Appendix I

Transportation Assessment Report

Appendix I1

Transportation Assessment Report

LINSCOTT LAW & GREENSPAN engineers

TRANSPORTATION ASSESSMENT REPORT

PROLOGIS VERMONT AVENUE AND REDONDO BEACH BOULEVARD INDUSTRIAL PROJECT

City of Los Angeles, California
July 2, 2020

Prepared for:

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LLG Ref. 1-19-4336-1





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TRANSPORTATION ASSESSMENT REPORT
PROLOGIS VERMONT AVENUE AND REDONDO BEACH BOULEVARD INDUSTRIAL PROJECT

City of Los Angeles, California
July 2, 2020

1.0 INTRODUCTION

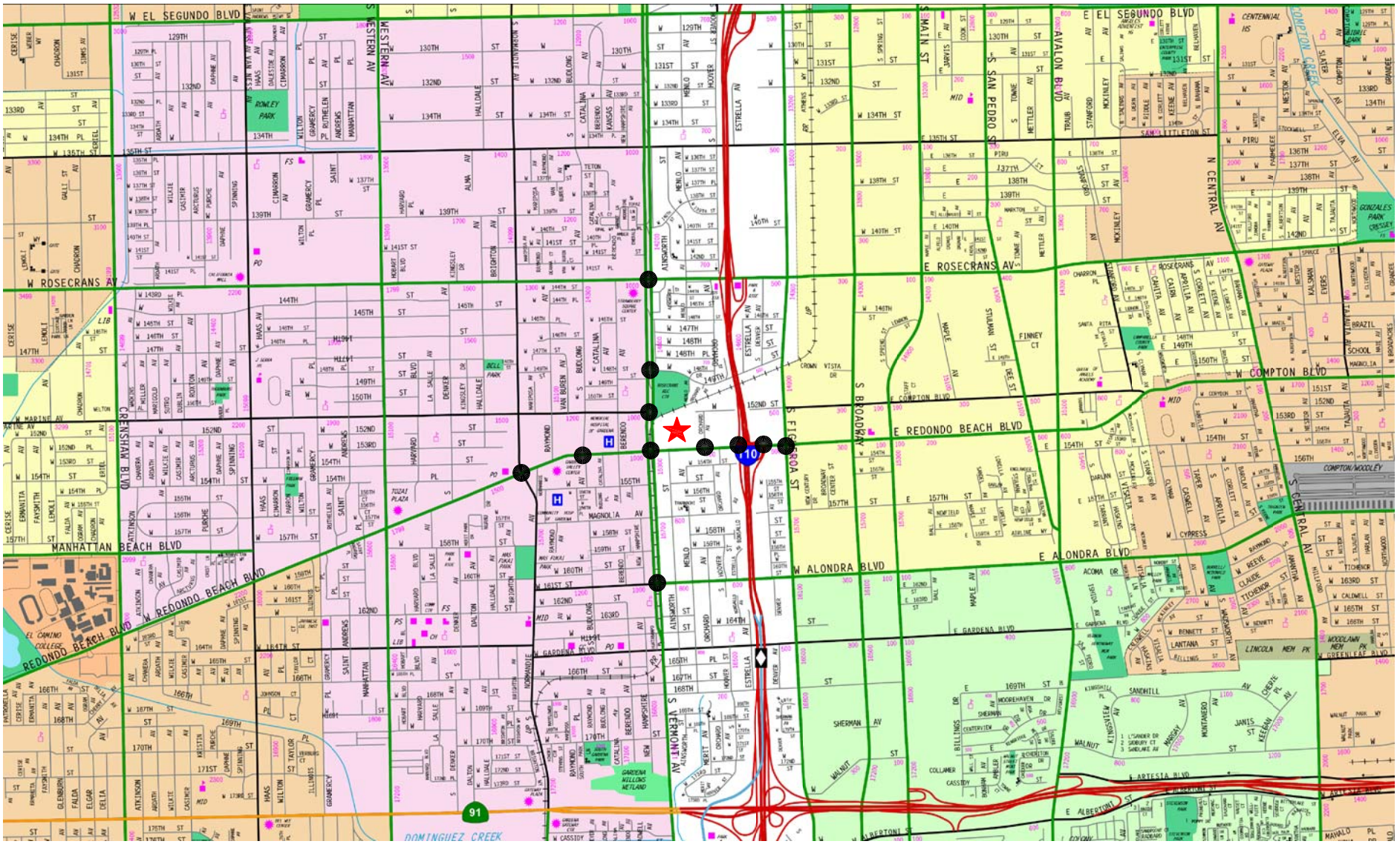
1.1 Transportation Assessment Overview

This transportation assessment has been conducted to identify and evaluate the potential transportation impacts of the proposed Prologis Vermont Avenue and Redondo Beach Boulevard Industrial project ("proposed project" herein) on the surrounding street system. The proposed project site is located in the Harbor Gateway Community Plan area of the City of Los Angeles, California. The approximately 16-acre project site is bounded by Vermont Avenue the west, the Union Pacific Railroad's Torrance Industrial Lead railway to the north, Orchard Avenue to the east, and Redondo Beach Boulevard to the south. The proposed Prologis Vermont Avenue and Redondo Beach Boulevard Industrial project site and general vicinity are shown in ***Figure 1-1***.

Since this project serves as a modification to a previous entitlement granted by the City of Los Angeles, this assessment has been prepared to comply with both the City's prior and current transportation assessment guidelines. The current City of Los Angeles's Transportation Assessment Guidelines[1] (TAG) implement transportation assessment metrics that promote the City's goals of a developing a safe, accessible, well-maintained, and well-connected multimodal transportation network, and which are consistent with the State's requirement to utilize transportation performance metrics which promote the reduction of greenhouse gas emissions, the development of multimodal networks, and access to diverse land uses. In compliance with the California Environmental Quality Act (CEQA), the City of Los Angeles' TAG identify vehicle miles traveled (VMT) as the primary metric for evaluating a project's transportation impacts, along with determination of the proposed projects' consistency with local plans and policies.

This transportation assessment evaluates potential project-related impacts at 11 study intersections in the vicinity of the proposed project. The study locations are under the City of Los Angeles, City of Gardena, and County of Los Angeles' jurisdiction. As such, this assessment is also consistent with traffic impact assessment guidelines from the City of Gardena[2] and the County of Los Angeles[3]. The Critical Movement Analysis method was also used to determine the Volume-to-Capacity ratios and corresponding Levels of Service for the nine City of Los Angeles study intersections identified for analysis in consultation with City of Los Angeles Department of Transportation (LADOT) staff (i.e.,

[1] *Los Angeles Department of Transportation (LADOT) Transportation Assessment Guidelines*, City of Los Angeles Department of Transportation, July 2019.
[2] Community Development Element Circulation of the *Gardena General Plan 2006*.
[3] *Traffic Impact Analysis Report Guidelines*, County of Los Angeles Department of Public Works, January 1997.



MAP SOURCE: RAND MCNALLY & COMPANY

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★ PROJECT SITE

● STUDY INTERSECTION

FIGURE 1-1
VICINITY MAP

LINSCOTT, LAW & GREENSPAN, engineers

PROLOGIS VERMONT AVENUE AND REDONDO BEACH BOULEVARD INDUSTRIAL PROJECT

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based on the City's prior guidelines). The Intersection Capacity Utilization (ICU) method was used to determine the Volume-to-Capacity ratios and corresponding Levels of Service for study intersections under the jurisdiction of the City of Gardena and the County of Los Angeles. In addition to the above analyses, this transportation assessment also includes an analysis of ramp intersections and freeway mainlines within the study area under the State of California Department of Transportation (Caltrans) jurisdiction.

This report (i) presents the proposed project's existing transportation network context, (ii) presents existing traffic volumes, (iii) forecasts cumulative baseline conditions, (iv) forecasts project-generated traffic, (v) assesses the potential for project-related transportation impacts consistent with CEQA and the City of Los Angeles' CEQA compliant and non-CEQA compliant metrics set forth in the City's current guidelines in addition to the City's prior guidelines, (vi) assesses the potential for project-related impacts at intersections under the jurisdiction of the City of Gardena and the County of Los Angeles, and (vii) recommends transportation improvement measures, where necessary.

1.2 Study Area

In consultation with LADOT staff, 11 study intersections were identified for evaluation during the weekday morning and afternoon peak hours. The study intersections provide both regional and local access to the study area and define the extent of the boundaries for this transportation assessment. The general location of the project in relation to the study locations and surrounding street system is presented in *Figure 1–1*. Further discussion of the existing street system and study area is provided in Section 3.0 herein.

In the traffic engineering practice, the study area generally includes those intersections that are:

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

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

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

The study intersections selected for analysis were based on the above criteria, the proposed project's forecast peak hour vehicle trip generation, the anticipated distribution of project vehicular and truck trips, and the existing intersection/corridor operations. LADOT confirmed the appropriateness of the 11 study intersections when it entered into a traffic study Memorandum of Understanding (MOU) with the applicant for the proposed project. The 11 study intersections are identified on page two of the MOU, which is attached to this report as ***Appendix A***, and summarized below:

1. Normandie Avenue/Redondo Beach Boulevard
2. Budlong Avenue/Redondo Beach Boulevard
3. Vermont Avenue/Rosecrans Avenue
4. Vermont Avenue/149th Street

5. Vermont Avenue/Marine Avenue
6. Vermont Avenue/Redondo Beach Boulevard
7. Vermont Avenue/161St St-Alondra Boulevard
8. Orchard Avenue/Redondo Beach Boulevard
9. I-110 Freeway Southbound Ramps/Redondo Beach Boulevard
10. I-110 Freeway Northbound Ramps/Redondo Beach Boulevard
11. Figueroa Street/Redondo Beach Boulevard

In addition to the study intersections, the multimodal transportation facilities along designated Avenues and Boulevards within the City of Los Angeles in the vicinity of the project site were also included in the assessment, pursuant to the City of Los Angeles' non-CEQA analysis requirements.

1.3 Overview of Senate Bill 743 and VMT-Based Analyses

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). 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 vehicle miles traveled (VMT) rather than impacts to intersection Level of Service. OPR issued other draft discussion documents in March 2015 and January 2016, suggesting some new revisions to the state CEQA Guidelines. In November 2017, OPR submitted the proposed amendments to the CEQA Guidelines to the State's Natural Resources Agency (that include a proposed new Guidelines section 15064.3 which governs how VMT-based analyses of potential traffic impacts should be conducted). On January 26, 2018, the Natural Resources Agency published a Notice of Rulemaking, commencing the formal rulemaking process for the amendments to the CEQA Guidelines. 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 and providing a grace period allowing local agencies to opt-in to the new metrics. As of November 2019, six cities in the State have updated their transportation analysis guidelines to incorporate VMT metrics for CEQA analysis (in order, the Cities of Pasadena, San Francisco, Oakland, San Jose, Los Angeles, and Beverly Hills). All other agencies have until July 1, 2020, when Statewide compliance with the revised CEQA Guidelines will be mandatory.

As defined by the CEQA Guidelines, the City of Los Angeles is the lead agency for the proposed project. On July 30, 2019, the City formally adopted VMT as the metric for analysis and established thresholds for assessing transportation impacts under CEQA, thereby coming into compliance with the State mandate. The City's Transportation Assessment Guidelines (TAG) were also revised in July 2019 to incorporate the State required analysis methodologies. As of May 2020, neither the City of Gardena nor the County of Los Angeles have adopted VMT methodologies. Therefore, analysis of intersections under their jurisdiction utilizes existing, long-established protocols in accordance with CEQA and those agency's current significance thresholds.

Caltrans is also pursuing VMT as a metric in determining project impacts, as described in Caltrans' *Local Development – Intergovernmental Review Program Interim Guidance* document (Revised November 2016) (LD-IGR Guidance). The LD-IGR Guidance was prepared as a result of recent legislation, planning guidance, and Caltrans' adoption of plans and policies that collectively promote reductions in greenhouse gas emissions, good community design, improved proximity to key destinations, and a safe, multimodal transportation system. The LD-IGR Guidance notes that Caltrans is currently creating its statewide Transportation Analysis Guide (TAG) and updating its Transportation Impact Study Guide (TISG), and that they will focus transportation analysis on VMT impacts and the multimodal transportation networks, but that until the TAG-TISG is complete, the LD-IGR Guidance will remain in effect.

1.4 Los Angeles County Congestion Management Program Status

The Los Angeles County Congestion Management Program (CMP) was previously a state-mandated program that was enacted by the California State Legislature with the passage of Proposition 111 in 1990 that primarily utilized a level of service (LOS) performance metric. Senate Bill 743 contains amendments to current congestion management law that allows counties to opt out of the LOS standards that would otherwise apply in areas where CMPs are utilized. Pursuant to California Government Code §65088.3, local jurisdictions may opt out of the CMP requirement without penalty if a majority of the local jurisdictions representing a majority of the County's population formally adopt resolutions requesting to opt out of the program. As of November 2019, the majority of local agencies representing the majority of the County's population have adopted resolutions to opt out of the program. Therefore, the CMP is no longer applicable in Los Angeles County.

2.0 PROJECT DESCRIPTION

2.1 Project Location

The project site is located at 15116-15216 Vermont Avenue and 747-761 Redondo Beach Boulevard in the Harbor Gateway Community Plan[4] area of the City of Los Angeles, California. The approximately 16-acre project site comprises the northeast corner of the Vermont Avenue/Redondo Beach Boulevard intersection, and is bounded by Vermont Avenue to the west, the Union Pacific Railroad Torrance Industrial Lead railway to the north, Orchard Avenue to the east, and Redondo Beach Boulevard to the south. The proposed project site and general vicinity are shown in *Figure 1-1*.

The Harbor Gateway Community Plan area consists of the narrow corridor which links the communities of San Pedro, Wilmington, Harbor City, and the City's harbor to the main body of the City of Los Angeles. The plan area is bounded by 120th Street to the north, Sepulveda Boulevard to the south, and is bordered by the Cities of Gardena, Torrance, Carson and unincorporated Los Angeles County to the east and west. The Harbor Gateway Community Plan, which comprises the City's General Plan Land Use Element for the community plan area, designates the project site for Light Manufacturing land uses, and the property is zoned as M2 – Light Industrial Zone. The Harbor Gateway community and the project site are located within the region served by the Harbor Area Planning Commission.

2.2 Existing Project Site

The existing project site was formerly utilized for a variety of commercial light industrial purposes. The project site has been vacant for approximately ten years, with all existing structures having been razed to ground level in that time. The project site is currently occupied by three large slab foundations which served the prior site buildings.

Vehicular access to the project site is currently accommodated by eight driveways (i.e., formal curb cuts with some that have been closed since the site is inactive). Four driveways are provided along the north side of Redondo Beach Boulevard, which would have accommodated full access (i.e., left and right-turning inbound and outbound movements) when the site was active. Two driveways are provided along the west side of Orchard Avenue, and would also have accommodated full access. Two driveways (curb cuts) and one discontinuous driveway is provided along the east side of Vermont Avenue. It is important to note that formal curb and gutter along the east side of Vermont Avenue only extends to just north of the existing bus stop (i.e., north of Redondo Beach Boulevard). North of this point the east side of the roadway transitions to edge of pavement and no formal curb and gutter exists. Due to the presence of a median island along Vermont Avenue, this access point would have accommodated right-turning inbound and outbound movements only when the site was active.

[4] "Harbor Gateway Community Plan: A Part of the General Plan – City of Los Angeles", adopted December 6, 1995 and amended to incorporate the *Mobility Plan 2035* on September 7, 2016.

A public transit bus turn-out area is provided adjacent to the project site on Vermont Avenue, immediately north of Redondo Beach Boulevard. North of the bus turn-out area and the existing discontinuous curb-cut, formal public sidewalks cease to be provided along the westerly project frontage. Similarly, no formal public sidewalk is provided along the west side of Orchard Avenue adjacent to the project site. Public sidewalks are provided along the southerly property frontage adjacent to Redondo Beach Boulevard. The Union Pacific right-of-way does not accommodate public access, therefore no public sidewalks are provided along the northerly project frontage. An aerial photograph of the existing project site is contained in ***Figure 2-1***.

2.3 Proposed Project Description

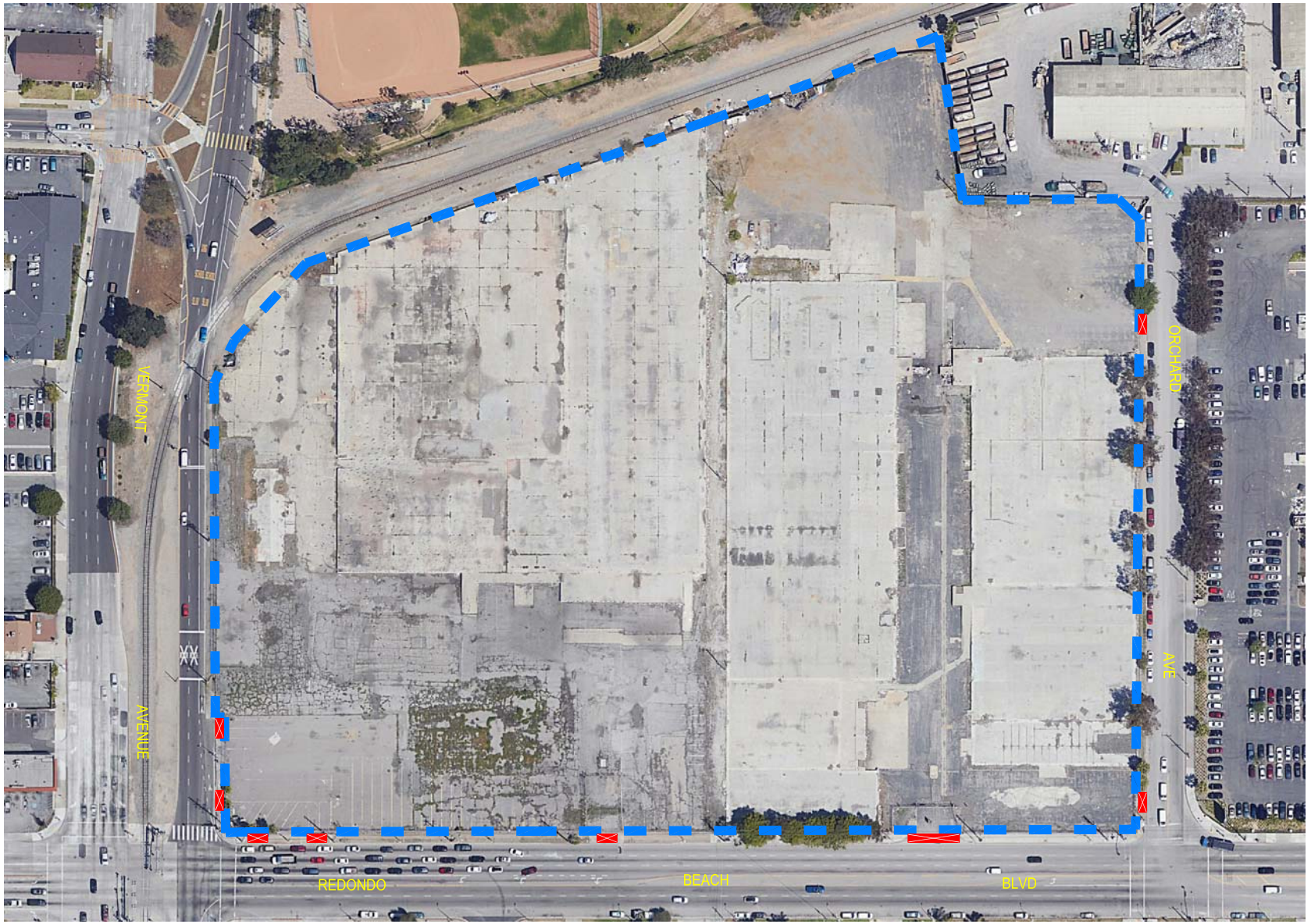
The proposed project consists of the development of a one-story, 53-foot tall building which would provide a total of 340,298 gross square feet of industrial space (including a 25,000 square-foot mezzanine). Tractor-trailer parking and 36 dock high truck loading positions are planned to be situated in the northerly portion of the project site, while passenger vehicle parking will be located along the project boundary fronting Vermont Avenue, Redondo Beach Boulevard, and Orchard Avenue. The proposed building has been designed to provide articulation and a variety of shading and materials to break up the mass of the building, which along with landscaping and the buffer provided by the on-site parking will set back the building back from the public right-of-way and shield the industrial operation from view. Although the future tenant for the proposed project is currently unknown, the project proposes to allow 24-hour operations.

Landscaped pedestrian pathways will be provided throughout the site, including linkages from the proposed building's various entry points to the adjacent public sidewalks. The project also plans to improve the pedestrian rail crossing to provide a connection to the sidewalk north of the project site along Vermont Avenue. All currently unimproved sidewalks adjacent to the site will be improved with new sidewalks and street landscaping. The applicant will work with the Bureaus of Engineering and Street Services as well as the Department of Water and Power to provide and maintain the maximum number of street trees within the public right-of-way alongside the reconstructed sidewalks. Further, the project plans to install a new public bus turn-out lane and bus shelter at the existing bus stop located on the northeast corner of the Vermont Avenue/Redondo Beach Boulevard intersection.

The existing site improvements such as the existing foundations, floor slabs, utilities, and any other subsurface improvements not utilized by the proposed project will be demolished to accommodate the development of the new industrial building. The proposed project site plan is illustrated in ***Figure 2-2***. Project construction is anticipated to take nine months commencing in mid-2021, with occupancy expected by year 2022.

2.3.1 *Proposed Vehicular Site Access*

Access to the project site will be accommodated by four driveways, including one driveway along Vermont Avenue, one driveway along Redondo Beach Boulevard, and two driveways along Orchard Avenue. This will result in a significant consolidation of existing curb cuts associated with the prior site. The proposed driveways are described in further detail below:



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MAP SOURCE: GOOGLE EARTH

PROJECT SITE

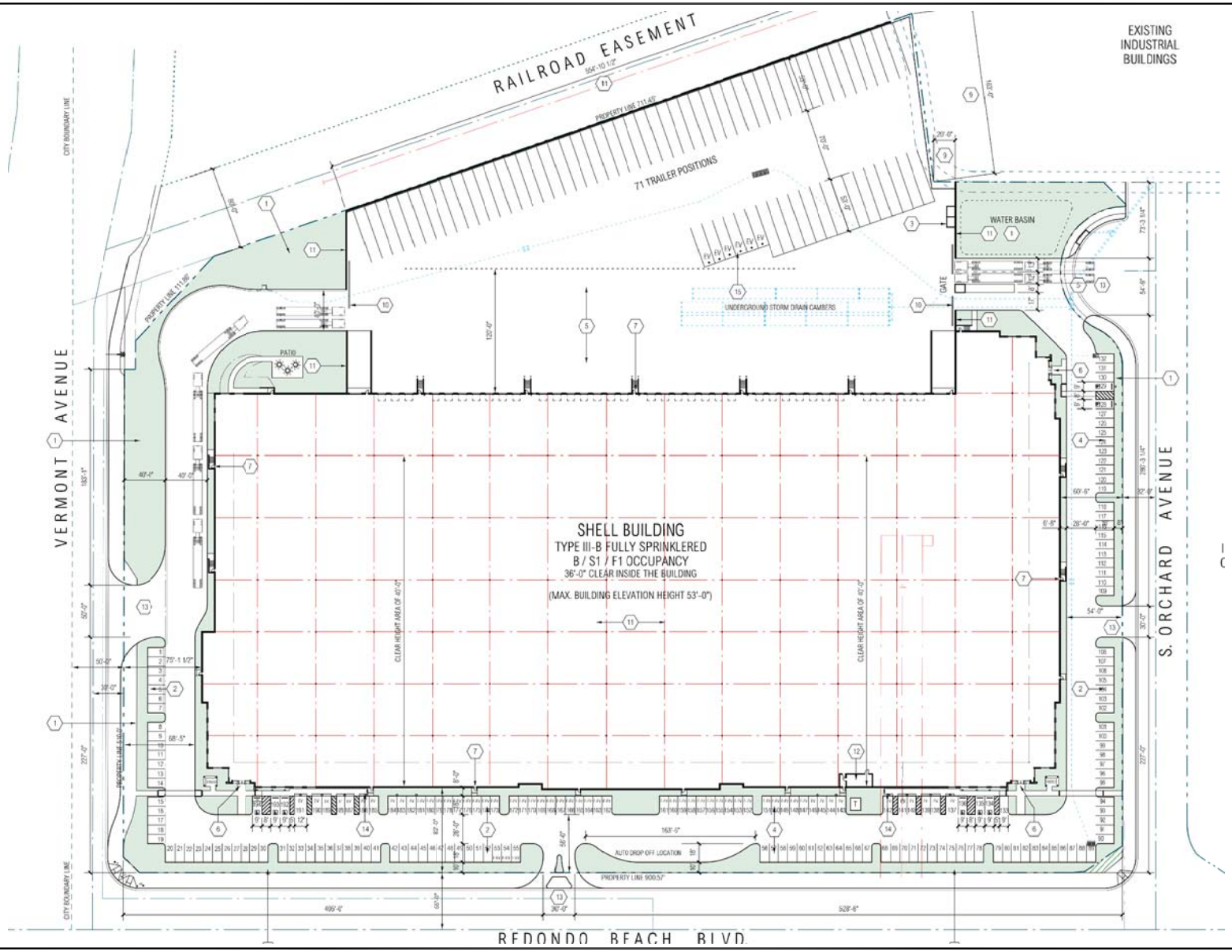
EXISTING DRIVEWAY

FIGURE 2-1
AERIAL PHOTOGRAPH OF EXISTING PROJECT SITE

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SOURCE: RGA

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FIGURE 2-2
SITE PLAN

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- Vermont Avenue Driveway
  This project driveway will be located along the east side of Vermont Avenue, north of the transit bus turn-out area which is to remain. The driveway will accommodate right-turning inbound and outbound movements only due to the presence of the median along Vermont Avenue. The project driveway will provide both passenger vehicle access to the on-site parking areas located south and east of the driveway as well as truck access to the loading area located north of the building. An internal queue of approximately five trucks will be accommodated at this project driveway without extending into the public right-of-way.

- Redondo Beach Boulevard Driveway
  This project driveway will be located along the north side of Redondo Beach Boulevard and will accommodate right-turning inbound and outbound movements only. The turning restrictions at this project driveway will be reinforced by a raised concrete island which will prevent left-turning movements into or out of the driveway. The driveway will provide passenger vehicle access to the on-site parking areas only.

- Southerly Orchard Avenue Driveway
  This project driveway will be located along the west side of Orchard Avenue, and will accommodate full access (i.e., left and right-turning inbound and outbound movements). The driveway will provide passenger vehicle access to the on-site parking areas only.

- Northerly Orchard Avenue Driveway
  This project driveway will be located at the terminus of Orchard Avenue, on the west side of the future circular cul-de-sac, and will accommodate full access. The driveway will provide both passenger vehicle access to the on-site parking areas south and west of the driveway, and truck access to the loading area located north of the building. An internal queue of up to two trucks will be accommodated at this project driveway without extending into the public right-of-way.

All current site access points will be closed, with sidewalk, curb, and gutter reconstructed to the City of Los Angeles' current standards.

2.3.2 *Proposed Right-of-Way Dedication and Roadway Widening*

The project is required to provide roadway dedications and physical improvements along Vermont Avenue, Redondo Beach Boulevard, and Orchard Avenue as outlined in the Bureau of Engineering's (BOE's) previous inter-departmental correspondence (i.e., dated July 6, 2017). The required improvements for each roadway are described below:

- Vermont Avenue
  Vermont Avenue is designated as an Avenue I in the City's *Mobility Plan 2035*[5]. Avenue I roadways have a designated right-of-way width of 100 feet and a designated roadway width of 70 feet, which corresponds to a half right-of-way width of 50 feet and a half roadway width of 35 feet. The project will accommodate a half right-of-way width of 50 feet from the City's westerly boundary along Vermont Avenue to the westerly property line, which satisfies the City's requirements for roadways that are designated as Avenue I. As noted previously, the project will construct a formal (i.e., 15-foot) sidewalk and a connection to the sidewalk north of the project site along the east side of Vermont Avenue. A 30-foot curb radius and standard access ramp at the intersection of Redondo Beach Boulevard will be required to comply with ADA requirements.

- Redondo Beach Boulevard
  Redondo Beach Boulevard is designated as a Boulevard II between Vermont Avenue and Figueroa Street (i.e., within the City boundaries) in the City's *Mobility Plan 2035.* Boulevard II roadways have a designated right-of-way width of 110 feet and a designated roadway width of 80 feet, which corresponds to a half right-of-way width of 55 feet, a half roadway width of 40 feet. The project will accommodate a half right-of-way width of 55 feet from the centerline of Redondo Beach Boulevard to the southerly property line, which satisfies the City's requirements for roadways which are designated as Boulevard II. A 15-foot wide sidewalk will also be required to be constructed and 20-foot radius property line returns or 15-foot by 15-foot cut corners at the intersections with Vermont Avenue and Orchard Avenue will also be required. A 30-foot curb radius and standard access ramp at the intersection of Orchard Avenue will be required to comply with ADA requirements.

- Orchard Avenue
  Orchard Avenue is designated as a Local street in the City's *Mobility Plan 2035*. As shown on the site plan, the Applicant is designing the street cross section to comply with the City's Industrial Local street standards. Industrial local streets have a designated right-of-way width of 64 feet and a designated roadway width of 44 feet, which corresponds to a half right-of-way width of 32 feet and a half roadway width of 22 feet. The project will accommodate a half right-of-way width of 32 feet, which satisfies the City's requirements for roadways which are designated as Industrial Local streets. The project will also construct a formal sidewalk (i.e., 12 feet wide) along the west side of Orchard Avenue. In addition, it is recommended that the southbound approach of the Orchard Avenue/Redondo Beach Boulevard intersection be restriped to provide one left-turn lane and one right-turn lane to facilitate project-related traffic and traffic associated with other nearby businesses on Orchard Avenue. As noted in the BOE correspondence, the Applicant shall obtain prior

[5] *Mobility Plan 2035: An Element of the General Plan*, Los Angeles Department of City Planning, adopted September 7, 2016.

approval for the configuration of the turning area and prepare the legal description for the turning area to be submitted with the dedication application.

2.4 Project Parking

The proposed project is planned to provide a total of 194 automobile parking spaces, of which 20 spaces will be electric charging stalls for electric vehicles (EV) and an additional 38 will be EV-ready. The project will also provide a total of 32 bicycle parking spaces, consisting of 16 short-term and 16 long-term bicycle parking spaces. Additionally, the project will provide 71 parking spaces for truck trailers. Six of the tractor trailer parking spaces will be improved with the necessary infrastructure to provide electric vehicle charging stations in the future (i.e., EV-ready parking spaces).

2.5 Project Loading

All loading and unloading at the project site would occur at the rear of the building, along the north side of the project site adjacent to the Union Pacific right-of-way and out of sight from public sidewalks. A 14-foot sound wall will be constructed along the northerly property boundary to further screen the on-site loading activities from the existing uses north of the site. Truck access to the loading area will be accommodated by the Vermont Avenue driveway and the northerly driveway on Orchard Avenue only. As previously noted, the project proposes to allow 24-hour operations, therefore the project site has been designed such that the loading activities would occur more than 300 feet from the nearest residential unit and out of view from the public right-of-way, which exceeds the requirements for vehicle loading and unloading set forth in Los Angeles Municipal Code Section 114.03.

3.0 PROJECT SITE CONTEXT

The project site is located within a well-established multi-modal transportation network maintained by the City of Los Angeles, the City of Gardena, and the County of Los Angeles. The following sections will 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 Local Street System

Immediate vehicular access to the project site is provided via Vermont Avenue, Redondo Beach Boulevard, and Orchard Avenue. The study intersections are listed in ***Table 3-1***, along with the current intersection traffic control and the agencies with jurisdiction over the location.

3.1.1 *Roadway Classifications*

Regional, state, and federal transportation agencies typically recognize four categories in the roadway hierarchy, ranging from freeways with the highest capacity to two-lane undivided roadways with the lowest capacity. The roadway categories are summarized as follows:

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

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

- *Collector* roadways are streets that provide access and traffic circulation within residential and non-residential (e.g., commercial and industrial) areas. Collector roadways connect local streets to arterials and are typically designed with two through travel lanes (i.e., one through travel lane in each direction) that may accommodate on-street parking. They may also provide access to abutting properties.

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

The City of Los Angeles utilizes five arterial roadway classifications (Boulevard I and II; Avenue I, II, and III) in addition to collector, local, and other roadway types. The City of Gardena utilizes arterial, major collector, collector, and local roadway classifications, while the County of Los

Table 3-1
LIST OF STUDY INTERSECTIONS

NO.	INTERSECTION	TRAFFIC CONTROL	JURISDICTION(S)
1	Normandie Avenue/Redondo Beach Boulevard	Signalized	City of Gardena
2	Budlong Avenue/Redondo Beach Boulevard	Signalized	City of Gardena
3	Vermont Avenue/Rosecrans Avenue	Signalized	City of Gardena/City of Los Angeles
4	Vermont Avenue/149th Street	Signalized	City of Gardena/City of Los Angeles
5	Vermont Avenue/Marine Avenue	Signalized	City of Gardena/City of Los Angeles
6	Vermont Avenue/Redondo Beach Boulevard	Signalized	City of Gardena/City of Los Angeles
7	Vermont Avenue/161st Street - Alondra Boulevard	Signalized	City of Gardena/City of Los Angeles
8	Orchard Avenue/Redondo Beach Boulevard	Signalized	City of Los Angeles
9	I-110 Freeway SB Ramps/Redondo Beach Boulevard	Signalized	City of Los Angeles
10	I-110 Freeway NB Ramps/Redondo Beach Boulevard	Signalized	City of Los Angeles
11	Figueroa Street/Redondo Beach Boulevard	Signalized	City of Los Angeles/County of Los Angeles

Angeles utilizes major highway, secondary highway, limited secondary highway, parkway, and expressway classifications. The roadway classifications for each roadway within the study area is presented in ***Table 3-2***.

3.1.2 *Roadway Descriptions*

The current lane configurations and traffic control measures at each study intersection is presented in ***Figure 3-1***. Descriptions of the roadways which make up the study area are provided in *Table 3-2*, including the number of lanes, median types, and speed limits designated by each agency with jurisdiction over the roadway.

3.1.3 *Regional Highway Access*

Regional vehicular access to the project site is primarily provided by the I-110 (Harbor) Freeway. The I-110 Freeway interconnects with the regional highway system, which is comprised of the Interstate (I), State Route (SR), and United States (US) highway systems. The I-110 Freeway is a north-south oriented freeway connecting downtown Los Angeles with the Los Angeles Harbor area, including the Port of Los Angeles. The I-110 Freeway generally provides four mainline freeway lanes in each direction in the project vicinity, along with auxiliary lanes to facilitate merging and diverging movements. Within the general project area, on and off-ramps are provided at Rosecrans Avenue and Redondo Beach Boulevard. The Los Angeles County Metropolitan Transportation Authority (Metro) manages the I-110 Freeway ExpressLanes, which are dynamically-priced high-occupancy toll lanes and require the use of a FasTrak Flex transponder. ExpressLanes are provided in each direction in the project vicinity, with an entrance to the northbound ExpressLanes from the mainline general use lanes provided at Redondo Beach Boulevard.

3.1.4 *City of Los Angeles High Injury Network*

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

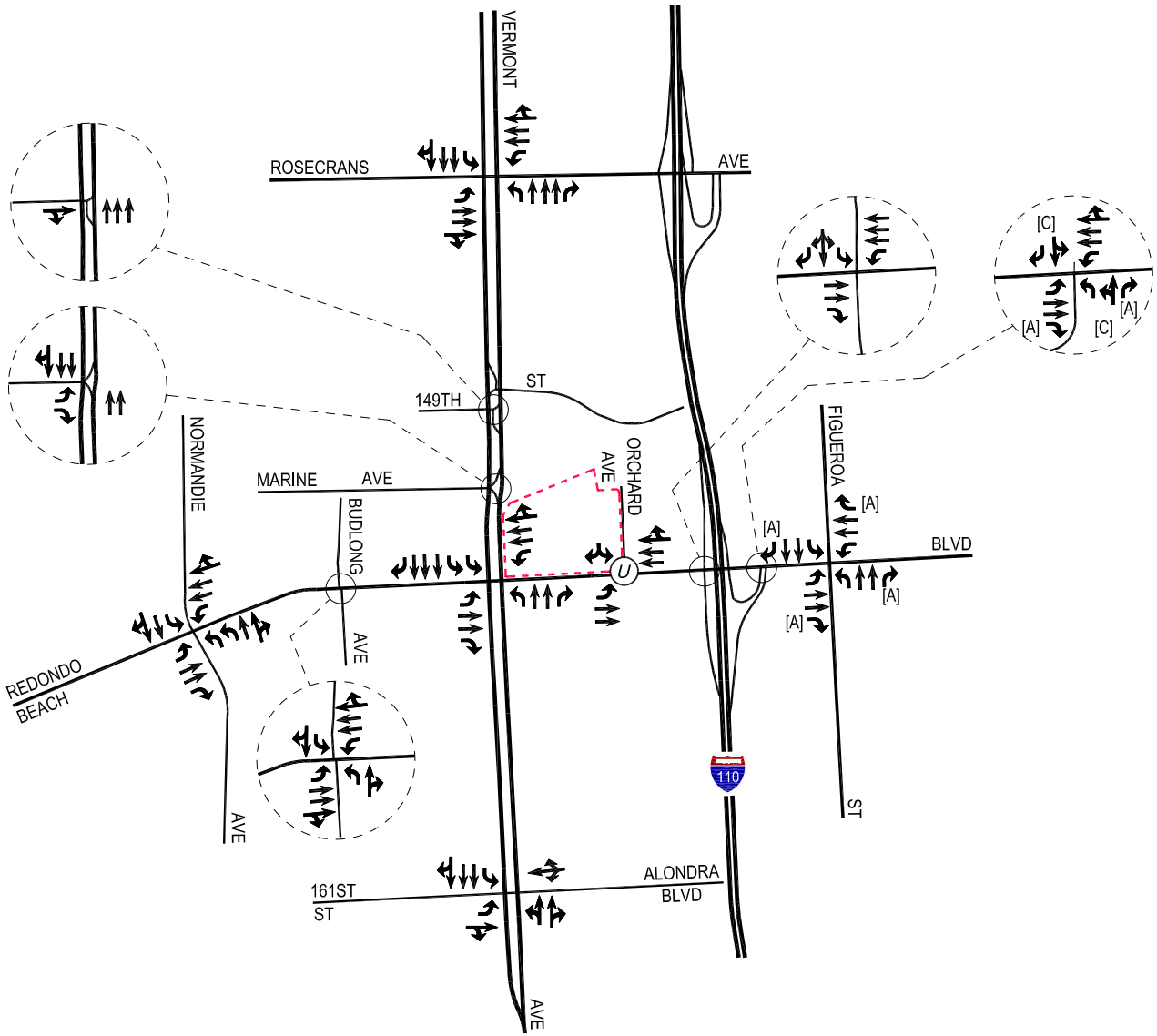
Mayor Eric Garcetti issued Executive Directive No. 10 in August 2015, formally launching the Vision Zero initiative in Los Angeles. Vision Zero is also a stated safety objective in the Mobility Plan 2035, which sets the goal of zero traffic deaths by 2035. Jointly directed by LADOT and the Police Department, Vision Zero takes a multi-disciplinary approach to identifying safety risk factors and implementing solutions on a citywide scale. Using a methodology originally developed by the San Francisco Public Health Department, the Vision Zero Task Force has identified streets where investments in safety will have the most impact in reducing severe injuries and traffic fatalities in the City.[6] These roads are collectively known as the High Injury Network (HIN). The HIN will be

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

Table 3-2
EXISTING ROADWAY DESCRIPTIONS

ROADWAY	CLASSIFICATION [1]	TRAVEL LANES		MEDIAN	SPEED
		DIRECTION [2]	NO. LANES [3]	TYPES [4]	LIMIT
Normandie Avenue	Major Collector [5]	NB-SB	4	N/A	35
Budlong Avenue	Collector [5]	NB-SB	2	N/A	30
Vermont Avenue	Arterial [5] Avenue I [6]	NB-SB NB-SB	4 to 6 4 to 6 [7]	RMI RMI	40 to 45 40 to 45
Orchard Avenue	Local Street [6]	NB-SB	2	N/A	25
Figueroa Street	Avenue I [6] Major Highway [9]	NB-SB NB-SB	4 [8] 4 [8]	2WLT 2WLT	40 40
Rosecrans Avenue	Arterial [5] Boulevard II [6]	EB-WB EB-WB	6 6	RMI 2WLT	40 40
149th Street	Local Street [5] Collector [6]	EB-WB EB-WB	2 2	N/A N/A	25 25
Marine Avenue	Collector [6]	EB-WB	2	N/A	30
Redondo Beach Boulevard	Arterial [5] Boulevard II [6] Major Highway [9]	EB-WB EB-WB EB-WB	4 to 6 5 [10] 4	2WLT/RMI 2WLT 2WLT	35 40 40
161st Street	Local Street [5]	EB-WB	2	N/A	30
Alondra Boulevard	Boulevard II [6]	EB-WB	2 to 6	2WLT/RMI	35

Notes:
[1] Roadway classifications obtained from;
City of Los Angeles' *Mobility Plan 2035: An Element of the General Plan,* adopted September 7, 2016,
City of Gardena's *General Plan (Circulation Element),* adopted April 25, 2006,
and Los Angeles County's *General Plan (Highway Plan),* adopted October 6, 2015.
[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] City of Gardena
[6] City of Los Angeles
[7] Class II Bike Lane - North of Redondo Beach Boulevard
[8] Class II Bike Lane - South of Redondo Beach Boulevard
[9] County of Los Angeles
[10] Tow Away No Stopping 7 AM to 9 AM and 4 PM to 6 PM in the westbound direction.



N

NOT TO SCALE

PROJECT SITE

(U) UNSIGNALIZED INTERSECTION

[A] OVERLAP PHASE

[C] SPLIT-PHASE

[B] NO RIGHT-TURN ON RED

FIGURE 3-1
EXISTING LANE CONFIGURATIONS

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reviewed by the LADOT's Vision Zero group for potential engineering re-design as well as educational and enforcement campaigns. If a proposed project results in significant traffic impacts at intersections located along a designated HIN, LADOT's Vision Zero group will review those specific locations and immediate vicinity for potential safety enhancements that are consistent with the City's Vision Zero initiative.

The proposed project is situated at the northeast corner of the Vermont Avenue/Redondo Beach Boulevard intersection in the Harbor Gateway Community of the City of Los Angeles. As shown in ***Figure 3-2***, within the Harbor Gateway Community Plan Area, only one roadway has been identified as part of the HIN: Carson Street between Western Avenue and Denker Avenue. This roadway segment is over four miles from the proposed project site. Therefore, the project is not expected to contribute additional vehicular or active transportation trips to roadways designated as part of the HIN.

3.2 Transit Service[7]

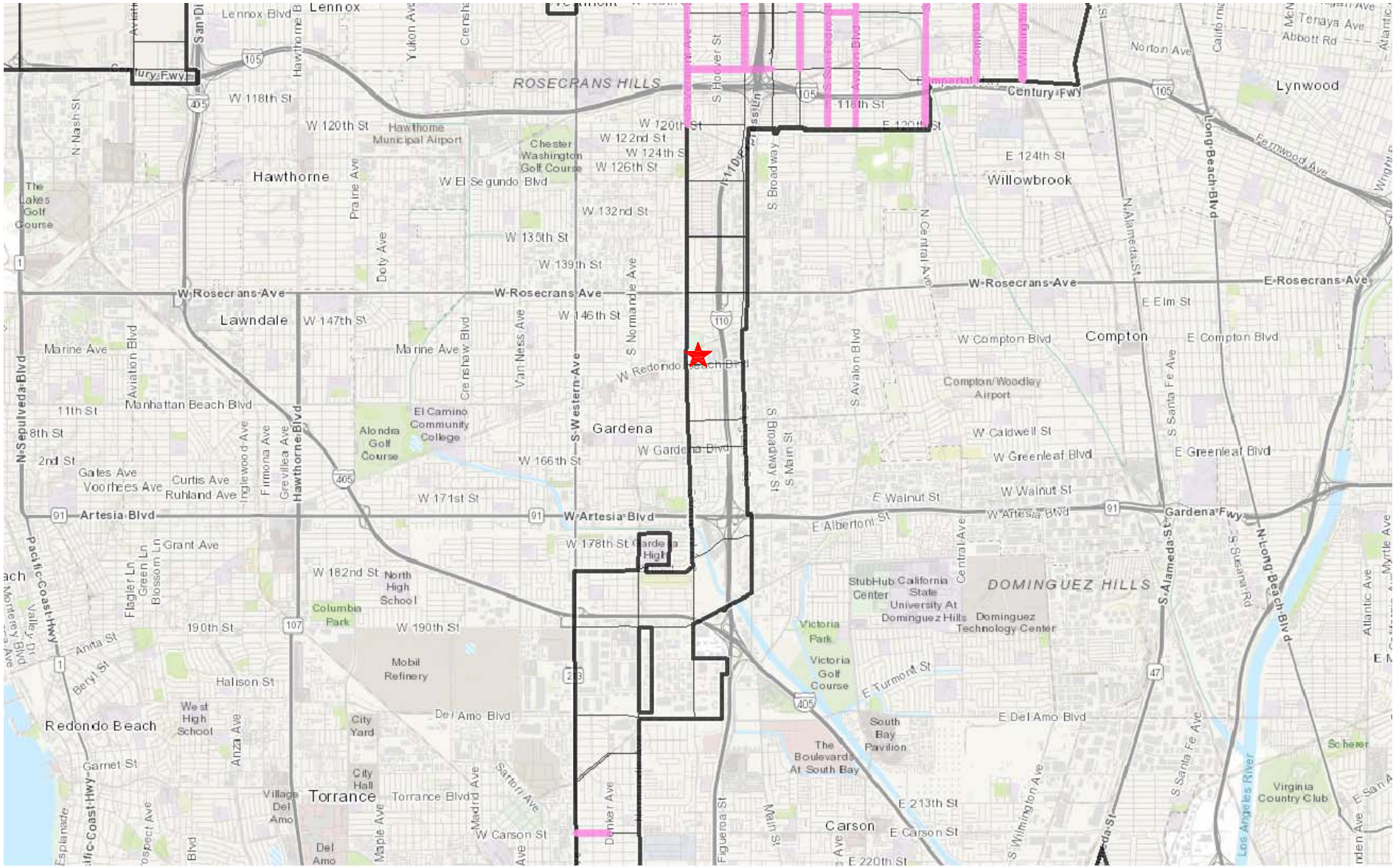
Public transit service is provided within the project study area by the County of Los Angeles Metropolitan Transportation Authority (Metro), the City of Gardena Department of Transportation (Gtrans), and Torrance Transit bus lines. A summary of the existing transit service present at the 11 study intersections, including the transit provider and route number, major destinations, and peak hour headways is presented in ***Table 3-3***. The existing public transit routes in the project site vicinity are illustrated in ***Figure 3-3***.

