0.37	0.08	0.26	0.26	0.63	0.00	0.00	0.57	0.00	0.00
Avail Cap(c_a), veh/h	811	1372	1432	696	1367	1396	495	0	0	487	0	0
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	2.7	0.0	0.0	2.7	4.0	4.0	53.7	0.0	0.0	53.4	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.1	0.1	0.0	0.5	0.5	3.4	0.0	0.0	2.8	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.4	0.0	0.0	0.3	4.0	4.1	6.5	0.0	0.0	5.8	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	2.7	0.1	0.1	2.7	4.5	4.4	57.1	0.0	0.0	56.2	0.0	0.0
LnGrp LOS	A	A	A	A	A	A	E	A	A	E	A	A
Approach Vol, veh/h		1110			761			116			105	
Approach Delay, s/veh		0.2			4.4			57.1			56.2	
Approach LOS		A			A			E			E	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	6.9	97.8		15.2	6.6	98.2		15.2				
Change Period (Y+Rc), s	3.5	5.5		5.0	4.0	5.5		5.0				
Max Green Setting (Gmax), s	15.5	57.5		33.0	15.0	57.5		33.0				
Max Q Clear Time (g_c+I1), s	2.8	8.9		9.7	2.6	2.0		9.0				
Green Ext Time (p_c), s	0.0	2.9		0.6	0.0	4.8		0.5				
Intersection Summary												
HCM 6th Ctrl Delay			7.7									
HCM 6th LOS			A									

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	39	654	32	34	945	22	25	48	27	18	29	40
Future Volume (veh/h)	39	654	32	34	945	22	25	48	27	18	29	40
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	42	711	35	37	1027	24	27	52	29	20	32	43
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	474	2683	132	653	2762	65	64	76	38	57	56	63
Arrive On Green	0.05	1.00	1.00	0.02	0.78	0.78	0.08	0.08	0.08	0.08	0.08	0.08
Sat Flow, veh/h	1781	3447	170	1781	3549	83	330	948	469	254	696	785
Grp Volume(v), veh/h	42	366	380	37	514	537	108	0	0	95	0	0
Grp Sat Flow(s),veh/h/ln	1781	1777	1840	1781	1777	1855	1748	0	0	1735	0	0
Q Serve(g_s), s	0.6	0.0	0.0	0.5	10.8	10.8	0.8	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.6	0.0	0.0	0.5	10.8	10.8	7.1	0.0	0.0	6.2	0.0	0.0
Prop In Lane	1.00		0.09	1.00		0.04	0.25		0.27	0.21		0.45
Lane Grp Cap(c), veh/h	474	1383	1432	653	1383	1444	177	0	0	175	0	0
V/C Ratio(X)	0.09	0.26	0.27	0.06	0.37	0.37	0.61	0.00	0.00	0.54	0.00	0.00
Avail Cap(c_a), veh/h	659	1383	1432	839	1383	1444	494	0	0	487	0	0
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	2.8	0.0	0.0	2.5	4.2	4.2	54.0	0.0	0.0	53.7	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.0	0.8	0.7	3.3	0.0	0.0	2.6	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.3	0.0	0.0	0.2	6.1	6.4	6.0	0.0	0.0	5.2	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	2.9	0.0	0.0	2.5	4.9	4.9	57.4	0.0	0.0	56.3	0.0	0.0
LnGrp LOS	A	A	A	A	A	A	E	A	A	E	A	A
Approach Vol, veh/h		788			1088			108			95	
Approach Delay, s/veh		0.2			4.8			57.4			56.3	
Approach LOS		A			A			E			E	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	6.5	98.9		14.6	6.5	98.9		14.6				
Change Period (Y+Rc), s	3.5	5.5		5.0	4.0	5.5		5.0				
Max Green Setting (Gmax), s	5.5	57.5		33.0	15.0	57.5		33.0				
Max Q Clear Time (g_c+I1), s	2.6	12.8		9.1	2.5	2.0		8.2				
Green Ext Time (p_c), s	0.0	4.8		0.5	0.0	3.0		0.5				