As illustrated in *Figure 3-3*, three transit lines have routes which are directly adjacent to the project site. Gtrans Lines 1X, 2, and 3 provide transit service along Vermont Avenue, and each provides a stop at the Vermont Avenue/Redondo Beach Boulevard intersection. As shown in *Table 3-3*, Gtrans Lines 2 and 3 have approximately 15-minute headways during the peak morning and afternoon commute periods (i.e., four buses per hour). Gtrans Line 1X operates with approximately 30-mintue headways (i.e., two buses per hour). Based on the existing level of public transit service, Vermont Avenue satisfies the definition of a high-quality transit corridor[8]. The project is also within a transit priority area within the definition of the Public Resources Code Sections 21064.3 and 21099(a)(7).

Lines 1X and 2 northbound buses utilize the existing bus stop located at the northeast corner of the intersection (i.e., the southwest corner of the project site), which currently provides a bus bench. Line 3 westbound buses utilize an existing stop on the northwest corner of the intersection which currently provides a public trash can, and buses for all three lines (southbound Line 1X and 2 and eastbound Line 3) utilize an existing stop on the southwest corner of the intersection which currently provides a bus bench and public trash can. The location of the bus stops and amenities (e.g., bus benches, shelters, etc.) are shown in ***Figure 3-4***.

[7] Refer to http://www.walkscore.com/, which generates a transit score of approximately 5 (Good Transit) out of 100 for the project site. Walk Score calculates the transit score of an address by summing the "usefulness" of nearby transit (based on the frequency, type of transit, and distance to the nearest stop).

[8] Public Resources Code, Section 21155.b: "For purposes of this section, a high-quality transit corridor means a corridor with fixed route bus service with service intervals no longer than 15 minutes during peak commute hours."



MAP SOURCE: SWITRS, LADOT

PROJECT SITE

HIGH INJURY NETWORK

CITY OF LOS ANGELES BOUNDARY

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NOT TO SCALE

FIGURE 3-2
CITY OF LOS ANGELES HIGH INJURY NETWORK

LINSCOTT, LAW & GREENSPAN, engineers

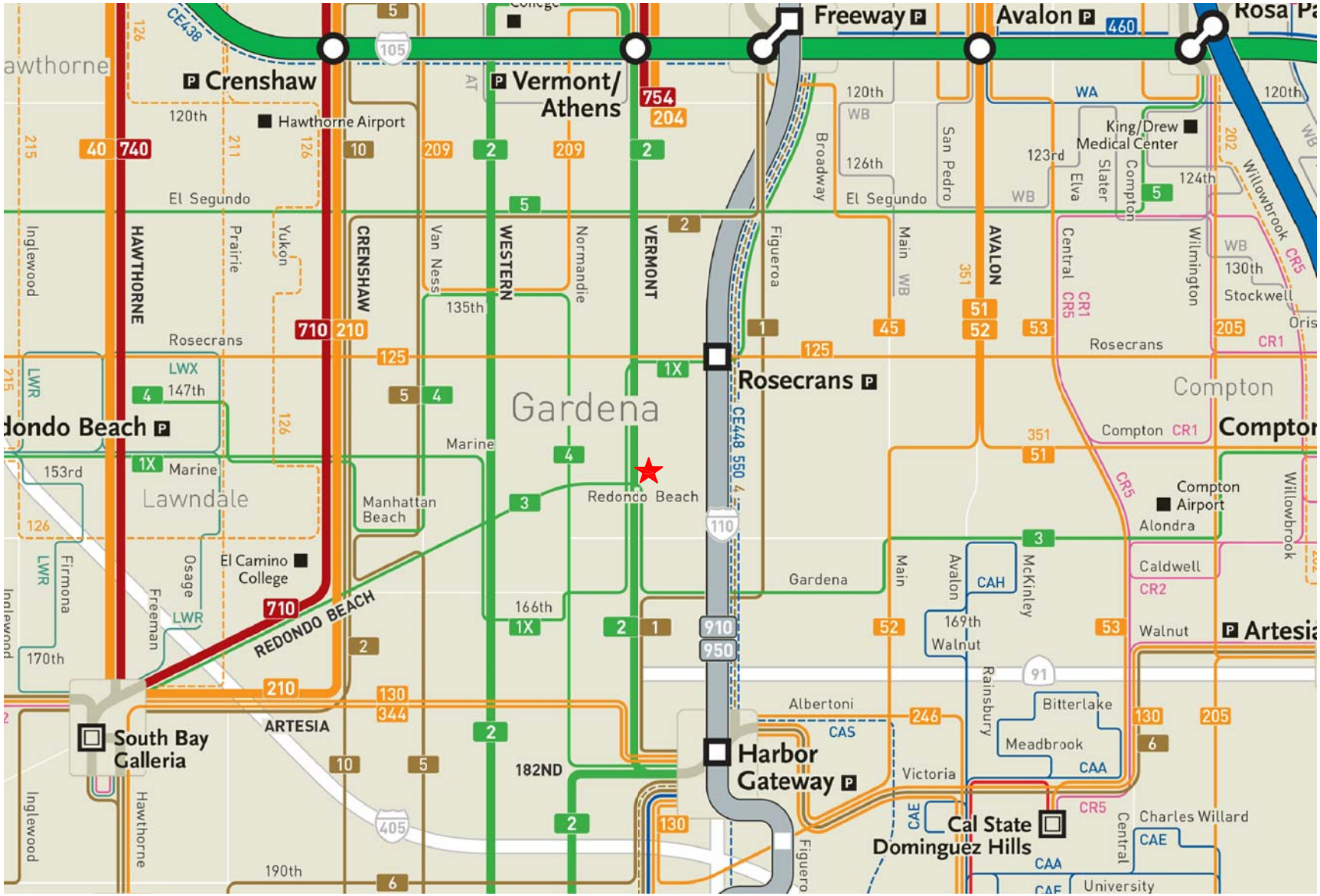
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Table 3-3
EXISTING TRANSIT ROUTES [1]

ROUTE	DESTINATIONS	ROADWAY(S) NEAR SITE	NO. OF BUSES/TRAINS DURING PEAK HOUR		
			DIR	AM	PM
GTrans Line 1X	Redondo Beach to Downtown Los Angeles via Gardena, Hawthorne and Torrance	Vermont Avenue, Rosecrans Avenue, Redondo Beach Boulevard, 161st Street, Alondra Boulevard	NB SB	2 2	2 2
GTrans Line 2	Gardena to Torrance	Vermont Avenue, Rosecrans Avenue, Redondo Beach Boulevard, 161st Street, Alondra Boulevard	NB SB	4 4	4 4
GTrans Line 3	Compton to Hawthorne via Gardena	Normandie Avenue, Vermont Avenue, Redondo Beach Boulevard, 161st Street, Alondra Boulevard	EB WB	4 4	4 4
GTrans Line 4	Gardena to Hawthorne via Torrance	Normandie Avenue, Redondo Beach Boulevard	EB WB	1 1	2 1
Metro 125	El Segundo to Norwalk via Lawndale, Los Angeles, Compton and Downey	Vermont Avenue, Rosecrans Avenue	EB WB	4 4	3 3
Torrance Transit 1	Torrance to Los Angeles via Carson, Gardena and Compton	Figueroa Street, Redondo Beach Boulevard	NB SB	2 3	2 2
			Total	**35**	**33**

[1] Sources: City of Gardena (Gtrans), Los Angeles County Metropolitan Transportation Authority (Metro) and Torrance Transit System websites, 2019.



MAP SOURCE: METROPOLITAN TRANSPORTATION AUTHORITY WEBSITE 2019

PROJECT SITE

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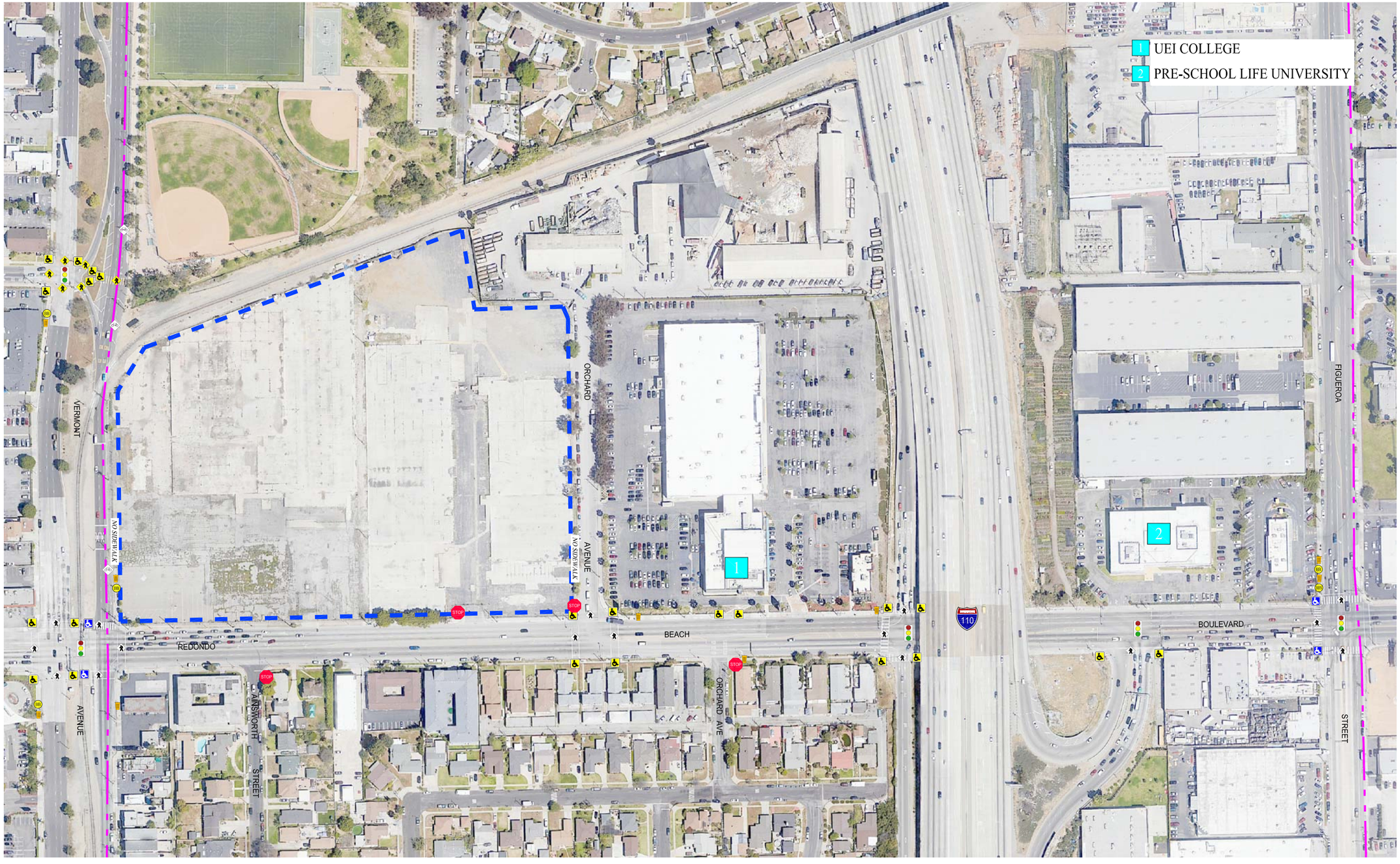
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FIGURE 3-3
EXISTING TRANSIT ROUTES

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SITE
CITY BOUNDARY
SIGNAL
STOP STOP SIGN

ADA
ADA YELLOW TRUNCATED DOME
TRASH

CROSSWALK
CROSSWALK YELLOW
BR BIKE RACK
BIKE LANE

BS BUS STOP
BB BUS STOP WITH BUS BENCH
BBS BUS STOP WITH BUS BENCH & SHELTER

LINSCOTT, LAW & GREENSPAN, engineers

FIGURE 3-4
EXISTING NEARBY PEDESTRIAN AND TRANSIT FACILITIES

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As previously noted, the project plans to improve the existing bus stop adjacent to the project site by providing a bus turnout area to allow transit buses to utilize the stop without impeding the flow to northbound traffic on Vermont Avenue, as well as providing a bus shelter for the existing transit stop.

3.3 Non-Vehicular Transport System

Non-vehicular transportation generally encompasses walking, biking, and other active transportation modes[9]. 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. The review includes a detailed inventory of the infrastructure provided along the portions of Vermont Avenue and Redondo Beach Boulevard that are within the Los Angeles city boundary.

3.3.1 *Pedestrian Framework*

Pedestrian infrastructure consists of facilities such as sidewalks, crosswalks, pedestrian signals, curb access ramps, American's with Disabilities Act (ADA) compliant tactile warning strips, and curb extensions, among other things. These facilities are widely provided within the study area. Pedestrian facilities are provided by the City of Gardena within the study area. Sidewalks are provided along the major corridors within the City, and marked crosswalks, pedestrian signals, and curb ramps are provided at the study intersections. Tactile warning strips consisting of yellow truncated dome pads are provided at most curb ramps along the portion of Vermont Avenue under the jurisdiction of the City of Gardena, but are not provided at the study intersections along Redondo Beach Boulevard west of Vermont Avenue. Additionally, sidewalks, marked crosswalks, pedestrian signals, and curb ramps with yellow truncated dome pads are provided along the portion of Figueroa Street under the jurisdiction of the County of Los Angeles.

Paved pedestrian sidewalks are provided along both sides of Redondo Beach Boulevard within the City of Los Angeles, however key facilities are missing from the pedestrian network adjacent to the project site. No paved pedestrian sidewalks are provided along the west side of Orchard Avenue, and a segment of the roadway shoulder along Vermont Avenue, while paved, does not provide any formal pedestrian facilities which are separated (i.e., elevated) from the roadway by curb and gutter. Additionally, neither marked crosswalks nor curb ramps are provided at the northeast and southeast corners of the Vermont Avenue/Redondo Beach Boulevard study intersection or at the unsignalized "T" intersections of Ainsworth Street/Redondo Beach Boulevard and Orchard Ave (East)/Redondo Beach Boulevard in the immediate vicinity of the project site. It is noted that marked crosswalks,

[9] For instance, the City of Los Angeles' *Mobility Plan* 2035 recognizes that "bicycling facilities are ideally suited for a host of slow moving modes, including but not limited to scooters, skateboards, rollerblading, rideables and other future compact personal transportation technologies".

pedestrian signals, and curb ramps with yellow truncated dome pads are provided at the signalized study intersections of Orchard Avenue/Redondo Beach Boulevard, I-110 Freeway Southbound Ramps/Redondo Beach Boulevard, I-110 Freeway Northbound Ramps/Redondo Beach Boulevard (with the exception of the signalized driveway which represents the north leg of the intersection), and the portion of Figueroa Street/Redondo Beach Boulevard under the City's jurisdiction. The existing pedestrian facilities within the City of Los Angeles' jurisdiction are presented in *Figure 3-4*.

Provision of a complete pedestrian network encourages pedestrian activity and walking as a transportation mode. Walkability is a term for the extent to which walking is readily available as a safe, connected, accessible and pleasant mode of transport[10]. There are several criteria that are widely accepted as key aspects of the walkability of urban areas that should be satisfied. The underlying principle is that pedestrians should not be delayed, diverted, or placed in danger. The widely accepted characteristics of walkability are as follows:

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

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

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

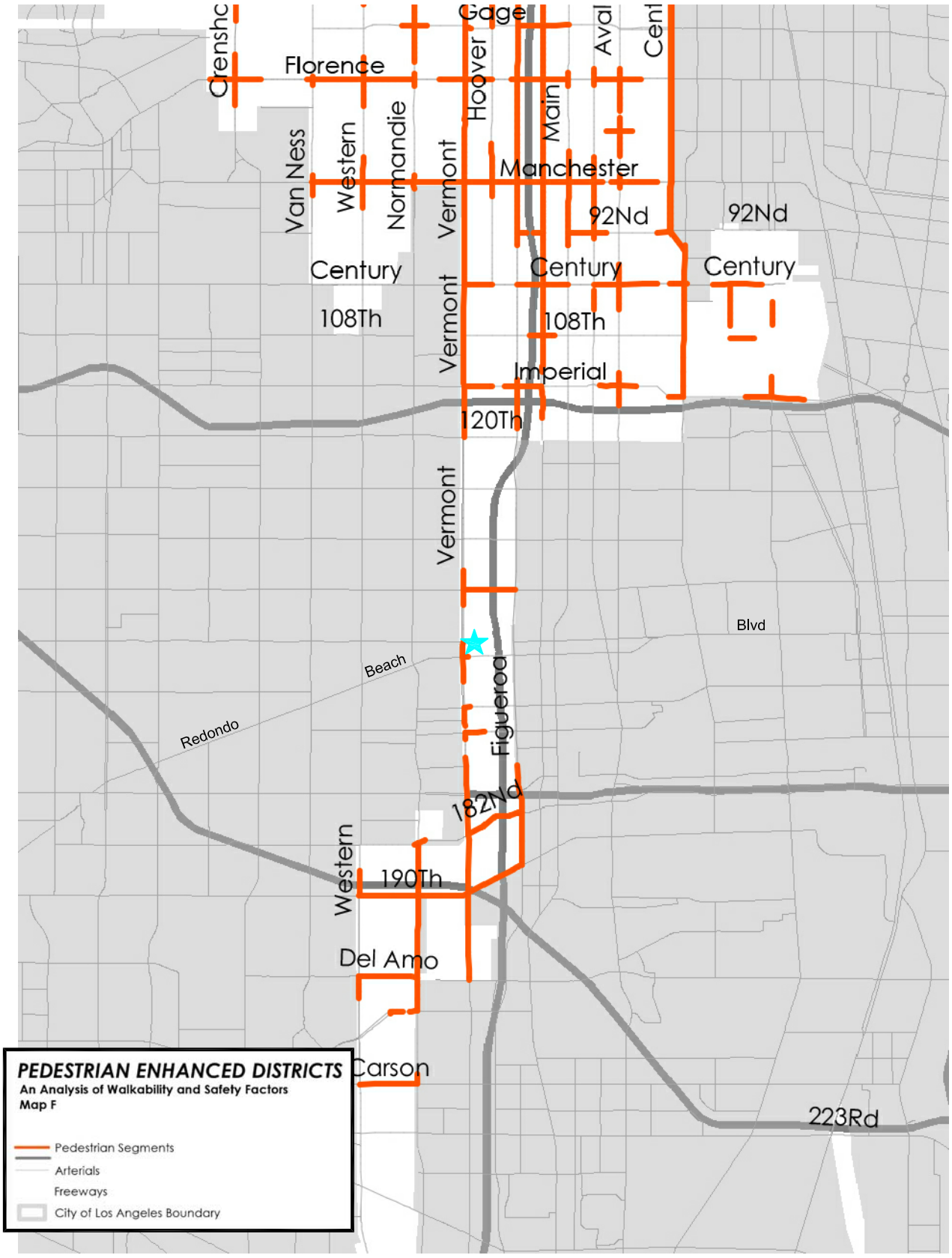
- Comfortable: High quality and well-maintained footpaths of suitable widths, attractive landscaping and architecture, shelter and rest spaces, and a suitable allocation of roadspace to pedestrians.

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

Further, the City's *Mobility Plan 2035* identifies a segment of Vermont Avenue in the vicinity of the proposed project as a Pedestrian Enhanced District, which are targeted areas prioritized for pedestrian enhancements. The Pedestrian Enhanced Districts in the vicinity of the project site are illustrated in ***Figure 3-5***.

As previously described, the proposed project includes improvements to the currently missing or inadequate components of the pedestrian network. The project will construct formal sidewalks along Vermont Avenue and Orchard Avenue adjacent to the project site, including curb ramps at the

[10] For example, refer to http://www.walkscore.com/, which generates a walkability score of approximately 69 (Somewhat Walkable) out of 100 for the project site. Walk Score calculates the walkability of an address by locating nearby stores, restaurants, schools, parks, etc., and applying pedestrian friendliness factors such as block length and intersection density. The Walk Score measures how easy it is to live a car-lite lifestyle—not how pretty the area is for walking.



NOT TO SCALE

MAP SOURCE: CITY OF LOS ANGELES MOBILITY PLAN 2035

PROJECT SITE

FIGURE 3-5
CITY OF LOS ANGELES
PEDESTRIAN ENHANCED DISTRICTS

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adjacent corners of the Vermont Avenue/Redondo Beach Boulevard and Orchard Avenue/Redondo Beach Boulevard intersections to be constructed to current City of Los Angeles standards. Further, pedestrian pathways will be provided on-site in order to connect the proposed industrial building with the public pedestrian network. Therefore, the project will contribute towards improved walkability in the vicinity of the site.

3.3.2 *Bicycle Framework*[11]

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.

The City of Los Angeles has designated a network of roadways which prioritize bicycle travel. The Bicycle Enhanced Network is comprised of protected bicycle lanes and bicycle paths which provide bicycle facilities for a variety of users in a low-stress environment meant to provide a higher level of comfort than striped bicycle lanes. This network includes bicycle facilities which are physically separated from other roadway users as well as facilities on neighborhood streets which provide connections within the protected bicycle lane system. The location of roadways in the vicinity of the project site which are designated as part of the Bicycle Enhanced Network is illustrated in ***Figure 3-6***. The Bicycle Lane Network consists of Tier 2 and Tier 3 bicycle lanes. The location of roadways with bicycle lanes identified in the City's *Mobility Plan 2035* is presented in ***Figure 3-7***. It should be noted that Vermont Avenue, which has been selected for a Tier 1 Protected Bicycle lane, currently accommodates a striped bike lane along the east side of the roadway north of Redondo Beach Boulevard within the City's jurisdiction.

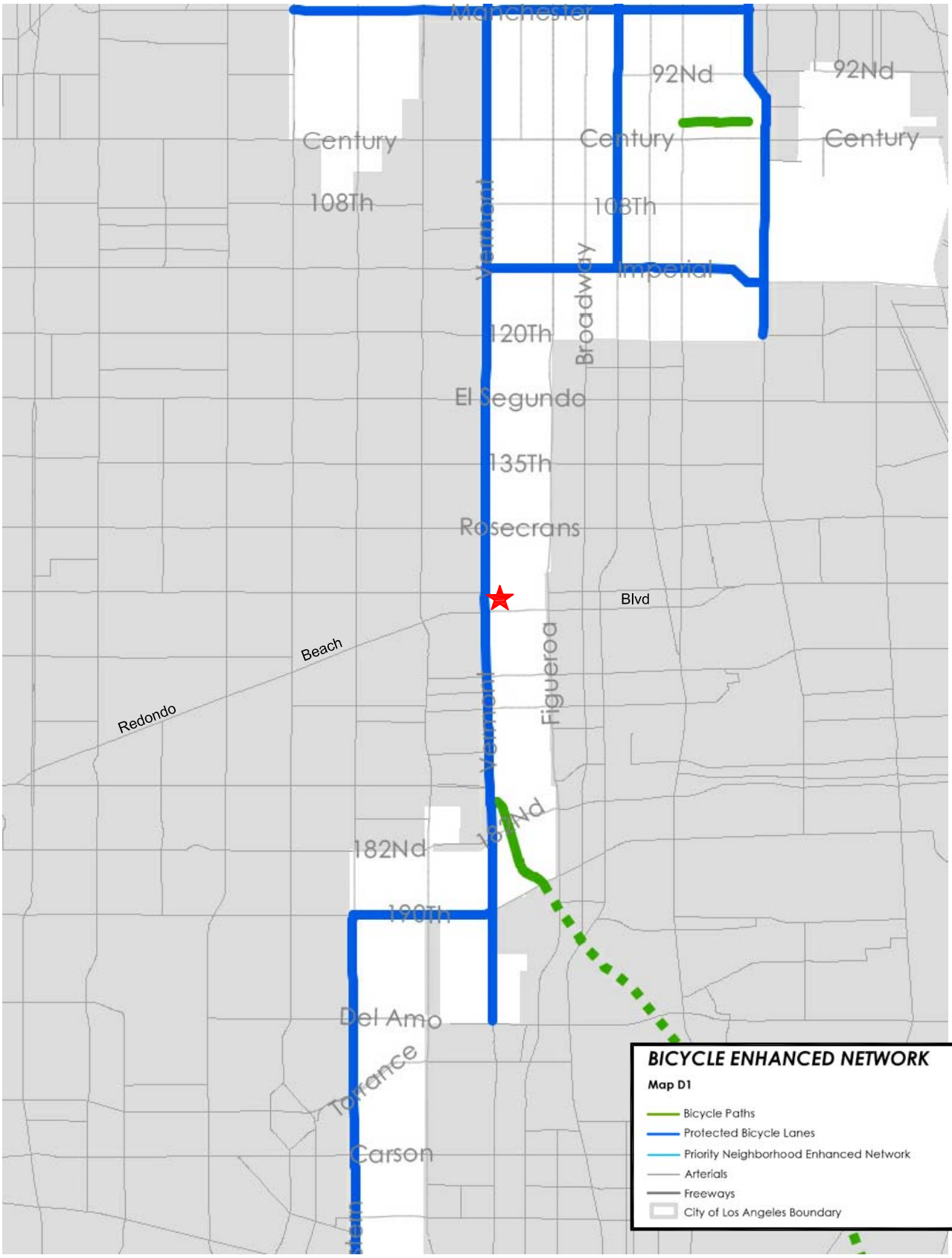
The City of Gardena's *General Plan 2006 Circulation Plan* also includes a network of designated bicycle routes, which are denoted by signage but no pavement marking[12]. The network is generally located along roadways with lower vehicular volumes and speeds, such as collectors and local streets. The bicycle network maintained by the City of Gardena does not directly connect to the bicycle network provided by the City of Los Angeles.

The proposed project is not planned to provide additional enhancements to the public bicycle network. The provision of on-site bicycle parking spaces, in conjunction with the relatively level terrain in the vicinity, will facilitate bicycling as a transportation mode for employees of the site.

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[11] Refer to http://www.walkscore.com/, which generates a bike score of approximately 57 (Somewhat Bikeable) out of 100 for the project site. Walk Score calculates the bike score of an address by locating nearby bicycling facilities, hills, destinations, and roadway connectivity in addition to the number of bike commuters. The Bike Score measures how easy it is to live a car-lite lifestyle—not how pretty the area is for bicycling.

[12] City of Gardena General Plan 2006 Circulation Plan, adopted April 25, 2006.



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MAP SOURCE: CITY OF LOS ANGELES MOBILITY PLAN 2035

PROJECT SITE

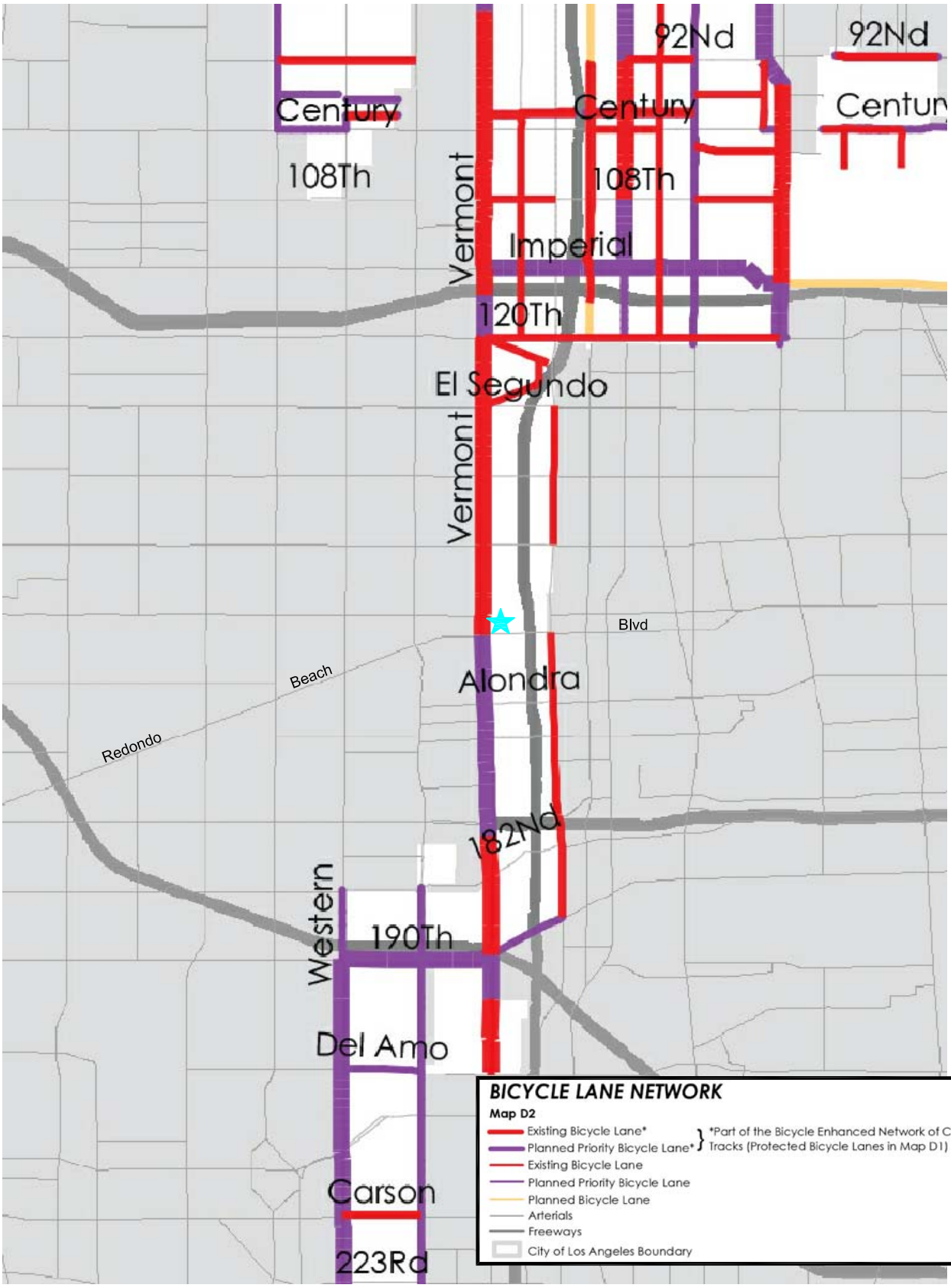
FIGURE 3-6

CITY OF LOS ANGELES BICYCLE ENHANCED NETWORK (LOW STRESS NETWORK)

LINSCOTT, LAW & GREENSPAN, engineers

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MAP SOURCE: CITY OF LOS ANGELES MOBILITY PLAN 2035

PROJECT SITE

FIGURE 3-7
CITY OF LOS ANGELES
PROPOSED BICYCLE LANE NETWORK

LINSCOTT, LAW & GREENSPAN, engineers

PROLOGIS VERMONT AVENUE AND REDONDO BEACH BOULEVARD INDUSTRIAL PROJECT

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4.0 TRAFFIC COUNTS

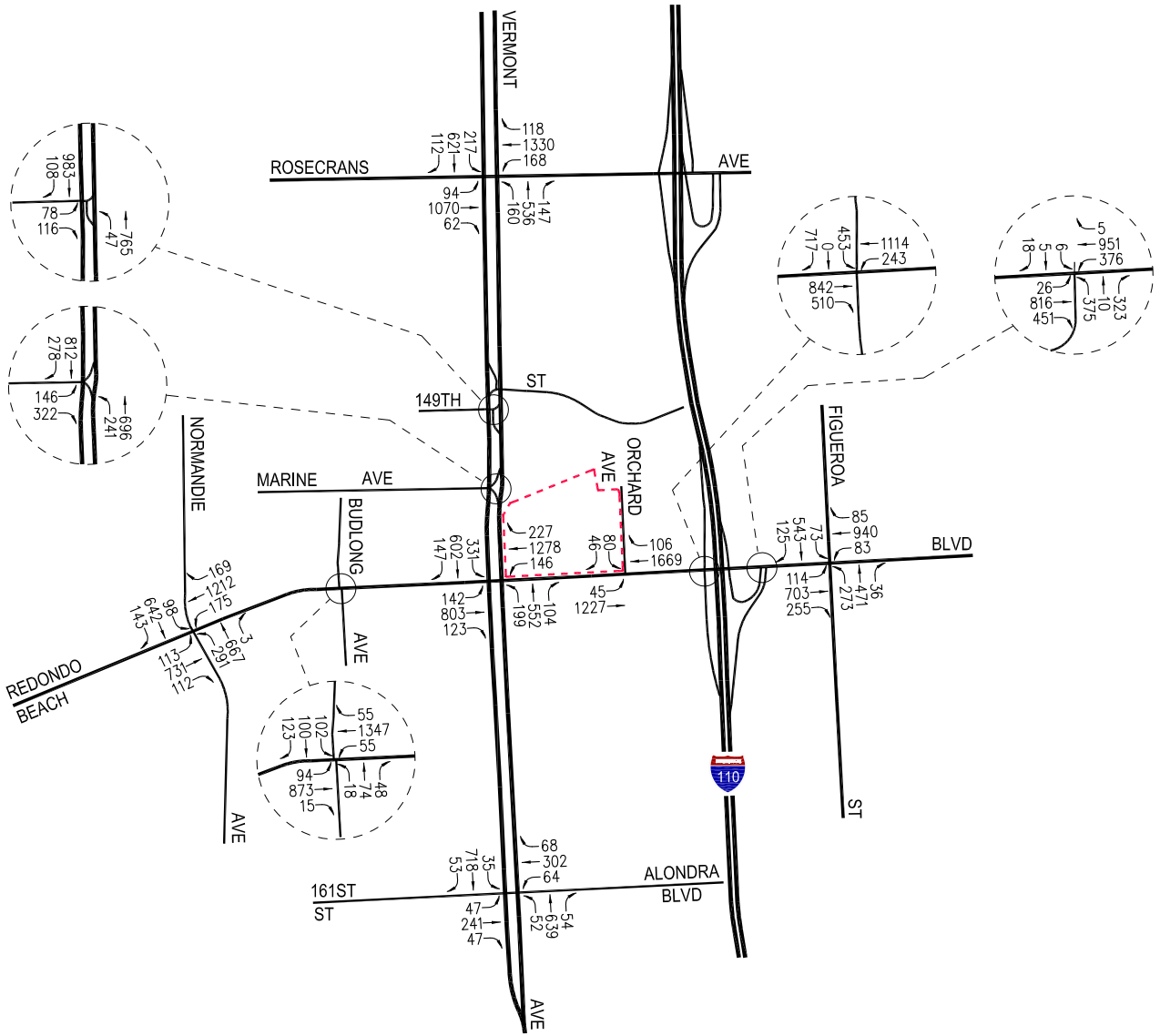
Manual counts of vehicular turning movements were conducted in May 2019 at each of the study intersections during the weekday morning (AM) and afternoon (PM) commute periods to determine the peak hour traffic volumes. The manual counts were conducted by an independent traffic count subconsultant (The Traffic Solution) at the study intersections from 7:00 to 10:00 AM to determine the weekday AM peak commute hour, and from 3:00 to 6:00 PM to determine the weekday PM peak commute hour. In conjunction with the manual turning movement vehicle counts, 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. Traffic volumes at the study intersections show the typical peak periods between 7:00 to 10:00 AM and 3:00 to 6:00 PM generally associated with metropolitan Los Angeles weekday peak commute hours.

The weekday peak hour manual counts of vehicle movements at the study intersections are summarized in ***Table 4-1***. The existing traffic volumes at the study intersections during the weekday AM and PM peak hours are shown in ***Figures 4-1*** and ***4-2***, respectively. Summary data worksheets of the manual traffic, pedestrian, and bicycle counts at the study intersections are contained in ***Appendix B***.

Table 4-1
EXISTING TRAFFIC VOLUMES [1]
WEEKDAY AM AND PM PEAK HOURS

NO.	INTERSECTION	DATE	DIR	AM PEAK HOUR		PM PEAK HOUR	
				BEGAN	VOLUME	BEGAN	VOLUME
1	Normandie Avenue/ Redondo Beach Boulevard	05/23/2019	NB SB EB WB	7:30 AM	961 883 956 1,556	5:00 PM	1,015 917 1,436 1,192
2	Budlong Avenue/ Redondo Beach Boulevard	05/23/2019	NB SB EB WB	7:30 AM	140 325 982 1,457	5:00 PM	235 294 1,337 1,093
3	Vermont Avenue/ Rosecrans Avenue	05/23/2019	NB SB EB WB	7:15 AM	843 950 1,226 1,616	4:45 PM	996 955 1,425 1,337
4	Vermont Avenue/ 149th Street	05/23/2019	NB SB EB WB	7:15 AM	812 1,091 194 0	4:30 PM	1,103 860 115 0
5	Vermont Avenue/ Marine Avenue	05/23/2019	NB SB EB WB	7:15 AM	937 1,090 468 0	4:30 PM	1,003 835 566 0
6	Vermont Avenue/ Redondo Beach Boulevard	05/23/2019	NB SB EB WB	7:30 AM	855 1,080 1,068 1,651	5:00 PM	893 917 1,412 1,389
7	Vermont Avenue/ 161st Street - Alondra Boulevard	05/23/2019	NB SB EB WB	7:30 AM	745 806 335 434	4:45 PM	938 762 445 346
8	Orchard Avenue/ Redondo Beach Boulevard	05/23/2019	NB SB EB WB	7:30 AM	0 126 1,272 1,775	5:00 PM	0 183 1,463 1,442
9	I-110 Freeway SB Ramps/ Redondo Beach Boulevard	05/23/2019	NB SB EB WB	7:30 AM	0 1,170 1,352 1,357	5:00 PM	0 1,014 1,486 1,135
10	I-110 Freeway NB Ramps/ Redondo Beach Boulevard	05/23/2019	NB SB EB WB	7:30 AM	708 29 1,293 1,332	4:45 PM	653 56 1,644 1,095
11	Figueroa Street/ Redondo Beach Boulevard	05/23/2019	NB SB EB WB	7:30 AM	780 741 1,072 1,108	4:30 PM	923 794 1,373 886

[1] Counts conducted by Counts Unlimited.



PROJECT SITE

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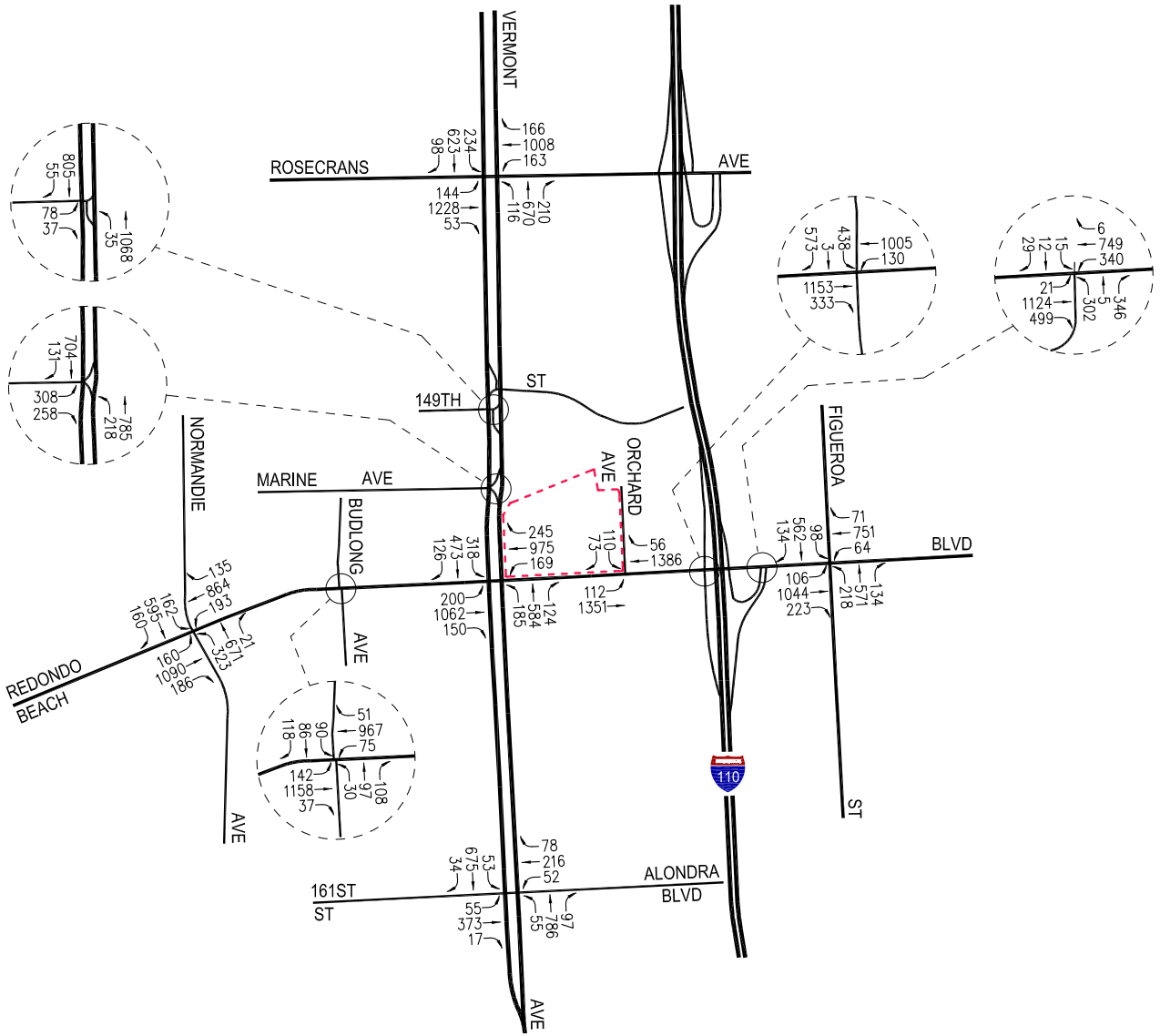
FIGURE 4-1
EXISTING TRAFFIC VOLUMES

WEEKDAY AM PEAK HOUR

PROLOGIS VERMONT AVENUE AND REDONDO BEACH BOULEVARD INDUSTRIAL PROJECT

LINSCOTT, LAW & GREENSPAN, engineers

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PROJECT SITE

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FIGURE 4-2
EXISTING TRAFFIC VOLUMES

WEEKDAY PM PEAK HOUR

PROLOGIS VERMONT AVENUE AND REDONDO BEACH BOULEVARD INDUSTRIAL PROJECT

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5.0 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 options for developing the future traffic volume forecast:

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

Accordingly, this traffic analysis provides a highly conservative estimate of future pre-project traffic volumes as it incorporates both the "A" and "B" options outlined in the CEQA Guidelines for purposes of developing the forecast. It is noted that the County of Los Angeles does not employ growth in ambient traffic in the assessment of future conditions. Thus, for the County of Los Angeles intersection analyses, no ambient traffic growth was considered (i.e., the "A" option above was employed for purposes of developing the future forecast).

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 1.0-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 Los Angeles Departments of Transportation (DOT) and City Planning (DCP), the Cities of Gardena and Carson, and the County of Los Angeles. The list of related projects in the project site area is presented in ***Table 5-1***. The location of the related projects is shown in ***Figure 5-1***.

Traffic volumes expected to be generated by the related projects were calculated using rates provided in the Institute of Transportation Engineers' (ITE) *Trip Generation Manual*[13], or they were obtained from other traffic studies as noted. The related projects' respective traffic generation for the

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

Table 5-1
RELATED PROJECTS LIST AND TRIP GENERATION [1]

MAP NO.	PROJECT STATUS	PROJECT NAME/NUMBER ADDRESS/LOCATION	LAND USE DATA		PROJECT DATA SOURCE	DAILY TRIP ENDS [2] VOLUMES	AM PEAK HOUR VOLUMES [2]			PM PEAK HOUR VOLUMES [2]		
			LAND-USE	SIZE			IN	OUT	TOTAL	IN	OUT	TOTAL
City of Gardena												
G1	Proposed	1333 W. 168th Street	Condominiums	3 DU	[3]	22	0	1	1	1	1	2
G2	Proposed	1112 Gardena Boulevard	Apartment	12 DU	[3]	88	1	5	6	4	3	7
			Retail	3,986 GLSF	[4]	150	2	2	4	7	8	15
G3	Proposed	Melia 178th Street Project 1515 W. 178th Street	Townhomes	114 DU	[3]	834	12	40	52	40	24	64
G4	Proposed	1932 W. 145th Street	Apartment	4 DU	[3]	29	0	2	2	1	1	2
G5	Proposed	2415 Marine Avenue	Townhomes	64 DU	[3]	468	7	22	29	23	13	36
			Retail	1,072 GLSF	[4]	40	1	0	1	2	2	4
G6	Proposed	Gardner Taxi Site 2129 W. Rosecrans Avenue	Townhomes	105 DU	[3]	769	11	37	48	37	22	59
			Retail	5,000 GLSF	[4]	189	3	2	5	9	10	19
G7	Proposed	Normandie Courtyard 1348 W. 168th Street	Apartment	9 DU	[3]	66	1	3	4	3	2	5
G8	Proposed	KB Home Stonefield 1017 W. 141st Street, 14031 S. Vermont Avenue	Townhomes	63 DU	[3]	461	7	22	29	22	13	35
G9	Proposed	13919 Normandie Avenue	Townhomes	20 DU	[3]	146	2	7	9	7	4	11
G10	Proposed	1341 W. Gardena Boulevard	Townhomes	14 DU	[3]	102	1	5	6	5	3	8
			Retail	3,385 GLSF	[4]	128	2	1	3	6	7	13
G11	Proposed	16819 Normandie Avenue	Townhomes	63 DU	[3]	461	7	22	29	22	13	35
G12	Proposed	15930 S. Western Avenue	Medical Office	6,430 GSF	[5]	224	14	4	18	6	16	22
G13	Under Construction	14105 S. Vermont Avenue	Restaurant	1,500 GSF	[6]	168	8	7	15	9	6	15
G14	Built	1201 W. 155th Avenue	Dialysis Facility	11,550 GSF	[5]	402	25	7	32	11	29	40
G15	Under Construction	15106 S. Western Avenue	Retail	5,895 GLSF	[4]	223	4	2	6	11	11	22
			(Less Existing Automotive Repair)	(5,895) GLSF	[7]	None	(9)	(4)	(13)	(9)	(9)	(18)

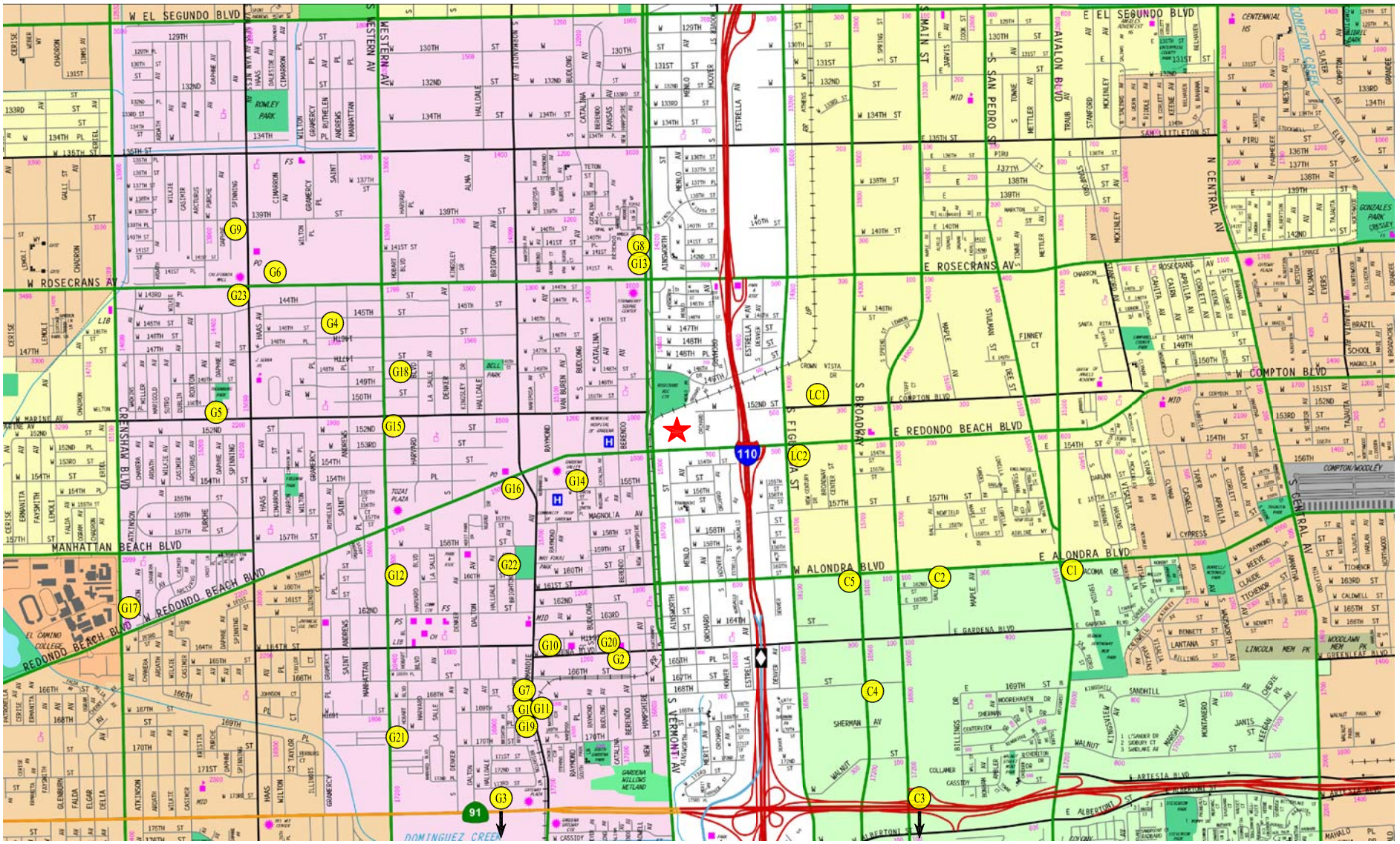
Table 5-1 (Continued)
RELATED PROJECTS LIST AND TRIP GENERATION [1]

MAP NO.	PROJECT STATUS	PROJECT NAME/NUMBER ADDRESS/LOCATION	LAND USE DATA		PROJECT DATA SOURCE	DAILY TRIP ENDS [2] VOLUMES	AM PEAK HOUR VOLUMES [2]			PM PEAK HOUR VOLUMES [2]		
			LAND-USE	SIZE			IN	OUT	TOTAL	IN	OUT	TOTAL
G16	Under Construction	1420 Redondo Beach Boulevard	Retail	4,053 GLSF	[4]	153	2	2	4	7	8	15
G17	Under Construction	16210 Crenshaw Boulevard	Restaurant	4,860 GSF	[8]	2,289	99	96	195	83	76	159
G18	Under Construction	1715 W. 149th Street	Townhomes	5 DU	[3]	37	0	2	2	2	1	3
G19	Under Construction	16809 S. Normandie Avenue	Single-Family Residential	21 DU	[9]	198	4	12	16	13	8	21
G20	Under Construction	1147 W. Gardena Boulevard	Apartment	4 DU	[3]	29	0	2	2	1	1	2
G21	Under Construction	16958 S. Western Avenue	Townhomes	46 DU	[3]	337	5	16	21	16	10	26
G22	Under Construction	15927 S. Brighton Avenue	Apartment	2 DU	[3]	15	0	1	1	1	0	1
G23	Under Construction	14321 Van Ness Avenue	Townhomes Retail	40 DU 1,835 GLSF	[3] [4]	293 69	4 1	14 1	18 2	14 3	8 4	22 7
County of Los Angeles												
LC1	Proposed	Compton Boulevard between Figueroa Street & Broadway	Transfer STA and MRF	27,413 GSF	[10]	191	22	3	25	3	24	27
LC2	Under Construction	15310 S. Figueroa Street	Convenience Store Retail	2,695 GSF 4,197 GLSF	[10] [10]	1,989 186	90 3	91 1	181 4	72 5	69 6	141 11
City of Carson												
C1	Proposed	16100 S. Avalon Boulevard	Self-Storage	44,000 GSF	[11]	66	2	2	4	3	4	7
C2	Proposed	200 E. Alondra Boulevard	Warehouse	137,000 GSF	[12]	238	18	5	23	7	19	26
C3	Proposed	California Park 17706 S. Main Street	Warehouse	94,731 GSF	[12]	165	12	4	16	5	13	18

Table 5-1 (Continued)
RELATED PROJECTS LIST AND TRIP GENERATION [1]

MAP NO.	PROJECT STATUS	PROJECT NAME/NUMBER ADDRESS/LOCATION	LAND USE DATA		PROJECT DATA SOURCE	DAILY TRIP ENDS [2] VOLUMES	AM PEAK HOUR VOLUMES [2]			PM PEAK HOUR VOLUMES [2]		
			LAND-USE	SIZE			IN	OUT	TOTAL	IN	OUT	TOTAL
C4	Proposed	Broadway Industrial Building 16800 Broadway	Warehouse	7,000 GSF	[10]	25	2	0	2	1	1	2
C5	Proposed	Giuliano's Bakery 320 Alondra Boulevard	Bakery	374,616 GSF	[10]	2,611	303	42	345	45	318	363
TOTAL						13,861	666	481	1,147	498	749	1,247

[1] Source: County of Los Angeles Department of Regional Planning, City of Gardena Community Development Department, and City of Carson Community Development Department. The City of Los Angeles Departments of Transportation and City Planning were consulted, and no projects were identified within a 1.0 mile radius of the project site. The peak hour traffic volumes were based forecast on trip rates as provided in the ITE *Trip Generation Manual*, 10th Edition, 2017.
[2] Trips are one-way traffic movements, entering or leaving.
[3] ITE Land Use Code 220 (Multifamily Housing (Low-Rise)) trip generation average rates.
[4] ITE Land Use Code 820 (Shopping Center) trip generation average rates.
[5] ITE Land Use Code 720 (Medical-Dental Office Building) trip generation average rates.
[6] ITE Land Use Code 932 (High-Turnover (Sit-Down)) Restaurant trip generation average rates.
[7] ITE Land Use Code 942 (Automobile Care Center) Restaurant trip generation average rates.
[8] ITE Land Use Code 934 (Fast-Food Restaurant with Drive-Through) Restaurant trip generation average rates.
[9] ITE Land Use Code 210 (Single-Family Detached Housing) trip generation average rates.
[10] Source: "South Bay Distribution Center Traffic Impact Analysis", prepared by Kunzman Associates, Inc., June 16, 2017.
[11] ITE Land Use Code 151 (Mini-Warehouse) trip generation average rates.
[12] ITE Land Use Code 150 (Warehouse) trip generation average rates.



MAP SOURCE: RAND MCNALLY & COMPANY

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- PROJECT SITE
- G CITY OF GARDENA RELATED PROJECT
- LC LOS ANGELES COUNTY RELATED PROJECT
- C CITY OF CARSON RELATED PROJECT

FIGURE 5-1
LOCATION OF RELATED PROJECTS

LINSCOTT, LAW & GREENSPAN, engineers

PROLOGIS VERMONT AVENUE AND REDONDO BEACH BOULEVARD INDUSTRIAL PROJECT

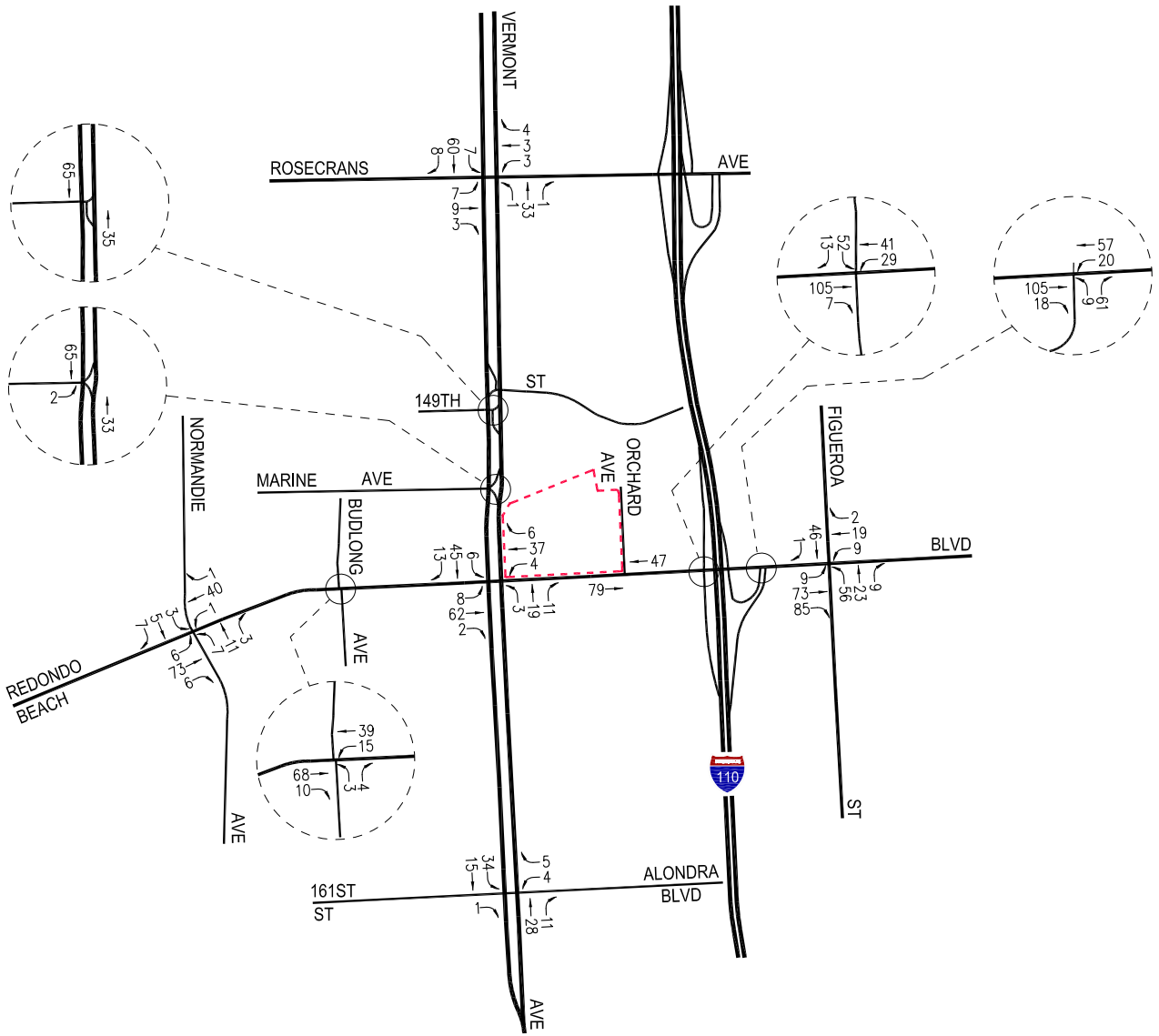
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weekday AM and PM peak hours, as well as on a daily basis for a typical weekday, is summarized in *Table 5-1*. The related projects traffic volumes were distributed and assigned to the street system based on the projects' locations in relation to the study intersections, their proximity to major traffic corridors, proposed land uses, nearby population and employment centers, etc. The distribution of the related projects traffic volumes to the study intersections during the weekday AM and PM peak hours are displayed in ***Figures 5-2*** and ***5-3***, respectively.

5.2 Ambient Traffic Growth Factor

Horizon year background traffic growth estimates have been calculated using an ambient traffic growth factor for the City of Los Angeles and City of Gardena analyses. It is important to note that based on the direction of the County of Los Angeles (i.e., for the one intersection analyzed under County of Los Angeles analysis methodology) no ambient growth was incorporated.

The ambient traffic growth factor is intended to include unknown related projects in the study area as well as account for typical growth in traffic volumes due to the development of projects outside the study area. Ambient traffic growth in the Harbor Gateway area (i.e., Regional Statistical Area (RSA) 18), which is presented in the Los Angeles County *2010 Congestion Management Program*, indicates existing traffic volumes are expected to increase at an annual rate of approximately 0.22 percent (0.22%) per year between years 2019 and 2022. In order to provide a very conservative forecast of future potential growth, an annual growth rate of one percent (1.0%) until the year 2022 (i.e., the anticipated project build-out year) was selected for this analysis in consultation with LADOT during the scoping process. Therefore, application of this one percent (1.0%) ambient growth factor (i.e., four times the CMP growth rate) in addition to the forecast traffic generated by the related projects allows for a very 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). Further, as described in Section 5.0 herein, CEQA only requires that one of these two approaches be employed in developing the future traffic volume forecasts, however, this cumulative analysis conservatively analyzes both growth projections and related projects.



PROJECT SITE

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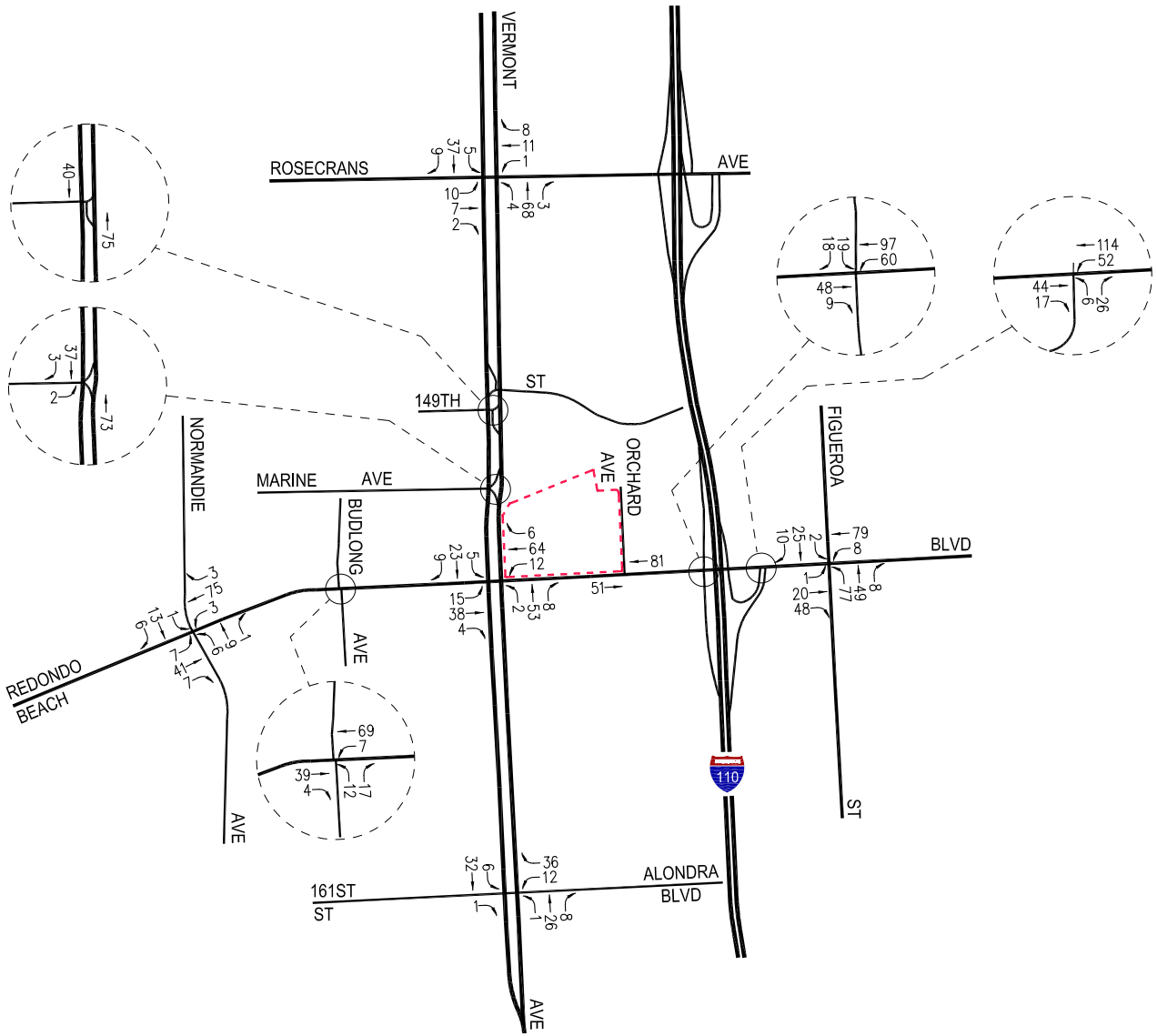
FIGURE 5-2
RELATED PROJECTS TRAFFIC VOLUMES

WEEKDAY AM PEAK HOUR

PROLOGIS VERMONT AVENUE AND REDONDO BEACH BOULEVARD INDUSTRIAL PROJECT

LINSCOTT, LAW & GREENSPAN, engineers

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PROJECT SITE

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FIGURE 5-3
RELATED PROJECTS TRAFFIC VOLUMES

WEEKDAY PM PEAK HOUR

PROLOGIS VERMONT AVENUE AND REDONDO BEACH BOULEVARD INDUSTRIAL PROJECT

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6.0 PROJECT TRAFFIC FORECAST

In order to estimate the amount of new vehicular traffic generated by the proposed project, a multi-step process has been utilized. The first step is trip generation, which estimates the total arriving and departing traffic volumes on a peak hour and daily basis. The traffic generation potential is forecast by applying the appropriate vehicle trip generation equations or rates to the project development program.

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

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

6.1 Project Traffic Generation

Traffic generation is expressed in vehicle trip ends, defined as one-way vehicular movements, either entering or exiting the generating land use. Trip rates provided in the ITE *Trip Generation Manual*, 10th Edition publication were utilized to forecast project traffic generation for the proposed project. As noted previously, the future tenant of the proposed industrial building is not yet known. The trip rates for General Light Industrial are among the highest rates published in the ITE *Trip Generation Manual* for industrial and warehousing land uses, and are the most appropriate rates to utilize for the proposed project in the absence of tenant information which would support a more specific land use category (it should be noted that based on information provided by the project Applicant, a high-cube fulfillment center warehouse is not proposed at the project site). Therefore, traffic volumes expected to be generated by the proposed project during the weekday AM and PM peak hours were based upon average rates per 1,000 square feet of floor area for General Light Industrial land uses (ITE Land Use Code 110) in general urban/suburban locations. The following average rates were employed for the morning and afternoon peak hour trip forecasts:

- AM Peak Hour: 0.70 trip ends per 1,000 square feet
- PM Peak Hour: 0.63 trip ends per 1,000 square feet

The forecast of daily trip ends generated by the proposed project was calculated by the City of Los Angeles Department of Transportation's Vehicle Miles Traveled (VMT) Calculator Version 1.2. The VMT Calculator will be discussed in additional detail in Sections 7.2 and 8.2, herein.

The trip rates published in the ITE *Trip Generation Manual* account for all vehicle trips generated by the land use. In the case of industrial land uses, it is expected that a proportion of the vehicles accessing the project site would consist of delivery trucks and/or tractor-trailer trucks, in addition to passenger vehicles. In August 2003, the City of Fontana, located in the County of San Bernardino, published a study which evaluated the vehicle trip generation characteristics of several land uses which typically generate a significant amount of truck trips. The "Fontana Truck Trip Generation Study"[14] enhances the relatively limited information provided by the ITE *Trip Generation Manual* by providing information on trip rates by type of vehicle (i.e., passenger vehicle and trucks), and by size of trucks (i.e., 2-axle, 3-axle, 4 and more axles).

The ratios of trucks to passenger vehicles and trucks by number of axles identified in the "Fontana Truck Trip Generation Study" for heavy warehouse land uses was applied to the general vehicle trip forecast based on the ITE trip generation rates described above. The ratio of trucks to passenger vehicles for heavy warehouse land uses corresponds to 38.8 percent (38.8%) of all trip ends, which corresponds to the fleet mix of approximately 40 percent (40%) trucks which has been recommended by the South Coast Air Quality Management District. The total number of forecast truck trips were then further broken down into truck trips by number of axles. Lastly, a passenger car equivalent (PCE) factor was applied to the truck trips based on the number of axles to account for the effect of the larger vehicles on intersection traffic operations.

The trip generation rates and forecast of the vehicular trips anticipated to be generated by the proposed project are presented in ***Table 6-1***. The project trip generation forecast was submitted for review and approval by LADOT staff. As summarized in *Table 6-1*, the proposed project is expected to generate 375 PCE-adjusted vehicle trips (329 inbound trips and 46 outbound trips) during the weekday AM peak hour. During the weekday PM peak hour, the proposed project is expected to generate 337 PCE-adjusted vehicle trips (45 inbound trips and 292 outbound trips). Over a 24-hour period, the proposed project is forecast to generate 3,108 PCE-adjusted vehicle trips (approximately 1,554 inbound trips and 1,554 outbound trips) during a typical weekday.

6.2 Project Traffic Distribution and Assignment

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

- The site's proximity to major traffic corridors (i.e., Vermont Avenue, Figueroa Street, Rosecrans Avenue, Redondo Beach Boulevard, etc.);
- Expected localized traffic flow patterns based on adjacent roadway channelization and presence of traffic signals;
- Existing intersection traffic volumes;

[14] "Truck Trip Generation Study, City of Fontana, County of San Bernardino, State of California", prepared by Transportation Engineering and Planning, Inc., August 2003.

Table 6-1
PROJECT TRIP GENERATION [1]

LAND USE	SIZE	DAILY TRIP ENDS [2] VOLUMES	AM PEAK HOUR VOLUMES [2] IN	AM PEAK HOUR VOLUMES [2] OUT	AM PEAK HOUR VOLUMES [2] TOTAL	PM PEAK HOUR VOLUMES [2] IN	PM PEAK HOUR VOLUMES [2] OUT	PM PEAK HOUR VOLUMES [2] TOTAL
Light Industrial	340,298 GSF							
Total Vehicles [3]		1,975	209	29	238	28	186	214
- Total Passenger Cars (61.20% Daily) [4]		1,209	128	18	146	17	114	131
- Total Trucks (38.80% Daily) [4]		766	81	11	92	11	72	83
- 2-Axle (11.10% of All Trucks)		86	9	1	10	1	8	9
- 3-Axle (36.0% of All Trucks)		276	29	4	33	4	26	30
- 4+-Axle (53.0% of All Trucks)		406	43	6	49	6	38	44
- 2-Axle (1.5 PCE)		129	14	2	16	2	12	14
- 3-Axle (2.0 PCE)		552	58	8	66	8	52	60
- 4+-Axle (3.0 PCE)		1,218	129	18	147	18	114	132
Subtotal Trucks (PCE Adjusted)		1,899	201	28	229	28	178	206
LIGHT INDUSTRIAL PCE TOTAL		**3,108**	**329**	**46**	**375**	**45**	**292**	**337**

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

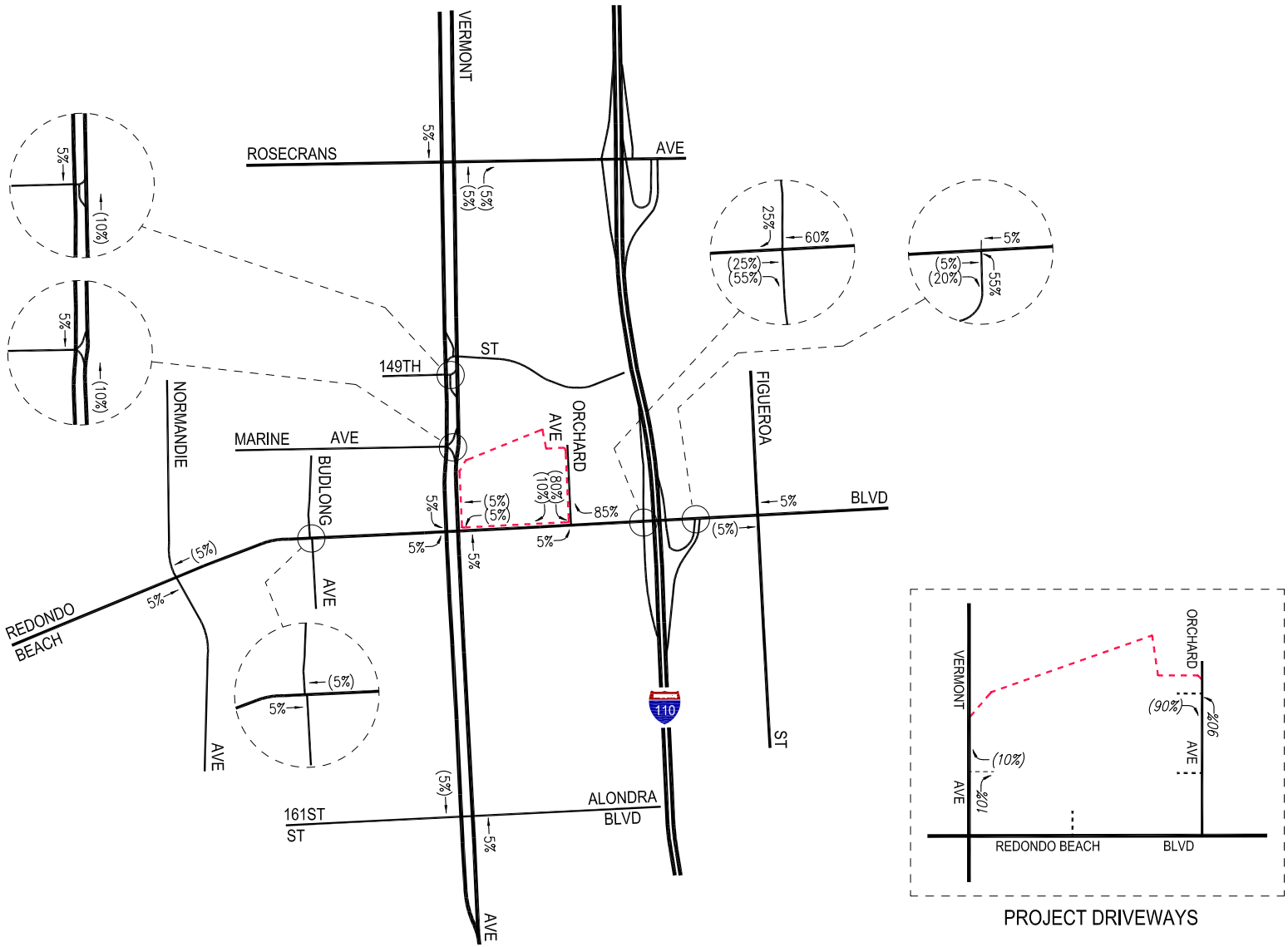
[2] Trips are one-way traffic movements, entering or leaving.

[3] ITE Land Use Code 110 (General Light Industrial) trip generation average rates.
- Daily Trip Rate: 4.96 trips/1,000 SF of floor area; 50% inbound/50% outbound. The daily total vehicle trips have been adjusted to reflect 1,975 trips to be consistent with the City's VMT Calculator.
- AM Peak Hour Trip Rate: 0.70 trips/1,000 SF of floor area; 88% inbound/12% outbound
- PM Peak Hour Trip Rate: 0.63 trips/1,000 SF of floor area; 13% inbound/87% outbound

[4] Based on information contained in the "Truck Trip Generation Study for City of Fontana, County of San Bernardino, State of California" prepared by Transportation Engineering and Planning, Inc., August 2003. A PCE factor of 1.5 was applied to all 2-axle trucks, while a PCE factor of 2.0 was applied to all 3-axle trucks and a PCE factor of 3.0 was applied to all 4 or more axle trucks.

- Ingress/egress scheme planned for the proposed project;
- Nearby population and employment centers; and
- Input from LADOT staff.

The general, directional traffic distribution pattern for the proposed project are presented in ***Figures 6-1*** and ***6-2*** for the trucks and passenger cars, respectively. The forecast weekday AM and PM peak hour project traffic volumes at the study intersections associated with the proposed project are presented in ***Figures 6-3*** and ***6-4***, respectively. The traffic volume assignments presented in *Figures 6-3* and *6-4* reflect the traffic distribution characteristics shown in *Figures 6-1* and *6-2*, and the project traffic generation forecasts presented in *Table 6-1*.



PROJECT DRIVEWAYS

PROJECT SITE

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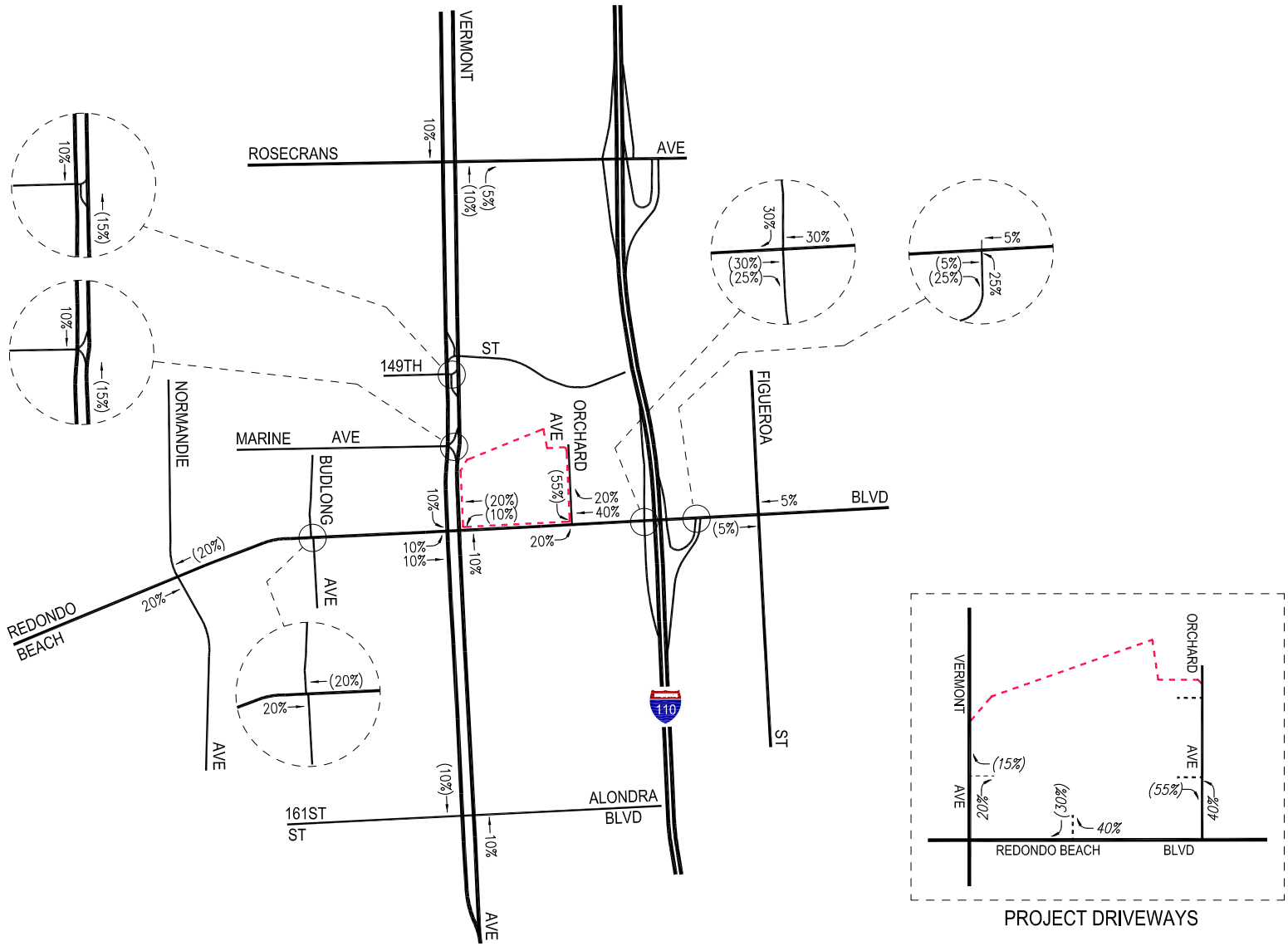
FIGURE 6-1
PROJECT TRIP DISTRIBUTION

TRUCKS

LINSCOTT, LAW & GREENSPAN, engineers

PROLOGIS VERMONT AVENUE AND REDONDO BEACH BOULEVARD INDUSTRIAL PROJECT

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N

NOT TO SCALE

PROJECT SITE

FIGURE 6-2
PROJECT TRIP DISTRIBUTION

PASSENGER CARS

PROLOGIS VERMONT AVENUE AND REDONDO BEACH BOULEVARD INDUSTRIAL PROJECT

LINSCOTT, LAW & GREENSPAN, engineers

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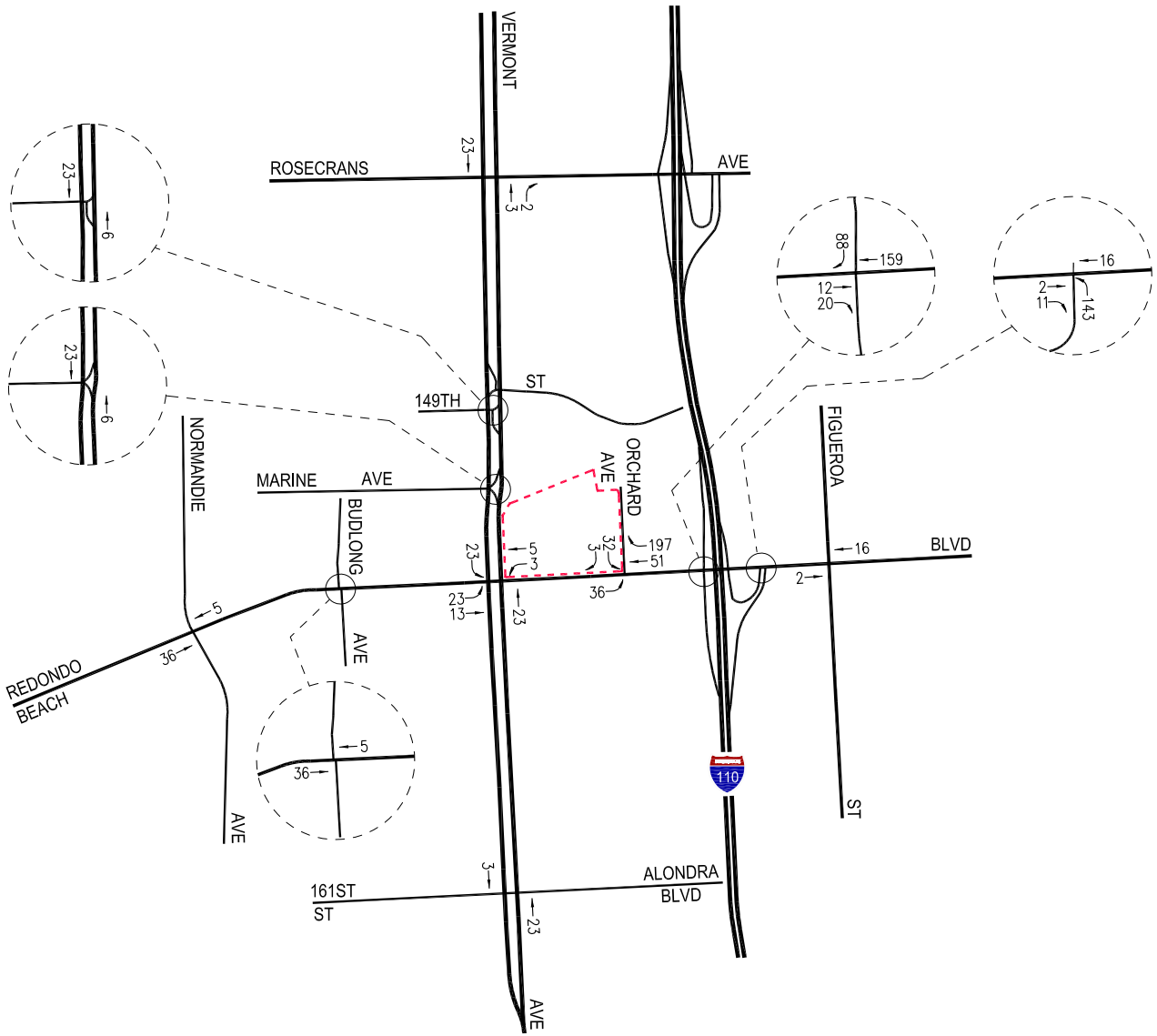


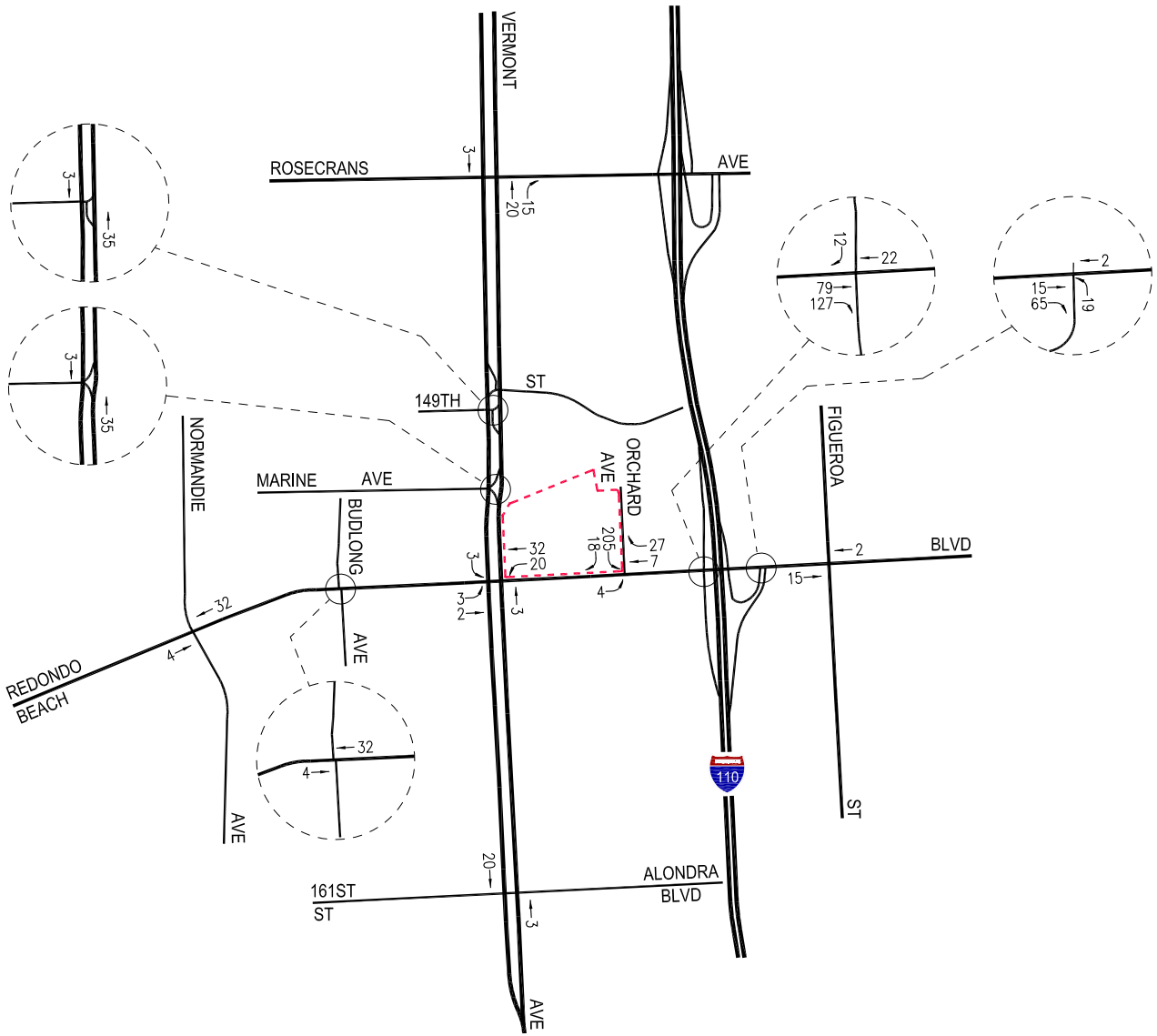
FIGURE 6-3
PROJECT TRAFFIC VOLUMES

WEEKDAY AM PEAK HOUR

PROLOGIS VERMONT AVENUE AND REDONDO BEACH BOULEVARD INDUSTRIAL PROJECT

LINSCOTT, LAW & GREENSPAN, engineers

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PROJECT SITE

N

NOT TO SCALE

FIGURE 6-4
PROJECT TRAFFIC VOLUMES

WEEKDAY PM PEAK HOUR

PROLOGIS VERMONT AVENUE AND REDONDO BEACH BOULEVARD INDUSTRIAL PROJECT

LINSCOTT, LAW & GREENSPAN, engineers

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7.0 TRANSPORTATION IMPACT ANALYSIS METHODOLOGY

7.1 City of Los Angeles

7.1.1 *Level of Service Analysis*

7.1.1.1 *Analysis Methodology*

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

7.1.1.2 *Impact Criteria and Thresholds*

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

The significance of the potential impacts of project-generated traffic was identified using the traffic impact criteria set forth in LADOT's *Transportation Impact Study Guidelines,* December 2016. According to the City's published traffic study guidelines, the impact is considered significant if the project-related increase in the *v/c* ratio equals or exceeds the thresholds presented in ***Table 7–1***.

Table 7-1
CITY OF LOS ANGELES
INTERSECTION IMPACT THRESHOLD CRITERIA

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

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

Corridors that serve major through traffic in the area are often times affected by the presence of freeway on/off ramps and closely spaced intersections. In the project study area, the operations of

the Redondo Beach Boulevard corridor are influenced by the I-110 Freeway ramps and their proximity to the Figueroa Street corridor. Based on field observations and existing vehicle queuing, it is therefore appropriate to adjust the corresponding *v/c* ratios and LOS analyses for Study Intersection Nos. 9, 10 and 11 (i.e., I-110 Freeway Southbound Ramps/Redondo Beach Boulevard, I-110 Freeway Northbound Ramps/Redondo Beach Boulevard, and Figueroa Street /Redondo Beach Boulevard, respectively) to reflect the effects of these closely spaced intersections in the project study area. Instead of an intersection capacity of 1,500 vehicles per hour per lane (vphpl) for a two-phase signalized intersection, or 1,425 vphpl for a three-phase signalized intersection, or 1,375 vphpl for a four-phase signalized intersection, as established by LADOT's methodology, the corresponding intersection capacities were reduced to 1,100 vphpl for analysis purposes based on consultation with LADOT and similar employments on other project analyses. This provides for a more conservative assessment of intersection operations. This approach is consistent with LADOT's *Transportation Impact Study Guidelines* which states: "The intersection capacity at intersections along a congested corridor may need to be adjusted to account for reduced capacity due to gridlock, heavy pedestrian volumes, or other prevailing factors."[15] Absent these adjustments based on field observations, the LOS calculations may report better operations than what actually exists due to fewer vehicles being able to traverse through the study intersections.

7.1.1.3 *Analysis Scenarios*

Traffic impacts at the City of Los Angeles study intersections were analyzed for the following conditions:

[a] Existing conditions.

[b] Existing with project conditions.

[c] Condition [a] plus one percent (1.0%) annual ambient traffic growth through year 2022 and with completion and occupancy of the related projects (i.e., future without project conditions).

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

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

It should be noted that Condition [b] above is a hypothetical scenario in that it calculates the traffic due to the occupancy of the proposed project in addition to the existing traffic volumes, but changes to existing volumes are expected to occur throughout the project's construction period due to other area projects and regional growth. However, this condition has been prepared to be consistent with the general rule under CEQA that the potential impacts of a development project are to be measured

[15] Refer to Section 3.3G – Transportation Analysis (page 16) of the *Transportation Impact Study Guidelines*, City of Los Angeles Department of Transportation, December 2016.

against existing conditions. Condition [d] above analyzes future conditions upon completion and full occupancy of the proposed project, which is expected to occur in 2022.

7.1.2 *CEQA Analysis Methodologies, Thresholds, and Scenarios*

7.1.2.1 *Consistency with Adopted Plans and Policies*

The City of Los Angeles aims to achieve an accessible and sustainable transportation system that meets the needs of all users. The City's adopted transportation-related plans and policies affirm that streets should be safe and convenient for all users of the transportation system, including pedestrians, bicyclists, motorists, public transit riders, disabled persons, senior citizens, children, and movers of commercial goods. Therefore, the transportation requirements and mitigations for proposed developments should be consistent with the City's transportation goals and policies.

Proposed projects shall be analyzed to identify potential conflicts with adopted City plans and policies and, if there is a conflict, improvements that prioritize access for and improve the comfort of people walking, bicycling, and riding transit in order to provide safe and convenient streets for all users should be identified. Projects designed to encourage sustainable travel help to reduce vehicle miles traveled. This section provides a review of the screening criteria and a summary of the consistency of the proposed Prologis Vermont Avenue and Redondo Beach Boulevard Industrial project with the City's adopted plans and policies.

Screening Criteria

If the project requires a discretionary action, and the answer is yes to any of the following questions, further analysis is required to assess whether the proposed project would conflict with adopted City plans, programs, ordinances, or policies that establish the transportation planning framework for all travel modes:

- Would the project generate a net increase of 250 or more daily vehicle trips?
    - Yes. The project is forecast to generate a net increase of 1,975 daily vehicle trips.
- Is the project proposing to, or required to make any voluntary or required, modifications to the public right-of-way (i.e., street dedications, reconfigurations of curb line, etc.)?
    - Yes. The City's BOE has previously made determinations regarding roadway dedications and/or widenings. Based on the current site plan, the project is being designed consistent with these requirements. Refer to Section 2.3.2 for a full discussion of the BOE requirements as they pertain to roadway dedications and widenings.
- Is the project on a lot that is 0.5-acre or more in total gross area, or is the project's frontage along a street classified as an Avenue or Boulevard (as designated in the City General Plan), 250 linear feet or more, or is the project's building frontage encompassing an entire block along a street classified as an Avenue or Boulevard by the City's General Plan?

- Yes. The project site is approximately 16 acres in size, and will have frontages along a roadway classified as Boulevard II (i.e., Redondo Beach Boulevard) and as Avenue I (i.e., Vermont Avenue). These frontages exceed 250 linear feet as they total approximately 1,500 feet. The project site also consists of an entire block (i.e., between Vermont Avenue and Orchard Avenue).

As the answer is yes to at least one of the screening criteria, further analysis is required to assess whether the proposed project would conflict with adopted City plans, programs, ordinances, or policies. This further analysis is contained in Section 8.2.1 herein.

Impact Criteria and Methodology

The impact criteria set forth in the City's TAG for conflicts with plans, programs, ordinances, or policies (referred to Threshold T-1) is defined as follows:

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

The threshold test is to assess whether a project would conflict with an adopted program, policy, plan, or ordinance that is adopted to protect the environment. In general, transportation policies or standards adopted to protect the environment are those that support multimodal transportation options and a reduction in VMT. Conversely, a project would not be shown to result in an impact merely based on whether a project would not implement a particular program, plan, policy, or ordinance. Many of these programs must be implemented by the City itself over time, and over a broad area, and it is the intention of this threshold test to ensure that proposed development projects and plans do not preclude the City from implementing adopted programs, plans and policies. The determination contained in Section 8.2.1 herein will require confirmation from LADOT and LADCP.