Intersection Summary	
HCM 6th Ctrl Delay	8.1
HCM 6th LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	54	950	24	38	614	57	24	52	30	23	39	35
Future Volume (veh/h)	54	950	24	38	614	57	24	52	30	23	39	35
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	59	1033	26	41	667	62	26	57	33	25	42	38
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	627	2735	69	509	2529	235	61	82	42	62	68	53
Arrive On Green	0.06	1.00	1.00	0.02	0.77	0.77	0.09	0.09	0.09	0.09	0.09	0.09
Sat Flow, veh/h	1781	3542	89	1781	3287	305	287	960	496	295	797	619
Grp Volume(v), veh/h	59	518	541	41	360	369	116	0	0	105	0	0
Grp Sat Flow(s),veh/h/ln	1781	1777	1854	1781	1777	1815	1742	0	0	1711	0	0
Q Serve(g_s), s	0.8	0.0	0.0	0.6	7.0	7.1	0.6	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.8	0.0	0.0	0.6	7.0	7.1	7.7	0.0	0.0	7.0	0.0	0.0
Prop In Lane	1.00		0.05	1.00		0.17	0.22		0.28	0.24		0.36
Lane Grp Cap(c), veh/h	627	1372	1432	509	1367	1397	185	0	0	183	0	0
V/C Ratio(X)	0.09	0.38	0.38	0.08	0.26	0.26	0.63	0.00	0.00	0.57	0.00	0.00
Avail Cap(c_a), veh/h	806	1372	1432	693	1367	1397	495	0	0	487	0	0
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	2.7	0.0	0.0	2.7	4.0	4.0	53.7	0.0	0.0	53.4	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.1	0.1	0.0	0.5	0.5	3.4	0.0	0.0	2.8	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.4	0.0	0.0	0.3	4.0	4.1	6.5	0.0	0.0	5.8	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	2.7	0.1	0.1	2.7	4.5	4.5	57.1	0.0	0.0	56.2	0.0	0.0
LnGrp LOS	A	A	A	A	A	A	E	A	A	E	A	A
Approach Vol, veh/h		1118			770			116			105	
Approach Delay, s/veh		0.2			4.4			57.1			56.2	
Approach LOS		A			A			E			E	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	6.9	97.8		15.2	6.6	98.2		15.2				
Change Period (Y+Rc), s	3.5	5.5		5.0	4.0	5.5		5.0				
Max Green Setting (Gmax), s	5.5	57.5		33.0	15.0	57.5		33.0				
Max Q Clear Time (g_c+I1), s	2.8	9.1		9.7	2.6	2.0		9.0				
Green Ext Time (p_c), s	0.0	3.0		0.6	0.0	4.8		0.5				

Intersection Summary			
HCM 6th Ctrl Delay		7.6	
HCM 6th LOS		A	

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	47	657	32	35	954	22	25	51	29	18	29	64
Future Volume (veh/h)	47	657	32	35	954	22	25	51	29	18	29	64
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	51	714	35	38	1037	24	27	55	32	20	32	70
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	465	2649	130	644	2721	63	63	84	43	52	49	89
Arrive On Green	0.05	1.00	1.00	0.02	0.77	0.77	0.09	0.09	0.09	0.09	0.09	0.09
Sat Flow, veh/h	1781	3448	169	1781	3550	82	293	931	478	191	542	986
Grp Volume(v), veh/h	51	368	381	38	519	542	114	0	0	122	0	0
Grp Sat Flow(s),veh/h/ln	1781	1777	1840	1781	1777	1856	1702	0	0	1719	0	0
Q Serve(g_s), s	0.7	0.0	0.0	0.6	11.6	11.6	0.0	0.0	0.0	0.4	0.0	0.0
Cycle Q Clear(g_c), s	0.7	0.0	0.0	0.6	11.6	11.6	7.7	0.0	0.0	8.1	0.0	0.0
Prop In Lane	1.00		0.09	1.00		0.04	0.24		0.28	0.16		0.57
Lane Grp Cap(c), veh/h	465	1365	1414	644	1362	1422	190	0	0	189	0	0
V/C Ratio(X)	0.11	0.27	0.27	0.06	0.38	0.38	0.60	0.00	0.00	0.64	0.00	0.00
Avail Cap(c_a), veh/h	646	1365	1414	829	1362	1422	489	0	0	484	0	0
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	3.2	0.0	0.0	2.8	4.6	4.6	53.2	0.0	0.0	53.5	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.0	0.8	0.8	3.0	0.0	0.0	3.6	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.4	0.0	0.0	0.3	6.7	7.0	6.3	0.0	0.0	6.8	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	3.2	0.0	0.0	2.8	5.4	5.4	56.2	0.0	0.0	57.1	0.0	0.0
LnGrp LOS	A	A	A	A	A	A	E	A	A	E	A	A
Approach Vol, veh/h		800			1099			114			122	
Approach Delay, s/veh		0.2			5.3			56.2			57.1	
Approach LOS		A			A			E			E	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	6.8	97.5		15.8	6.5	97.7		15.8				
Change Period (Y+Rc), s	3.5	5.5		5.0	4.0	5.5		5.0				
Max Green Setting (Gmax), s	5.5	57.5		33.0	15.0	57.5		33.0				
Max Q Clear Time (g_c+I1), s	2.7	13.6		9.7	2.6	2.0		10.1				
Green Ext Time (p_c), s	0.0	4.8		0.6	0.0	3.1		0.6				