The methodology for determining project impacts associated with conflicts with plans, programs, ordinances, or policies is defined per the City's TAG as follows:

- A project that generally conforms with, and does not obstruct the City's development policies and standards will generally be considered to be consistent. The Project Applicant should review the documents and ordinances identified in the TAG (refer to Table 2.1-1 on pages 10 and 11) for City plans, policies, programs, ordinances and standards relevant to determining project consistency. A specific list of questions (refer to Table 2.1-2 on pages 12 through 14 of the TAG) shall be answered in order to help guide whether the project conflicts with City circulation system policies. A 'yes' or 'no' answer to these questions does not determine a conflict. Rather, as indicated in the list of questions (i.e., Table 2.1-2 of the TAG), the Project Applicant shall review relevant policies and programs corresponding to the questions to assess whether the proposed project precludes the City's implementation of any adopted policy and/or program.

- If vacation of a public right-of-way, or relief from a required street dedication is sought as part of a proposed project, an assessment should be made as to whether the right-of-way in question is necessary to serve a long-term mobility need, as defined in the Mobility Plan 2035, transportation specific plan, or other planned improvement in the future.

The analysis of cumulative impacts may be quantitative or qualitative. Each of the plans, ordinances and policies reviewed to assess potential conflicts with proposed projects should be reviewed to assess cumulative impacts that may result from the proposed project in combination with other development projects in the study area. In addition, the cumulative analysis should also consider planned transportation system improvements within the study area as identified in consultation with LADOT.

7.1.2.2 *Vehicle Miles Traveled Analysis*

As previously discussed, the State of California Governor's Office of Planning and Research (OPR) issued proposed updates to the CEQA guidelines in November 2017 and an accompanying *Technical Advisory* in December 2018 that amends the Appendix G question for transportation impacts to delete reference to vehicle delay and level of service and instead refer to Section 15064.3, subdivision (b)(1) of the CEQA Guidelines asking if the project will result in a substantial increase in vehicle miles traveled (VMT). The California Natural Resources Agency certified and adopted the CEQA Guidelines in December 2018, and are now in effect. Accordingly, the City of Los Angeles has adopted significance criteria for transportation impacts based on VMT for land use projects and plans in accordance with the amended Appendix G question:

- Threshold T-2.1: For a land use project, would the project conflict or be inconsistent with CEQA guidelines section 15064.3, subdivision (b)(1)?

For land use projects, the intent of this threshold is to assess whether a land use land or plan causes substantial vehicle miles traveled. In order to assess the vehicle miles traveled expected to be generated by a proposed project, the City developed a Vehicle Miles Traveled (VMT) Calculator[16]. The VMT Calculator is designed to evaluate development projects within the City of Los Angeles, and the VMT methodology and impact thresholds built into the tool are tailored to the guidelines set forth in the TAG. The tool calculates project-specific metrics such as daily vehicle trips, daily VMT, daily household VMT per capita, and daily work VMT per employee for residential and employment projects. It should be noted that the tool is not intended to be utilized for regional-serving retail projects, entertainment projects, or event venues. The tool also automatically evaluates the screening criteria and applies the impact criteria set forth in the TAG. The City's adopted screening and impact criteria are based on recommendations provided in OPR's *Technical Advisory*, but have been modified to reflect local considerations.

[16] The current Los Angeles Department of Transportation Vehicle Miles Traveled Calculator, Version 1.2, was released on November 14, 2019.

Screening Criteria

If the project requires discretionary action, and the answer is no to either T-2.1-1 or T-2.1-2, further analysis will not be required for CEQA Threshold T-2.1, and a "no impact" determination can be made for that threshold:

- T-2.1-1: Would the land use project generate a net increase of 250 or more daily vehicle trips?

For purposes of screening the daily vehicle trips, a proposed project's daily vehicle trips should be estimated using the City's VMT Calculator tool or the most recent edition of the ITE *Trip Generation Manual*. TDM strategies should not be considered for the purposes of screening. If existing land uses are present on the project site or there were previously terminated land uses that meet the criteria for trip credits described in the trip generation methodology discussion (refer to Subsection 3.3.4.1 of the TAG), the daily vehicle trips generated by the existing or qualified terminated land uses can be estimated using the VMT Calculator tool and subtracted from the proposed project's daily vehicle trips to determine the net increase in daily vehicle trips.

The proposed project is forecast to generate a net increase of 1,975 daily vehicle trips. The daily trip forecast was estimated using the City's VMT Calculator tool. As the site has been vacant for approximately 10 years, no existing or qualified terminated land use credits were applied to the daily vehicle trip forecast. Therefore, the project exceeds the screening criteria set forth as T-2.1-1.

- T-2.1-2: Would the project generate a net increase in daily VMT?

For the purpose of screening the VMT, a project's daily VMT should be estimated using the City's VMT Calculator tool or the City's Travel Demand Forecasting (TDF) model. TDM strategies should not be considered for the purpose of screening. If existing land uses are present on the project site or there were previously terminated land uses that meet the criteria for trip credits description in the trip generation methodology discussion (refer to Subsection 3.3.4.1 of the TAG), the daily VMT generated by the existing or qualified terminated land uses can be estimated using the City VMT Calculator tool and subtracted from the project's daily VMT to determine the net increase in daily VMT.

The proposed project is forecast to generate a net increase in daily VMT. As the site has been vacant for approximately 10 years, no existing or qualified terminated land use credits were applied to the daily VMT forecast. Therefore, the project exceeds the screening criteria set forth as T-2.1-2. However, while the prior development does not qualify for an existing VMT credit, based on the City's VMT calculator the prior use generated roughly 18,848 daily VMT (i.e., based on a total of 501,433 square feet of light industrial use).

In addition to the above screening criteria, the portion of, or the entirety of a project that contains small-scale or local serving retail uses[17] are assumed to have less than significant VMT impacts. If the answer to the following question is no, then that portion of the project meets the screening criteria and a no impact determination can be made for the portion of the project that contains retail uses. However, if the retail project is part of a larger mixed-use project, then the remaining portion of the project may be subject to further analysis in accordance with the above screening criteria. Projects that include retail uses in excess of the screening criteria would need to evaluate the entirety of the project's VMT, as specified in Subsection 2.2.4 of the TAG.

- If the project includes retail uses, does the portion of the project that contain retail uses exceed a net 50,000 square feet?

Independent of the above screening criteria, and the project requires a discretionary action, further analysis will be required if the following statement is true:

- Would the Project or Plan located within a one-half mile of a fixed-rail or fixed-guideway transit station replace an existing number of residential units with a smaller number of residential units?

For the purposes of screening for a proposed change in housing units located near fixed-rail or fixed-guideway transit for development projects, the total number of housing units that exist on the project site should be counted and compared to the total number of housing units as proposed by the project to determine if the project would result in a net decrease in housing units. For the purposes of screening for a proposed change in housing units that are in proximity to transit for land use plans, the total number of existing housing units within a one-half mile of a fixed-rail transit station that fall within the land use plan area should be counted and compared to the total housing capacity within the same area that could be built as a result of the land use plan to determine if the plan could result in a net decrease in housing.

The proposed project is not planned to include any retail or residential components, therefore the additional screening criteria regarding local serving retail and decreases in housing units described above are not applicable.

Impact Criteria and Methodology

For development projects, the proposed project will have a potential VMT impact if the project meets the following:

- For residential projects, the project would generate household VMT per capita exceeding 15% below the existing average household VMT per capita for the Area Planning Commission (APC) area in which the project is located.

[17] As noted in the TAG, the definition of retail for this purpose includes restaurant.

- For office projects, the project would generate work VMT per employee exceeding 15% below the existing average work VMT per employee for the APC in which the project is located.

- For regional serving retail projects, the project would result in a net increase in VMT.

- For other land use types, measure VMT impacts for the work trip element using the criteria for office projects above.

Different VMT significance thresholds have been established for each APC boundary area as the characteristics of each are distinct in terms of land use, density, transit availability, employment, etc. The City of Los Angeles significance thresholds (i.e., provided on a daily household VMT per capita basis and a daily work VMT per employee basis) for each of the seven (7) APC boundary areas are set forth in the TAG. According to the TAG, the VMT generated by a residential or employment project is considered significant if it exceeds the thresholds presented in ***Table 7-2***.

Table 7-2
CITY OF LOS ANGELES
VMT IMPACT THRESHOLD CRITERIA [1]

	15 Percent (15%) Below Existing VMT	
Area Planning Commission	**Daily Household VMT per Capita**	**Daily Work VMT per Employee**
Central	6.0	7.6
East Los Angeles	7.2	12.7
Harbor	9.2	12.3
North Valley	9.2	15.0
South Los Angeles	6.0	11.6
South Valley	9.4	11.6
West Los Angeles	7.4	11.1

As the project site is located in the Harbor APC, the VMT impact criteria (i.e., 15% below the APC average) applicable to the proposed project would be 12.3 daily work VMT per employee. The proposed project does not include any residential components, therefore the household VMT per capita does not apply.

7.1.2.3 *Geometric Design*

As stated in the City's TAG document (refer to page 27 of the TAG), impacts regarding the potential increase of hazards due to a geometric design feature generally relate to the design of access points to and from the project site, and may include safety, operational, or capacity impacts. Impacts can be related to vehicle/vehicle, vehicle/bicycle, or vehicle/pedestrian conflicts as well as to operational

delays caused by vehicles slowing and/or queuing to access a project site. These conflicts may be created by the driveway configuration or through the placement of project driveway(s) in areas of inadequate visibility, adjacent to bicycle or pedestrian facilities, or too close to busy or congested intersections. Evaluation of access impacts require details relative to project land use, size, design, location of access points, etc. These impacts are typically evaluated for permanent conditions after project completion, but can also be evaluated for temporary conditions during project construction. Project access can be analyzed in qualitative and/or quantitative terms, and in conjunction with the review of internal site circulation and access to parking areas. All proposed site access points should be evaluated.

Screening Criteria

If the project requires a discretionary action, and the answer is "yes" to either of the following questions, further analysis will be required to assess whether the project would result in impacts due to geometric design hazards or incompatible uses:

- Is the project proposing new driveways, or introducing new vehicle access to the property from the public right-of-way?

    - Yes. The project proposes to close all eight existing driveways (curb cuts) which provide access to the project site and construct four new project driveways.

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

    As stated in the City's TAG document (refer to page 28 of the TAG), for the purpose of the screening for projects that are making physical changes to the public right-of-way, determine the street designation and improvement standard for any project frontage along streets classified as an Avenue or Boulevard (as designated in the City's General Plan) using the *Mobility Plan 2035*, or NavigateLA. If any street fronting the project site is an Avenue or Boulevard and it is determined that additional dedication, or physical modifications to the public right-of-way are proposed or required, the answer to this question is yes. For projects not subject to dedication and improvement requirements under the Los Angeles Municipal Code, though the project does propose dedications or physical modifications to the public right-of-way, the answer to this question is yes. Based on a review of the proposed project, the following answer is provided:

    - Yes. While the City's Bureau of Engineering (BOE) will make a final determination if any roadway dedications and/or widenings are required, based on the current site plan it appears that the project will be providing some roadway dedications and physical widenings along roadways adjacent to the project site. As part of the project, construction of a formal half cul-de-sac is proposed at the north terminus of Orchard Avenue. In addition, formal curb and gutter will be constructed along the east side of Vermont Avenue along the project frontage where edge of pavement currently exists. In addition,

sidewalks along the project frontages (i.e., within the public right-of-way) will be constructed to City standards where no such sidewalks currently exist.

Impact Criteria and Methodology

The impact criteria set forth in the City's TAG for substantially increasing hazards due to a geometric design feature or incompatible use (referred to a Threshold T-3) is defined as follows:

- Threshold T-3: Would the project substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?

Preliminary project access plans are to be reviewed in light of commonly-accepted traffic engineering design standards[18] to ascertain whether any deficiencies are apparent in the site access plans which would be considered significant. The determination of significance shall be on a case-by-case basis, considering the following factors:

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

For vehicle, bicycle and pedestrian safety impacts, the City's TAG (refer to page 28) indicate that a review of all project access points, internal circulation, and parking access from an operational and safety perspective (for example, turning radii, driveway queuing, line of sight for turns into and out of project driveway[s]) should be conducted. Where project driveways would cross pedestrian facilities or bicycle facilities (bike lanes or bike paths), operational and safety issues related to the potential for vehicle/pedestrian and vehicle/bicycle conflicts and the severity of consequences that

[18] One example of traffic engineering design standards includes Section 321 of LADOT's Manual of Policies and Procedures, which provides guidance on acceptable driveway design.

could result should be considered. In areas with moderate to high levels of pedestrian or bicycle activity, the collection of pedestrian or bicycle count data may be required.

7.1.3 *Non-CEQA Analysis Methodologies, Thresholds, and Scenarios*

The authority for requiring non-CEQA transportation analysis and potentially requiring improvements to address identified deficiencies lies in the City of Los Angeles' Site Plan Review authority as established in Section 16.05 of the Los Angeles Municipal Code (LAMC). As provided in Section 16.05:

> "The purposes of site plan review are to promote orderly development, evaluate and mitigate significant environmental impacts, and promote public safety and the general welfare by ensuring that development projects are properly related to their sites, surrounding properties, traffic circulation, sewers, other infrastructure and environmental setting; and to control or mitigate the development of projects which are likely to have a significant adverse effect on the environment as identified in the City's environmental review process, or on surrounding properties by reason of inadequate site planning or improvements."

Additional authority is found in other City ordinances, such as certain transportation specific plans. The impacts, also referred to as deficiencies, discussed in City's TAG are not intended to be interpreted as thresholds of significance, or significance criteria for purposes of CEQA review unless otherwise specifically identified (refer to Section 7.1.2, CEQA Analysis of Transportation Impacts).

7.1.3.1 *Pedestrian, Bicycle, and Transit Access*

The pedestrian, bicycle, and transit facilities assessment is intended to determine a project's potential effect on pedestrian, bicycle, and transit facilities in the vicinity of the proposed project. The deficiencies could be physical (through removal, modification, or degradation of facilities) or demand-based (by adding pedestrian or bicycle demand to inadequate facilities).

Screening Criteria

If the answer is yes to all of the following questions, further analysis will be required to assess whether the project would negatively affect existing pedestrian, bicycle, or transit facilities:

- Would the project generate a net increase of 250 or more daily vehicle trips?
    - Yes. The project is forecast to generate a net increase of 1,975 daily vehicle trips.
- Does the land use project include the construction, or addition of 50 dwelling units or guest rooms or combination thereof, or 50,000 square feet of non-residential space?
    - Yes. The proposed project consists of the construction of 340,298 square feet of industrial space.

- Is the project on a lot that is 0.5-acre or more in total gross area, or is the project's frontage along an Avenue or Boulevard (as designated in the City's General Plan), 250 lineal feet or more, or is the project's building frontage encompassing an entire block along an Avenue or Boulevard (as designated in the City's General Plan)?

    - Yes. The project site is approximately 16 acres in size, and will have frontages along a roadway classified as Boulevard II (i.e., Redondo Beach Boulevard) and as Avenue I (i.e., Vermont Avenue). These frontages exceed 250 linear feet as they total approximately 1,500 feet. The project site also consists of an entire block (i.e., between Vermont Avenue and Orchard Avenue).

As the answer is yes to all of the screening criteria, further analysis is required to assess whether the proposed project would negatively affect existing pedestrian, bicycle, or transit facilities.

Evaluation Criteria

Factors to consider when assessing a project's potential effect on pedestrian, bicycle and transit facilities, include, but are not limited to, the following:

- Would a project directly or indirectly result in a permanent removal or modification that would lead to the degradation of pedestrian, bicycle, or transit facilities, such as:

    - Removal or degradation of existing sidewalks, crosswalks, pedestrian refuge islands, and/or curb extensions/bulbouts

    - Removal or degradation of existing bikeways and/or supporting facilities (e.g., bikeshare stations, on-street bike racks/parking, bike corrals, etc.)

    - Removal or degradation of existing transit and/or local circulator facilities including stop, bench, shelter, concrete pad, bus lane, or other amenities

    - Removal of other existing transportation system elements supporting sustainable mobility

    - Increase street crossing distance for pedestrians; increase in number of travel/turning lanes; increase in turning radius or turning speeds

    - Removal, degradation, or narrowing of an existing sidewalk, path, crossing, or pedestrian access way

    - Removal or narrowing of existing sidewalk-street buffering elements (e.g., curb extension, parkway, planting strip, street trees, etc.)

- Would a project intensify use of existing pedestrian, bicycle, or transit facilities, such as:

    - Increase in pedestrian or vehicle volume, and thereby increase the need or attraction to cross a street at unmarked pedestrian crossings or unsignalized or uncontrolled intersections where a crossing is not available without significant rerouting. Refer to the Guidelines for Marked Crosswalks Across Uncontrolled Locations, in LADOT's Manual of Policies and Procedures (MPP) Section 344, or Guidelines for Traffic Signals in MPP Section 353 to determine approval and warrant criteria for an additional crossing.

    - Result in new pedestrian demand between project site entries/exits and major destinations or transit stops expected to serve the development where there are missing pedestrian facilities (e.g., gaps in the sidewalk network) or substandard pedestrian facilities (e.g., narrow or uneven sidewalks, no crosswalks at intersections or mid-block, no marked crossing, or push button crossing rather than actuated, etc.).

    - Increase transit demand at bus stops that lack marked crossings, with insufficient sidewalks, or are in isolated, or unlit areas.

The locations and descriptions of pedestrian, bicycle and transit facilities in the project vicinity that could be affected by project-related traffic or by users traveling between a project and nearby destinations is presented in Section 3.0 (Project Context) herein. The existing transit routes in the proximity to the project site are illustrated in *Figure 3-3*. Pedestrian facilities currently located near the project site are provided in *Figure 3-4*, and the location of nearby pedestrian enhanced districts is illustrated in *Figure 3-5*. The location of the City's bicycle enhanced network (low stress network) in close proximity to the project site and in the surrounding area is shown in *Figure 3-6*. The location of the City of Los Angeles proposed bicycle lane network in close proximity to the project site and in the surrounding area is illustrated in *Figure 3-7*.

7.1.3.2 *Project Access and Circulation Review*

Project access and circulation constraints relate to the provision of access to and from the project site, and may include safety, operational, or capacity constraints. Constraints can be related to vehicular/vehicular, vehicular/bicycle, or vehicular/pedestrian constraints as well as to operational delays. These conflicts may be created by the driveway configuration or through the placement of project driveway(s) in areas of inadequate visibility, adjacent to bicycle or pedestrian facilities, or too close to an intersection or crosswalk. The project access and circulation has been evaluated for permanent conditions after project completion.

Screening Criteria

For land use projects, if the answer is yes to all of the following questions, further analysis will be required to assess whether the project would negatively affect project access and circulation:

- Does the land use project involve a discretionary action that would be under review by the Department of City Planning?

- Yes. The project will require a discretionary action.

- Would the land use project generate a net increase of 250 or more daily vehicle trips?
    - Yes. The project is forecast to generate a net increase of 1,975 daily vehicle trips.

As the answer is yes to both of the screening criteria questions, further analysis is required to evaluate project access, safety and circulation.

Evaluation Criteria

For operational evaluation of land use projects, the City's TAG requires a quantitative evaluation of the project's expected access and circulation operations. Project access is considered constrained if the project's traffic would contribute to unacceptable queuing on an Avenue or Boulevard (as designated in the Mobility Plan 2035) at project driveway(s) or would cause or substantially extend queuing at nearby signalized intersections. Unacceptable or extended queuing may be defined as follows:

- Spill over from turn pockets into through lanes.

- Block cross streets or alleys.

- Contribute to gridlock congestion. For the purposes of this section, "gridlock" is defined as the condition where traffic queues between closely-spaced intersections and impedes the flow of traffic through upstream intersections.

The following three study intersections were identified for operational evaluation of whether the project's traffic would contribute to unacceptable queuing on an Avenue or Boulevard:

- Int. No. 5: Vermont Avenue/Marine Avenue

- Int. No. 6: Vermont Avenue/Redondo Beach Boulevard

- Int. No. 8: Orchard Avenue/Redondo Beach Boulevard

The above study locations are under the jurisdiction of the City of Los Angeles. The I-110 Freeway ramp intersections (i.e., Int. No. 9: I-110 Freeway Southbound Ramps/Redondo Beach Boulevard and Int. No. 10: I-110 Freeway Northbound Ramps/Redondo Beach Boulevard) are under the joint jurisdiction between the City of Los Angeles and the State of California Department of Transportation (Caltrans) and are evaluated for intersection Level of Service and off-ramp queuing in Section 12.0, herein.

The vehicle queuing analysis was prepared based on the *Highway Capacity Manual*[19] (HCM) operational analysis methodology pursuant to the City's TAG. Intersection analyses were prepared utilizing the *Synchro 10* software package, which implements the Highway Capacity Manual operational methods. A *Synchro* network was created based on existing conditions field reviews at the above three 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 for signalized locations, etc., were coded to complete the roadway network. The operational analysis was prepared utilizing the following data previously presented herein:

- Project Peak Hour Traffic Generation: Refer to Subsection 6.1
- Project Trip Distribution and Assignment: Refer to Subsection 6.2
- Existing Roadway Network: Refer to Subsection 3.1
- Existing Weekday AM and PM Hour Traffic Count Data: Refer to Section 4.0
- Related Projects (i.e., with a one-half mile radius) and Ambient Traffic Growth: Refer to Section 5.0

LADOT confirmed the appropriateness of the above data when it entered into a transportation assessment MOU for the proposed project. The transportation assessment MOU and a checklist developed by Linscott, Law, & Greenspan, Engineers for the screening criteria set forth in the TAG are attached to this report in *Appendix A*.

The operational analysis of vehicle queuing at the study intersections was prepared for the following conditions:

[a] Existing conditions.

[b] Condition [a] plus one percent (1.0%) annual ambient traffic growth through year 2022 (i.e., project build-out) and with completion and occupancy of the related projects (i.e., future without project conditions).

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

Pursuant to the City's TAG, the HCM methodology for signalized and unsignalized intersections was utilized to calculate vehicle queuing. The operational analyses report the 95th percentile queues (in feet) for all left-turn movements. In addition, the queuing for a select right-turn movement at the Orchard Avenue/Redondo Beach Boulevard intersection was also reported, as the subject movement is anticipated to accommodate a considerable portion of inbound project trips. The 95th percentile

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

queue is the maximum back of queue with 95th percentile traffic volumes. The HCM 6th Edition methodology worksheets report queues in number of vehicles. As such, an average vehicle length of 25 feet, which includes the length of the vehicle and spacing between vehicles, was assumed for analysis purposes. It is important to note that although larger and longer tractor-trailer trucks are expected to utilize the site, the trip ends associated with project-generated truck traffic have been converted to passenger car equivalents, therefore the assumption of a 25-foot vehicle length is appropriate for the purpose of the queuing analysis. The reported queues therefore represent the calculated maximum back of queue in feet.

The City's TAG also acknowledges that demand for curbside space has substantially increased due to the continued expansion of driver-for-hire transportation network companies (TNCs) and shared mobility services. As such, the TAG requires that a transportation assessment characterize the on-site loading demand of the project frontage and assess the potential for conflicts with other travel modes, as well as provide curbside management options, if necessary.

7.1.3.3 *Project Construction Effect on Nearby Mobility*

The project construction evaluation addresses activity associated with project construction and major in-street construction of infrastructure projects.

Screening Criteria

For land use projects, if the answer is yes to any of the following questions, further analysis will be required to assess whether project construction would negatively affect pedestrian, bicycle, transit, or vehicle circulation:

- Would a project that requires construction activities to take place within the right-of-way of a Boulevard or Avenue (as designated in the Mobility Plan 2035) which would necessitate temporary lane, alley, or street closures for more than one day (including day and evening hours, and overnight closures if on a residential street)?
    - It is possible that a temporary, but more than one day, closure of a travel lane on an Avenue (i.e., Vermont Avenue - Avenue I) or Boulevard (i.e., Redondo Beach Boulevard – Boulevard II) may be required during certain portions of project construction.
- Would a project require construction activities to take place within the right-of-way of a Collector or Local Street (as designated in the Mobility Plan 2035) which would necessitate temporary lane, alley, or street closures for more than seven days (including day and evening hours, and including overnight closures if on a residential street)?
    - No
- Would in-street construction activities result in the loss of regular vehicle, bicycle, or pedestrian access, including loss of existing bicycle parking to an existing land use for more than one day, including day and evening hours and overnight closures if access is lost to residential units?

- No.

- Would in-street construction activities result in the loss of regular ADA pedestrian access to an existing transit station, stop, or facility (e.g., layover zone) during revenue hours?

  - No.

- Would in-street construction activities result in the temporary loss for more than one day of an existing bus stop or rerouting of a bus route that serves the project site?

  - It is possible that during certain portions of construction, an existing bus stop may need to be relocated.

As the answer is yes to one of the screening criteria questions, further analysis is required to evaluate whether project construction would negatively affect pedestrian, bicycle, transit, or vehicle circulation.

Evaluation Criteria

The evaluation criteria for project construction is focused on whether the proposed project would adversely affect mobility in the project vicinity during the construction process. Specifically, the City's TAG asks the following question: "Would construction of a project substantially interfere with pedestrian, bicycle, transit, or vehicle circulation and accessibility to adjoining areas." Factors to consider when assessing a project's construction activity and its potential effect on mobility in the project area include the following:

- Temporary transportation constraints:

  - The length of time of temporary street closures or closures of two or more travel lanes;

  - The classification of the street (major arterial, state highway) affected;

  - The existing congestion levels on the affected street segments and intersections;

  - Whether the affected street directly leads to a freeway on- or off-ramp or other state highway;

  - Potential safety issues involved with street or lane closures; and

  - The presence of emergency services (fire, hospital, etc.) located nearby that regularly use the affected street.

- Temporary loss of access:

  - The length of time of any loss of pedestrian or bicycle circulation past a construction area;

- The length of time of any loss of vehicular, bicycle, or pedestrian access to a parcel fronting the construction area;

- The length of time of any loss of ADA pedestrian access to a transit station, stop, or facility;

- The availability of nearby vehicular or pedestrian access within ¼ mile of the lost access; and

- The type of land uses affected, and related safety, convenience, and/or economic issues.

- Temporary Loss of Bus Stops or Rerouting of Bus Lines:

  - The length of time that an existing bus stop would be unavailable or that existing service would be interrupted;

  - The availability of a nearby location (within ¼ mile) to which the bus stop or route can be temporarily relocated;

  - The existence of other bus stops or routes with similar routes/destinations within a ¼- mile radius of the affected stops or routes; and

  - Whether the interruption would occur on a weekday, weekend or holiday, and whether the existing bus route typically provides service that/those day(s).

Descriptions of the project location and physical setting are provided in Subsection 2.1, Project Location, and Section 3.0, Project Site Context, herein for reference purposes in the project construction evaluation. These sections present project location and project setting data items such as adjacent street classifications, public bicycle parking, inventory of existing transit lines, bus stops, etc. The evaluation of the project construction includes a review of whether construction activity within the street right-of-way would require any of the following:

- Street, sidewalk, or lane closures.

- Block existing vehicle, bicycle, or pedestrian access along a street or to parcels fronting the street.

- Modification of access to transit stations, stops, or facilities during revenue hours.

- Closure or movement of an existing bus stop or rerouting of an existing bus line.

- Creation of transportation hazards.

The City's TAG notes that a comparison of the results to the evaluation criteria are to be provided in order to determine the level of impact. Refer to *Table 8-6* and Section 11.0 for further discussion of the qualitative construction traffic analysis.

7.1.3.4 *Residential Street Cut-Through Analysis*

Land use and transportation projects may be required to conduct a residential street cut-through analysis. Cut-through trips are defined as trips which feature travel along a roadway designated as a local street by the City's *Mobility Plan 2035* and which is adjacent to residential land uses in order to access a destination which is not within the neighborhood in which the local street is located, as an alternative to travel along roadway segments with higher roadway classifications (i.e., collectors, boulevards, or avenues). The objective of the analysis is to determine potential increases in average daily traffic (ADT) volumes on local residential streets due to project-generated traffic which could affect the character and function of those streets.

Screening Criteria

If the answer is yes to all of the following questions, further analysis may be required to assess whether the project would negatively affect residential streets:

- Would the land use project generate a net increase of 250 or more daily vehicle trips?
    - Yes. The project is forecast to generate a net increase of 1,975 daily vehicle trips.
- Does the land use project involve a discretionary action that would be under review by the Department of City Planning?
    - Yes. The project will require a discretionary action.

In addition, for development projects, when selecting residential street segments for analysis during the transportation assessment scoping process, all of the following conditions must be present:

- The project is located along a currently congested Boulevard or Avenue and adds trips that may lead to trip diversion to parallel routes along residential Local Streets. The congestion level of the Boulevard or Avenue can be determined based on the estimated peak hour LOS under project conditions of the study intersection(s) (as determined in Section 3.3 [Site Access and Circulation]). LOS E and F are considered to represent congested conditions;
- The project is projected to add a substantial amount of automobile traffic to the congested Boulevard(s), Avenue(s), or Collector(s) that could potentially cause a shift to alternative route(s); and
- Nearby local residential street(s) (defined as Local streets as designated in the City's General Plan passing through a residential neighborhood) provide motorists with a viable alternative route. LADOT has discretion to define which routes are viable alternative routes, based on, but not limited to, features such as geography and presence of existing traffic control devices, etc.

The project is located adjacent to roadways which are designated as Boulevard II (Redondo Beach Boulevard) and as Avenue I (Vermont Avenue) in the City's *Mobility Plan 2035*. Further, local

residential streets are located south of the project site (i.e., south of Redondo Beach Boulevard). However, the residential neighborhood to the south does not provide viable alternate routes to and from the project site. It is uniquely bounded by the I-110 Freeway to the east and the Union Pacific Railroad Torrance Industrial Lead railway along Vermont Avenue. The limited crossing opportunities afforded by these corridors naturally protect the neighborhood from cut-through traffic traveling in the east-west direction. The railway provides a similar barrier to any residential cut-through trips traveling to the project site from the north. Further, as shown in *Table 8-1*, Vermont Avenue generally operates at acceptable levels of service during the peak hours, although in the future cumulative conditions the Vermont Avenue/Redondo Beach Boulevard intersection is forecast to operate at LOS E. It should be noted that the project is not expected to result in substantial increases in vehicular traffic on Vermont Avenue traveling to the project site from the south, as shown in *Figures 6-3* and *6-4*. Therefore, it is concluded that the project does not satisfy the requirements for a residential street cut-through analysis.

7.2 City of Gardena

7.2.1 *Analysis Methodology*

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

7.2.2 *Impact Criteria and Thresholds*

While the City of Gardena has established performance criteria for evaluating the circulation system (refer to Table CI-2 of the Community Development Element Circulation Plan), there is no established impact criteria for study intersections. Accordingly, based on prior coordination with City staff, the significance of the potential project-generated traffic impacts was identified using the traffic impact analysis guidelines set forth in the LACDPW *Traffic Impact Analysis Report Guidelines*. According to the County's published guidelines, the impact is considered significant if the project-related increase in the *v/c* ratio equals or exceeds the threshold criteria presented in ***Table 7-3***.

Table 7-3
COUNTY OF LOS ANGELES
INTERSECTION IMPACT THRESHOLD CRITERIA

Pre-Project *v/c*	Level of Service	Project Related Increase in *v/c*
0.71 to 0.80	C	equal to or greater than 0.04
0.81 to 0.90	D	equal to or greater than 0.02
0.91 or more	E / F	equal to or greater than 0.01

According to the City of Gardena performance criteria and County of Los Angeles requirements, the ICU calculations utilize a lane capacity of 1,600 vehicles per hour (vph) per lane for left-turn, through, and right-turn lanes, and 2,880 vph for dual left-turn lanes. Additionally, a clearance factor of 0.10 is included in the ICU calculations. The Sliding Scale Method requires mitigation of project traffic impacts whenever traffic generated by the proposed development causes an increase in the analyzed intersection *v/c* ratio by an amount equal to or greater than the values shown above.

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

7.2.3 *Analysis Scenarios*

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

[a] Existing conditions.

[b] Existing with project conditions.

[c] Condition [b] with implementation of project mitigation measures, where necessary.

[d] Condition (a) plus one percent (1.0%) annual ambient traffic growth through year 2022 and with completion and occupancy of the related projects (i.e., future without project conditions).

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

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

The project traffic volumes were added for each new condition volumes (i.e., existing condition and future without project conditions) to determine the change in capacity utilization at the study intersections.

7.3 County of Los Angeles

7.3.1 *Analysis Methodology*

The one County of Los Angeles study intersection (i.e., Intersection No. 11 is shared with the City of Los Angeles) was also evaluated using the County of Los Angeles ICU method of analysis which determines *v/c* ratios on a critical lane basis. The overall intersection *v/c* ratio is subsequently assigned a Level of Service (LOS) value to describe intersection operations. Level of Service varies from LOS A (free flow condition) to LOS F (jammed condition). A description of the ICU method and corresponding Level of Service is provided in *Appendix C*.

7.3.2 *Impact Criteria and Thresholds*

For the one study intersection located partially within the County of Los Angeles, the significance of the potential project-generated traffic impacts was identified using the traffic impact analysis guidelines set forth in the Los Angeles County Department of Public Works' *Traffic Impact Analysis Report Guidelines*[20]. According to the County's published guidelines, the impact is considered significant if the project-related increase in the *v/c* ratio equals or exceeds the threshold criteria presented in *Table 7-3*.

According to the County of Los Angeles requirements, the ICU calculations utilize a lane capacity of 1,600 vph per lane for left-turn, through, and right-turn lanes, and 2,880 vph for dual left-turn lanes. Additionally, a clearance factor of 0.10 is included in the ICU calculations. The County's Sliding Scale Method requires mitigation of project traffic impacts whenever traffic generated by the proposed development causes an increase in the analyzed intersection *v/c* ratio by an amount equal to or greater than the values shown above.

7.3.3 *Analysis Scenarios*

Traffic impacts at the County of Los Angeles study intersection were analyzed for the following conditions pursuant to County of Los Angeles requirements:

[a] Existing conditions.

[b] Condition [a] with completion and occupancy of the proposed project.

[c] Condition [b] with implementation of project mitigation measures, where necessary.

[d] Condition [c] with cumulative traffic of other related projects.

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

The traffic volumes for each new condition were added to the volumes in the prior condition to determine the change in capacity utilization at the study intersections.

[20] *Traffic Impact Analysis Report Guidelines*, County of Los Angeles Department of Public Works, January 1997.

8.0 CITY OF LOS ANGELES TRANSPORTATION ASSESSMENT

8.1 Level of Service Analysis

The traffic impact analysis prepared for the nine study intersections located either partially or solely within the City of Los Angeles using the CMA methodology and application of the City's significant traffic impact criteria is summarized in ***Table 8-1***. The CMA data worksheets for the analyzed intersections are contained in ***Appendix C-1***. As noted previously within Section 7.1.1.2, the *v/c* ratios and LOS calculations reflect a reduced capacity of 1,100 vehicles per hour for some of the study intersections based on field observations and existing vehicle queuing.

8.1.1 *Existing Conditions*

8.1.1.1 *Existing Conditions*

As indicated in column [1] of *Table 8–1*, seven of the nine City of Los Angeles study intersections are presently operating at LOS D or better during the weekday AM and PM peak hours under existing conditions. The remaining study intersections (No. 9, I-110 Freeway Southbound Ramps/Redondo Beach Boulevard, and No. 11, Figueroa Street/Redondo Beach Boulevard) presently operate at LOS E during the weekday AM peak hour under existing conditions. The existing traffic volumes at the study intersections during the weekday AM and PM peak hours are displayed in *Figures 4–1* and *4–2*, respectively.

8.1.1.2 *Existing with Project Conditions*

As shown in column [2] of *Table 8–1,* application of the City's threshold criteria to the "Existing With Project" scenario indicates that the proposed project would be expected to create significant impacts at three (3) of the nine City of Los Angeles study intersections as noted below:

- Int. No. 6: Vermont Avenue/Redondo Beach Boulevard

  AM peak hour *v/c* ratio increase of 0.036 [to 0.837 (LOS D) from 0.801 (LOS D)]

- Int. No. 9: I-110 Freeway Southbound Ramps/Redondo Beach Boulevard

  AM peak hour *v/c* ratio increase of 0.045 [to 0.984 (LOS E) from 0.939 (LOS E)]
  PM peak hour *v/c* ratio increase of 0.039 [to 0.889 (LOS D) from 0.850 (LOS D)]

- Int. No. 10: I-110 Freeway Northbound Ramps/Redondo Beach Boulevard

  AM peak hour *v/c* ratio increase of 0.066 [to 0.864 (LOS D) from 0.798 (LOS C)]

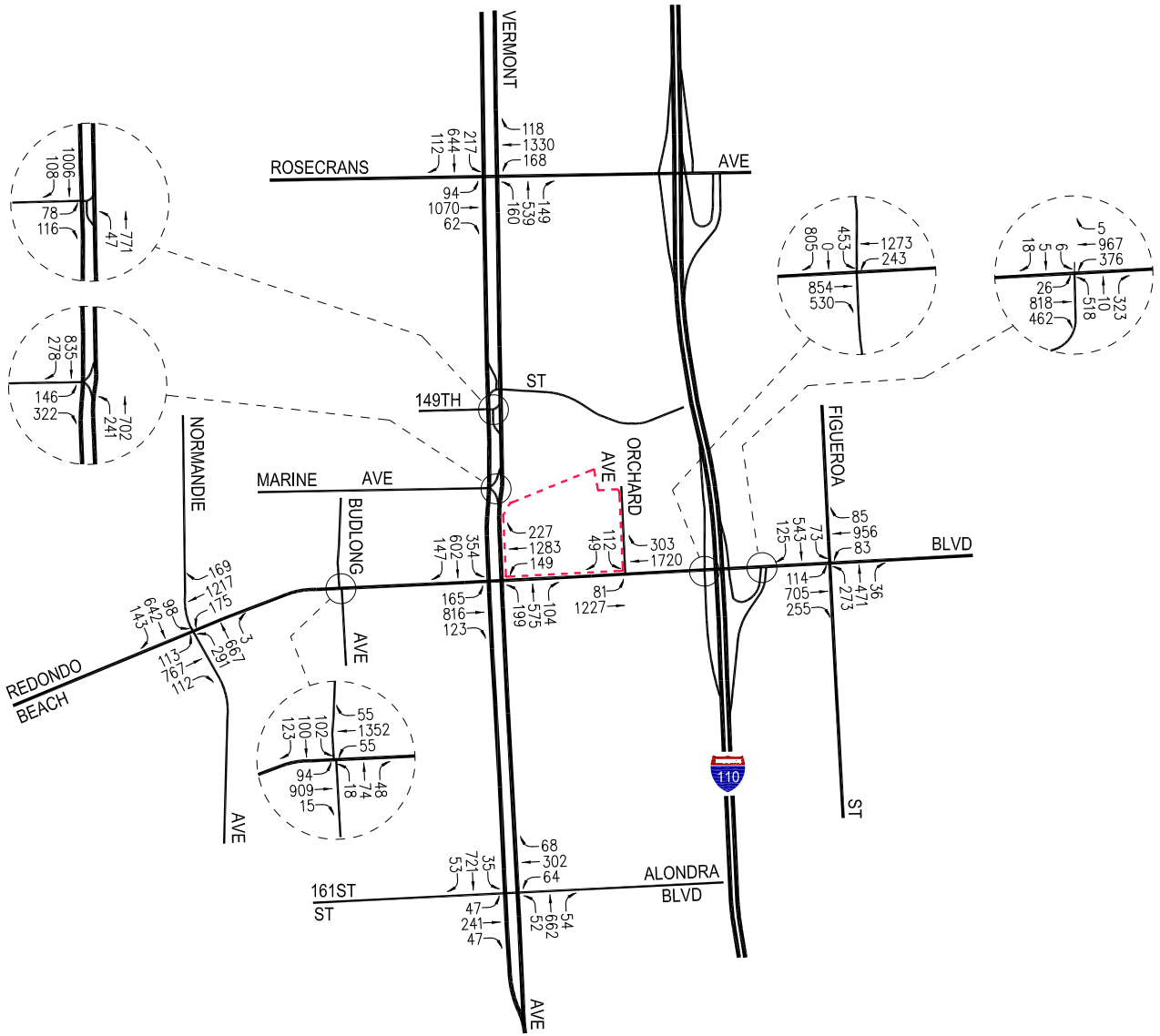
Incremental, but not significant, changes are noted at the remaining six study intersections analyzed using the City of Los Angeles CMA methodology. The existing with project traffic volumes at the study intersections during the weekday AM and PM peak hours are illustrated in ***Figures 8–1*** and ***8–2***, respectively.

Table 8-1
CITY OF LOS ANGELES
SUMMARY OF VOLUME TO CAPACITY RATIOS AND LEVELS OF SERVICE
WEEKDAY AM AND PM PEAK HOURS

NO.	INTERSECTION	PEAK HOUR	[1] YEAR 2019 EXISTING V/C	[1] LOS	[2] YEAR 2019 EXISTING WITH PROJECT V/C	[2] LOS	[2] CHANGE V/C [(2)-(1)]	[2] SIGNIF. IMPACT [a]	[3] YEAR 2022 FUTURE W/O PROJECT V/C	[3] LOS	[4] YEAR 2022 FUTURE WITH PROJECT V/C	[4] LOS	[4] CHANGE V/C [(4)-(3)]	[4] SIGNIF. IMPACT [a]	[5] YEAR 2022 W/ PROJECT MITIGATION V/C	[5] LOS	[5] CHANGE V/C [(5)-(3)]	[5] MITIGATED
3	Vermont Avenue/	AM	0.713	C	0.719	C	0.006	No	0.759	C	0.765	C	0.006	No	0.765	C	0.006	---
	Rosecrans Avenue	PM	0.761	C	0.767	C	0.006	No	0.808	D	0.812	D	0.004	No	0.812	D	0.004	---
4	Vermont Avenue/	AM	0.425	A	0.429	A	0.004	No	0.452	A	0.458	A	0.006	No	0.458	A	0.006	---
	149th Street	PM	0.331	A	0.339	A	0.008	No	0.358	A	0.366	A	0.008	No	0.366	A	0.008	---
5	Vermont Avenue/	AM	0.566	A	0.571	A	0.005	No	0.598	A	0.604	B	0.006	No	0.604	B	0.006	---
	Marine Avenue	PM	0.564	A	0.565	A	0.001	No	0.592	A	0.593	A	0.001	No	0.593	A	0.001	---
6	Vermont Avenue/	AM	0.801	D	0.837	D	0.036	Yes	0.851	D	0.887	D	0.036	Yes	0.887	D	0.036	No
	Redondo Beach Boulevard	PM	0.849	D	0.867	D	0.018	No	0.919	E	0.936	E	0.017	Yes	0.936	E	0.017	No
7	Vermont Avenue/	AM	0.645	B	0.652	B	0.007	No	0.706	C	0.713	C	0.007	No	0.713	C	0.007	---
	161st Street-Alondra Boulevard	PM	0.698	B	0.699	B	0.001	No	0.745	C	0.747	C	0.002	No	0.747	C	0.002	---
8	Orchard Avenue/	AM	0.409	A	0.511	A	0.102	No	0.434	A	0.536	A	0.102	No	0.536	A	0.102	---
	Redondo Beach Boulevard	PM	0.473	A	0.621	B	0.148	No	0.507	A	0.655	B	0.148	No	0.655	B	0.148	---
9	I-110 Freeway SB Ramps/	AM	0.939	E	0.984	E	0.045	Yes	1.023	F	1.067	F	0.044	Yes	1.067	F	0.044	No
	Redondo Beach Boulevard	PM	0.850	D	0.889	D	0.039	Yes	0.965	E	1.005	F	0.040	Yes	1.005	F	0.040	No
10	I-110 Freeway NB Ramps/	AM	0.798	C	0.864	D	0.066	Yes	0.895	D	0.960	E	0.065	Yes	0.960	E	0.065	No
	Redondo Beach Boulevard	PM	0.885	D	0.900	D	0.015	No	0.983	E	0.999	E	0.016	Yes	0.999	E	0.016	No
11	Figueroa Street/	AM	0.926	E	0.934	E	0.008	No	1.045	F	1.053	F	0.008	No	1.053	F	0.008	---
	Redondo Beach Boulevard	PM	0.886	D	0.894	D	0.008	No	1.015	F	1.022	F	0.007	No	1.022	F	0.007	---

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

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



PROJECT SITE

N

NOT TO SCALE

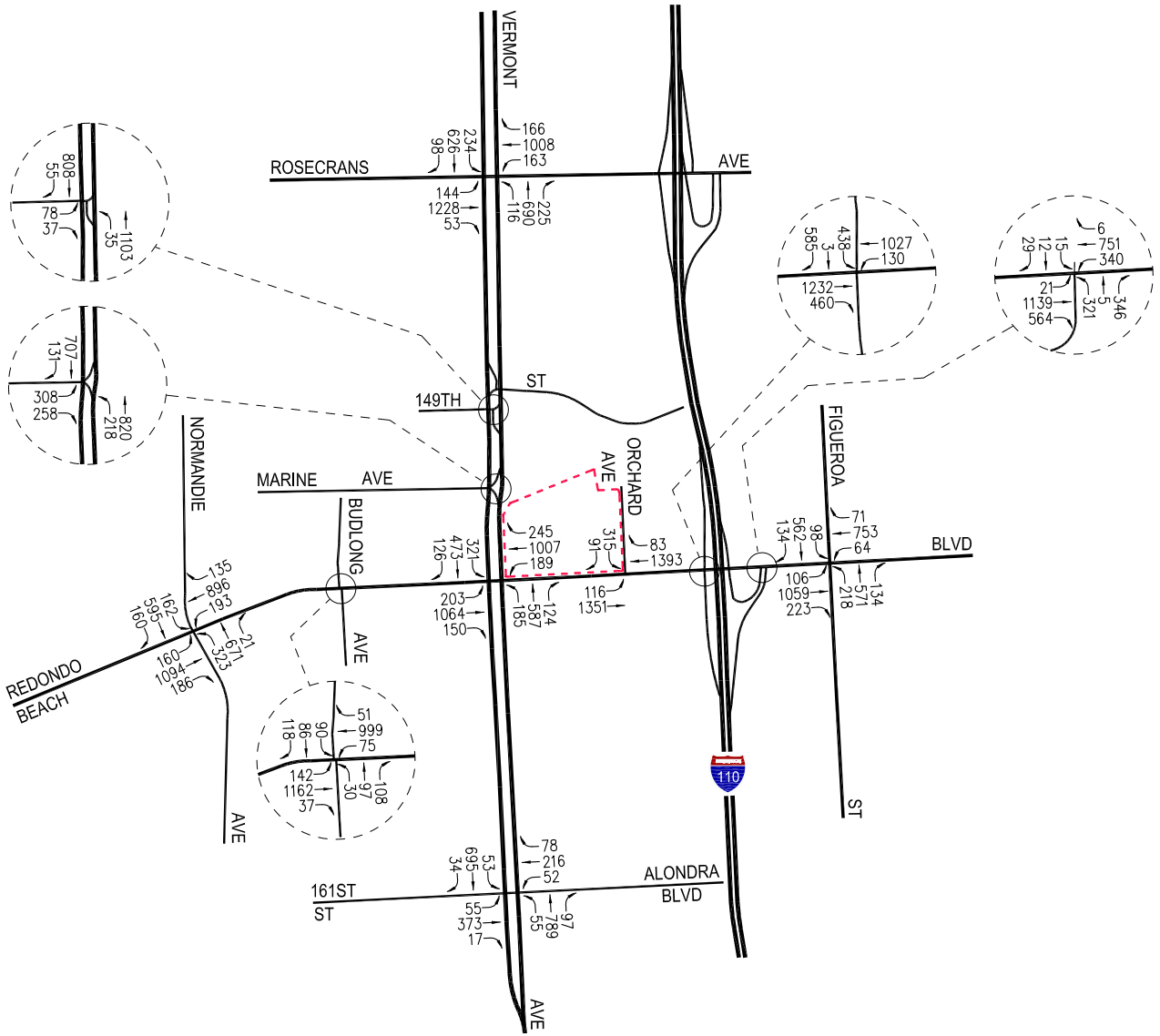
FIGURE 8-1
EXISTING WITH PROJECT TRAFFIC VOLUMES

WEEKDAY AM PEAK HOUR

PROLOGIS VERMONT AVENUE AND REDONDO BEACH BOULEVARD INDUSTRIAL PROJECT

LINSCOTT, LAW & GREENSPAN, engineers

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PROJECT SITE

NOT TO SCALE

FIGURE 8-2
EXISTING WITH PROJECT TRAFFIC VOLUMES

WEEKDAY PM PEAK HOUR

PROLOGIS VERMONT AVENUE AND REDONDO BEACH BOULEVARD INDUSTRIAL PROJECT

LINSCOTT, LAW & GREENSPAN, engineers

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8.1.2 *Year 2022 Conditions*

8.1.2.1 *Year 2022 Cumulative without Project Conditions*

The future year 2022 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 *v/c* ratios at all of the study intersections are incrementally increased with the addition of ambient traffic and traffic generated by the related projects listed in *Table 5–1*. As presented in column [3] of *Table 8–1*, five of the nine City of Los Angeles study intersections are expected to continue operating at LOS D or better during the weekday AM and PM peak hours with the addition of growth in ambient traffic and related projects traffic under the future without project conditions. The following four City of Los Angeles study intersections are expected to operate at LOS E or F during the peak hours shown below with the addition of ambient growth traffic and traffic due to the related projects (i.e., without the addition of project trips):

- Int. No. 6: Vermont Ave/Redondo Beach Blvd PM Peak Hour: *v/c*=0.919, LOS E
- Int. No. 9: I-110 Freeway SB Ramps/Redondo Beach Blvd
  AM Peak Hour: *v/c*=1.023, LOS F
  PM Peak Hour: *v/c*=0.965, LOS E
- Int. No. 10: I-110 Freeway NB Ramps/Redondo Beach Blvd
  PM Peak Hour: *v/c*=0.983, LOS E
- Int. No. 11: Figueroa St/Redondo Beach Blvd AM Peak Hour: *v/c*=1.045, LOS F
  PM Peak Hour: *v/c*=1.015, LOS F

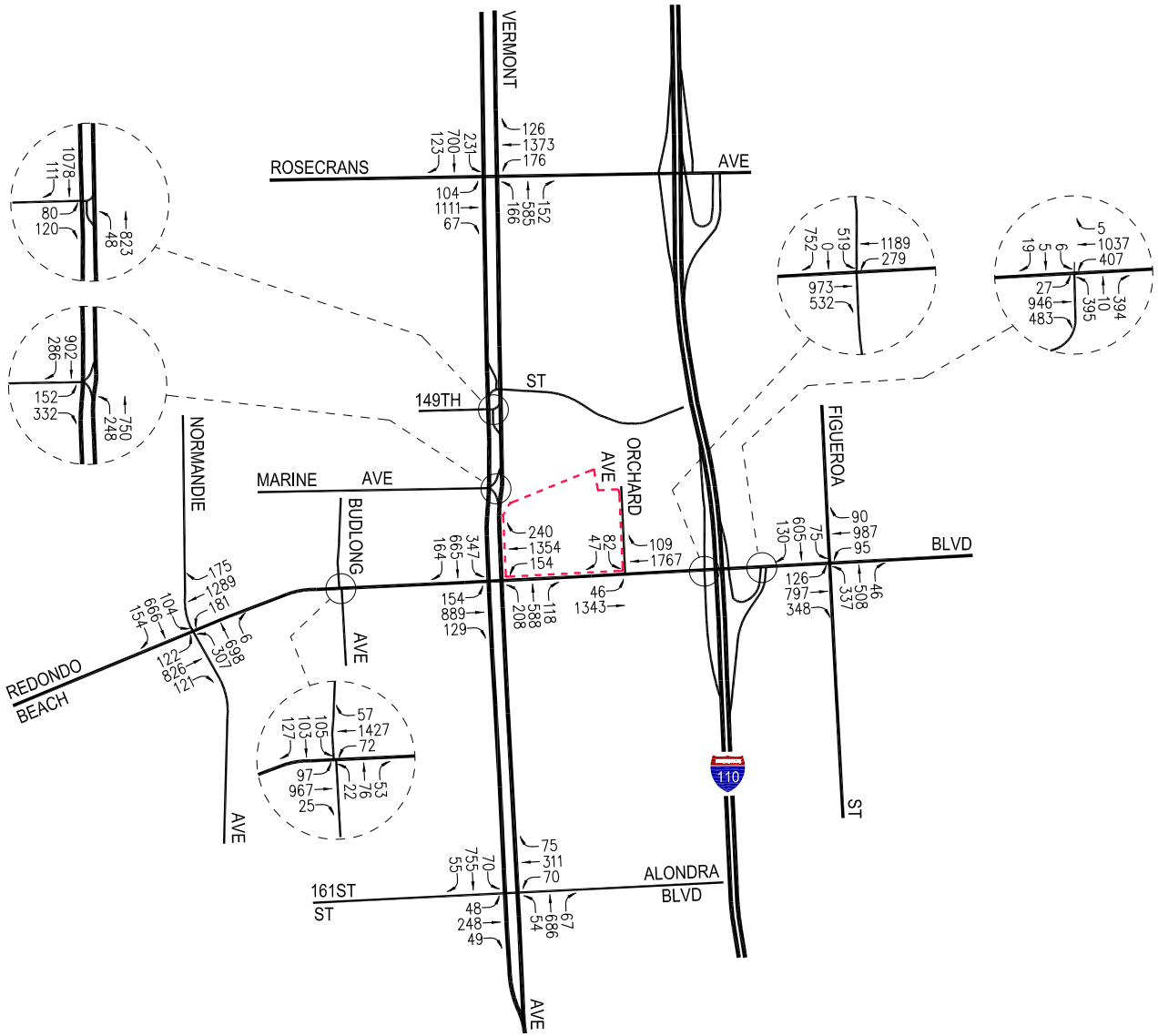
The future without project (existing, ambient growth, and related projects) traffic volumes at the study intersections during the weekday AM and PM peak hours are presented in ***Figures 8–3*** and ***8–4***, respectively.