Intersection Summary	
HCM 6th Ctrl Delay	9.1
HCM 6th LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	73	956	24	40	618	58	24	59	31	23	39	50
Future Volume (veh/h)	73	956	24	40	618	58	24	59	31	23	39	50
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	79	1039	26	43	672	63	26	64	34	25	42	54
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	620	2713	68	503	2500	234	60	90	43	59	63	69
Arrive On Green	0.06	1.00	1.00	0.02	0.76	0.76	0.09	0.09	0.09	0.09	0.09	0.09
Sat Flow, veh/h	1781	3543	89	1781	3284	308	259	991	472	250	691	759
Grp Volume(v), veh/h	79	521	544	43	363	372	124	0	0	121	0	0
Grp Sat Flow(s),veh/h/ln	1781	1777	1854	1781	1777	1815	1723	0	0	1700	0	0
Q Serve(g_s), s	1.2	0.0	0.0	0.6	7.4	7.4	0.1	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	1.2	0.0	0.0	0.6	7.4	7.4	8.3	0.0	0.0	8.2	0.0	0.0
Prop In Lane	1.00		0.05	1.00		0.17	0.21		0.27	0.21		0.45
Lane Grp Cap(c), veh/h	620	1361	1420	503	1353	1382	193	0	0	191	0	0
V/C Ratio(X)	0.13	0.38	0.38	0.09	0.27	0.27	0.64	0.00	0.00	0.63	0.00	0.00
Avail Cap(c_a), veh/h	795	1361	1420	686	1353	1382	495	0	0	485	0	0
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	2.9	0.0	0.0	2.9	4.3	4.3	53.3	0.0	0.0	53.3	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.1	0.1	0.0	0.5	0.5	3.5	0.0	0.0	3.4	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.6	0.0	0.0	0.3	4.3	4.4	6.9	0.0	0.0	6.7	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	2.9	0.1	0.1	2.9	4.8	4.8	56.8	0.0	0.0	56.7	0.0	0.0
LnGrp LOS	A	A	A	A	A	A	E	A	A	E	A	A
Approach Vol, veh/h		1144			778			124			121	
Approach Delay, s/veh		0.3			4.7			56.8			56.7	
Approach LOS		A			A			E			E	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	7.2	96.8		15.9	6.7	97.4		15.9				
Change Period (Y+Rc), s	3.5	5.5		5.0	4.0	5.5		5.0				
Max Green Setting (Gmax), s	5.5	57.5		33.0	15.0	57.5		33.0				
Max Q Clear Time (g_c+I1), s	3.2	9.4		10.3	2.6	2.0		10.2				
Green Ext Time (p_c), s	0.1	3.0		0.6	0.0	4.9		0.6				