8.1.2.2 *Year 2022 Cumulative with Project Conditions*

As shown in column [4] of *Table 8–1,* application of the City's threshold criteria to the "Future With Project" scenario indicates that the proposed project is expected to create significant impacts at three (3) of the nine City of Los Angeles study intersections as noted below:

- <u>Int. No. 6: Vermont Avenue/Redondo Beach Boulevard</u>

  AM peak hour *v/c* ratio increase of 0.036 [to 0.887 (LOS D) from 0.851 (LOS D)]
  PM peak hour *v/c* ratio increase of 0.017 [to 0.936 (LOS E) from 0.919 (LOS E)]



PROJECT SITE

N

NOT TO SCALE

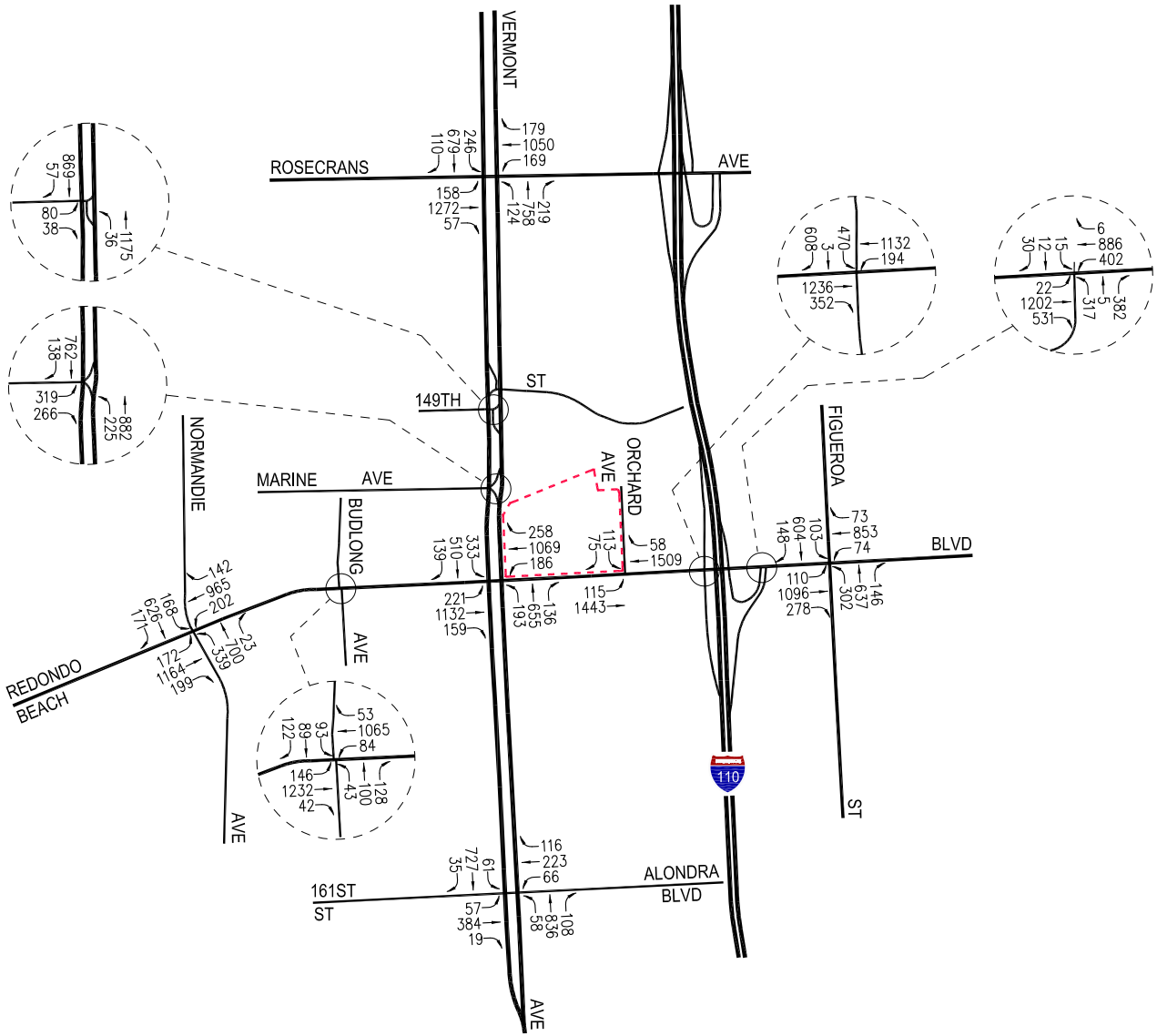
FIGURE 8-3
FUTURE WITHOUT PROJECT TRAFFIC VOLUMES

WEEKDAY AM PEAK HOUR

PROLOGIS VERMONT AVENUE AND REDONDO BEACH BOULEVARD INDUSTRIAL PROJECT

LINSCOTT, LAW & GREENSPAN, engineers

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PROJECT SITE

N

NOT TO SCALE

FIGURE 8-4
FUTURE WITHOUT PROJECT TRAFFIC VOLUMES

WEEKDAY PM PEAK HOUR

PROLOGIS VERMONT AVENUE AND REDONDO BEACH BOULEVARD INDUSTRIAL PROJECT

LINSCOTT, LAW & GREENSPAN, engineers

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- Int. No. 9: I-110 Freeway Southbound Ramps/Redondo Beach Boulevard

  AM peak hour *v/c* ratio increase of 0.044 [to 1.067 (LOS F) from 1.023 (LOS F)]
  PM peak hour *v/c* ratio increase of 0.040 [to 1.005 (LOS F) from 0.965 (LOS E)]

- Int. No. 10: I-110 Freeway Northbound Ramps/Redondo Beach Boulevard

  AM peak hour *v/c* ratio increase of 0.065 [to 0.960 (LOS E) from 0.895 (LOS D)]
  PM peak hour *v/c* ratio increase of 0.016 [to 0.999 (LOS E) from 0.983 (LOS E)]

Incremental, but not significant, changes are noted at the remaining six study intersections analyzed using the City of Los Angeles CMA methodology. The future with project (existing, ambient growth, related projects and project) traffic volumes at the study intersections during the weekday AM and PM peak hours are illustrated in ***Figures 8–5*** and ***8–6***, respectively.

8.2 CEQA Analysis of Transportation Impacts

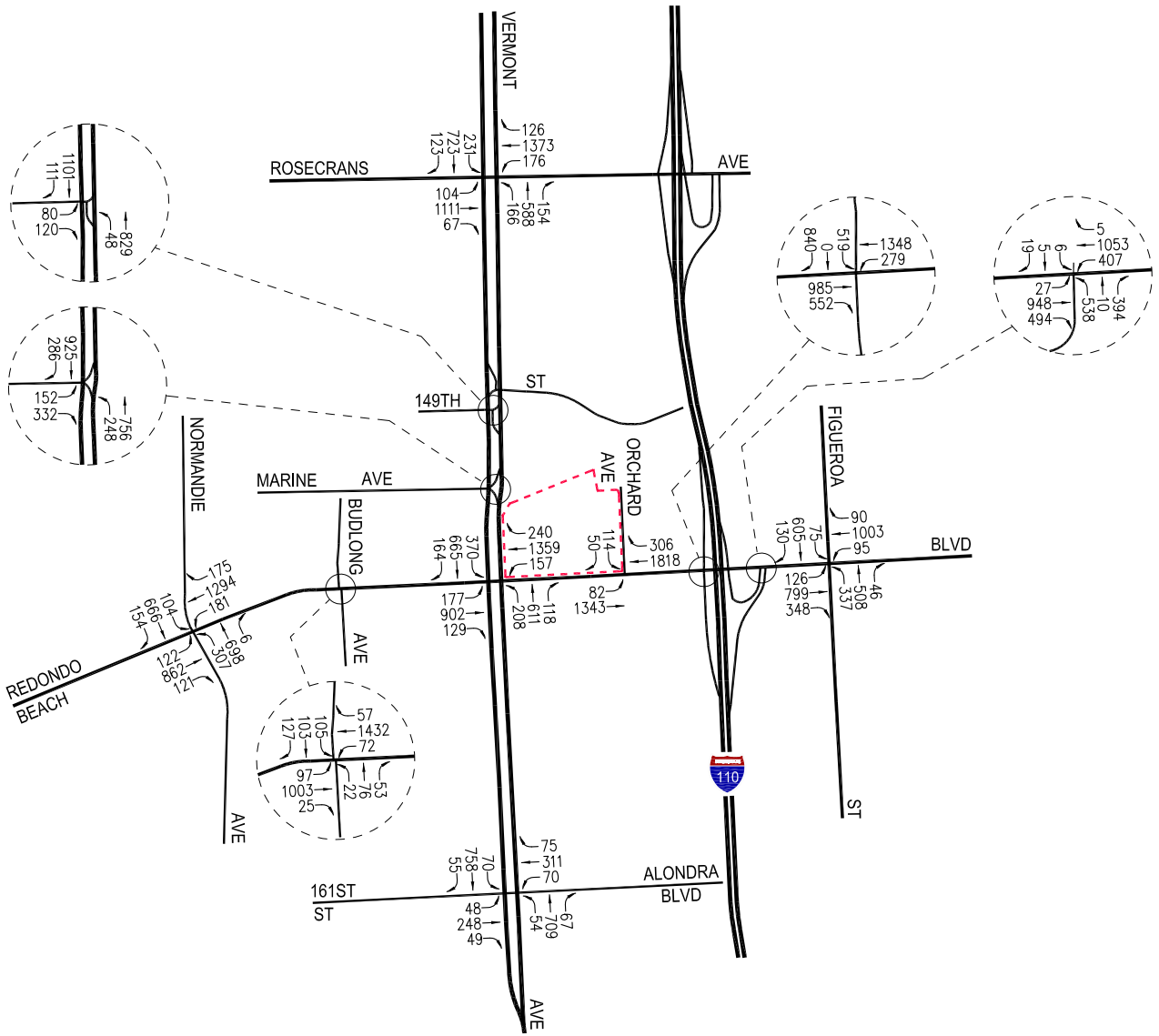
8.2.1 *Consistency with Adopted Plans and Policies (Threshold T-1)*

This section provides a summary of the consistency review comparing the characteristics of the proposed Prologis Vermont Avenue and Redondo Beach Boulevard Industrial project and site design features (i.e., including the site access and circulation scheme) with the City's adopted plans and policies. ***Table 8-2*** summarizes the City's guiding questions contained in the TAG (TAG Table 2.1-1), the responses applicable to the proposed project, the relevant and supporting City plans, policies and programs, as well as the determination of whether or not the proposed project is consistent with the corresponding City plans, programs, ordinances or policies. As shown in *Table 8-2*, the proposed project has been found to be consistent with the relevant City plans, policies and programs and does not include any features that would preclude the City from completing and complying with these guiding documents and policy objectives. Further, the Applicant will comply with existing applicable City ordinances (e.g., the City's existing Transportation Demand Management [TDM] Ordinance, referred to in the City of Los Angeles Municipal Code Section 12.26.J) and the other requirements pursuant to the City's Municipal Code.

Based on the above project consistency conclusion and review of the guiding language contained in the City's TAG, it can be concluded that this is sufficient documentation to demonstrate that there is also no cumulative inconsistency with the City's plans, policies, ordinances and programs. In addition, since the proposed project does not include any features that would preclude the City from completing and complying with these guiding documents and policy objectives, there is no cumulative inconsistency that can be determined.

8.2.2 *Vehicle Miles Traveled Analysis (Threshold T-2.1)*

The daily vehicle trips and daily VMT expected to be generated by the proposed project were forecast using the City's VMT Calculator tool. Copies of the detailed City of Los Angeles VMT Calculator worksheets for the proposed project are contained in ***Appendix C-2***. As indicated in the summary VMT Calculator worksheet, the proposed project is forecast to generate the following:



PROJECT SITE

NOT TO SCALE

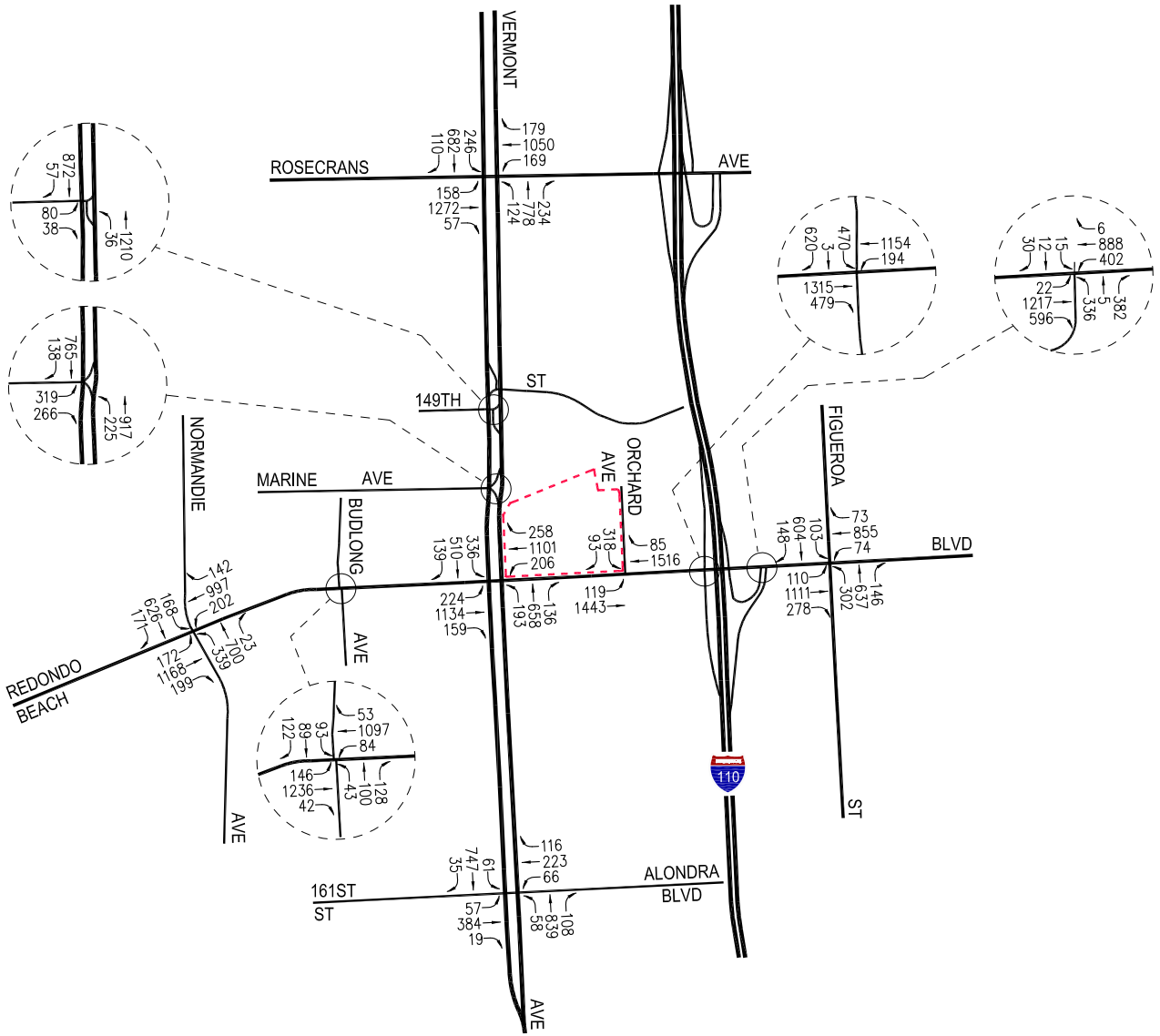
FIGURE 8-5
FUTURE WITH PROJECT TRAFFIC VOLUMES

WEEKDAY AM PEAK HOUR

PROLOGIS VERMONT AVENUE AND REDONDO BEACH BOULEVARD INDUSTRIAL PROJECT

LINSCOTT, LAW & GREENSPAN, engineers

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PROJECT SITE

N

NOT TO SCALE

FIGURE 8-6
FUTURE WITH PROJECT TRAFFIC VOLUMES

WEEKDAY PM PEAK HOUR

PROLOGIS VERMONT AVENUE AND REDONDO BEACH BOULEVARD INDUSTRIAL PROJECT

LINSCOTT, LAW & GREENSPAN, engineers

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TABLE 8-2
PROJECT CONSISTENCY WITH PLANS, PROGRAMS, ORDINANCES, OR POLICIES

NO.	GUIDING QUESTIONS	RESPONSE TO GUIDING QUESTIONS	RELEVANT PLAN, POLICIES, AND PROGRAMS	SUPPORTING/COMPLEMENTARY CITY PLANS, POLICIES, AND PROGRAMS TO CONSULT	PROJECT CONSISTENCY?
		EXISTING PLAN APPLICABILITY			
1	Does the project include additions or new construction along a street designated as a Boulevard I, and II, and/or Avenue I, II, or III on property zoned for R3 or less restrictive zone? (screening question)	**Yes**	LAMC Section 12.37		**YES**
2	Is project site along any network identified in the City's Mobility Plan?	**Yes, Bicycle Enhanced Network, Pedestrian Enhanced District**	MP 2.3 through 2.7		**YES**
3	Are dedications or improvements needed to serve long-term mobility needs identified in the Mobility Plan 2035?	**Yes**	MP: Street Classifications, Street Designations and Standard Roadway Dimensions	MP - 2.17 Street Widenings	**YES**
4	Does the project require placement of transit furniture in accordance with City's Coordinated Street Furniture and Bus Bench Program?	**Yes. While not required, the applicant has agreed to install a new public bus turn-out lane and bus shelter at the existing bus stop located on the northeast corner of the Vermont Avenue/Redondo Beach Boulevard intersection. The bus stop would include enhanced weather/sun protection, lighting, benches, trash receptacles, and transit information.**			**YES**
5	Is project site in an identified Transit Oriented Community (TOC)?	**No**	MP: TEN, PED, BEN; TOC Guidelines		**YES**
6	Is project site on a roadway identified in City's High Injury Network?	**No**	Vision Zero	Mobility Plan 2035	**YES**
7	Does project propose repurposing existing curb space? (Bike corral, car-sharing, parklet, electric vehicle charging, loading zone, curb extension, etc.)	**No**	MP: 2.1 Adaptive Reuse of Streets, 2.10 Loading Areas, 3.5 Multi-Modal Features, 3.8 Bicycle Parking, 4.13 Parking and Land Use Management, 5.4 Clean Fuels and Vehicles	MP: 2.3 Pedestrian Infrastructure, 2.4 Neighborhood Enhanced Network, 3.2 People with Disabilities, 4.1 New Technologies, 5.1 Sustainable Transportation, 5.5 Green Streets	**YES**
8	Does project propose narrowing or shifting existing sidewalk placement?	**No**	MP: 2.3 Pedestrian Infrastructure, 3.1 - Access for All, PED; MP - ENG 19; MP 2.17 Street Widenings	Healthy LA; Vision Zero; Sustainability pLAn	**YES**
9	Does project propose paving, narrowing, shifting or removing an existing parkway?	**New sidewalks will be installed where none exist along Vermont Avenue and Orchard Avenue**	MP - 5.5 Green Streets; Sustainability pLAn		**YES**
10	Does project propose modifying, removing or otherwise affect existing bicycle infrastructure? (ex: driveway proposed along street with bicycle facility)	**Yes, new driveway proposed along bike lane, but results in a consolidation of existing driveways**	MP: BEN, 4.15 Public Hearing Process	Vision Zero	**YES**
11	Is project site adjacent to an alley? If yes, will project make use of, modify, or restrict alley access?	**No**	MP - 3.9 Increased Network Access; MP - ENG.9; MP - PL.1; MP - PL.13; MP - PS.3		**YES**
12	Does project create a cul-de-sac or is project site located adjacent to existing cul-de-sac? If yes, is cul-de-sac consistent with design goal in Mobility Plan 2035 (maintain through bicycle and pedestrian access)?	**Project is adjacent to existing terminus of Orchard Avenue and will construct new 1/2 cul-de-sac with new sidewalk, curb and gutter, and driveway**	MP - 3.10 Cul-de-sacs		**YES**
		ACCESS: DRIVEWAYS AND LOADING			
13	Does project site introduce a new driveway or loading access along an arterial (Avenue or Boulevard)?	**Yes, new driveways are proposed but will result in a consolidation of existing driveways**	MP - PL.1; MP - PK.10, CDG 4.1.02	Vision Zero	**YES**
14	If yes to 13, Is a non-arterial frontage or alley access available to serve the driveway or loading access needs?	**Yes, local street access is available**	MP - PL.1; MPP 321	Vision Zero	**YES**
15	Does project site include a corner lot? (avoid driveways too close to intersections)	**Yes**	CDG 4.1.01		**YES**

TABLE 8-2 (Continued)
PROJECT CONSISTENCY WITH PLANS, PROGRAMS, ORDINANCES, OR POLICIES

NO.	GUIDING QUESTIONS	RESPONSE TO GUIDING QUESTIONS	RELEVANT PLAN, POLICIES, AND PROGRAMS	SUPPORTING/COMPLEMENTARY CITY PLANS, POLICIES, AND PROGRAMS TO CONSULT	PROJECT CONSISTENCY?
ACCESS: DRIVEWAYS AND LOADING (Continued)					
16	Does project propose driveway width in excess of City standard?	**Yes, greater than standard widths are proposed at the two main truck access driveways (requires LADOT input)**	MPP Sec. 321	Vision Zero, Sustainability pLAn, MP - PED, MP - BEN CDG 4.1.04	**YES**
17	Does project propose more driveways than required by City maximum standard?	**No**	MPP - Sec No. 321 Driveway Design	Vision Zero, MP, Healthy LA	**YES**
18	Are loading zones proposed as a part of the project?	**Yes, on-site truck loading**	MP - 2.10 Loading Areas; MP - PK.1; MP - PK.7; MP - PK.8; MPP 321		**YES**
19	Does project include "drop-off" zones or areas? If yes, are such areas located to the side or rear of the building?	**Project will have loading docks located at rear of building and no curb-side passenger loading zone(s) are proposed**	MP - 2.10 Loading Areas		**NEED LADOT INPUT**
20	Does project propose modifying, limiting/restricting, or removing public access to a public right-of-way (e.g., vacating public right-of-way?)	**No**	MP - 2.3 Pedestrian Infrastructure; MP - 3.9 Increased Network Access		**YES**

- The proposed project is estimated to generate a total of 1,975 daily vehicle trips.
- The proposed project is estimated to generate a total of 12,800 daily VMT.
- The proposed project is estimated to generate 9.7 daily work VMT per employee, which is less than the Central APC significance threshold of 12.3 VMT per employee.

Thus, based on the above analyses, the project is not expected to result in a significant VMT impact. Therefore, no mitigation is necessary as it relates to VMT.

As stated in the City's TAG document (refer to page 20 of the TAG), analyses should consider both short-term and long-term project effects on VMT. Short-term effects are evaluated in the detailed project-level VMT analysis summarized above. Long-term, or cumulative, effects are determined through a consistency check with the Southern California Association of Government's (SCAG's) Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS). The RTP/SCS is the regional plan that demonstrates compliance with air quality conformity requirements and greenhouse gas (GHG) reduction targets. As such, projects that are consistent with this plan in terms of development, location, density, and intensity, are part of the regional solution for meeting air pollution and GHG goals. Projects that are deemed to be consistent would have a less than significant cumulative impact on VMT. Development in a location where the RTP/SCS does not specify any development may indicate a significant impact on transportation. However, as noted in the City's TAG document, for projects that do not demonstrate a project impact by applying an efficiency-based impact threshold (i.e., VMT per capita or VMT per employee) in the analysis, a less than significant project impact conclusion is sufficient in demonstrating there is no cumulative VMT impact. Projects that fall under the City's efficiency-based impact thresholds are already shown to align with the long-term VMT and GHG reduction goals of SCAG's RTP/SCS.

Based on the above project-related VMT analysis, in which it is concluded that the proposed project falls under the City's efficiency-based impact thresholds and thus are already shown to align with the long-term VMT and GHG reduction goals of SCAG's RTP/SCS, no cumulative VMT impacts are anticipated.

8.2.3 *Geometric Design (Threshold T-3)*

The following section provides a qualitative review of the proposed site access points. As noted previously, the project proposes to close all eight existing curb cuts which currently provide access to the project site and construct four new project driveways, resulting in significant consolidation of the project site access points. A detailed description of each project site driveway is provided in Section 2.3.1 herein.

A review of pedestrian and bicycle counts in the area indicate a moderate level of existing activity (refer to the pedestrian and bicycle counts included in *Appendix B*). The project is planned to provide public sidewalks along all three roadways adjacent to the project site, therefore project traffic utilizing the proposed driveways will be required to cross public right-of-way formally designated

for pedestrians. Additionally, a bike lane is currently provided in the public right-of-way along Vermont Avenue north of Redondo Beach Boulevard, and an existing bus stop is provided adjacent to the project site. Project traffic utilizing the Vermont Avenue driveway will be required to share roadway space with bicycles and transit vehicles as well as pedestrians utilizing the adjacent sidewalks to access the bus stop. All proposed project site driveways will be constructed to the current City of Los Angeles standards, and will provide clear lines of sight for all roadway users.

The project site driveways located on Vermont Avenue and Redondo Beach Boulevard have been designed to accommodate right-turning inbound and outbound movements only (note that the Vermont Avenue driveway is naturally restricted to right-turning movements due to the presence of a median island). Limiting vehicular turning movements at these driveways will also reduce the potential for conflicts between pedestrians, bicycles, and motorized vehicles.

The project driveway on Vermont Avenue and the northerly project driveway on Orchard Avenue are planned to accommodate truck access to and from the project site. The adequacy of these driveways to accommodate safe and efficient access for tractor-trailer trucks has been verified through a truck turning/maneuvering analysis prepared using the AutoTurn software package. The truck turning analyses were prepared utilizing the WB-67 design vehicle, which has a maximum overall length of 73.5 feet, in order to provide a conservative estimate of the access requirements for the tractor-trailer style trucks which are expected to utilize the site. As illustrated in ***Appendix Figures D-1*** and ***D-2***, the project driveways are expected to adequately accommodate tractor-trailer truck access. Further, as described in Section 2.3.1, the Vermont Avenue driveway is designed to accommodate an on-site queue of approximately five trucks, and the Orchard Avenue driveway is designed to accommodate an on-site queue of up to two trucks without extending into the public-right-of-way.

Based on the review of the project site driveways outlined above, no safety concerns relating to geometric design of the project site access points is noted. As the project site frontage encompasses the entire block along Vermont Avenue, Redondo Beach Boulevard, and Orchard Avenue, no cumulative impacts due to the presence of other projects on the same block will occur.

8.3 Non-CEQA Analysis

8.3.1 *Pedestrian, Bicycle, and Transit Access*

Table 8-3 summarizes the City's criteria associated with the two guiding questions regarding the pedestrian, bicycle, and transit access assessment and the determination of potential project-related effect on the subject facilities in the vicinity of the proposed project. The determination is based on whether the proposed project would create deficiencies that could be physical (through removal, modification, or degradation of facilities) or demand-based (by adding pedestrian or bicycle demand to inadequate facilities). As indicated in *Table 8-3*, it is determined the proposed project does not include any features that would permanently remove, adversely modify, or degrade pedestrian, bicycle, and transit facilities in the project vicinity. As also noted in *Table 8-3*, it is determined that it is possible that the proposed project may intensify use of pedestrian, bicycle, and transit facilities in the project vicinity.

TABLE 8-3
PROJECT EVALUATION OF PEDESTRIAN, BICYCLE, AND TRANSIT ACCESS

CRITERIA	PROJECT RESPONSE	FURTHER QUANTITATIVE ASSESSMENT?
PERMANENT REMOVAL OR MODIFICATION OF FACILITIES		
Removal or degradation of existing sidewalks, crosswalks, pedestrian refuge islands, and/or curb extensions/bulbouts	**No**	**No**
Removal or degradation of existing bikeways and/or supporting facilities (e.g., bikeshare stations, on-street bike racks/parking, bike corrals, etc.)	**No**	**No**
Removal or degradation of existing transit and/or local circulator facilities including stop, bench, shelter, concrete pad, bus lane, or other amenities	**No**	**No**
Removal of other existing transportation system elements supporting sustainable mobility	**No**	**No**
Increase street crossing distance for pedestrians; increase in number of travel/turning lanes; increase in turning radius or turning speeds	**No**	**No**
Removal, degradation, or narrowing of an existing sidewalk, path, crossing, or pedestrian access way	**No**	**No**
Removal or narrowing of existing sidewalk-street buffering elements (e.g., curb extension, parkway, planting strip, street trees, etc.)	**No**	**No**
INTENSIFY USE OF FACILITIES		
Increase in pedestrian or vehicle volume, and thereby increase the need or attraction to cross a street at unmarked pedestrian crossings or unsignalized or uncontrolled intersections where a crossing is not available without significant rerouting. Refer to the Guidelines for Marked Crosswalks Across Uncontrolled Locations, in LADOT's Manual of Policies and Procedures (MPP) Section 344, or Guidelines for Traffic Signals in MPP Section 353 to determine approval and warrant criteria for an additional crossing.	**Increase in pedestrian volumes is possible at the uncontrolled pedestrian rail crossing, however the proposed Project incorporates sidewalk improvements, including at the rail crossing to improve safety. All roadway and pedestrian improvements would comply with City standards.**	**No adverse impact would occur because the proposed Project incorporates sidewalk improvements, including at the rail crossing to improve safety. All roadway and pedestrian improvements would comply with City standards.**
Result in new pedestrian demand between project site entries/exits and major destinations or transit stops expected to serve the development where there are missing pedestrian facilities (e.g., gaps in the sidewalk network) or substandard pedestrian facilities (e.g., narrow or uneven sidewalks, no crosswalks at intersections or mid-block, no marked crossing, or push button crossing rather than actuated, etc.).	**Possible, however, no adverse impact would occur because the proposed Project would improve sidewalks. Additionally, the proposed Project would enhance the existing bus stop at Vermont Avenue and Redondo Beach Boulevard with weather protection, lighting, seating, trash bins, and information.**	**No adverse impact would occur because the Project would improve pedestrian facilities and all improvements would be reviewed and approved by LADOT in accordance with City standards.**
Increase transit demand at bus stops that lack marked crossings, with insufficient sidewalks, or are in isolated, unshaded, or unlit areas.	**Possible, however no adverse impact would occur because the proposed Project would enhance sidewalks, including a pedestrian railway crossing along Vermont Avenue. The proposed Project would enhance the existing bus stop at Vermont Avenue and Redondo Beach Boulevard with lighting.**	**No adverse impact would occur because all improvements would be reviewed and approved by LADOT in accordance with City standards.**

The potential pedestrian destinations within one-quarter mile of the project site are presented in ***Figure 8-7***. The current pedestrian facilities in the immediate vicinity of the proposed project are missing key components. As described in Section 3.3.1, Pedestrian Framework, paved public sidewalks are not currently provided along Orchard Avenue adjacent to the project site, and a segment of Vermont Avenue does not provide a public sidewalk which is separated (i.e., elevated) from the roadway by curb and gutter.

The proposed project will construct formal sidewalks along Vermont Avenue and Orchard Avenue adjacent to the project site, including curb ramps at the adjacent corners of the Vermont Avenue/Redondo Beach Boulevard and Orchard Avenue/Redondo Beach Boulevard intersections to be constructed to current City of Los Angeles standards. In addition, the project Applicant will provide a bus turnout area within the roadway and a bus shelter for the existing transit stop. Therefore, the proposed project will result in improvements to the currently deficient multi-modal infrastructure in the vicinity, including improvements to better accommodate a potential increase in pedestrian and transit demand. Based on this analysis, no additional project-specific actions or improvements are recommended as it relates to pedestrian, bicycle, and transit access above and beyond that discussed above.

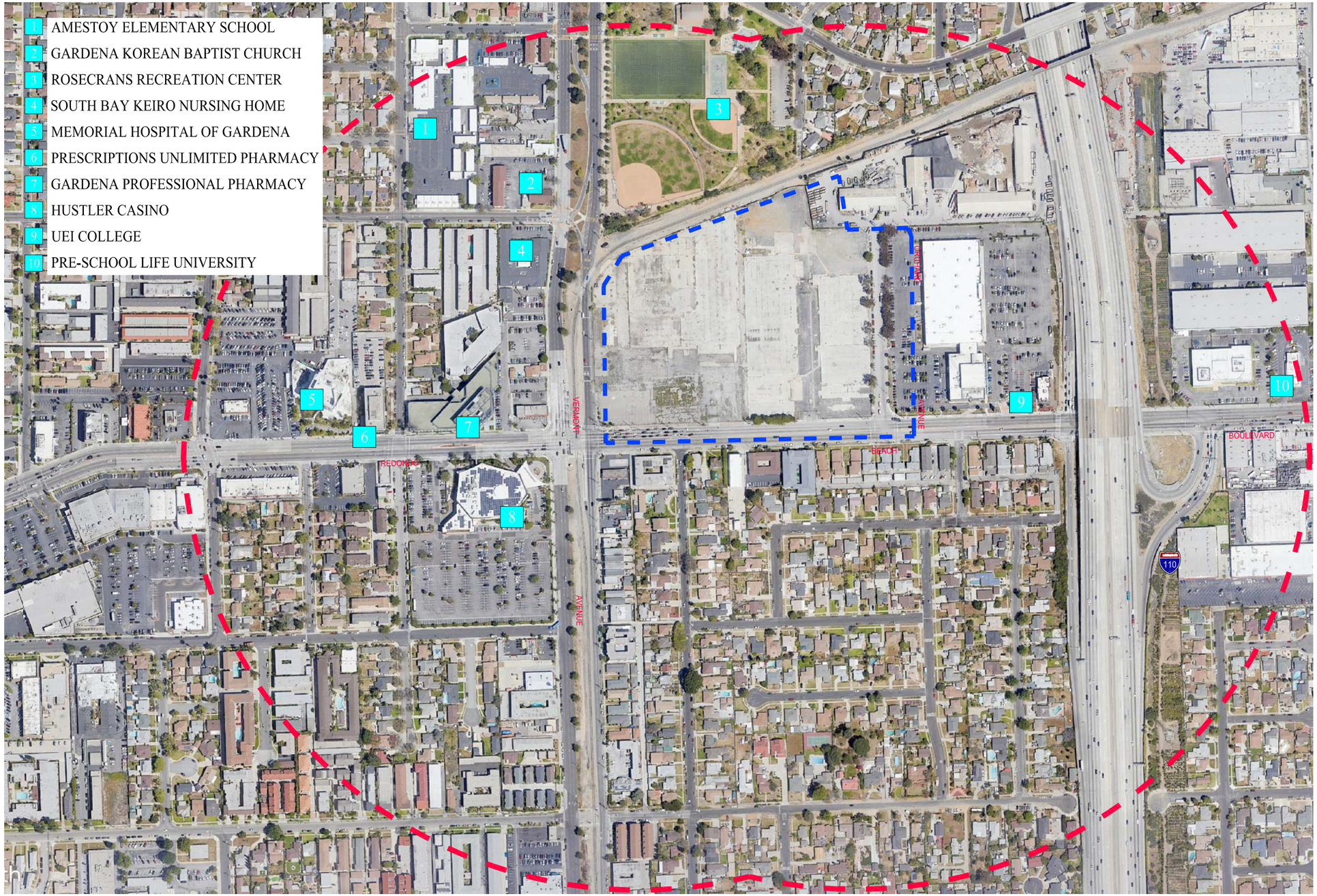
8.3.2 *Project Access and Circulation Review*

Table 8-4 summarizes the vehicle queuing analysis prepared for the three City of Los Angeles intersections in closest proximity to the project site for the representative intersection traffic movements for the weekday AM and PM peak hours. ***Appendix C-3*** contains the Highway Capacity Manual analysis data worksheets for the study intersections.

Field observations of the study intersections during morning and afternoon peak hour operations were conducted by LLG staff. The observations were used to calibrate the calculations of vehicle queuing under existing conditions. The peak hour observations were found to either validate the calculated vehicle queues or indicate that the calculations may be overestimating vehicle queues. The calculated vehicle queues have been reported, with the understanding that in some cases the queues represent a conservative, worst-case analysis.

Each of the three study intersections were reviewed in terms of expected maximum vehicle queues (i.e., 95th percentile queues) which represent the maximum back of vehicle queues with 95th percentile traffic volumes during the weekday AM and PM commuter peak hours. As shown in *Table 8-4*, some of the calculated 95th percentile queues are shown to exceed the available storage distances under existing conditions. For Intersection No. 5 (Vermont Avenue/Marine Avenue), the proposed project is not expected to add any traffic to the corresponding left-turn queues. For Intersection No. 6 (Vermont Avenue/Redondo Beach Boulevard), the calculated 95th percentile left-turn queues are shown to exceed the available storage distances under existing conditions for three of the four intersection approaches. The proposed project is forecast to add no more than two car lengths to any of these left-turn queues during the AM peak hour. For Intersection No. 8 (Orchard Avenue/Redondo Beach Boulevard), although the "With Project" conditions indicate that the 95th percentile eastbound left-turn queue is expected to exceed the left-turn storage distance during the

1. AMESTOY ELEMENTARY SCHOOL
2. GARDENA KOREAN BAPTIST CHURCH
3. ROSECRANS RECREATION CENTER
4. SOUTH BAY KEIRO NURSING HOME
5. MEMORIAL HOSPITAL OF GARDENA
6. PRESCRIPTIONS UNLIMITED PHARMACY
7. GARDENA PROFESSIONAL PHARMACY
8. HUSTLER CASINO
9. UEI COLLEGE
10. PRE-SCHOOL LIFE UNIVERSITY



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NOT TO SCALE

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FIGURE 8-7
POTENTIAL PEDESTRIAN DESTINATIONS

LINSCOTT, LAW & GREENSPAN, engineers

PROLOGIS VERMONT AVENUE AND REDONDO BEACH BOULEVARD INDUSTRIAL PROJECT

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Table 8-4
SUMMARY OF LEFT-TURN LANE AND SELECT RIGHT-TURN LANE VEHICLE QUEUING [1]
WEEKDAY AM AND PM PEAK HOURS

NO.	INTERSECTION	MOVEMENT	PEAK HOUR	EXISTING STORAGE CAPACITY	95th PERCENTILE QUEUES [2]					
					YEAR 2019 EXISTING	YEAR 2019 EXISTING WITH PROJECT	CHANGE IN QUEUE [3]	YEAR 2022 FUTURE W/O PROJECT	YEAR 2022 FUTURE W/ PROJECT	CHANGE IN QUEUE [3]
5	Vermont Avenue/ Marine Avenue	NB Left	AM	110	255	255	0	238	238	0
			PM	110	212	212	0	190	190	0
		EB Left	AM	N/A	168	168	0	174	174	0
			PM	N/A	306	306	0	316	316	0
6	Vermont Avenue/ Redondo Beach Boulevard	NB Left	AM	150	333	333	0	365	365	0
			PM	150	288	288	0	313	313	0
		SB Left	AM	205	240	258	18	250	268	18
			PM	205	233	235	2	243	245	2
		EB Left	AM	200	223	263	40	243	293	50
			PM	200	373	380	7	445	458	13
		WB Left	AM	395	230	230	0	243	243	0
			PM	395	275	335	60	328	388	60
8	Orchard Avenue/ Redondo Beach Boulevard	SB Lane	AM	N/A	195	235	40	198	238	40
			PM	N/A	260	488	228	265	495	230
		EB Left	AM	90	3	8	5	3	8	5
			PM	90	5	98	93	5	103	98
		WB Right	AM	N/A	15	18	3	15	20	5
			PM	N/A	125	243	118	145	268	123

[1] Pursuant to LADOT's *Transportation Assessment Guidelines* , July 2019, the Highway Capacity Manual (HCM) methodology for signalized and unsignalized intersections was utilized to calculate vehicle queuing.

[2] The 95th percentile queue is the maximum back of queue with 95th percentile traffic volumes. The HCM methodology worksheets reports queues in number of vehicles, however an average vehicle length of 25 feet was assumed for analysis purposes. The queues reported above therefore represent the calculated maximum back of queue in feet.

[3] Represents the change in calculated maximum back of queue (in feet) due to the addition of project-related traffic.

PM peak hour, the presence of the corresponding lane transition followed by the two-way left-turn lane would ensure that the eastbound left-turn queue does not extend into the adjacent number 1 through lane. As discussed in Section 2.3.2, the Applicant is designing the street cross section of Orchard Avenue to comply with the City's Industrial Local street standards, which correspond to a half right-of-way width of 32 feet and a half roadway width of 22 feet. Furthermore, it is recommended that separate left-turn and right-turn lanes be provided at the southbound approach of the Orchard Avenue/Redondo Beach Boulevard intersection. This measure will facilitate project-related traffic and traffic associated with other nearby businesses on Orchard Avenue and is expected to improve vehicle queuing at this intersection.