Intersection Summary		
HCM 6th Ctrl Delay		8.2
HCM 6th LOS		A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	47	666	32	35	959	22	25	51	29	18	29	64
Future Volume (veh/h)	47	666	32	35	959	22	25	51	29	18	29	64
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	51	724	35	38	1042	24	27	55	32	20	32	70
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	463	2651	128	638	2721	63	63	84	43	52	49	89
Arrive On Green	0.05	1.00	1.00	0.02	0.77	0.77	0.09	0.09	0.09	0.09	0.09	0.09
Sat Flow, veh/h	1781	3450	167	1781	3551	82	293	931	478	191	542	986
Grp Volume(v), veh/h	51	373	386	38	521	545	114	0	0	122	0	0
Grp Sat Flow(s),veh/h/ln	1781	1777	1840	1781	1777	1856	1702	0	0	1719	0	0
Q Serve(g_s), s	0.7	0.0	0.0	0.6	11.6	11.6	0.0	0.0	0.0	0.4	0.0	0.0
Cycle Q Clear(g_c), s	0.7	0.0	0.0	0.6	11.6	11.6	7.7	0.0	0.0	8.1	0.0	0.0
Prop In Lane	1.00		0.09	1.00		0.04	0.24		0.28	0.16		0.57
Lane Grp Cap(c), veh/h	463	1365	1414	638	1362	1422	190	0	0	189	0	0
V/C Ratio(X)	0.11	0.27	0.27	0.06	0.38	0.38	0.60	0.00	0.00	0.64	0.00	0.00
Avail Cap(c_a), veh/h	644	1365	1414	824	1362	1422	489	0	0	484	0	0
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	3.2	0.0	0.0	2.8	4.6	4.6	53.2	0.0	0.0	53.5	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.0	0.8	0.8	3.0	0.0	0.0	3.6	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.4	0.0	0.0	0.3	6.8	7.1	6.3	0.0	0.0	6.8	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	3.2	0.0	0.0	2.8	5.5	5.4	56.2	0.0	0.0	57.1	0.0	0.0
LnGrp LOS	A	A	A	A	A	A	E	A	A	E	A	A
Approach Vol, veh/h		810			1104			114			122	
Approach Delay, s/veh		0.2			5.3			56.2			57.1	
Approach LOS		A			A			E			E	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	6.8	97.5		15.8	6.5	97.7		15.8				
Change Period (Y+Rc), s	3.5	5.5		5.0	4.0	5.5		5.0				
Max Green Setting (Gmax), s	5.5	57.5		33.0	15.0	57.5		33.0				
Max Q Clear Time (g_c+I1), s	2.7	13.6		9.7	2.6	2.0		10.1				
Green Ext Time (p_c), s	0.0	4.9		0.6	0.0	3.1		0.6				

Intersection Summary	
HCM 6th Ctrl Delay	9.1
HCM 6th LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	73	963	24	40	627	58	24	59	31	23	39	50
Future Volume (veh/h)	73	963	24	40	627	58	24	59	31	23	39	50
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	79	1047	26	43	682	63	26	64	34	25	42	54
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	615	2713	67	500	2504	231	60	90	43	59	63	69
Arrive On Green	0.06	1.00	1.00	0.02	0.76	0.76	0.09	0.09	0.09	0.09	0.09	0.09
Sat Flow, veh/h	1781	3543	88	1781	3289	304	259	991	472	250	691	759
Grp Volume(v), veh/h	79	525	548	43	368	377	124	0	0	121	0	0
Grp Sat Flow(s),veh/h/ln	1781	1777	1855	1781	1777	1816	1723	0	0	1700	0	0
Q Serve(g_s), s	1.2	0.0	0.0	0.6	7.5	7.5	0.1	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	1.2	0.0	0.0	0.6	7.5	7.5	8.3	0.0	0.0	8.2	0.0	0.0
Prop In Lane	1.00		0.05	1.00		0.17	0.21		0.27	0.21		0.45
Lane Grp Cap(c), veh/h	615	1361	1420	500	1353	1382	193	0	0	191	0	0
V/C Ratio(X)	0.13	0.39	0.39	0.09	0.27	0.27	0.64	0.00	0.00	0.63	0.00	0.00
Avail Cap(c_a), veh/h	790	1361	1420	683	1353	1382	495	0	0	485	0	0
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	2.9	0.0	0.0	2.9	4.3	4.3	53.3	0.0	0.0	53.3	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.1	0.1	0.0	0.5	0.5	3.5	0.0	0.0	3.4	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.6	0.0	0.0	0.3	4.4	4.5	6.9	0.0	0.0	6.7	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	2.9	0.1	0.1	2.9	4.8	4.8	56.8	0.0	0.0	56.7	0.0	0.0
LnGrp LOS	A	A	A	A	A	A	E	A	A	E	A	A
Approach Vol, veh/h		1152			788			124			121	
Approach Delay, s/veh		0.3			4.7			56.8			56.7	
Approach LOS		A			A			E			E	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	7.2	96.8		15.9	6.7	97.4		15.9				
Change Period (Y+Rc), s	3.5	5.5		5.0	4.0	5.5		5.0				
Max Green Setting (Gmax), s	5.5	57.5		33.0	15.0	57.5		33.0				
Max Q Clear Time (g_c+I1), s	3.2	9.5		10.3	2.6	2.0		10.2				
Green Ext Time (p_c), s	0.1	3.1		0.6	0.0	4.9		0.6				

Intersection Summary		
HCM 6th Ctrl Delay		8.2
HCM 6th LOS		A

Intersection	
Int Delay, s/veh	0.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	746	5	5	1006	0	9	0	9	0	0	0
Future Vol, veh/h	0	746	5	5	1006	0	9	0	9	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	60	-	-	60	-	-	0	-	0	-	-	-
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	0	811	5	5	1093	0	10	0	10	0	0	0

Major/Minor	Major1			Major2			Minor1		
Conflicting Flow All	1093	0	0	816	0	0	1371	-	408
Stage 1	-	-	-	-	-	-	814	-	-
Stage 2	-	-	-	-	-	-	557	-	-
Critical Hdwy	4.14	-	-	4.14	-	-	6.84	-	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	5.84	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	5.84	-	-
Follow-up Hdwy	2.22	-	-	2.22	-	-	3.52	-	3.32
Pot Cap-1 Maneuver	634	-	-	807	-	0	137	0	593
Stage 1	-	-	-	-	-	0	396	0	-
Stage 2	-	-	-	-	-	0	537	0	-
Platoon blocked, %		-	-		-				
Mov Cap-1 Maneuver	634	-	-	807	-	-	136	0	593
Mov Cap-2 Maneuver	-	-	-	-	-	-	136	0	-
Stage 1	-	-	-	-	-	-	396	0	-
Stage 2	-	-	-	-	-	-	534	0	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	22.3
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT
Capacity (veh/h)	136	593	634	-	-	807	-
HCM Lane V/C Ratio	0.072	0.016	-	-	-	0.007	-
HCM Control Delay (s)	33.5	11.2	0	-	-	9.5	-
HCM Lane LOS	D	B	A	-	-	A	-
HCM 95th %tile Q(veh)	0.2	0.1	0	-	-	0	-

Intersection	
Int Delay, s/veh	0.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	1172	9	9	665	0	7	0	7	0	0	0
Future Vol, veh/h	0	1172	9	9	665	0	7	0	7	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	60	-	-	60	-	-	0	-	0	-	-	-
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	0	1274	10	10	723	0	8	0	8	0	0	0

Major/Minor	Major1			Major2			Minor1		
Conflicting Flow All	723	0	0	1284	0	0	1661	-	642
Stage 1	-	-	-	-	-	-	1279	-	-
Stage 2	-	-	-	-	-	-	382	-	-
Critical Hdwy	4.14	-	-	4.14	-	-	6.84	-	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	5.84	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	5.84	-	-
Follow-up Hdwy	2.22	-	-	2.22	-	-	3.52	-	3.32
Pot Cap-1 Maneuver	875	-	-	536	-	0	88	0	417
Stage 1	-	-	-	-	-	0	225	0	-
Stage 2	-	-	-	-	-	0	660	0	-
Platoon blocked, %		-	-		-				
Mov Cap-1 Maneuver	875	-	-	536	-	-	86	0	417
Mov Cap-2 Maneuver	-	-	-	-	-	-	86	0	-
Stage 1	-	-	-	-	-	-	225	0	-
Stage 2	-	-	-	-	-	-	647	0	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.2	32.4
HCM LOS			D