In addition to the review of operational and capacity constraints at intersections providing access to the project site, the TAG states that a transportation assessment should characterize the on-site loading demand of the project frontage and answer the following questions:

- Would the project result in passenger loading demand that could not be accommodated within any proposed on-site passenger loading facility?
    - Not Anticipated. Passenger loading/unloading will occur on-site within the surface parking areas. Curbside passenger loading/unloading is not anticipated to occur.
- Would accommodating the passenger loading demand create pedestrian or bicycle conflicts? Which curbside management options should be explored to better address passenger loading needs in the public right-of-way?
    - No pedestrian or bicycle conflicts due to potential passenger loading/unloading activities are anticipated to occur. While not anticipated, if any curbside loading/unloading zones would be proposed by the Applicant, appropriate signage and pavement/curb markings would be required by the City and installed by the Applicant. Any installations that fall within the City's (public) right-of-way will require prior review and approval by LADOT.

8.3.3 *Project Construction Effects on Nearby Mobility*

The City's TAG notes that a comparison of the results to the evaluation criteria are to be provided in order to determine the level of impact. The summary of the project construction evaluation criteria review in order to determine level of impact is provided in ***Table 8-5***. As presented in *Table 8-5*, it is concluded the proposed project would not result in the closure of two or more travel lanes, and may require the temporary relocation of an existing bus transit stop or route, but would not impede emergency access.

A detailed discussion of the forecast daily and peak hour trips and a qualitative review of the potential transportation impact of project-related construction activities is provided in Section 11.0.

TABLE 8-5
QUALITATIVE REVIEW OF PROJECT CONSTRUCTION ACTIVITIES

CRITERIA	PROJECT RESPONSE	DESCRIPTION
TEMPORARY TRANSPORTATION CONSTRAINTS		
The length of time of temporary street closures or closures of two or more travel lanes	**It is not expected that construction would require street closures or closures of two or more lanes.**	
The classification of the street (major arterial, state highway) affected	**It is not expected that construction would require street closures or closures of two or more lanes.**	**(Avenue I - Vermont Avenue), (Boulevard II-Redondo Beach Boulevard), (Local Street- Orchard Avenue)**
The existing congestion levels on the affected street segments and intersections	**LOS D @ Int. No. 6, LOS A @ Int. No. 8**	
Whether the affected street directly leads to a freeway on- or off-ramp or other state highway	**Yes, if lane closures are proposed along Redondo Beach Boulevard**	
Potential safety issues involved with street or lane closures	**Unknown - if lane closures are proposed, a traffic control plan would be prepared to ensure safe vehicular transitions**	
The presence of emergency services (fire, hospital, etc.) located nearby that regularly use the affected street	**None**	**N/A**
TEMPORARY LOSS OF ACCESS		
The length of time of any loss of pedestrian or bicycle circulation past a construction area	**Adjacent sidewalks along Vermont Avenue, Redondo Beach Boulevard, and Orchard Avenue may need to be temporarily closed. A marked bicycle lane exists on the east side of Vermont Avenue. The existing sidewalk along the Vermont Avenue frontage is discontinuous and substandard. It will be improved and the missing segments along the frontage will be constructed. Should temporary pedestrian closure be determined to be necessary, appropriate pedestrian detours will be required to be established along with the appropriate advance warning signage directing pedestrians to other available sidewalks and crosswalks/crossings. Should any such pedestrian detours or temporary travel lane closures be proposed, traffic control/management plans will be prepared for the required review and approval by LADOT.**	
The length of time of any loss of vehicular, bicycle, or pedestrian access to a parcel fronting the construction area	**Adjacent sidewalks along Vermont Avenue, Redondo Beach Boulevard, and Orchard Avenue may need to be temporarily closed. A marked bicycle lane exists on the east side of Vermont Avenue. The existing sidewalk along the Vermont Avenue frontage is discontinuous and substandard. It will be improved and the missing segments along the frontage will be constructed. Should temporary pedestrian closure be determined to be necessary, appropriate pedestrian detours will be required to be established along with the appropriate advance warning signage directing pedestrians to other available sidewalks and crosswalks/crossings. Should any such pedestrian detours or temporary travel lane closures be proposed, traffic control/management plans will be prepared for the required review and approval by LADOT.**	
The length of time of any loss of ADA pedestrian access to a transit station, stop, or facility	**None**	**N/A**
The availability of nearby vehicular or pedestrian access within ¼ mile of the lost access	**None**	**N/A**
The type of land uses affected, and related safety, convenience, and/or economic issues	**No land uses will be affected by construction. Access will be maintained for adjacent parcels in the Project vicinity**	**Access will be maintained for adjacent parcels in the project vicinity**

TABLE 8-5 (Continued)
QUALITATIVE REVIEW OF PROJECT CONSTRUCTION ACTIVITIES

CRITERIA	PROJECT RESPONSE	DESCRIPTION
TEMPORARY LOSS OF BUS STOPS OR REROUTING OF BUS LINES		
The length of time that an existing bus stop would be unavailable or that existing service would be interrupted	**An existing bus stop is located at the northeast corner of the Vermont Avenue/Redondo Beach Boulevard intersection. The Project plans to improve the existing bus stop adjacent to the Project site by providing a bus turnout area to allow transit buses to utilize the stop without impeding the flow to northbound traffic on Vermont Avenue, as well as providing a bus shelter for the existing transit stop. Construction of the bus turnout would temporarily interrupt service at this location. This bus stop would be maintained to the extent feasible, or it would be temporarily relocated consistent with Metro bus operational needs. Other bus stops that serve Gtrans 1X and 2 routes are located approximately 0.3 miles (an additional 5-minute walk) north and south along Vermont Avenue from the potentially affected bus stop.**	**Temporary bus stop relocation possible**
The availability of a nearby location (within ¼ mile) to which the bus stop or route can be temporarily relocated	**Yes**	
The existence of other bus stops or routes with similar routes/destinations within a ¼-mile radius of the affected stops or routes	**The construction of the proposed Project may temporarily affect the bus stop along the Vermont Avenue Project frontage (near the northeast corner of the intersection of Vermont Avenue and Redondo Beach Boulevard), which is served by Gtrans lines 1X and 2. This bus stop would be maintained to the extent feasible, or it would be temporarily relocated consistent with Metro bus operational needs. Other bus stops that serve Gtrans 1X and 2 routes are located approximately 0.3 miles north and south along Vermont Avenue from the potentially affected bus stop. There is a bus stop at the southwest corner of the intersection of Vermont Avenue and Redondo Beach Boulevard and on the west side of Vermont Avenue south of Marine Avenue. A 0.3 mile equates to an additional 5 minute walk from the bus stop along Vermont Avenue; therefore the construction of the proposed Project would not be expected to affect other bus stops nearby.**	**N/A**
Whether the interruption would occur on a weekday, weekend or holiday, and whether the existing bus route typically provides service that/those day(s)	**As stated, the bus stop at Vermont Avenue and Redondo Beach Boulevard would be temporarily interrupted by construction activities to construct a bus turnout.**	

9.0 CITY OF GARDENA TRAFFIC ANALYSIS

As discussed previously, an analysis was prepared using the City of Gardena ICU method for the seven study intersections located either partially or solely within the City of Gardena. The traffic impact analysis prepared for the City of Gardena study intersections using the ICU methodology and application of the City of Gardena significant traffic impact criteria is summarized in ***Table 9-1***. The ICU data worksheets for the analyzed intersections are contained in ***Appendix C-4***.

9.1 Existing Conditions

9.1.1 *Existing Conditions*

As indicated in column [1] of *Table 9–1*, six of the seven City of Gardena study intersections are presently operating at LOS D or better during the weekday AM and PM peak hours under existing conditions. The remaining study intersection (No. 1, Normandie Avenue/Redondo Beach Boulevard) presently operates at LOS E during the weekday PM peak hour under existing conditions. The existing traffic volumes at the study intersections during the weekday AM and PM peak hours are displayed in *Figures 4–1* and *4–2*, respectively.

9.1.2 *Existing With Project Conditions*

As shown in column [2] of *Table 9–1,* application of the City of Gardena study intersection threshold criteria (refer to *Table 7-2*) to the "Existing With Project" scenario indicates that the proposed project is not expected to create significant impacts at any of the City of Gardena study intersections. Incremental, but not significant, changes are noted at the study intersections. Because there are no significant impacts, no traffic mitigation measures are required or recommended for the study intersections under the "Existing With Project" conditions. The existing with project traffic volumes at the study intersections during the weekday AM and PM peak hours are illustrated in *Figures 8–1* and *8–2*, respectively.

9.2 Year 2022 Conditions

9.2.1 *Year 2022 Cumulative without Project Conditions*

The future year 2022 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 *v/c* ratios at all of the study intersections are incrementally increased with the addition of ambient traffic and traffic generated by the related projects listed in *Table 5–1*. As presented in column [3] of *Table 9–1*, six of the seven City of Gardena study intersections are expected to continue operating at LOS D or better during the weekday AM and PM peak hours with the addition of growth in ambient traffic and related projects traffic under the future without project conditions. The following City of Gardena study intersection is expected to continue to operate at LOS E during the PM peak hour with the addition of ambient growth traffic and traffic due to the related projects (i.e., without the addition of project trips):

- Int. 1: Normandie Ave/Redondo Beach Blvd PM Peak Hour: *v/c*=0.957, LOS E

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

			[1]		[2]				[3]		[4]				[5]			
NO.	INTERSECTION	PEAK HOUR	YEAR 2019 EXISTING V/C	LOS [a]	YEAR 2019 EXISTING W/ PROJECT V/C	LOS [a]	CHANGE V/C [(2)-(1)]	SIGNIF. IMPACT [b]	YEAR 2022 FUTURE WITHOUT PROJECT V/C	LOS [a]	YEAR 2022 FUTURE WITH PROJECT V/C	LOS [a]	CHANGE V/C or [(4)-(3)]	SIGNIF. IMPACT [b]	YEAR 2022 FUTURE W/ PROJECT MITIGATION V/C	LOS [a]	CHANGE V/C [(5)-(3)]	MITIGATED
1	Normandie Avenue/ Redondo Beach Boulevard	AM	0.805	D	0.806	D	0.001	No	0.844	D	0.845	D	0.001	No	0.845	D	0.001	---
		PM	0.909	E	0.911	E	0.002	No	0.957	E	0.958	E	0.001	No	0.958	E	0.001	---
2	Budlong Avenue/ Redondo Beach Boulevard	AM	0.601	B	0.603	B	0.002	No	0.627	B	0.628	B	0.001	No	0.628	B	0.001	---
		PM	0.585	A	0.592	A	0.007	No	0.625	B	0.631	B	0.006	No	0.631	B	0.006	---
3	Vermont Avenue/ Rosecrans Avenue	AM	0.713	C	0.718	C	0.005	No	0.753	C	0.757	C	0.004	No	0.757	C	0.004	---
		PM	0.755	C	0.759	C	0.004	No	0.794	C	0.798	C	0.004	No	0.798	C	0.004	---
4	Vermont Avenue/ 149th Street	AM	0.478	A	0.483	A	0.005	No	0.503	A	0.508	A	0.005	No	0.508	A	0.005	---
		PM	0.394	A	0.402	A	0.008	No	0.419	A	0.426	A	0.007	No	0.426	A	0.007	---
5	Vermont Avenue/ Marine Avenue	AM	0.679	B	0.684	B	0.005	No	0.710	C	0.715	C	0.005	No	0.715	C	0.005	---
		PM	0.603	B	0.603	B	0.000	No	0.628	B	0.628	B	0.000	No	0.628	B	0.000	---
6	Vermont Avenue/ Redondo Beach Boulevard	AM	0.790	C	0.820	D	0.030	No	0.833	D	0.863	D	0.030	Yes	0.863	D	0.030	No
		PM	0.830	D	0.846	D	0.016	No	0.890	D	0.905	E	0.015	No	0.905	E	0.015	---
7	Vermont Avenue/ 161st Street-Alondra Boulevard	AM	0.655	B	0.663	B	0.008	No	0.711	C	0.718	C	0.007	No	0.718	C	0.007	---
		PM	0.703	C	0.703	C	0.000	No	0.744	C	0.745	C	0.001	No	0.745	C	0.001	---

[a] Level of Service (LOS) is based on the reported ICU value for signalized intersections.

[b] According to the County of Los Angeles Department of Public Works' *Traffic Impact Analysis Report Guidelines* , January 1, 1997, Page 6: an impact is considered significant if the project related increase in the volume-to-capacity ratio (v/c) equals or exceeds the thresholds shown below:

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

The future without project (existing, ambient growth, and related projects) traffic volumes at the study intersections during the weekday AM and PM peak hours are presented in *Figures 8–3* and *8–4*, respectively.

9.2.2 *Year 2022 Cumulative with Project Conditions*

As shown in column [4] of *Table 9–1,* application of the City of Gardena study intersection threshold criteria (refer to *Table 7-2*) to the "Future With Project" scenario indicates the proposed project is expected to result in a significant impact at the following City of Gardena study intersection:

- Int. No. 6: Vermont Avenue/Redondo Beach Boulevard

  AM peak hour *v/c* ratio increase of 0.030 [to 0.863 (LOS D) from 0.833 (LOS D)]

It should be noted that this shared intersection (Int. No. 6: Vermont Avenue/Redondo Beach Boulevard) is also forecast to be significantly impacted employing the corresponding City of Los Angeles analysis methodology and threshold criteria. Incremental, but not significant, changes are noted at the remaining six study intersections analyzed using the City of Gardena ICU methodology. The future with project (existing, ambient growth, related projects and project) traffic volumes at the study intersections during the weekday AM and PM peak hours are illustrated in *Figures 8–5* and *8–6*, respectively.

10.0 COUNTY OF LOS ANGELES TRAFFIC ANALYSIS

As discussed previously, an analysis was prepared using the County of Los Angeles ICU methodology for one study intersection located partially within the County of Los Angeles. The traffic impact analysis prepared for the County of Los Angeles study intersection using the ICU methodology and application of the County of Los Angeles significant traffic impact criteria is summarized in ***Table 10-1***. The ICU data worksheets for the analyzed intersection are contained in ***Appendix C-5***.

10.1 Existing Conditions

10.1.1 *Existing Conditions*

As indicated in column [1] of *Table 10-1*, the Figueroa Street/Redondo Beach Boulevard intersection (Intersection No. 11) is operating at LOS D and LOS C during the weekday AM and PM peak hours, respectively. As previously mentioned, the existing traffic volumes at the study intersections during the weekday AM and PM peak hours are displayed in *Figures 4-1* and *4-2*, respectively.

10.1.2 *Existing With Project Conditions*

As presented in column [2] of *Table 10–1*, application of the County of Los Angeles' threshold criteria to the Existing With Project scenario indicates that the proposed project is not expected to create a significant impact at the County of Los Angeles study intersection. As indicated in *Table 10-1*, incremental but not significant changes in *v/c* ratios are noted at the County of Los Angeles study intersection due to the proposed project.

10.2 Future Conditions

10.2.1 *Future Cumulative With Project Conditions*

The *v/c* ratios at the County of Los Angeles study intersection are incrementally increased with the addition of traffic generated by the related projects listed in *Table 5-1*. As shown in Column [3] of *Table 10-1*, application of the County of Los Angeles' threshold criteria to the Future With Related Projects scenario indicates that the cumulative developments in the project vicinity are expected to result in significant cumulative traffic impacts at the Figueroa Street/Redondo Beach Boulevard study intersection during the weekday AM and PM peak hours.

Table 10-1
COUNTY OF LOS ANGELES
SUMMARY OF VOLUME TO CAPACITY RATIOS AND LEVELS OF SERVICE
WEEKDAY AM AND PM PEAK HOURS

			[1]		[2]				[3]				[4]			
NO.	INTERSECTION	PEAK HOUR	EXISTING V/C	EXISTING LOS [a]	EXISTING W/ PROPOSED PROJECT V/C	EXISTING W/ PROPOSED PROJECT LOS [a]	CHANGE V/C [(2)-(1)]	SIGNIF. IMPACT [b]	FUTURE W/ PROJECT & REL. PROJECTS V/C	FUTURE W/ PROJECT & REL. PROJECTS LOS [a]	CHANGE V/C [(3)-(1)]	SIGNIF. IMPACT [b]	FUTURE W/ REGIONAL MITIGATION V/C	FUTURE W/ REGIONAL MITIGATION LOS [a]	CHANGE V/C [(4)-(1)]	MITI-GATED
11	Figueroa Street/	AM	0.805	D	0.810	D	0.005	No	0.871	D	0.066	Yes	0.871	D	0.066	No
	Redondo Beach Boulevard	PM	0.778	C	0.783	C	0.005	No	0.850	D	0.072	Yes	0.850	D	0.072	No

[a] Level of Service (LOS) is based on the reported ICU value for the signalized intersection.

[b] According to the County of Los Angeles Department of Public Works' *Traffic Impact Analysis Report Guidelines* , January 1, 1997, Page 6: an impact is considered significant if the project related increase in the volume-to-capacity ratio (v/c) equals or exceeds the thresholds shown below:

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

11.0 CONSTRUCTION TRAFFIC ANALYSES

This section summarizes the qualitative construction impact analysis for the proposed project. The construction impact analysis relates to the temporary transportation impacts that may result from the construction activities of the proposed project, which may include safety, operational, or capacity impacts.

11.1 Construction Assumptions

While detailed construction staging plans have not yet been developed, the project applicant has provided preliminary information regarding the overall construction activities in order to identify the potential construction traffic generation during the weekday AM and PM peak hours. It has been determined that the duration of construction activities is expected to total approximately nine months. The construction activities will consist of the following phases: 1) Demolition and Debris Processing, 2) Rough Grading, and 3) Building Construction. A summary of key elements of each construction phase is provided in ***Table 11-1***. Based on information provided by the applicant, it is assumed that the construction phases will not overlap.

As presented in *Table 11-1*, it is assumed that the demolition and site preparation would occur on the project site during the first month (i.e., approximately four to five weeks) after commencement of construction activities and would require six workers. It is anticipated that approximately 1,000 tons of asphalt demolition would be hauled off-site to a facility located in the City of Stanton, while the majority of asphalt demolition debris would be reprocessed on-site. Export of the 1,000 tons of demolition debris would generate approximately six daily one-way haul trips during this phase (i.e., three daily truck loads). Rough grading activities would occur during the following one month and would require 11 workers. Following the completion of rough grading, building construction would occur during the remaining seven months, requiring 50 workers and up to 100 one-way vendor delivery-related trips per day. It should be noted that other related construction activities, such as utility trenching, fine grading, paving, architectural coating, and finishing/landscaping will also take place during the building construction phase and these activities will require an additional four to 15 daily workers and up to four additional one-way vendor delivery-related trips per day.

It is anticipated that construction activities would generally occur Monday through Friday from 7:00 AM to 4:00 PM. It is assumed that the equipment staging area and construction worker parking would occur on-site. It should be noted that the City's Noise Ordinance currently limits construction hours Monday through Friday to no earlier than 7:00 AM and no later than 9:00 PM. On Saturdays, construction hours are limited to no earlier than 8:00 AM and no later than 6:00 PM. It is assumed that workers would generally arrive at the site by 7:00 AM and depart the site by 4:00 PM (i.e., after an eight-hour workday including a lunch break), except when overtime is necessary to maintain the schedule. At this time, it is not known if temporary lane closures will be necessary during the course of project construction. However, any such lane closures would be expected to occur outside the weekday AM and PM commute hours so as to maintain roadway capacity when the street system is typically most heavily constrained.

Table 11-1
SUMMARY OF CONSTRUCTION PHASES [1]

CONSTRUCTION PHASE	DURATION (MONTHS)	NUMBER OF DAILY WORKERS	NUMBER OF DAILY VENDOR TRIPS (1-WAY)	NUMBER OF DAILY TRUCK HAUL TRIPS (1-WAY)	MATERIAL EXPORT (TONS)
Phase 1: Demolition & Debris Processing	1.0	6	nom.	6	999
Phase 2: Rough Grading	1.0	11	4	nom.	nom.
Phase 3: Building Construction	7.0	50	100	nom.	nom.
- Utility Trenching		4	nom.	nom.	nom.
- Fine Grading		6	4	nom.	nom.
- Paving		6	nom.	nom.	nom.
- Architectural Coating		6	nom.	nom.	nom.
- Finishing/Landscaping		15	nom.	nom.	nom.

[1] Based on preliminary information provided by Placeworks.

Based on a review of the construction phasing, it is determined that the overall highest construction traffic generation is expected to occur during building construction activities (i.e., during the building construction and finishing/landscaping phase). Other phases such as demolition/debris processing and rough grading are expected to be less intensive in terms of overall construction traffic generation. In addition, with implementation of a Construction Staging and Traffic Management Plan (CSTMP), discussed further below, it is anticipated that most haul truck activity to and from the project site would occur outside of the morning and afternoon peak hours. Accordingly, construction traffic associated with phases such as demolition/debris processing and rough grading are not expected to result in any significant construction traffic impacts. The peak construction traffic trip generation and corresponding impact assessment (during building construction and finishing/landscaping activities) for the weekday AM and PM peak hours is described in more detail below.

11.2 Construction Traffic Impacts During Building Construction Phase

As described above, the peak construction traffic generation has been determined to occur during the building construction and finishing/landscaping phase. This peak construction activity is expected to occur over an approximate one-month period. Activities related to this phase/period are expected to generate the highest number of construction trips as compared to the other construction activities. Based on information provided by the applicant, during this phase the maximum number of construction workers is expected to total 65 workers (i.e., 50 workers for building construction and 15 workers for finishing/landscaping). Construction workers are expected to arrive to the project site prior to the start of the work day (i.e., prior to 7:00 AM). Therefore, it is assumed that these trips would occur outside of the weekday AM peak commuter hour. Assuming the typical eight-hour work day ends at 4:00 PM, fifty percent (50%) of the workers are assumed to leave the site between 4:00 PM and 4:30 PM, twenty-five percent (25%) between 4:30 PM and 5:00 PM, and the remaining twenty-five percent (25%) after 5:00 PM (including supervisors). Thus, while these construction worker trips would generally occur outside of the afternoon commuter peak hours of adjacent street traffic, fifty percent (50%) of the work force (i.e., 33 workers) has been assumed to overlap with the weekday commute PM peak hour, which generally occurs between 5:00 PM and 6:00 PM (as shown in *Table 4-1*), in order to provide a conservative forecast of construction traffic generation.

It is anticipated that construction workers would primarily remain on-site throughout the day. It is conservatively assumed that each construction worker would drive-alone to/from the project site each day. Therefore, it is estimated that approximately 130 daily vehicle trips (65 inbound trips and 65 outbound trips) would be generated to/from the site by the construction workers during this peak building construction and finishing/landscaping phase. With 50% of the workers conservatively assumed to overlap with the weekday PM peak commuter hour, this would result in 33 outbound construction worker vehicle trips.

In addition to construction worker vehicles, additional trips may be generated by miscellaneous vendors/trucks traveling to and from the project site. These trucks may consist of trucks delivering equipment and/or construction materials to the project site. In addition, smaller pick-up trucks or four-wheel drive vehicles used by construction supervisors and/or City inspectors are expected to be generated to and from the site. During peak building construction phase, it is estimated that up to 50

trucks per day would be generated to and from the site, resulting in 100 truck trip ends (i.e., 50 inbound truck trips and 50 outbound truck trips). To conservatively estimate the equivalent number of vehicles associated with the trucks, a passenger car equivalent (PCE) factor of 2.0 was utilized based on standard traffic engineering practice. Therefore, assuming 50 trucks per day, it is estimated that the trucks would generate approximately 200 daily PCE vehicle trip ends (i.e., 100 inbound PCE trips and 100 outbound PCE trips). Assuming that miscellaneous truck trips such as equipment and material deliveries may occur during the eight-hour workday, it is estimated that an average of approximately 28 PCE vehicle trips (i.e., 14 inbound trips and 14 outbound trips) would occur per hour, including during the AM and PM peak hours.

The trip generation forecast of vehicular trips anticipated to be generated during the peak phase of building construction is presented in ***Table 11-2***. Taken together, the construction worker vehicles and miscellaneous vendors/trucks during the peak phase of building construction are forecast to generate up to 28 weekday AM peak hour vehicle trips (i.e., 14 inbound trips and 14 outbound trips), and up to 61 weekday PM peak hour vehicle trips (i.e., 14 inbound trips and 47 outbound trips). By comparison, the proposed project upon completion and occupancy is expected to generate 375 vehicle trips (i.e., 329 inbound trips and 46 outbound trips) during the weekday AM peak hour, and 337 vehicle trips (i.e., 45 inbound trips and 292 outbound trips) during the weekday PM peak hour. Therefore, it can be concluded based on a comparative review of trip generation associated with the project and peak construction activities that no new or greater traffic impacts above and beyond those already identified in the transportation impact study are expected during project construction.

As discussed further in Section 11.3 below, a detailed Construction Staging and Traffic Management Plan (CSTMP) would be required which would provide detailed information regarding any potential temporary sidewalk(s) and/or lane closure(s) along the project frontages. If any sidewalk and/or lane closures are necessary, safety precautions for pedestrians and bicyclists through such measures as alternate routing and protection barriers would be implemented. In addition, the existing bus stop located along the Vermont Avenue project frontage would be maintained to the extent feasible, or it would be temporarily relocated consistent with Metro bus operational needs. Therefore, impacts to access (including pedestrians/bicycles) and transit during project construction would be less than significant.

It is important to note that as required by the State of California Vehicle Code (i.e., specifically Section 21806, Authorized Emergency Vehicles), "upon the immediate approach of an authorized emergency vehicle which is sounding a siren and which has at least one lighted lamp exhibiting red light that is visible, under normal atmospheric conditions, from a distance of 1,000 feet in front of a vehicle, the surrounding traffic shall, except as otherwise directed by a traffic officer, do the following:

(a) (1) Except as required under paragraph (2), the driver of every other vehicle shall yield the right-of-way and shall immediately drive to the right-hand edge or curb of the highway, clear of any intersection, and thereupon shall stop and remain stopped until the authorized emergency vehicle has passed.

Table 11-2
PROJECT TRIP GENERATION DURING PEAK CONSTRUCTION PHASE [1]

GENERATOR TYPE	DAILY TRIP ENDS[2] VOLUMES	AM PEAK HOUR VOLUMES [2]			PM PEAK HOUR VOLUMES [2]		
		IN	OUT	TOTAL	IN	OUT	TOTAL
[A] Workers [3]	130	nom.	nom.	nom.	nom.	33	33
[B] Miscellaneous Vendor Trips [4]	100	7	7	14	7	7	14
[C] PCE-Adjusted Miscellaneous Vendor Trips [5]	200	14	14	28	14	14	28
TOTAL PCE ADJUSTED TRIPS ([A] + [C])	**330**	**14**	**14**	**28**	**14**	**47**	**61**

[1] Project construction information provided by Placeworks and T&B Planning representatives. The peak construction traffic occurs during the Building Construction & Finishing/Landscaping phase.
[2] Trips are one-way traffic movements, entering or leaving.
[3] A combined daily total of 65 workers is anticipated at the project site during the peak building construction and finishing/ landscaping phase. Workers are expected to arrive before the 7:00 AM shift start time (i.e., outside of the AM peak hour). During the PM peak hour, it is assumed that fifty percent (50%) of the workers will depart the site, therefore a total of 33 outbound trips are anticipated to occur (65 workers x 50% = 33 outbound trips).
[4] A total of 100 miscellaneous one-way vendor trips per day is anticipated during the building construction phase (i.e., 50 inbound trips and 50 outbound trips). Based on an eight-hour workday, an average total of 7 inbound trips and 7 outbound trips per hour is anticipated.
[5] A PCE factor of 2.0 was employed for analysis purposes. This accounts for the assumption that a miscellaneous vendor vehicle/truck has the same overall effect on intersection traffic operations as 2.0 passenger cars.

(2) A person driving a vehicle in an exclusive or preferential use lane shall exit that lane immediately upon determining that the exit can be accomplished with reasonable safety.

(b) The operator of every street car shall immediately stop the street car, clear of any intersection, and remain stopped until the authorized emergency vehicle has passed.

(c) All pedestrians upon the highway shall proceed to the nearest curb or place of safety and remain there until the authorized emergency vehicle has passed."[21]

During construction of the proposed project, it is expected that emergency vehicles will continue to utilize the surrounding street system (i.e., particularly Redondo Beach Boulevard and Vermont Avenue) even though some travel lanes along certain portions of some roadways may be temporarily used for construction staging and/or material delivery. If required, drivers of emergency vehicles are also trained to utilize center turn lanes, or travel in opposing through lanes (on two-way streets) to pass through crowded intersections or streets. Thus, the respect entitled to emergency vehicles and driver training allow emergency vehicles to negotiate typical street conditions in urban areas including areas near any temporary travel lane closure(s). Construction activities associated with the proposed project are not expected to have a detrimental effect on emergency response times and therefore, impacts to emergency access during project construction are considered less than significant.

11.3 Construction Staging and Traffic Management Plan

As a general contractor has not yet been selected, the exact extent of the construction work site boundary cannot be determined at this time. However, during certain portions of the construction schedule it is possible that the adjacent sidewalks along Vermont Avenue, Redondo Beach Boulevard, and Orchard Avenue may need to be temporarily closed. The existing sidewalk along the Vermont Avenue frontage is discontinuous and substandard. It will be improved and the missing segments along the frontage will be constructed. Should temporary sidewalk closure be determined to be necessary, appropriate pedestrian detours will be required to be established along with the appropriate advance warning signage directing pedestrians to other available sidewalks and crosswalks/crossings. Should any such pedestrian detours or temporary travel lane closures be proposed, traffic control/management plans will be prepared for the required review and approval by LADOT.

A detailed CSTMP, including any potential street closure information, a detour plan, haul routes, and a staging plan, will be prepared and submitted to the City for review and approval. The CSTMP would formalize how construction would be carried out and identify specific actions that would be required to reduce effects on the surrounding community. The CSTMP would be based on the nature and timing of the specific construction activities for the project and would consider other projects under construction in the vicinity of the project site. Accordingly, the CSTMP shall include, but not be limited to the following features, as appropriate:

[21] Source: State of California Department of Motor Vehicles website; https://www.dmv.ca.gov/portal/dmv; Amended Sec. 68, Ch. 1154, Stats 1996 Effective September 30, 1996.

- Provide a posted sign on the project site with hotline information for adjacent property owners to call and address specific issues or activities that may potentially cause problems at on-and-off-site locations;
- Coordinate with the City and emergency service providers to ensure adequate access is maintained to the project site and neighboring businesses;
- Coordinate with public transit agencies to provide advanced notifications of any temporary stop relocations and durations and follow all safety required procedures required by the concerned agency;
- Limit any potential roadway lane closure/s to off-peak travel periods, to the extent feasible;
- Provide traffic control for any potential roadway lane closure, detour, or other disruption to traffic circulation;
- To the extent feasible, store any construction equipment within the perimeter fence of the construction site. Should temporary storage of a large piece of equipment be necessary outside of the perimeter fence (e.g., within a designated lane closure area), that area must comply with City-approved detour/traffic control plans;
- Provide safety precautions for pedestrians and bicyclists through such measures as alternate routing and protection barriers;
- Identify the routes that construction vehicles would utilize for the delivery of construction materials (i.e. lumber, tiles, piping, windows, etc.), to access the project site, traffic controls and detours, and proposed construction phasing plan for the project;
- Require the Applicant to keep all haul routes adjacent to the project site clean and free of debris including, but not limited to, gravel and dirt as a result of its operations;
- Schedule delivery of construction materials and hauling/transport of oversize loads to non-peak travel periods, to the extent possible. No hauling or transport shall be allowed during nighttime hours, Sundays, or federal holidays unless required by Caltrans or LADOT;
- Obtain a Caltrans transportation permit for use of oversized transport vehicles on Caltrans facilities, if needed;
- Haul trucks entering or exiting public streets shall at all times yield to public traffic;
- Construction-related parking and staging of vehicles shall occur on-site to the extent possible, but may occur on nearby public parking lots, as approved by the City;
- Coordinate deliveries to reduce the potential of trucks waiting to unload for protracted periods of times;
- Prohibit parking by construction workers on adjacent streets and direct construction workers to available/designated parking areas within and adjacent to the project site; and

- The CSTMP shall meet standards established in the current *California Manual on Uniform Traffic Control Device (MUTCD)* as well as City of Los Angeles requirements.

Ultimately, implementation of the CSTMP would serve to reduce any potential temporary impacts during project construction.

11.4 Haul Route Approval

Approvals required by the City of Los Angeles for implementation of the proposed project include a Truck Haul Route program. Based on information provided by the applicant, it is anticipated that the demolition, material export, and construction debris will be transported to an off-site facility in the City of Stanton. In the project vicinity, the planned haul routes for loaded trucks to the disposal facility in Stanton will likely include Redondo Beach Boulevard and the I-110 Freeway. As stated previously, an average of three daily truck loads of demolition debris is expected. The proposed haul routes would require review and approval by the City of Los Angeles.

12.0 TRANSPORTATION DEMAND MANAGEMENT PROGRAM AND IMPROVEMENT MEASURES

12.1 Summary of Project Impacts

Based on the City of Los Angeles traffic analyses summarized in Section 8.0, it was determined that the proposed project is expected to result in significant project impacts at the following three study intersections, based on the City of Los Angeles' threshold criteria:

- Int. No. 6: Vermont Avenue/Redondo Beach Boulevard (shared intersection with City of Gardena)
- Int. No. 9: I-110 Freeway Southbound Ramps/Redondo Beach Boulevard
- Int. No. 10: I-110 Freeway Northbound Ramps/Redondo Beach Boulevard

Based on the City of Gardena traffic analyses summarized in Section 9.0, it was determined that the proposed project is expected to result in significant project impacts at the following study intersection, based on the City of Gardena's threshold criteria:

- Int. No. 6: Vermont Avenue/Redondo Beach Boulevard (shared intersection with City of Los Angeles)

Based on the County of Los Angeles traffic analyses summarized in Section 10.0, it was determined that the proposed project would result in a contribution to significant cumulative traffic impacts at the following study intersection, based on the County of Los Angeles' cumulative threshold criteria (i.e., no direct project-related impacts were identified):

- Int. No. 11: Figueroa Street/Redondo Beach Boulevard (shared intersection with City of Los Angeles)

12.2 Transportation Demand Management (TDM) Program

Transportation Demand Management Program

Transportation demand management (TDM) measures are aimed at reducing vehicular traffic generated at project sites and the associated need for parking. TDM measures decrease the number of vehicular trips generated by persons traveling to/from the site by offering specific facilities, services and actions designed to increase the use of alternative transportation modes (e.g., transit, walking, and bicycling) and ridesharing. These measures would be expected to reduce the project's potential traffic impacts, however, no formal trip reductions have been incorporated into the traffic analysis. Trip reductions in the range of five (5%) to ten percent (10%) are common with greater reductions possible depending on the range of measures offered above and beyond those required by the City.

In order to comply with the City's Trip Reduction Ordinance[22], a formal Preliminary TDM Plan will be developed in conjunction with LADOT and will be required prior to issuance of a building permit for the project and as such will become a project design feature. This preliminary plan will include, at a minimum, measures consistent with the City's Trip Reduction Ordinance. A Final TDM Plan will be required prior to issuance of any Certificate of Occupancy. The project TDM plan could include some of the following measures:

- *TDM Information/Promotional Materials*. Transportation information should be provided in a highly visible and accessible location within the building, including information on local transit providers, area walking routes, bicycling maps, etc., to inform employees and visitors of available alternative transportation modes to access the project, other amenities in the area and travel opportunities in the area. The area/display should highlight the environmental benefits of utilization of alternative transportation modes. In addition, transit fare media and day/month passes should be made available for purchase to employees and visitors during typical business hours.

- *Transit Welcome Package*. All new employees could be provided with a Transit Welcome Package (TWP) in addition to holding a Transportation Fair on an annual basis. The TWP at a minimum could include information regarding the employer/s' arrangements for free or discounted use of the transit system, area bus/rail transit route and connections/transfers information, bicycle facilities (including routes, rental and sales locations, on-site bicycle racks, walking and biking maps), and convenient local services and restaurants within walking distance of the project.

- *Carpool Program for Employees*. Provide preferential parking within the on-site parking areas for employees who commute to work in registered carpools. An employee who drives to work with at least one other employee to the site may register as a carpool entitled to preferential parking within the meaning of this provision.

- *Public Transit Stop Enhancements.* Work in cooperation with LADOT and other transit agencies to improve the existing bus stop on Vermont Avenue with a shelter and transit information. Enhancements could include enhanced weather/sun protection, lighting, benches, and trash receptacles. These improvements would be intended to make riding the bus a safer and more attractive alternative.

- *Convenient Parking/Amenities for Bicycle Riders*. Consistent with the City's Municipal Code requirements, provide locations at the project site for convenient bicycle parking for employees and visitors. Bicycle parking may include bicycle racks, locked cages, or another

[22] City of Los Angeles Ordinance 168,700 (Transportation Demand Management and Trip Reduction Measures, effective 3/31/93) added Section J to Section 12.26 of the Los Angeles Municipal Code to provide transportation demand management features within new buildings which would facilitate the use of alternative transportation modes to decrease dependency on vehicles carrying only one person.

similar parking area. Provide shower facilities for employees who commute to work via bicycle. Refer to Section 2.4 for a summary of the number of long-term and short-term bicycle parking spaces proposed to be provided by the project.

- *Local Hiring Program*. To the extent feasible, when hiring conduct outreach to residents who live in the study area based on satisfaction of other requirements of the available positions.

- *Flexible/Alternative Work Schedules*. Encourage tenants in the building to offer flexible or alternative work schedules, as well as the opportunity to telecommute if feasible.

- *Parking Cash-Out Program.* Require in any lease it executes as landlord for space within the project that a parking cash-out program be provided if employees are charged for parking. Parking cash-out program refers to an employer-funded program under which an employer offers in-lieu of any parking subsidy, a transit subsidy or cash allowance (for use of alternative modes such as walking and bicycling) of equal or greater value.

12.3 Recommended Transportation Mitigation Program and Other Transportation Enhancements

Transportation mitigation measures typically consist of travel demand management programs and physical improvements such as traffic signal installations/modifications and/or roadway intersection restriping measures. Roadway widenings to accommodate additional travel lanes resulting in increased capacities and speeds are contrary to the City's Vision Zero initiative and are proposed only by exception (e.g., when additional right-of-way is available and an unusually high volume of turning traffic requires an additional lane to improve a significant vehicle queuing and safety issue). Moreover, current LADOT policies promote improvements to support the goals of the State of California to reduce greenhouse gas emissions by reducing the use of single-occupant vehicles and by encouraging developers to construct transit and pedestrian-friendly projects with safe and walkable environments connecting with transit stations for project tenants and patrons. Sustainability, smart growth and the reduction of greenhouse gas emissions have become prime concerns for the City of Los Angeles in addition to traditional mobility considerations. The following sections provide an overview of feasible transportation improvement mitigation measures that are anticipated to reduce the project's significant traffic impacts and project's contribution to significant cumulative traffic impacts to less than significant levels (to the extent feasible). However, because the affected study intersections are under shared jurisdiction, the improvements are not under sole control of the City of Los Angeles as Lead Agency. As such, these impacts have been conservatively considered unavoidable for environmental review purposes.

12.3.1 *City of Los Angeles Transportation Improvement Measures*

The following improvements were considered but rejected:

Intersection No. 6: Vermont Avenue/Redondo Beach Boulevard

This shared City of Los Angeles study intersection is expected to be significantly impacted by the proposed project under the existing with project weekday AM peak hour and under the future with project weekday AM and PM peak hour conditions (according to the City of Los Angeles analysis methodology contained in their prior guidelines). A potential project mitigation option examined for this intersection consisted of restriping the northbound Vermont Avenue approach to provide one left-turn lane, two through lanes, and one shared through/right-turn lane at the intersection. This measure was expected to reduce the project's significant AM and PM peak hour traffic impacts to less than significant levels, however due to the measure requiring removal of the existing intersection's northbound departure bicycle facilities on Vermont Avenue, which would be incompatible with the City's current mobility policies and *Mobility Plan 2035*, this measure was considered but rejected.

Another potential project mitigation option examined for this intersection consisted of restriping the eastbound Redondo Beach Boulevard approach to provide one left-turn lane, two through lanes, and one shared through/right-turn lane at the intersection. This measure was expected to reduce the project's significant PM peak hour traffic impact to a less than significant level, however, this measure would not have mitigated the project's significant impact during the AM peak hour. Given the proximity of the signalization equipment associated with the existing rail crossing, this measure would result in an offset in travel lanes across the intersection since additional right-of-way is not available. In addition, this measure would also require on-street parking removal or restriction along the south side of Redondo Beach Boulevard east of Vermont Avenue. Thus, this measure was also considered but rejected.

Based on the above, it has been conservatively concluded that the project's traffic impacts at this location would remain significant and unavoidable, as shown in *Table 8-1*. The corresponding CMA data worksheets are contained in *Appendix C-1*.

Intersection No. 9: I-110 Freeway Southbound Ramps/Redondo Beach Boulevard

This City of Los Angeles study intersection is expected to be significantly impacted by the proposed project under the existing with project and future with project weekday AM and PM peak hour conditions. A potential project mitigation option examined for this intersection consisted of the restriping of the subject westbound intersection approach to provide two left-turn lanes and two through lanes. Since additional right-of-way is not available due to the existing I-110 Freeway overcrossing and supportive structural bridge abutments, this measure would have involved the conversion of the number one westbound through lane to a left-turn lane. While there are currently two southbound on-ramp lanes provided, which would technically facilitate the incorporation of dual westbound left-turn lanes, the inner lane is currently designated as a high occupancy vehicle (HOV

2+) travel lane which is also not ideal given that the No. 1 westbound left-turn lane is currently for mixed-flow traffic. This measure would have also required that the number one westbound left-turn lane be limited to only high-occupancy vehicles (i.e., carpools). In addition, the conversion of the number one westbound through lane to a left-turn only lane is considered infeasible due to the secondary vehicle queuing impacts associated with the elimination of the number one westbound through lane. The lane conversion would also result in a "trap" lane for westbound motorists departing the I-110 Freeway Northbound Ramps intersection (i.e., the westbound through motorists that are not destined to the I-110 Freeway Southbound On-Ramp could be trapped into the number two westbound left-turn lane at the on-ramp intersection). In order to avoid this condition, westbound motorists would need to immediately merge upon departing the I-110 Freeway Northbound Ramps intersection, causing additional vehicle slowing, queuing and congestion. Thus, given the proximity of the I-110 Freeway overcrossing, the location of the bridge abutments and lack of additional right-of-way to maintain three westbound through lanes, this measure was considered but rejected.

Based on the above, it has been conservatively concluded that the project's traffic impacts at this location would remain significant and unavoidable, as shown in *Table 8-1*. The corresponding CMA data worksheets are contained in *Appendix C-1*.

Intersection No. 10: I-110 Freeway Northbound Ramps/Redondo Beach Boulevard

This City of Los Angeles study intersection is expected to be significantly impacted by the proposed project under the existing with project weekday AM peak hour and under the future with project weekday AM and PM peak hour conditions. A potential project mitigation option examined for this intersection consisted of the restriping of the subject westbound intersection approach to provide two left-turn lanes, one through lane, and one shared through/right turn lane (i.e., the exterior westbound lane is also utilized by right-turning motorists to access the parking lot associated with the 555 Redondo Beach Boulevard commercial building). Due to the lack of available additional right-of-way, the incorporation of the second westbound left-turn lane onto the on-ramp would require the conversion of the number one westbound through travel lane. While currently two southbound on-ramp lanes are provided and could technically facilitate the incorporation of dual westbound left-turn lanes, the conversion of the number one westbound through lane to a left-turn only lane is considered infeasible due to the secondary vehicle queuing impacts associated with the elimination of the number one westbound through lane. The lane conversion would also result in a "trap" lane for westbound motorists departing the Figueroa Street intersection (i.e., the westbound through motorists that are not destined to the I-110 Freeway Northbound On-Ramp could be trapped into the number two westbound left-turn lane at the on-ramp intersection). In order to avoid this condition, westbound motorists would need to immediately merge upon departing the Figueroa Street intersection, causing additional vehicle slowing, queuing and congestion. Thus, given the lack of additional right-of-way in order to maintain three westbound through travel lanes, this measure was considered but rejected.

Based on the above, it has been conservatively concluded that the project's traffic impacts at this location would remain significant and unavoidable, as shown in *Table 8-1*. The corresponding CMA data worksheets are contained in *Appendix C-1*.

Potential City of Los Angeles Traffic Signal Upgrades

Some of the signalized intersections within the project study area require an upgrade to the traffic signal equipment and hardware. Some of the traffic signals in the study area currently operate using a Type 170 traffic signal controller. Newer controllers (e.g., Type 2070) provide for enhanced and real-time operation of the traffic signal timing. Also, when supplemented by additional roadway system loops and closed-circuit television (CCTV) cameras at key locations, LADOT can identify the causes of delay and implement instant signal timing remedies to improve the traffic flow of vehicles and buses. These traffic signal upgrades provide a system-wide benefit by reducing delays experienced by motorists.

To enhance the traffic signal system in the project study area and in response to the forecast significant project impacts, it is recommended that a fixed-fee financial contribution toward funding traffic signal upgrades be provided by the project Applicant for the following study intersections along the Vermont Avenue and Redondo Beach Boulevard corridors:

- Intersection No. 6: Vermont Avenue/Redondo Beach Boulevard
- Intersection No. 9: I-110 Freeway Southbound Ramps/Redondo Beach Boulevard
- Intersection No. 10: I-110 Freeway Northbound Ramps/Redondo Beach Boulevard

Traffic signal upgrades, if needed and implemented along with other nearby corridor-level type signal improvements as required for other development projects, could be expected to further improve traffic operations and increase intersection capacities. LADOT has previously determined that such transportation system management (TSM) improvements could increase intersection capacity by one percent (a 0.01 improvement in v/c ratio). Identification of any available traffic signal upgrades and subsequent contribution would be reviewed as part of the preparation of LADOT's departmental clearance letter. This, and any other required financial fair-share contributions, would need to be guaranteed prior to issuance of the project's building permit. Also, any project-related financial fair-share contribution payments would need to be deposited into the appropriate City account prior to issuance of the Certificate of Occupancy. It has been confirmed with LADOT that these traffic signal upgrades would result in a financial contribution of $100,000.

Potential Additional Transportation Enhancements

- City of Los Angeles Bicycle Trust Fund: The project Applicant may be required to provide a fixed-fee financial fair-share contribution towards the City's Bicycle Trust Fund. The Trust Fund was established to collect developer mitigation fees to be used for implementation of bicycle projects and programs consistent with the goals of the adopted City of Los Angeles

Bicycle Master Plan. It has been confirmed with LADOT that the amount of the Bicycle Trust Fund fair-share contribution would total $50,000.

- LADOT's Mobility Hub Program: The project Applicant may be required to contribute fair-share funding towards the City's Mobility Hub Program. LADOT's Mobility Hub Program attempts to enhance urban mobility and serve as an extension of the current transportation network. To support the goals of the project's TDM plan and to expand the City's current program, the applicant may be required to provide a fixed-fee financial contribution towards this program. It has been confirmed with LADOT that the amount of the Mobility Hub Program fair-share contribution would total $50,000.

As the extent of the trip reduction level associated with the required TDM program and additional transportation enhancements is indeterminate at this time, the impacts have been conservatively determined to remain significant and unavoidable for environmental review purposes.

12.3.2 *City of Gardena Transportation Improvement Measures*

The following improvement has been identified which, if approved and implemented, is expected to reduce the proposed project's significant traffic impact at the subject City of Gardena study intersection to a less than significant level:

Intersection No. 6: Vermont Avenue/Redondo Beach Boulevard

This shared City of Gardena study intersection is expected to be significantly impacted by the proposed project under the future with project weekday AM peak hour conditions (according to the City of Gardena analysis methodology). As stated in the previous subsection, a potential project mitigation option examined for this intersection consisted of restriping the northbound Vermont Avenue approach to provide one left-turn lane, two through lanes, and one shared through/right-turn lane at the intersection. This measure was expected to reduce the project's significant AM peak hour traffic impact to a less than significant level, however due to the measure requiring removal of the existing intersection's northbound departure bicycle facilities on Vermont Avenue, which would be incompatible with the City of Los Angeles' current mobility policies and *Mobility Plan 2035*, this measure was considered but rejected.

Based on the above, it has been conservatively concluded that the project's traffic impact at this location would remain significant and unavoidable, as shown in *Table 9-1*. The corresponding CMA data worksheets are contained in *Appendix C-4*.

12.3.3 *County of Los Angeles Transportation Improvement Measures*

The following provides an overview of the transportation improvement measures reviewed and considered for the one study intersection located partially within the County of Los Angeles whereby the proposed project is expected to result in a contribution toward a significant cumulative impact according to the County of Los Angeles analysis methodology. Thus, while a cumulative measure has been considered and discussed herein for purposes of identifying a fair-share financial contribution, the Lead Agency cannot control the actual implementation of this measure as the permitting and construction is under the jurisdiction of another agency (i.e., County of Los Angeles). Thus, should the County of Los Angeles not permit the implementation of the measure identified herein, significant and unavoidable cumulative impacts at the affected intersection would result. The project Applicant will be required to provide its fair-share contribution toward the recommended cumulative improvements, however.

Intersection No. 11: Figueroa Street/Redondo Beach Boulevard

Development of the proposed project and the related projects is expected to result in a significant cumulative traffic impact at this intersection in the future analysis conditions. Cumulative mitigation for this intersection consists of the conversion of the eastbound and westbound right-turn only lanes to shared through/right-turn lanes. The resultant eastbound and westbound approach lane configurations would consist of one left-turn lane, two through lanes, and one shared through/right-turn lane. It should be noted that peak period on-street parking restrictions along the south side of Redondo Beach Boulevard east of Figueroa Street will be required in order to accommodate the improvement measures. In addition, the traffic signal will require modification to remove the existing eastbound and westbound right-turn overlapping phases. It is determined that the appropriate mitigation measure would consist of a fair-share contribution towards the above improvements (refer to ***Table 12-1***), which shows the resultant fair-share contribution at 5.0 percent. These improvements will require the approval from both City of Los Angeles and County of Los Angeles. In addition, enhancing intersection capacities is likely to be considered by the City as being in conflict with the City's current mobility policies. Although this measure could be expected to reduce the project's contribution to the significant cumulative traffic impacts during the AM and PM peak hours to less than significant levels, due to the multi-jurisdictional nature of the intersection and associated timing (approval and implementation) issues, it has been conservatively concluded that the cumulative traffic impacts at this location would remain significant and unavoidable, as shown in *Table 10-1*. The corresponding ICU data worksheets are contained in *Appendix C-5*.

Table 12-1
PRO-RATA PERCENTAGE OF CUMULATIVE IMPROVEMENT MEASURES [1]

Pro-Rata Percentage Methodology

A project's pro-rata percentage of cumulative mitigation costs at the County study intersection conditioned for the subject project should be calculated using AM and PM peak hour traffic volumes. The project's percentage share is derived by dividing project traffic by project plus other related projects traffic. It should be noted that existing traffic and ambient growth traffic volumes are not included in the calculations.

$$\frac{\text{Project Traffic}}{\text{Project + Other Related Projects Traffic}}$$

The following equation is provided to assist in calculating the project's pro-rata percentage to implement roadway improvement measures:

$$P = \frac{Vp}{Vp + Vc}$$

where:
- P = Project's pro-rate percentage for traffic improvement measure
- Vp = AM and PM Peak Hour volume at the intersection generated by the project
- Vc = Cumulative (other related projects) AM and PM Peak Hour volume at the intersection

Study Intersection(s) Calculations

	Intersection	AM, PM and/or Sat Traffic Volumes		Calculation	Percentage of Impact
11.	Figueroa Street / Redondo Beach Boulevard	Vp = 35 Vc = 659	P =	35 / (35) + (659 - 0) =	**5.0 %**

[1] Source: Traffic Impact Analysis Report Preparation Guidelines, County of Los Angeles, January 1, 1997.

13.0 CALIFORNIA DEPARTMENT OF TRANSPORTATION TRAFFIC ANALYSIS

In addition to the analysis conducted pursuant to the requirements of the City of Los Angeles, City of Gardena, and County of Los Angeles, a supplemental analysis was conducted of facilities under the jurisdiction of the State of California Department of Transportation (Caltrans). The analyses conducted for Caltrans facilities included freeway mainline segments, ramp intersections, and off-ramp queuing. Two mainline freeway segments along the I-110 Freeway were analyzed to determine density and corresponding LOS. In addition, two Caltrans ramp intersections were analyzed to determine average vehicular control delay and corresponding LOS as well as off-ramp queue lengths. The analyzed freeway mainline segments correspond to the I-110 Freeway north of Redondo Beach Boulevard and the I-110 Freeway south of Redondo Beach Boulevard, while the analyzed ramp intersections correspond to Int. No. 9: I-110 Freeway Southbound Ramps/ Redondo Beach Boulevard, and Int. No. 10: I-110 Freeway Northbound Ramps/Redondo Beach Boulevard. In response to Caltrans comments provided during the Notice of Preparation (NOP) process and subsequent clarifications, queuing analyses were prepared for the I-110 Freeway Southbound Off-Ramp at Redondo Beach Boulevard, the I-110 Freeway Northbound Off-Ramp at Redondo Beach Boulevard, and the eastbound Redondo Beach Boulevard right-turn to the I-110 Freeway Northbound On-Ramp. The analyses were prepared based on the Highway Capacity Manual (HCM) operational analysis methodologies, pursuant to Caltrans' *Guide for the Preparation of Traffic Impact Studies*[23].

The technical analyses of Caltrans facilities are provided in ***Appendix E***, along with the corresponding LOS and queuing worksheets for each type of analysis. ***Appendix Table E-1*** summarizes the Caltrans freeway (I-110 Freeway) mainline analyses and no impacts are noted. ***Appendix Table E-2*** summarizes the Caltrans intersection analysis and ***Appendix Table E-3*** summarizes the Caltrans off-ramp vehicle queuing analyses. While the vehicle queuing on I-110 Freeway Southbound Off-Ramp at Redondo Beach Boulevard is forecast to total 1,428 feet and shown to exceed the 85% storage length (1,340 feet) in the Future Year 2022 With Project conditions, it does not exceed the actual off-ramp storage length (i.e., a storage length of 1,580 feet). With respect to the I-110 Freeway Northbound Ramps/Redondo Beach Boulevard intersection, the calculated 95th percentile Redondo Beach Boulevard eastbound right-turn queues are shown to exceed the available storage distance under existing conditions. Field observations confirmed that vehicle queues during the weekday AM and PM peak hours occasionally extend along Redondo Beach Boulevard to west of the adjacent I-110 Freeway Southbound Ramps/Redondo Beach Boulevard intersection. The proposed project is forecast to contribute additional traffic to this existing queue. However, it should be noted that the subject Redondo Beach Boulevard is under the City of Los Angeles jurisdiction and there are no established City of Los Angeles significance thresholds applicable to vehicle queues. Nonetheless, it is recommended that a fixed-fee financial contribution toward funding traffic signal upgrades be provided by the project Applicant along the Redondo Beach Boulevard corridor. In addition, other transportation enhancements through

[23] *Guide for the Preparation of Traffic Impact Studies,* State of California Department of Transportation, December 2002.

additional financial contributions by the project Applicant are also recommended, as outlined in Section 12.3.1.

Regarding the Caltrans intersection analyses, no changes in the future LOS are reported due to the proposed Project. Please refer to Section 12.3.1 for a full discussion of measures that were considered but rejected at Int. No. 9: I-110 Freeway Southbound Ramps/ Redondo Beach Boulevard and Int. No. 10: I-110 Freeway Northbound Ramps/Redondo Beach Boulevard.

14.0 SUMMARY AND CONCLUSIONS

- ***Project Description*** – The proposed project consists of the development of a one-story, 53-foot tall building which would provide a total of 340,298 gross square feet of industrial space, including a 25,000 square-foot mezzanine. Construction of the proposed project is expected to commence in year 2020 with occupancy in year 2022.

- ***Vehicular Site Access*** – Access to the project site will be accommodated by four driveways, including one driveway along Vermont Avenue, one driveway along Redondo Beach Boulevard, and two driveways along Orchard Avenue. This will result in a significant consolidation of existing curb cuts associated with the prior site.

- ***Study Scope –*** This transportation assessment evaluates potential project-related impacts at 11 study intersections in the vicinity of the proposed project. The study locations are under the City of Los Angeles, City of Gardena, and County of Los Angeles' jurisdiction. A supplemental analysis was conducted of facilities under the jurisdiction of the State of California Department of Transportation (Caltrans). The analyses conducted for Caltrans facilities included two I-110 Freeway mainline segments, two I-110 Freeway ramp intersections, and off-ramp queuing at two ramp intersections.

- ***Project Trip Generation*** – The proposed project is expected to generate 375 PCE-adjusted vehicle trips (329 inbound trips and 46 outbound trips) during the weekday AM peak hour. During the weekday PM peak hour, the proposed project is expected to generate 337 PCE-adjusted vehicle trips (45 inbound trips and 292 outbound trips). Over a 24-hour period, the proposed project is forecast to generate 3,108 PCE-adjusted vehicle trips (approximately 1,554 inbound trips and 1,554 outbound trips) during a typical weekday.

- ***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 1.0-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 Los Angeles Departments of Transportation (DOT) and City Planning (DCP), the Cities of Gardena and Carson, and the County of Los Angeles.

- ***Transportation Impact Analysis*** – It is concluded that the proposed project is expected to result in four intersections being significantly impacted based on the prior City of Los Angeles' significance thresholds, one intersection based on the City of Gardena's significance thresholds, and one intersection based on the County's significance thresholds. No significant work VMT per employee impacts are anticipated based on the City's recently adopted TAG and the significance thresholds contained therein.

- ***TDM Program and Improvement Measures*** – Transportation demand management (TDM) measures will be required based on the City's ordinance. Contributions to various transportation system improvements are also recommended in addition to the curb and gutter, sidewalk and pedestrian and transit-related improvements along the project's frontages. As the extent of the trip reduction level associated with the required TDM program is indeterminate at this time, and due to uncertainty of the timing for review and approval of improvements considered at multi-jurisdictional intersections, the impacts due to the project have been conservatively concluded to remain significant and unavoidable.

- ***Caltrans Traffic Analysis*** – Supplemental analyses of Caltrans facilities, including mainline freeway segments, ramp intersections, and freeway off-ramps for queuing, were conducted pursuant to Caltrans' transportation study guidelines. Based on the Caltrans freeway (I-110 Freeway) mainline analyses no impacts are noted. Regarding the Caltrans intersection analyses, no changes in the future LOS are reported due to the proposed Project, however, this assessment report contains a full discussion of measures that were considered but rejected at Int. No. 9: I-110 Freeway Southbound Ramps/ Redondo Beach Boulevard and Int. No. 10: I-110 Freeway Northbound Ramps/Redondo Beach Boulevard. Lastly, while the vehicle queuing on I-110 Freeway Southbound Off-Ramp at Redondo Beach Boulevard is forecast to total 1,428 feet and shown to exceed the 85% storage length (1,340 feet) in the Future Year 2022 With Project conditions, it does not exceed the actual off-ramp storage length (i.e., a storage length of 1,580 feet).

APPENDIX A

TRAFFIC STUDY MEMORANDUM OF UNDERSTANDING

LADOT

Transportation Impact Study Memorandum of Understanding (MOU)

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

I. PROJECT INFORMATION

Project Name: Prologis South Bay Distribution Center #24 Project

Project Address: 15116-15216 S.Vermont Ave. & 747-761 W.Redondo Beach Blvd., Harbor Gateway Community Plan Area

Project Description: The proposed project consists of the development of approximately 340,300 square feet of industrial use(s).

LADOT Project Case Number: HRB19-108453 HRB17-105224 (Former) Project Site Plan attached? *(Required)* ■ Yes ☐ No (Refer to Figure 2-2)

II. TRIP GENERATION

Geographic Distribution: N 40% (Car) 30 (Truck) % S 35% (Car) 60 (Truck) % E 5% (Car) 5 (Truck) % W 20% (Car) 5 (Truck) %

Illustration of Project trip distribution percentages at Study intersections attached? *(Required)* ■ Yes ☐ No (Refer to Figures 7-1 & 7-2)

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

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

Trip Generation Rate(s): ITE 10th Edition / Other ITE 10th Edition and "Truck Trip Generation Study for City of Fontana"

Trip generation table including a description of the proposed land uses, ITE rates, estimated morning and afternoon peak hour volumes (ins/outs/totals), proposed trip credits, etc. attached? *(Required)* ■ Yes ☐ No (Refer to Table 7-1)

	IN	OUT	TOTAL
AM Trips	329	46	375
PM Trips	45	292	337

III. STUDY AREA AND ASSUMPTIONS

Project Buildout Year: 2022 Ambient or CMP Growth Rate: 1.0 % Per Yr.

Related Projects List, researched by the consultant and approved by LADOT, attached? *(Required)* ■ Yes ☐ No (Refer to Table 6-1 and Figure 6-1)

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

Map of Study Intersections attached? *(May be subject to LADOT revision after initial impact analysis)* ■ Yes ☐ No (Refer to Figure 1-1)

Is this Project located on a street within the High Injury Network? ☐ Yes ■ No (Refer to Figure 9-7)

IV. CONTACT INFORMATION

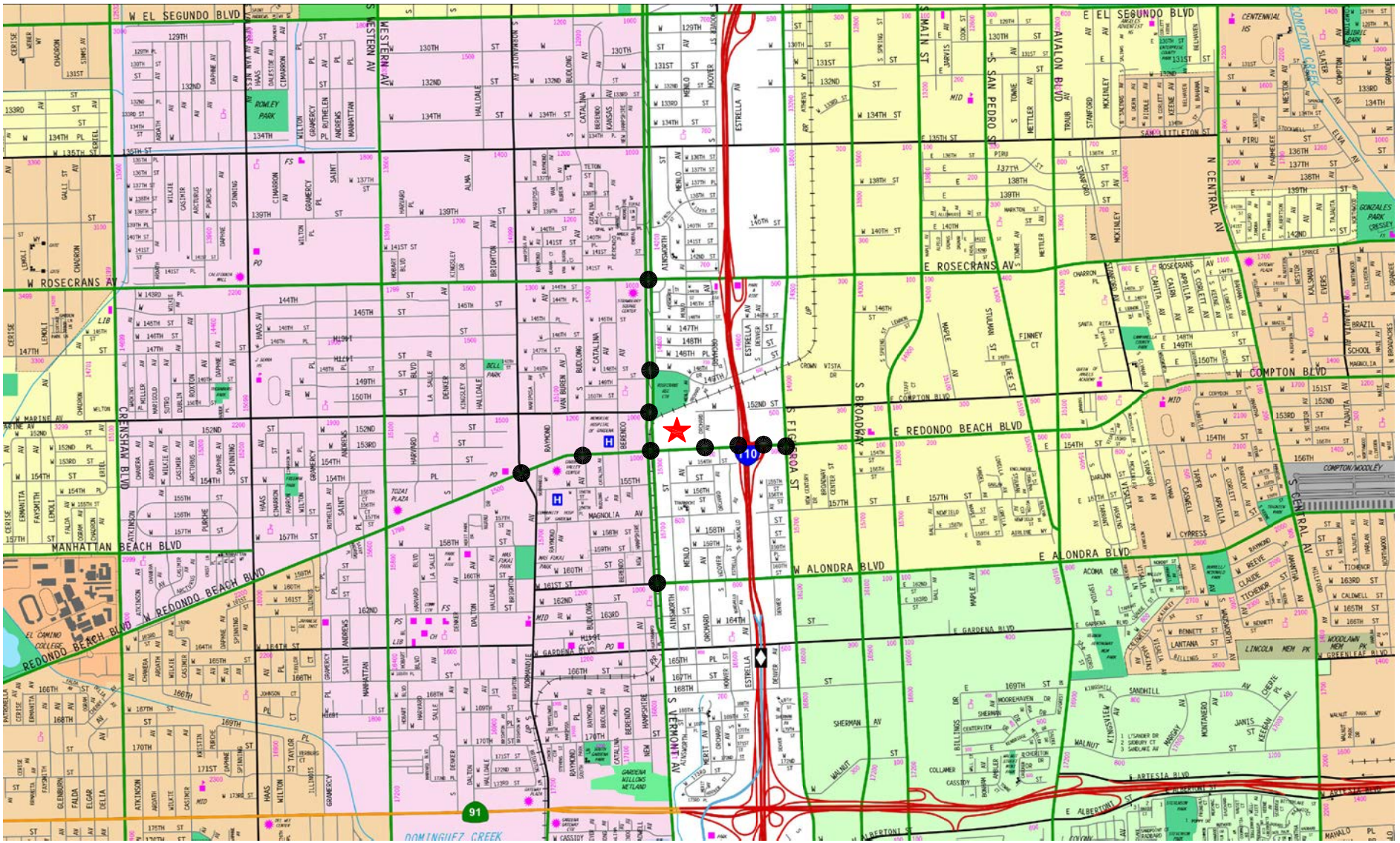
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Approved by:	x		2019-07-18	x		8/21/19
		Consultant's Representative	Date		LADOT Representative	Date

HRB19-108453

STUDY INTERSECTIONS LADOT Proj. Case No: HRB17-105224 (Former)

1. Normandie Avenue/Redondo Beach Boulevard
2. Budlong Avenue/Redondo Beach Boulevard
3. Vermont Avenue/Rosecrans Avenue
4. Vermont Avenue/149th Street
5. Vermont Avenue/Marine Avenue
6. Vermont Avenue/Redondo Beach Boulevard
7. Vermont Avenue/161st St-Alondra Boulevard
8. Orchard Avenue/Redondo Beach Boulevard
9. I-110 Freeway Southbound Ramps/Redondo Beach Boulevard
10. I-110 Freeway Northbound Ramps/Redondo Beach Boulevard
11. Figueroa Street/Redondo Beach Boulevard



MAP SOURCE: RAND MCNALLY & COMPANY

N

NOT TO SCALE

★ PROJECT SITE

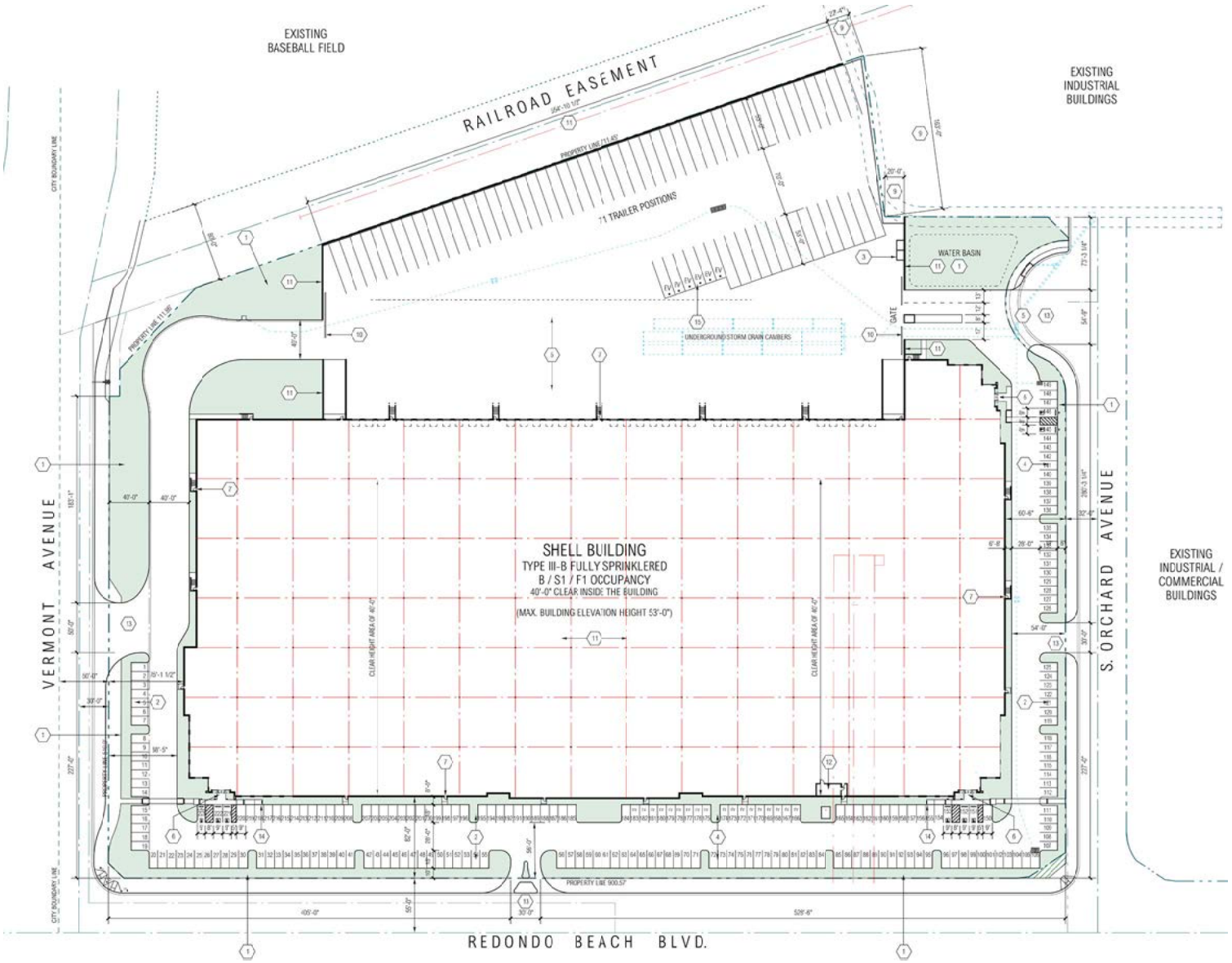
● STUDY INTERSECTION

FIGURE 1-1
VICINITY MAP

LINSCOTT, LAW & GREENSPAN, engineers

PROLOGIS SOUTH BAY DISTRIBUTION CENTER #24 PROJECT

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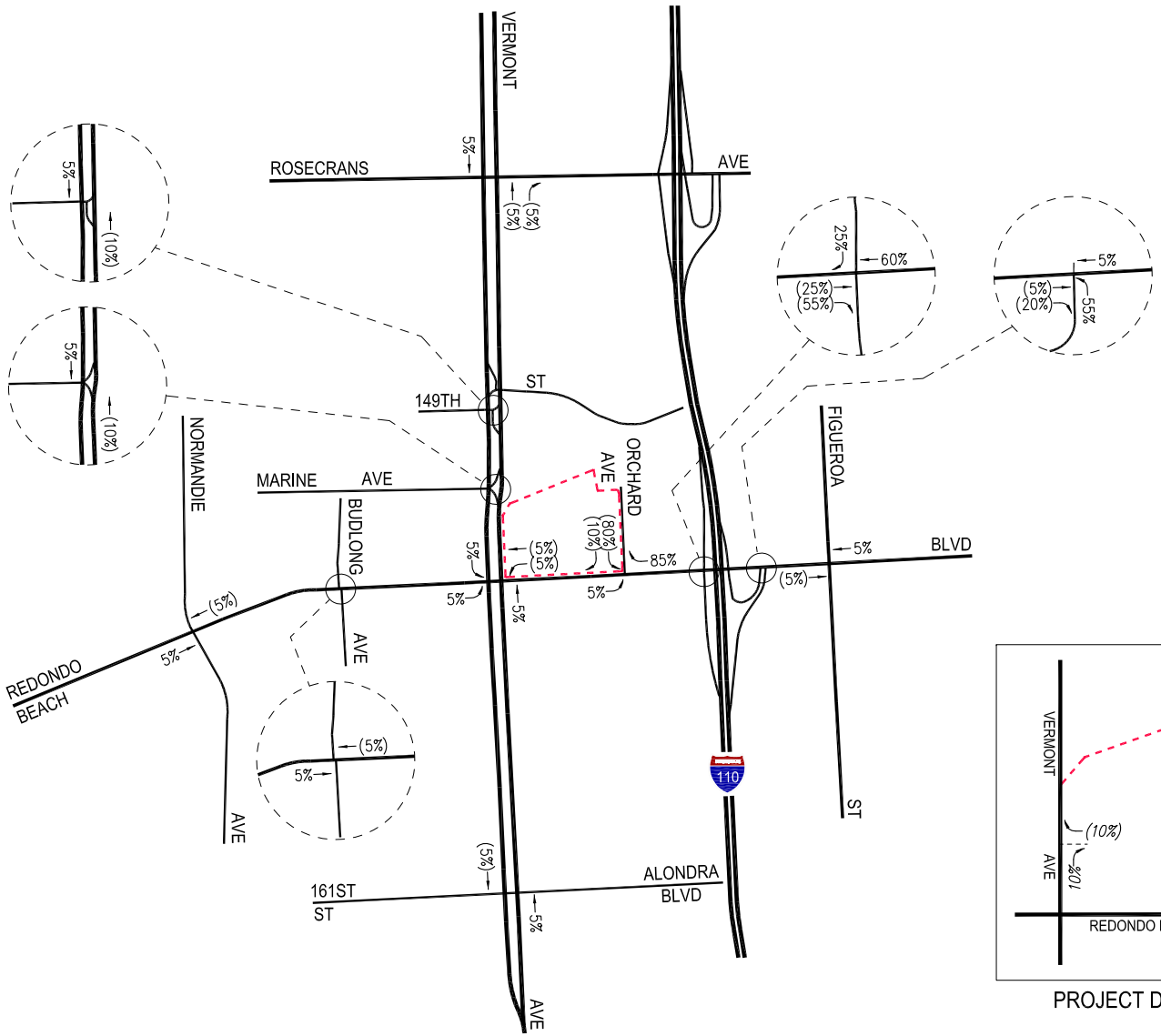
SOURCE: RGA

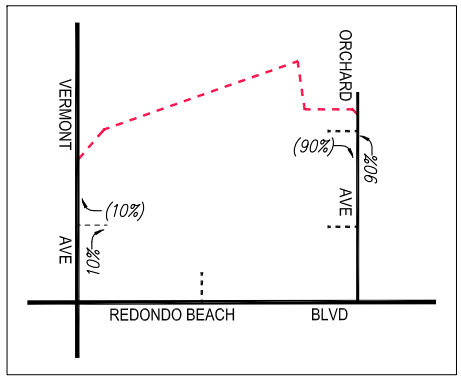
FIGURE 2-2
SITE PLAN

LINSCOTT, LAW & GREENSPAN, engineers

PROLOGIS SOUTH BAY DISTRIBUTION CENTER #24 PROJECT

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PROJECT DRIVEWAYS

N

NOT TO SCALE

PROJECT SITE

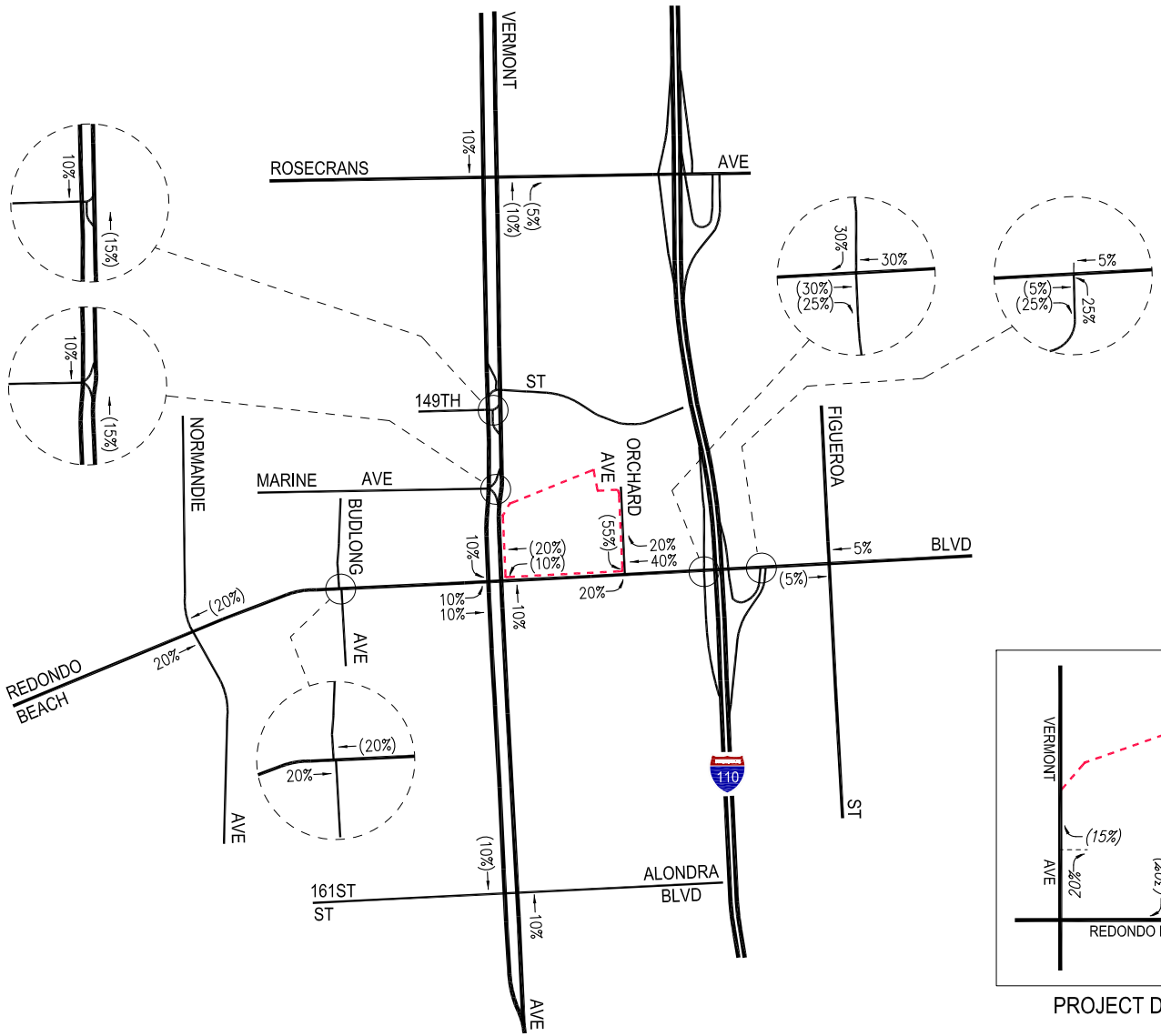
FIGURE 7-1
PROJECT TRIP DISTRIBUTION

TRUCK TRIPS

PROLOGIS SOUTH BAY DISTRIBUTION CENTER #24 PROJECT

LINSCOTT, LAW & GREENSPAN, engineers

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PROJECT SITE

N

NOT TO SCALE

FIGURE 7-2
PROJECT TRIP DISTRIBUTION

PASSENGER VEHICLE TRIPS

PROLOGIS SOUTH BAY DISTRIBUTION CENTER #24 PROJECT

LINSCOTT, LAW & GREENSPAN, engineers

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Table 7-1
PROJECT TRIP GENERATION [1]

LAND USE	SIZE	DAILY TRIP ENDS [2] VOLUMES	AM PEAK HOUR VOLUMES [2] IN	AM PEAK HOUR VOLUMES [2] OUT	AM PEAK HOUR VOLUMES [2] TOTAL	PM PEAK HOUR VOLUMES [2] IN	PM PEAK HOUR VOLUMES [2] OUT	PM PEAK HOUR VOLUMES [2] TOTAL
Light Industrial	340,298 GSF							
Total Vehicles [3]		1,688	209	29	238	28	186	214
- Total Passenger Cars (61.20% Daily) [4]		1,033	128	18	146	17	114	131
- Total Trucks (38.80% Daily) [4]		655	81	11	92	11	72	83
- 2-Axle (11.10% of All Trucks)		72	9	1	10	1	8	9
- 3-Axle (36.0% of All Trucks)		236	29	4	33	4	26	30
- 4+-Axle (53.0% of All Trucks)		347	43	6	49	6	38	44
- 2-Axle (1.5 PCE)		108	14	2	16	2	12	14
- 3-Axle (2.0 PCE)		472	58	8	66	8	52	60
- 4+-Axle (3.0 PCE)		1,041	129	18	147	18	114	132
Subtotal Trucks (PCE Adjusted)		1,621	201	28	229	28	178	206
LIGHT INDUSTRIAL PCE TOTAL		**2,654**	**329**	**46**	**375**	**45**	**292**	**337**

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

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

[3] ITE Land Use Code 110 (General Light Industrial) trip generation average rates.
- Daily Trip Rate: 4.96 trips/1,000 SF of floor area; 50% inbound/50% outbound
- AM Peak Hour Trip Rate: 0.70 trips/1,000 SF of floor area; 88% inbound/12% outbound
- PM Peak Hour Trip Rate: 0.63 trips/1,000 SF of floor area; 13% inbound/87% outbound

[4] Based on information contained in the "Truck Trip Generation Study for City of Fontana, County of San Bernardino, State of California" prepared by Transportation Engineering and Planning, Inc., August 2003. A PCE factor of 1.5 was applied to all 2-axle trucks, while a PCE factor of 2.0 was applied to all 3-axle trucks and a PCE factor of 3.0 was applied to all 4 or more axle trucks.

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

MAP NO.	PROJECT STATUS	PROJECT NAME/NUMBER ADDRESS/LOCATION	LAND USE DATA		PROJECT DATA SOURCE	DAILY TRIP ENDS [2]	AM PEAK HOUR VOLUMES [2]			PM PEAK HOUR VOLUMES [2]		
			LAND-USE	SIZE		VOLUMES	IN	OUT	TOTAL	IN	OUT	TOTAL
City of Gardena												
G1	Proposed	1333 W. 168th Street	Condominiums	3 DU	[3]	22	0	1	1	1	1	2
G2	Proposed	1112 Gardena Boulevard	Apartment	12 DU	[3]	88	1	5	6	4	3	7
			Retail	3,986 GLSF	[4]	150	2	2	4	7	8	15
G3	Proposed	Melia 178th Street Project 1515 W. 178th Street	Townhomes	114 DU	[3]	834	12	40	52	40	24	64
G4	Proposed	1932 W. 145th Street	Apartment	4 DU	[3]	29	0	2	2	1	1	2
G5	Proposed	2415 Marine Avenue	Townhomes	64 DU	[3]	468	7	22	29	23	13	36
			Retail	1,072 GLSF	[4]	40	1	0	1	2	2	4
G6	Proposed	Gardner Taxi Site 2129 W. Rosecrans Avenue	Townhomes	105 DU	[3]	769	11	37	48	37	22	59
			Retail	5,000 GLSF	[4]	189	3	2	5	9	10	19
G7	Proposed	Normandie Courtyard 1348 W. 168th Street	Apartment	9 DU	[3]	66	1	3	4	3	2	5
G8	Proposed	KB Home Stonefield 1017 W. 141st Street, 14031 S. Vermont Avenue	Townhomes	63 DU	[3]	461	7	22	29	22	13	35
G9	Proposed	13919 Normandie Avenue	Townhomes	20 DU	[3]	146	2	7	9	7	4	11
G10	Proposed	1341 W. Gardena Boulevard	Townhomes	14 DU	[3]	102	1	5	6	5	3	8
			Retail	3,385 GLSF	[4]	128	2	1	3	6	7	13
G11	Proposed	16819 Normandie Avenue	Townhomes	63 DU	[3]	461	7	22	29	22	13	35
G12	Proposed	15930 S. Western Avenue	Medical Office	6,430 GSF	[5]	224	14	4	18	6	16	22
G13	Under Construction	14105 S. Vermont Avenue	Restaurant	1,500 GSF	[6]	168	8	7	15	9	6	15
G14	Built	1201 W. 155th Avenue	Dialysis Facility	11,550 GSF	[5]	402	25	7	32	11	29	40
G15	Under Construction	15106 S. Western Avenue	Retail	5,895 GLSF	[4]	223	4	2	6	11	11	22
			(Less Existing Automotive Repair)	(5,895) GLSF	[7]	None	(9)	(4)	(13)	(9)	(9)	(18)
G16	Under Construction	1420 Redondo Beach Boulevard	Retail	4,053 GLSF	[4]	153	2	2	4	7	8	15
G17	Under Construction	16210 Crenshaw Boulevard	Restaurant	4,860 GSF	[8]	2,289	99	96	195	83	76	159

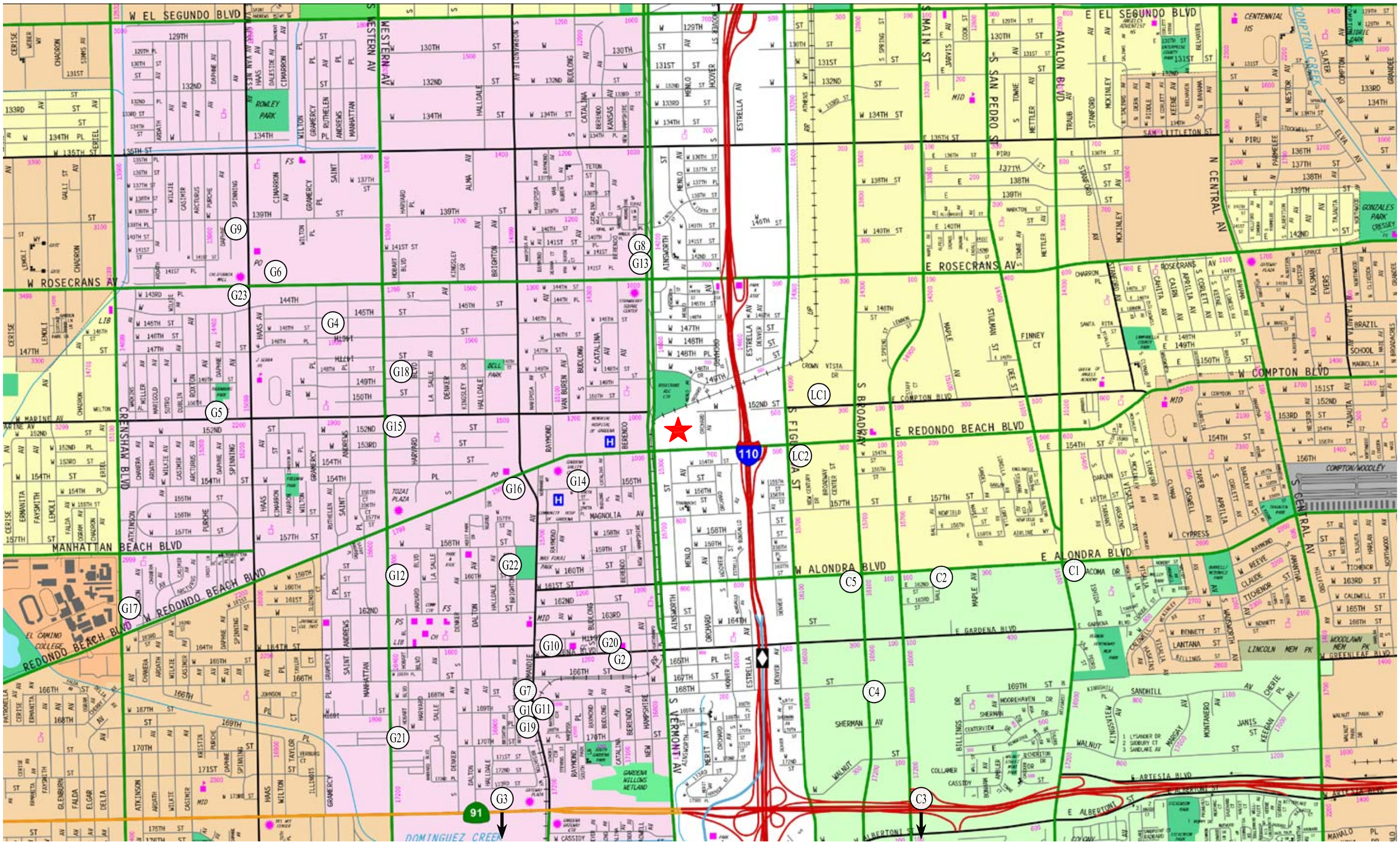
Table 6-1 (Continued)
RELATED PROJECTS LIST AND TRIP GENERATION [1]

MAP NO.	PROJECT STATUS	PROJECT NAME/NUMBER ADDRESS/LOCATION	LAND USE DATA		PROJECT DATA SOURCE	DAILY TRIP ENDS [2]	AM PEAK HOUR VOLUMES [2]			PM PEAK HOUR VOLUMES [2]		
			LAND-USE	SIZE		VOLUMES	IN	OUT	TOTAL	IN	OUT	TOTAL
G18	Under Construction	1715 W. 149th Street	Townhomes	5 DU	[3]	37	0	2	2	2	1	3
G19	Under Construction	16809 S. Normandie Avenue	Single-Family Residential	21 DU	[9]	198	4	12	16	13	8	21
G20	Under Construction	1147 W. Gardena Boulevard	Apartment	4 DU	[3]	29	0	2	2	1	1	2
G21	Under Construction	16958 S. Western Avenue	Townhomes	46 DU	[3]	337	5	16	21	16	10	26
G22	Under Construction	15927 S. Brighton Avenue	Apartment	2 DU	[3]	15	0	1	1	1	0	1
G23	Under Construction	14321 Van Ness Avenue	Townhomes Retail	40 DU 1,835 GLSF	[3] [4]	293 69	4 1	14 1	18 2	14 3	8 4	22 7
County of Los Angeles												
LC1	Proposed	Compton Boulevard between Figueroa Street & Broadway	Transfer STA and MRF	27,413 GSF	[10]	191	22	3	25	3	24	27
LC2	Under Construction	15310 S. Figueroa Street	Convenience Store Retail	2,695 GSF 4,197 GLSF	[10] [10]	1,989 186	90 3	91 1	181 4	72 5	69 6	141 11
City of Carson												
C1	Proposed	16100 S. Avalon Boulevard	Self-Storage	44,000 GSF	[11]	66	2	2	4	3	4	7
C2	Proposed	200 E. Alondra Boulevard	Warehouse	137,000 GSF	[12]	238	18	5	23	7	19	26
C3	Proposed	California Park 17706 S. Main Street	Warehouse	94,731 GSF	[12]	165	12	4	16	5	13	18
C4	Proposed	Broadway Industrial Building 16800 Broadway	Warehouse	7,000 GSF	[10]	25	2	0	2	1	1	2
C5	Proposed	Giuliano's Bakery 320 Alondra Boulevard	Bakery	374,616 GSF	[10]	2,611	303	42	345	45	318	363
TOTAL						13,861	666	481	1,147	498	749	1,247

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

MAP NO.	PROJECT STATUS	PROJECT NAME/NUMBER ADDRESS/LOCATION	LAND USE DATA		PROJECT DATA SOURCE	DAILY TRIP ENDS [2] VOLUMES	AM PEAK HOUR VOLUMES [2]			PM PEAK HOUR VOLUMES [2]		
			LAND-USE	SIZE			IN	OUT	TOTAL	IN	OUT	TOTAL

[1] Source: City of Los Angeles Department of Transportation (LADOT) and Department of City Planning (LADCP), County of Los Angeles Department of Regional Planning, City of Gardena, and City of Carson, except as noted below. The peak hour traffic volumes were based forecast on trip data provided by LADOT and by applying trip rates as provided in the ITE "Trip Generation", 9th Edition, 2012 and ITE "Trip Generation Manual", 10th Edition, 2017.
[2] Trips are one-way traffic movements, entering or leaving.
[3] ITE Land Use Code 220 (Multifamily Housing (Low-Rise)) trip generation average rates.
[4] ITE Land Use Code 820 (Shopping Center) trip generation average rates.
[5] ITE Land Use Code 720 (Medical-Dental Office Building) trip generation average rates.
[6] ITE Land Use Code 932 (High-Turnover (Sit-Down)) Restaurant trip generation average rates.
[7] ITE Land Use Code 942 (Automobile Care Center) Restaurant trip generation average rates.
[8] ITE Land Use Code 934 (Fast-Food Restaurant with Drive-Through) Restaurant trip generation average rates.
[9] ITE Land Use Code 210 (Single-Family Detached Housing) trip generation average rates.
[10] Source: "South Bay Distribution Center Traffic Impact Analysis", prepared by Kunzman Associates, Inc., June 16, 2017.
[11] ITE Land Use Code 151 (Mini-Warehouse) trip generation average rates.
[12] ITE Land Use Code 150 (Warehouse) trip generation average rates.