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT
Capacity (veh/h)	86	417	875	-	-	536	-
HCM Lane V/C Ratio	0.088	0.018	-	-	-	0.018	-
HCM Control Delay (s)	50.9	13.8	0	-	-	11.8	-
HCM Lane LOS	F	B	A	-	-	B	-
HCM 95th %tile Q(veh)	0.3	0.1	0	-	-	0.1	-

Intersection	
Int Delay, s/veh	0.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	767	5	5	1045	0	9	0	9	0	0	0
Future Vol, veh/h	0	767	5	5	1045	0	9	0	9	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	60	-	-	60	-	-	0	-	0	-	-	-
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	0	834	5	5	1136	0	10	0	10	0	0	0

Major/Minor	Major1			Major2			Minor1		
Conflicting Flow All	1136	0	0	839	0	0	1415	-	420
Stage 1	-	-	-	-	-	-	837	-	-
Stage 2	-	-	-	-	-	-	578	-	-
Critical Hdwy	4.14	-	-	4.14	-	-	6.84	-	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	5.84	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	5.84	-	-
Follow-up Hdwy	2.22	-	-	2.22	-	-	3.52	-	3.32
Pot Cap-1 Maneuver	611	-	-	791	-	0	128	0	582
Stage 1	-	-	-	-	-	0	385	0	-
Stage 2	-	-	-	-	-	0	524	0	-
Platoon blocked, %		-	-		-				
Mov Cap-1 Maneuver	611	-	-	791	-	-	127	0	582
Mov Cap-2 Maneuver	-	-	-	-	-	-	127	0	-
Stage 1	-	-	-	-	-	-	385	0	-
Stage 2	-	-	-	-	-	-	521	0	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	23.5
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT
Capacity (veh/h)	127	582	611	-	-	791	-
HCM Lane V/C Ratio	0.077	0.017	-	-	-	0.007	-
HCM Control Delay (s)	35.7	11.3	0	-	-	9.6	-
HCM Lane LOS	E	B	A	-	-	A	-
HCM 95th %tile Q(veh)	0.2	0.1	0	-	-	0	-

Intersection	
Int Delay, s/veh	0.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	1206	9	9	694	0	7	0	7	0	0	0
Future Vol, veh/h	0	1206	9	9	694	0	7	0	7	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	60	-	-	60	-	-	0	-	0	-	-	-
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	0	1311	10	10	754	0	8	0	8	0	0	0

Major/Minor	Major1			Major2			Minor1		
Conflicting Flow All	754	0	0	1321	0	0	1713	-	661
Stage 1	-	-	-	-	-	-	1316	-	-
Stage 2	-	-	-	-	-	-	397	-	-
Critical Hdwy	4.14	-	-	4.14	-	-	6.84	-	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	5.84	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	5.84	-	-
Follow-up Hdwy	2.22	-	-	2.22	-	-	3.52	-	3.32
Pot Cap-1 Maneuver	852	-	-	519	-	0	81	0	405
Stage 1	-	-	-	-	-	0	215	0	-
Stage 2	-	-	-	-	-	0	648	0	-
Platoon blocked, %		-	-		-				
Mov Cap-1 Maneuver	852	-	-	519	-	-	79	0	405
Mov Cap-2 Maneuver	-	-	-	-	-	-	79	0	-
Stage 1	-	-	-	-	-	-	215	0	-
Stage 2	-	-	-	-	-	-	636	0	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.2	34.7
HCM LOS			D

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT
Capacity (veh/h)	79	405	852	-	-	519	-
HCM Lane V/C Ratio	0.096	0.019	-	-	-	0.019	-
HCM Control Delay (s)	55.4	14.1	0	-	-	12.1	-
HCM Lane LOS	F	B	A	-	-	B	-
HCM 95th %tile Q(veh)	0.3	0.1	0	-	-	0.1	-