MAP SOURCE: RAND MCNALLY & COMPANY

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NOT TO SCALE

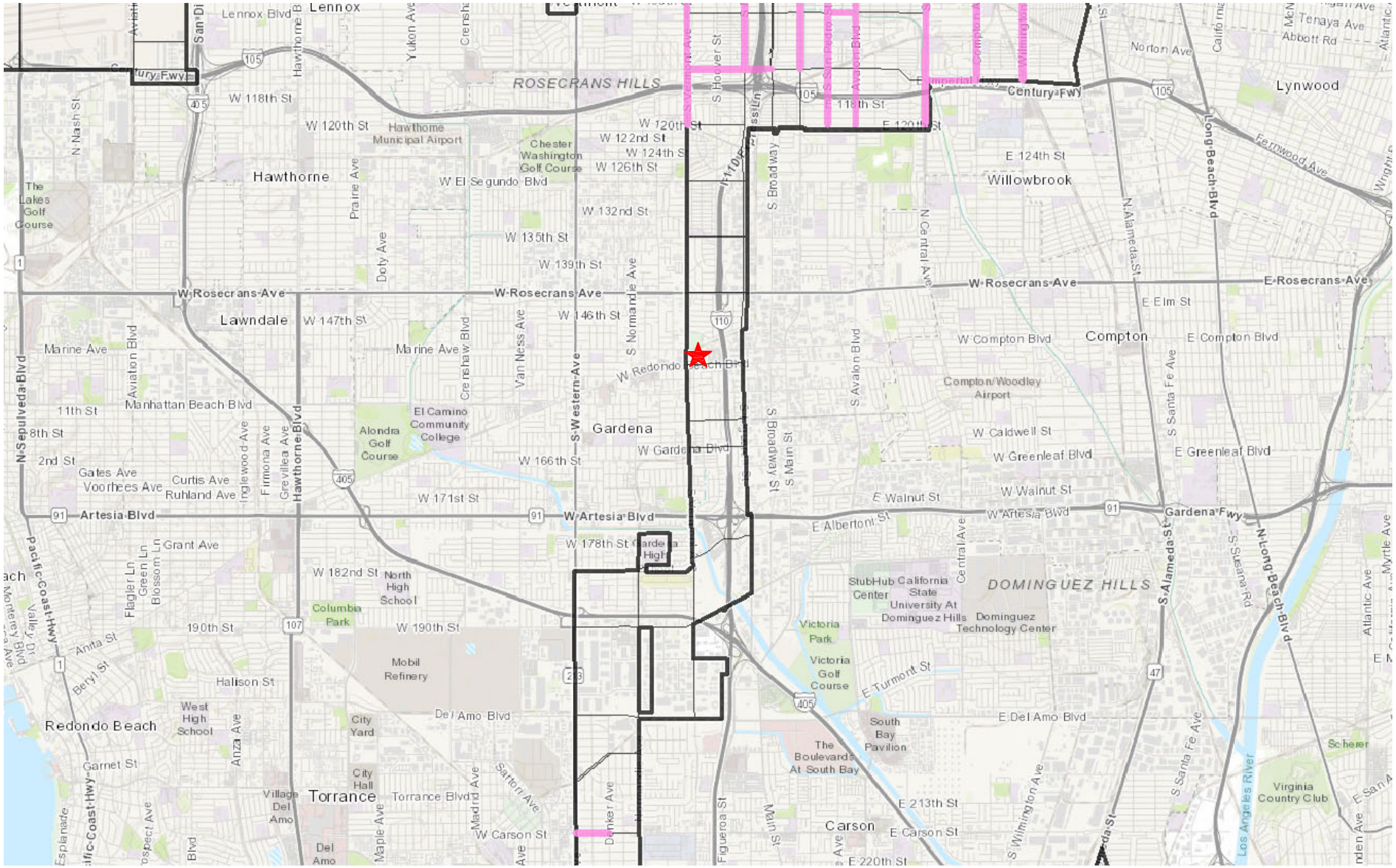
★ PROJECT SITE
(G) CITY OF GARDENA RELATED PROJECT
(LC) LOS ANGELES COUNTY RELATED PROJECT
(C) CITY OF CARSON RELATED PROJECT

LINSCOTT, LAW & GREENSPAN, engineers

FIGURE 6-1
LOCATION OF RELATED PROJECTS

PROLOGIS SOUTH BAY DISTRIBUTION CENTER #24 PROJECT

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MAP SOURCE: SWITRS, LADOT

PROJECT SITE

HIGH INJURY NETWORK

CITY OF LOS ANGELES BOUNDARY

FIGURE 9-7
CITY OF LOS ANGELES HIGH INJURY NETWORK

LINSCOTT, LAW & GREENSPAN, engineers

PROLOGIS SOUTH BAY DISTRIBUTION CENTER #24 PROJECT

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APPENDIX B

TRAFFIC, PEDESTRIAN, AND BICYCLE COUNT DATA

Counts Unlimited
PO Box 1178
Corona, CA 92878
(951) 268-6268

City of Gardena
N/S: Normandie Avenue
E/W: Redondo Beach Boulevard
Weather: Clear

File Name : 01_GDA_Normandie_Redondo Beach AM
Site Code : 05719380
Start Date : 5/23/2019
Page No : 1

Groups Printed- Passenger Vehicles - Buses - 2 Axle Vehicles - 3+ Axle Trucks

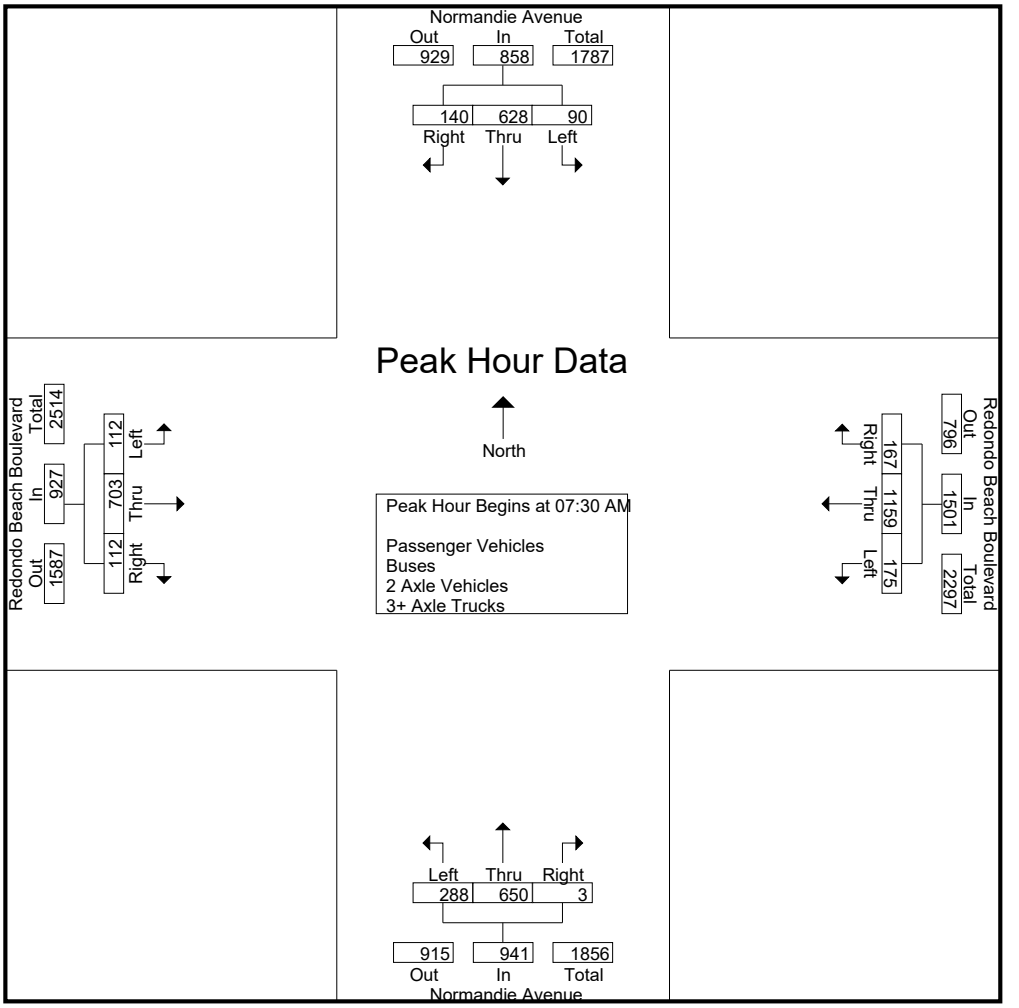
	Normandie Avenue Southbound				Redondo Beach Boulevard Westbound				Normandie Avenue Northbound				Redondo Beach Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	14	79	24	117	22	241	33	296	50	143	1	194	21	101	12	134	741
07:15 AM	20	131	32	183	35	237	40	312	52	166	2	220	11	123	15	149	864
07:30 AM	24	181	29	234	51	271	42	364	71	157	0	228	15	157	27	199	1025
07:45 AM	15	182	30	227	54	307	41	402	75	176	0	251	30	196	29	255	1135
Total	73	573	115	761	162	1056	156	1374	248	642	3	893	77	577	83	737	3765
08:00 AM	28	125	38	191	33	297	45	375	71	155	1	227	35	189	31	255	1048
08:15 AM	23	140	43	206	37	284	39	360	71	162	2	235	32	161	25	218	1019
08:30 AM	13	103	26	142	20	285	31	336	72	138	2	212	22	134	29	185	875
08:45 AM	17	82	27	126	30	226	34	290	58	135	3	196	27	165	32	224	836
Total	81	450	134	665	120	1092	149	1361	272	590	8	870	116	649	117	882	3778
09:00 AM	19	87	33	139	34	207	20	261	70	101	4	175	23	175	23	221	796
09:15 AM	25	69	37	131	20	249	22	291	61	109	4	174	19	180	37	236	832
09:30 AM	31	79	26	136	25	219	22	266	80	95	5	180	12	186	37	235	817
09:45 AM	15	87	35	137	24	200	29	253	59	107	4	170	30	168	22	220	780
Total	90	322	131	543	103	875	93	1071	270	412	17	699	84	709	119	912	3225
Grand Total	244	1345	380	1969	385	3023	398	3806	790	1644	28	2462	277	1935	319	2531	10768
Apprch %	12.4	68.3	19.3		10.1	79.4	10.5		32.1	66.8	1.1		10.9	76.5	12.6		
Total %	2.3	12.5	3.5	18.3	3.6	28.1	3.7	35.3	7.3	15.3	0.3	22.9	2.6	18	3	23.5	
Passenger Vehicles	236	1312	375	1923	374	2913	385	3672	772	1591	28	2391	270	1869	312	2451	10437
% Passenger Vehicles	96.7	97.5	98.7	97.7	97.1	96.4	96.7	96.5	97.7	96.8	100	97.1	97.5	96.6	97.8	96.8	96.9
Buses	0	14	1	15	5	16	0	21	2	13	0	15	0	19	3	22	73
% Buses	0	1	0.3	0.8	1.3	0.5	0	0.6	0.3	0.8	0	0.6	0	1	0.9	0.9	0.7
2 Axle Vehicles	5	15	4	24	6	66	11	83	14	34	0	48	7	30	4	41	196
% 2 Axle Vehicles	2	1.1	1.1	1.2	1.6	2.2	2.8	2.2	1.8	2.1	0	1.9	2.5	1.6	1.3	1.6	1.8
3+ Axle Trucks	3	4	0	7	0	28	2	30	2	6	0	8	0	17	0	17	62
% 3+ Axle Trucks	1.2	0.3	0	0.4	0	0.9	0.5	0.8	0.3	0.4	0	0.3	0	0.9	0	0.7	0.6

	Normandie Avenue Southbound				Redondo Beach Boulevard Westbound				Normandie Avenue Northbound				Redondo Beach Boulevard 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 09:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	24	181	29	**234**	51	271	42	364	71	157	0	228	15	157	27	199	1025
07:45 AM	15	**182**	30	227	**54**	**307**	41	**402**	**75**	**176**	0	**251**	30	**196**	29	**255**	**1135**
08:00 AM	**28**	125	38	191	33	297	**45**	375	71	155	1	227	**35**	189	**31**	255	1048
08:15 AM	23	140	**43**	206	37	284	39	360	71	162	**2**	235	32	161	25	218	1019
Total Volume	90	628	140	858	175	1159	167	1501	288	650	3	941	112	703	112	927	4227
% App. Total	10.5	73.2	16.3		11.7	77.2	11.1		30.6	69.1	0.3		12.1	75.8	12.1		
PHF	.804	.863	.814	.917	.810	.944	.928	.933	.960	.923	.375	.937	.800	.897	.903	.909	.931

Counts Unlimited
PO Box 1178
Corona, CA 92878
(951) 268-6268

City of Gardena
N/S: Normandie Avenue
E/W: Redondo Beach Boulevard
Weather: Clear

File Name : 01_GDA_Normandie_Redondo Beach AM
Site Code : 05719380
Start Date : 5/23/2019
Page No : 2



Peak Hour Analysis From 07:00 AM to 09:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:30 AM				07:30 AM				07:30 AM				07:30 AM			
+0 mins.	24	181	29	**234**	51	271	42	364	71	157	0	228	15	157	27	199
+15 mins.	15	**182**	30	227	**54**	**307**	41	**402**	**75**	**176**	0	**251**	30	**196**	29	**255**
+30 mins.	**28**	125	38	191	33	297	**45**	375	71	155	1	227	**35**	189	**31**	255
+45 mins.	23	140	**43**	206	37	284	39	360	71	162	**2**	235	32	161	25	218
Total Volume	90	628	140	858	175	1159	167	1501	288	650	3	941	112	703	112	927
% App. Total	10.5	73.2	16.3		11.7	77.2	11.1		30.6	69.1	0.3		12.1	75.8	12.1	
PHF	.804	.863	.814	.917	.810	.944	.928	.933	.960	.923	.375	.937	.800	.897	.903	.909

Counts Unlimited
PO Box 1178
Corona, CA 92878
(951) 268-6268

City of Gardena
N/S: Normandie Avenue
E/W: Redondo Beach Boulevard
Weather: Clear

File Name : 01_GDA_Normandie_Redondo Beach AM
Site Code : 05719380
Start Date : 5/23/2019
Page No : 1

Groups Printed- Passenger Vehicles

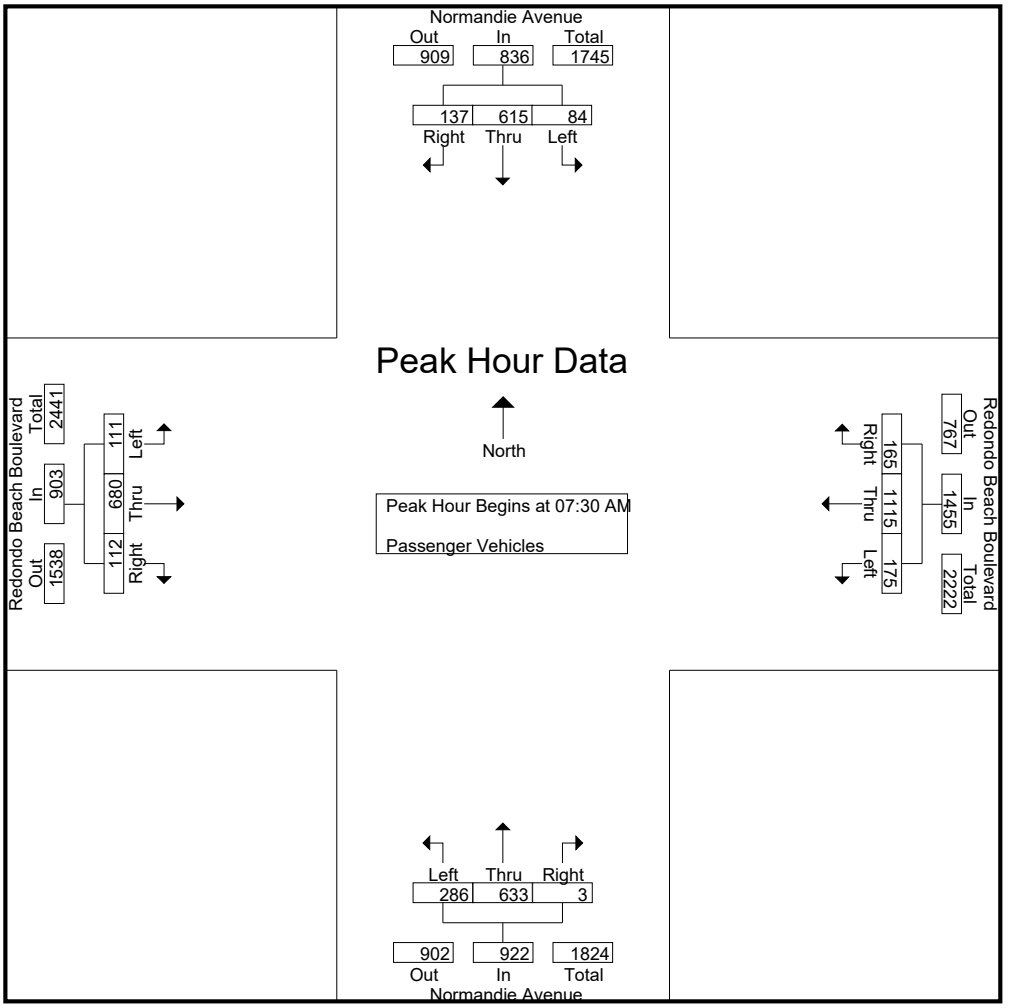
	Normandie Avenue Southbound				Redondo Beach Boulevard Westbound				Normandie Avenue Northbound				Redondo Beach Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	14	75	23	112	21	224	31	276	47	136	1	184	20	97	10	127	699
07:15 AM	20	129	32	181	31	229	40	300	49	158	2	209	11	121	15	147	837
07:30 AM	21	178	29	228	51	259	40	350	71	155	0	226	15	149	27	191	995
07:45 AM	13	182	29	224	54	300	41	395	74	171	0	245	30	191	29	250	1114
Total	68	564	113	745	157	1012	152	1321	241	620	3	864	76	558	81	715	3645
08:00 AM	27	120	38	185	33	281	45	359	70	150	1	221	35	183	31	249	1014
08:15 AM	23	135	41	199	37	275	39	351	71	157	2	230	31	157	25	213	993
08:30 AM	12	98	26	136	19	279	28	326	70	136	2	208	22	130	28	180	850
08:45 AM	17	80	27	124	28	218	32	278	58	130	3	191	27	160	30	217	810
Total	79	433	132	644	117	1053	144	1314	269	573	8	850	115	630	114	859	3667
09:00 AM	19	87	32	138	34	198	19	251	67	99	4	170	22	170	22	214	773
09:15 AM	25	68	37	130	19	244	21	284	61	105	4	170	17	171	36	224	808
09:30 AM	30	75	26	131	24	214	22	260	76	92	5	173	12	179	37	228	792
09:45 AM	15	85	35	135	23	192	27	242	58	102	4	164	28	161	22	211	752
Total	89	315	130	534	100	848	89	1037	262	398	17	677	79	681	117	877	3125
Grand Total	236	1312	375	1923	374	2913	385	3672	772	1591	28	2391	270	1869	312	2451	10437
Apprch %	12.3	68.2	19.5		10.2	79.3	10.5		32.3	66.5	1.2		11	76.3	12.7		
Total %	2.3	12.6	3.6	18.4	3.6	27.9	3.7	35.2	7.4	15.2	0.3	22.9	2.6	17.9	3	23.5	

	Normandie Avenue Southbound				Redondo Beach Boulevard Westbound				Normandie Avenue Northbound				Redondo Beach Boulevard 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 07:30 AM to 08:15 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	21	178	29	**228**	51	259	40	350	71	155	0	226	15	149	27	191	995
07:45 AM	13	**182**	29	224	**54**	**300**	41	**395**	**74**	**171**	0	**245**	30	**191**	29	**250**	**1114**
08:00 AM	**27**	120	38	185	33	281	**45**	359	70	150	1	221	**35**	183	**31**	249	1014
08:15 AM	23	135	**41**	199	37	275	39	351	71	157	**2**	230	31	157	25	213	993
Total Volume	84	615	137	836	175	1115	165	1455	286	633	3	922	111	680	112	903	4116
% App. Total	10	73.6	16.4		12	76.6	11.3		31	68.7	0.3		12.3	75.3	12.4		
PHF	.778	.845	.835	.917	.810	.929	.917	.921	.966	.925	.375	.941	.793	.890	.903	.903	.924

Counts Unlimited
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City of Gardena
N/S: Normandie Avenue
E/W: Redondo Beach Boulevard
Weather: Clear

File Name : 01_GDA_Normandie_Redondo Beach AM
Site Code : 05719380
Start Date : 5/23/2019
Page No : 2



Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:30 AM				07:30 AM				07:30 AM				07:30 AM			
+0 mins.	21	178	29	**228**	51	259	40	350	71	155	0	226	15	149	27	191
+15 mins.	13	**182**	29	224	**54**	**300**	41	**395**	**74**	**171**	0	**245**	30	**191**	29	**250**
+30 mins.	**27**	120	38	185	33	281	**45**	359	70	150	1	221	**35**	183	**31**	249
+45 mins.	23	135	**41**	199	37	275	39	351	71	157	**2**	230	31	157	25	213
Total Volume	84	615	137	836	175	1115	165	1455	286	633	3	922	111	680	112	903
% App. Total	10	73.6	16.4		12	76.6	11.3		31	68.7	0.3		12.3	75.3	12.4	
PHF	.778	.845	.835	.917	.810	.929	.917	.921	.966	.925	.375	.941	.793	.890	.903	.903

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Corona, CA 92878
(951) 268-6268

City of Gardena
N/S: Normandie Avenue
E/W: Redondo Beach Boulevard
Weather: Clear

File Name : 01_GDA_Normandie_Redondo Beach AM
Site Code : 05719380
Start Date : 5/23/2019
Page No : 1

Groups Printed- Buses

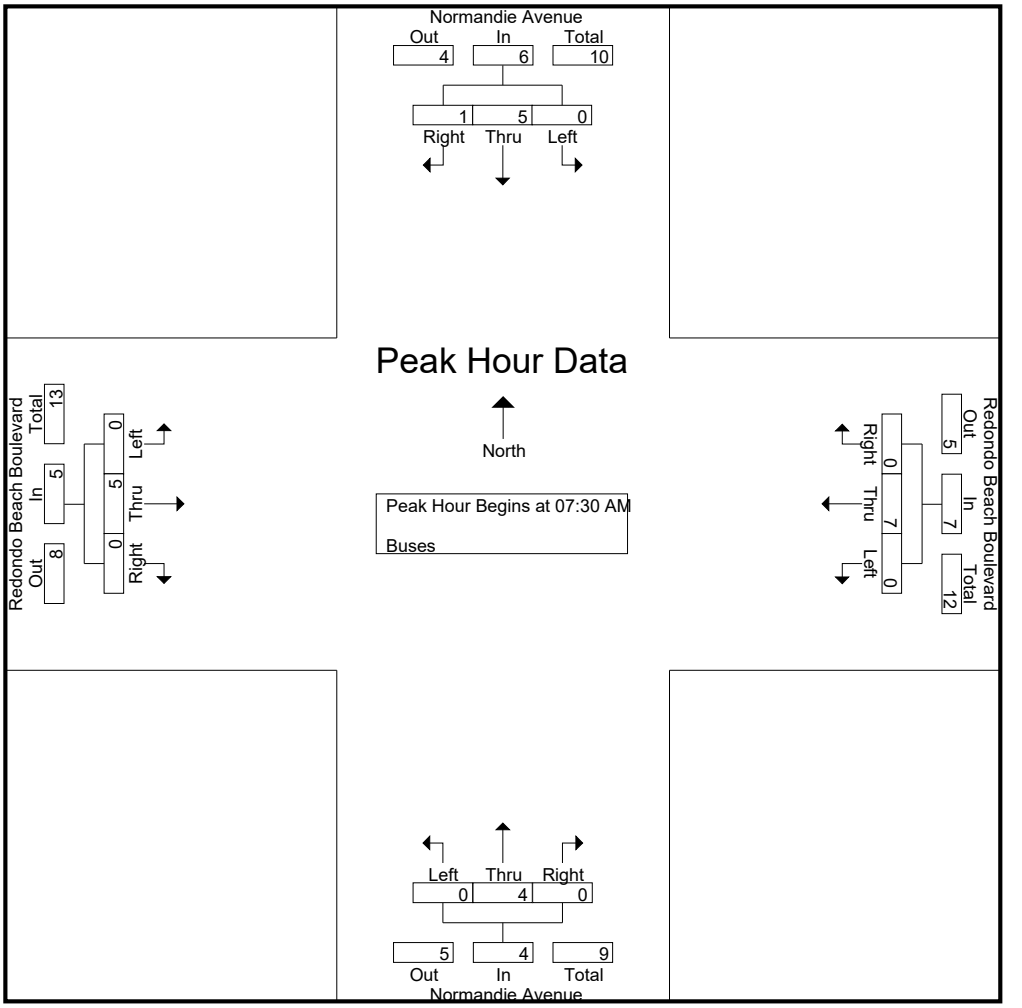
	Normandie Avenue Southbound				Redondo Beach Boulevard Westbound				Normandie Avenue Northbound				Redondo Beach Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	0	2	0	2	0	2	0	2	1	3	0	4	0	1	0	1	9
07:15 AM	0	2	0	2	4	1	0	5	1	4	0	5	0	1	0	1	13
07:30 AM	0	2	0	2	0	2	0	2	0	0	0	0	0	0	0	0	4
07:45 AM	0	0	0	0	0	3	0	3	0	0	0	0	0	2	0	2	5
Total	0	6	0	6	4	8	0	12	2	7	0	9	0	4	0	4	31
08:00 AM	0	3	0	3	0	0	0	0	0	2	0	2	0	1	0	1	6
08:15 AM	0	0	1	1	0	2	0	2	0	2	0	2	0	2	0	2	7
08:30 AM	0	2	0	2	0	1	0	1	0	0	0	0	0	2	1	3	6
08:45 AM	0	1	0	1	0	1	0	1	0	0	0	0	0	1	1	2	4
Total	0	6	1	7	0	4	0	4	0	4	0	4	0	6	2	8	23
09:00 AM	0	0	0	0	0	2	0	2	0	0	0	0	0	2	1	3	5
09:15 AM	0	1	0	1	1	1	0	2	0	2	0	2	0	4	0	4	9
09:30 AM	0	0	0	0	0	1	0	1	0	0	0	0	0	1	0	1	2
09:45 AM	0	1	0	1	0	0	0	0	0	0	0	0	0	2	0	2	3
Total	0	2	0	2	1	4	0	5	0	2	0	2	0	9	1	10	19
Grand Total	0	14	1	15	5	16	0	21	2	13	0	15	0	19	3	22	73
Apprch %	0	93.3	6.7		23.8	76.2	0		13.3	86.7	0		0	86.4	13.6		
Total %	0	19.2	1.4	20.5	6.8	21.9	0	28.8	2.7	17.8	0	20.5	0	26	4.1	30.1	

	Normandie Avenue Southbound				Redondo Beach Boulevard Westbound				Normandie Avenue Northbound				Redondo Beach Boulevard 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 07:30 AM to 08:15 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	0	2	0	2	0	2	0	2	0	0	0	0	0	0	0	0	4
07:45 AM	0	0	0	0	0	**3**	0	**3**	0	0	0	0	0	**2**	0	**2**	5
08:00 AM	0	**3**	0	**3**	0	0	0	0	0	**2**	0	**2**	0	1	0	1	6
08:15 AM	0	0	**1**	1	0	2	0	2	0	2	0	2	0	2	0	2	**7**
Total Volume	0	5	1	6	0	7	0	7	0	4	0	4	0	5	0	5	22
% App. Total	0	83.3	16.7		0	100	0		0	100	0		0	100	0		
PHF	.000	.417	.250	.500	.000	.583	.000	.583	.000	.500	.000	.500	.000	.625	.000	.625	.786

Counts Unlimited
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City of Gardena
N/S: Normandie Avenue
E/W: Redondo Beach Boulevard
Weather: Clear

File Name : 01_GDA_Normandie_Redondo Beach AM
Site Code : 05719380
Start Date : 5/23/2019
Page No : 2



Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:30 AM				07:30 AM				07:30 AM				07:30 AM			
+0 mins.	0	2	0	2	0	2	0	2	0	0	0	0	0	0	0	0
+15 mins.	0	0	0	0	0	**3**	0	**3**	0	0	0	0	0	**2**	0	**2**
+30 mins.	0	**3**	0	**3**	0	0	0	0	0	**2**	0	**2**	0	1	0	1
+45 mins.	0	0	**1**	1	0	2	0	2	0	2	0	2	0	2	0	2
Total Volume	0	5	1	6	0	7	0	7	0	4	0	4	0	5	0	5
% App. Total	0	83.3	16.7		0	100	0		0	100	0		0	100	0	
PHF	.000	.417	.250	.500	.000	.583	.000	.583	.000	.500	.000	.500	.000	.625	.000	.625

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(951) 268-6268

City of Gardena
N/S: Normandie Avenue
E/W: Redondo Beach Boulevard
Weather: Clear

File Name : 01_GDA_Normandie_Redondo Beach AM
Site Code : 05719380
Start Date : 5/23/2019
Page No : 1

Groups Printed- 2 Axle Vehicles

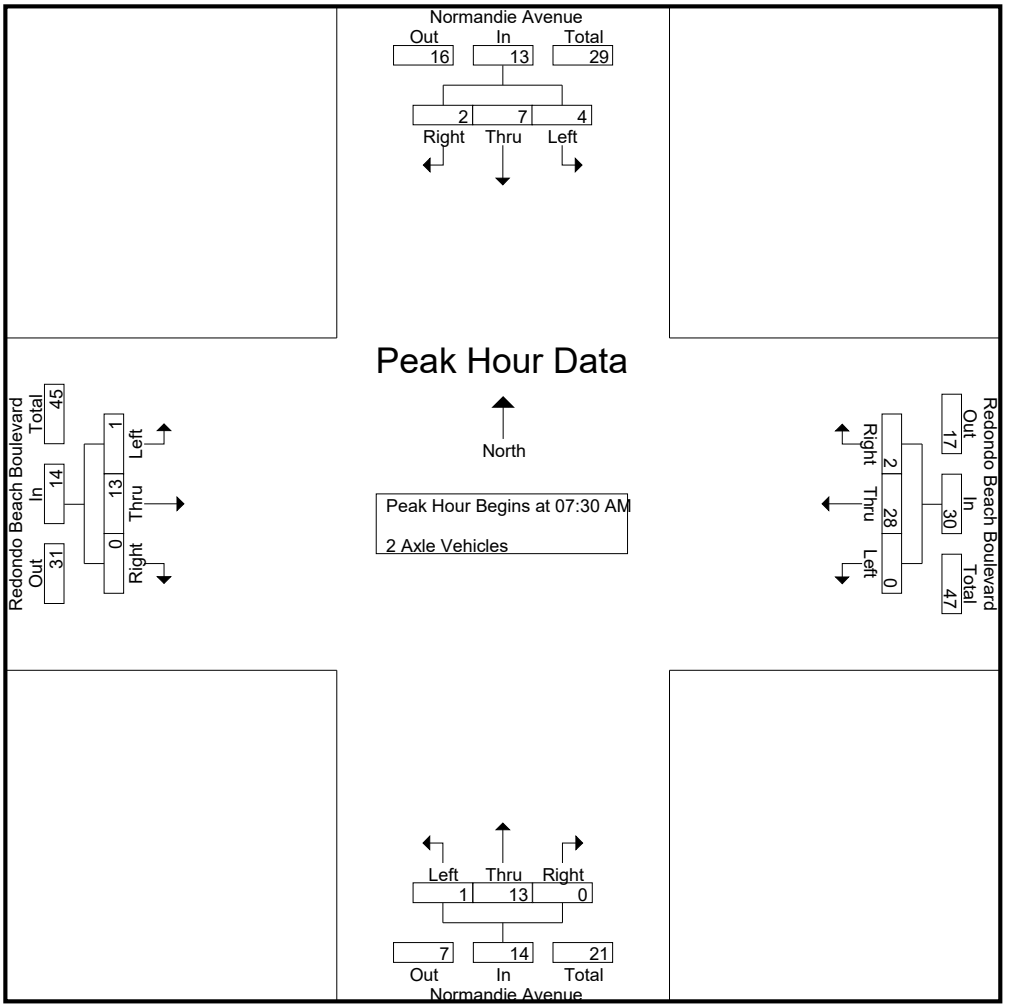
	Normandie Avenue Southbound				Redondo Beach Boulevard Westbound				Normandie Avenue Northbound				Redondo Beach Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	0	2	1	3	1	11	2	14	2	3	0	5	1	2	2	5	27
07:15 AM	0	0	0	0	0	4	0	4	2	3	0	5	0	0	0	0	9
07:30 AM	1	0	0	1	0	7	2	9	0	2	0	2	0	4	0	4	16
07:45 AM	2	0	1	3	0	3	0	3	1	5	0	6	0	2	0	2	14
Total	3	2	2	7	1	25	4	30	5	13	0	18	1	8	2	11	66
08:00 AM	1	2	0	3	0	12	0	12	0	3	0	3	0	5	0	5	23
08:15 AM	0	5	1	6	0	6	0	6	0	3	0	3	1	2	0	3	18
08:30 AM	0	1	0	1	1	4	1	6	2	2	0	4	0	2	0	2	13
08:45 AM	0	1	0	1	2	5	2	9	0	5	0	5	0	2	1	3	18
Total	1	9	1	11	3	27	3	33	2	13	0	15	1	11	1	13	72
09:00 AM	0	0	1	1	0	3	1	4	2	1	0	3	1	2	0	3	11
09:15 AM	0	0	0	0	0	4	1	5	0	2	0	2	2	3	1	6	13
09:30 AM	1	3	0	4	1	3	0	4	4	2	0	6	0	4	0	4	18
09:45 AM	0	1	0	1	1	4	2	7	1	3	0	4	2	2	0	4	16
Total	1	4	1	6	2	14	4	20	7	8	0	15	5	11	1	17	58
Grand Total	5	15	4	24	6	66	11	83	14	34	0	48	7	30	4	41	196
Apprch %	20.8	62.5	16.7		7.2	79.5	13.3		29.2	70.8	0		17.1	73.2	9.8		
Total %	2.6	7.7	2	12.2	3.1	33.7	5.6	42.3	7.1	17.3	0	24.5	3.6	15.3	2	20.9	

	Normandie Avenue Southbound				Redondo Beach Boulevard Westbound				Normandie Avenue Northbound				Redondo Beach Boulevard 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 07:30 AM to 08:15 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	1	0	0	1	0	7	**2**	9	0	2	0	2	0	4	0	4	16
07:45 AM	**2**	0	**1**	3	0	3	0	3	**1**	**5**	0	**6**	0	2	0	2	14
08:00 AM	1	2	0	3	0	**12**	0	**12**	0	3	0	3	0	**5**	0	**5**	**23**
08:15 AM	0	**5**	1	**6**	0	6	0	6	0	3	0	3	**1**	2	0	3	18
Total Volume	4	7	2	13	0	28	2	30	1	13	0	14	1	13	0	14	71
% App. Total	30.8	53.8	15.4		0	93.3	6.7		7.1	92.9	0		7.1	92.9	0		
PHF	.500	.350	.500	.542	.000	.583	.250	.625	.250	.650	.000	.583	.250	.650	.000	.700	.772

Counts Unlimited
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City of Gardena
N/S: Normandie Avenue
E/W: Redondo Beach Boulevard
Weather: Clear

File Name : 01_GDA_Normandie_Redondo Beach AM
Site Code : 05719380
Start Date : 5/23/2019
Page No : 2



Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:30 AM				07:30 AM				07:30 AM				07:30 AM			
+0 mins.	1	0	0	1	0	7	**2**	9	0	2	0	2	0	4	0	4
+15 mins.	**2**	0	**1**	3	0	3	0	3	**1**	**5**	0	**6**	0	2	0	2
+30 mins.	1	2	0	3	0	**12**	0	**12**	0	3	0	3	0	**5**	0	**5**
+45 mins.	0	**5**	1	**6**	0	6	0	6	0	3	0	3	**1**	2	0	3
Total Volume	4	7	2	13	0	28	2	30	1	13	0	14	1	13	0	14
% App. Total	30.8	53.8	15.4		0	93.3	6.7		7.1	92.9	0		7.1	92.9	0	
PHF	.500	.350	.500	.542	.000	.583	.250	.625	.250	.650	.000	.583	.250	.650	.000	.700

Counts Unlimited
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City of Gardena
N/S: Normandie Avenue
E/W: Redondo Beach Boulevard
Weather: Clear

File Name : 01_GDA_Normandie_Redondo Beach AM
Site Code : 05719380
Start Date : 5/23/2019
Page No : 1

Groups Printed- 3+ Axle Trucks

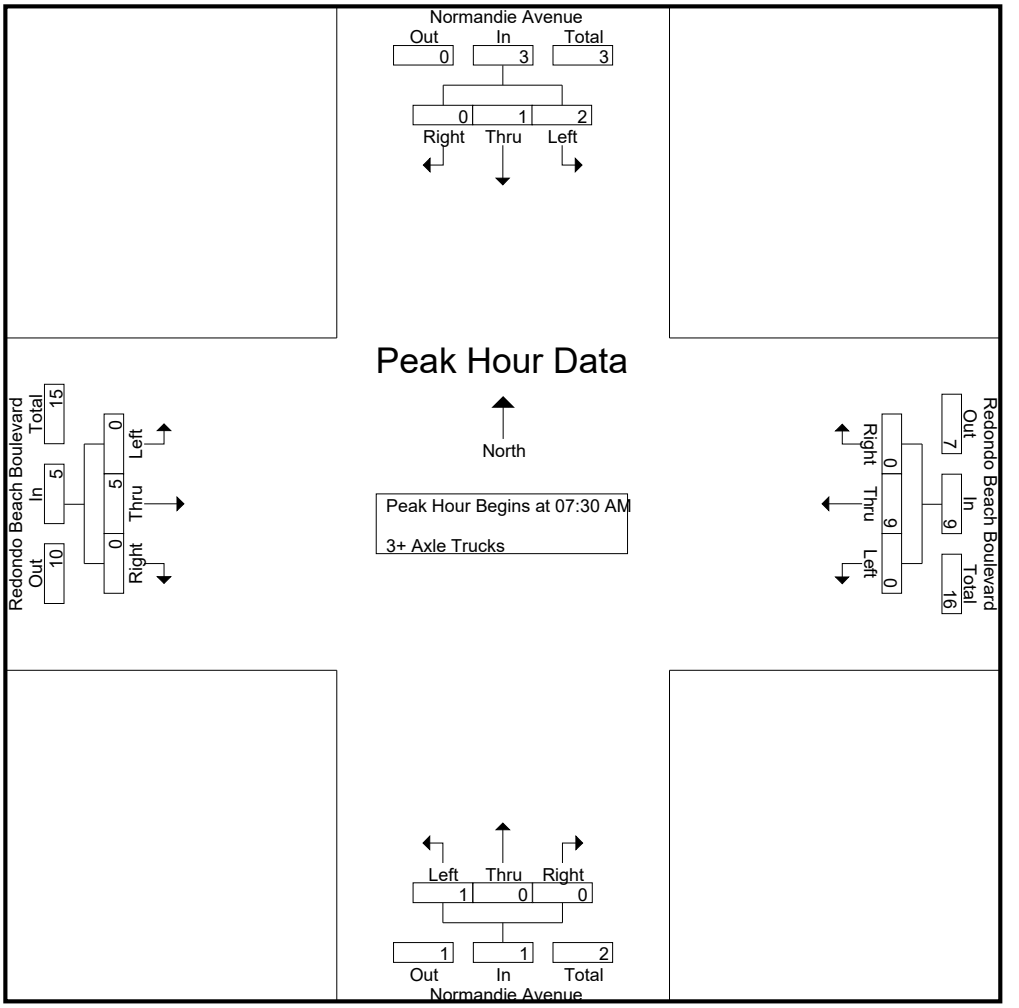
	Normandie Avenue Southbound				Redondo Beach Boulevard Westbound				Normandie Avenue Northbound				Redondo Beach Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	0	0	0	0	0	4	0	4	0	1	0	1	0	1	0	1	6
07:15 AM	0	0	0	0	0	3	0	3	0	1	0	1	0	1	0	1	5
07:30 AM	2	1	0	3	0	3	0	3	0	0	0	0	0	4	0	4	10
07:45 AM	0	0	0	0	0	1	0	1	0	0	0	0	0	1	0	1	2
Total	2	1	0	3	0	11	0	11	0	2	0	2	0	7	0	7	23
08:00 AM	0	0	0	0	0	4	0	4	1	0	0	1	0	0	0	0	5
08:15 AM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
08:30 AM	1	2	0	3	0	1	2	3	0	0	0	0	0	0	0	0	6
08:45 AM	0	0	0	0	0	2	0	2	0	0	0	0	0	2	0	2	4
Total	1	2	0	3	0	8	2	10	1	0	0	1	0	2	0	2	16
09:00 AM	0	0	0	0	0	4	0	4	1	1	0	2	0	1	0	1	7
09:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2	2
09:30 AM	0	1	0	1	0	1	0	1	0	1	0	1	0	2	0	2	5
09:45 AM	0	0	0	0	0	4	0	4	0	2	0	2	0	3	0	3	9
Total	0	1	0	1	0	9	0	9	1	4	0	5	0	8	0	8	23
Grand Total	3	4	0	7	0	28	2	30	2	6	0	8	0	17	0	17	62
Apprch %	42.9	57.1	0		0	93.3	6.7		25	75	0		0	100	0		
Total %	4.8	6.5	0	11.3	0	45.2	3.2	48.4	3.2	9.7	0	12.9	0	27.4	0	27.4	

	Normandie Avenue Southbound				Redondo Beach Boulevard Westbound				Normandie Avenue Northbound				Redondo Beach Boulevard 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 07:30 AM to 08:15 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	**2**	**1**	0	**3**	0	3	0	3	0	0	0	0	0	**4**	0	**4**	**10**
07:45 AM	0	0	0	0	0	1	0	1	0	0	0	0	0	1	0	1	2
08:00 AM	0	0	0	0	0	**4**	0	**4**	**1**	0	0	**1**	0	0	0	0	5
08:15 AM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
Total Volume	2	1	0	3	0	9	0	9	1	0	0	1	0	5	0	5	18
% App. Total	66.7	33.3	0		0	100	0		100	0	0		0	100	0		
PHF	.250	.250	.000	.250	.000	.563	.000	.563	.250	.000	.000	.250	.000	.313	.000	.313	.450

Counts Unlimited
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City of Gardena
N/S: Normandie Avenue
E/W: Redondo Beach Boulevard
Weather: Clear

File Name : 01_GDA_Normandie_Redondo Beach AM
Site Code : 05719380
Start Date : 5/23/2019
Page No : 2



Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:30 AM				07:30 AM				07:30 AM				07:30 AM			
+0 mins.	**2**	**1**	0	**3**	0	3	0	3	0	0	0	0	0	**4**	0	**4**
+15 mins.	0	0	0	0	0	1	0	1	0	0	0	0	0	1	0	1
+30 mins.	0	0	0	0	0	**4**	0	**4**	**1**	0	0	**1**	0	0	0	0
+45 mins.	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0
Total Volume	2	1	0	3	0	9	0	9	1	0	0	1	0	5	0	5
% App. Total	66.7	33.3	0		0	100	0		100	0	0		0	100	0	
PHF	.250	.250	.000	.250	.000	.563	.000	.563	.250	.000	.000	.250	.000	.313	.000	.313

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City of Gardena
N/S: Normandie Avenue
E/W: Redondo Beach Boulevard
Weather: Clear

File Name : 01_GDA_Normandie_Redondo Beach PM
Site Code : 05719380
Start Date : 5/23/2019
Page No : 1

Groups Printed- Passenger Vehicles - Buses - 2 Axle Vehicles - 3+ Axle Trucks

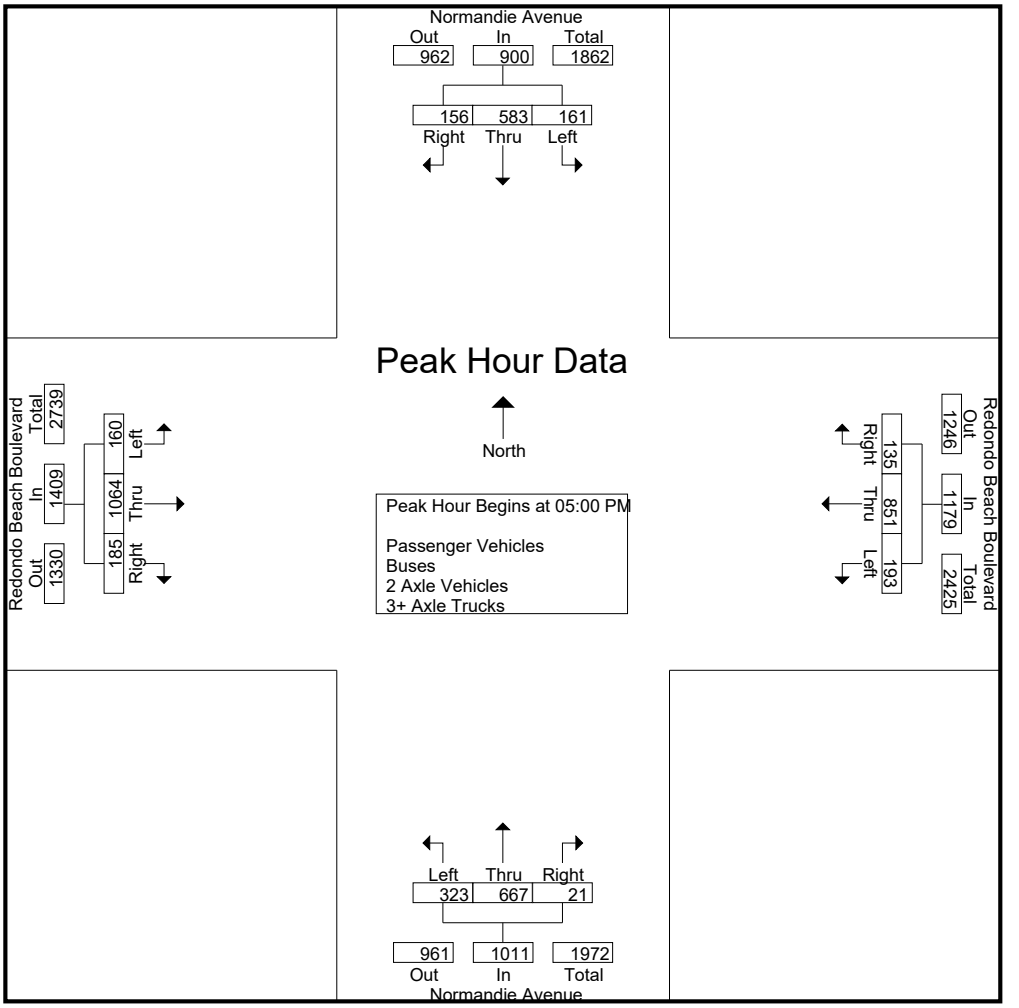
	Normandie Avenue Southbound				Redondo Beach Boulevard Westbound				Normandie Avenue Northbound				Redondo Beach Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
03:00 PM	28	102	10	140	47	201	35	283	68	131	10	209	41	248	64	353	985
03:15 PM	21	99	22	142	37	188	28	253	71	136	4	211	31	262	49	342	948
03:30 PM	27	117	21	165	43	202	26	271	76	162	9	247	38	244	68	350	1033
03:45 PM	44	155	41	240	37	223	29	289	77	137	1	215	49	259	64	372	1116
Total	120	473	94	687	164	814	118	1096	292	566	24	882	159	1013	245	1417	4082
04:00 PM	42	151	24	217	39	184	36	259	74	141	4	219	37	261	45	343	1038
04:15 PM	38	141	34	213	51	209	41	301	76	137	7	220	36	262	35	333	1067
04:30 PM	33	147	43	223	43	226	40	309	76	155	3	234	34	270	51	355	1121
04:45 PM	39	140	37	216	44	225	32	301	73	187	4	264	34	255	53	342	1123
Total	152	579	138	869	177	844	149	1170	299	620	18	937	141	1048	184	1373	4349
05:00 PM	46	149	42	237	45	199	36	280	70	174	3	247	47	266	46	359	1123
05:15 PM	39	152	48	239	44	186	31	261	83	152	10	245	35	275	42	352	1097
05:30 PM	42	131	32	205	50	232	41	323	80	176	3	259	32	262	46	340	1127
05:45 PM	34	151	34	219	54	234	27	315	90	165	5	260	46	261	51	358	1152
Total	161	583	156	900	193	851	135	1179	323	667	21	1011	160	1064	185	1409	4499
Grand Total	433	1635	388	2456	534	2509	402	3445	914	1853	63	2830	460	3125	614	4199	12930
Apprch %	17.6	66.6	15.8		15.5	72.8	11.7		32.3	65.5	2.2		11	74.4	14.6		
Total %	3.3	12.6	3	19	4.1	19.4	3.1	26.6	7.1	14.3	0.5	21.9	3.6	24.2	4.7	32.5	
Passenger Vehicles	422	1600	381	2403	530	2462	400	3392	907	1830	61	2798	454	3042	608	4104	12697
% Passenger Vehicles	97.5	97.9	98.2	97.8	99.3	98.1	99.5	98.5	99.2	98.8	96.8	98.9	98.7	97.3	99	97.7	98.2
Buses	1	18	1	20	0	12	0	12	2	6	0	8	1	16	0	17	57
% Buses	0.2	1.1	0.3	0.8	0	0.5	0	0.3	0.2	0.3	0	0.3	0.2	0.5	0	0.4	0.4
2 Axle Vehicles	9	14	6	29	4	28	2	34	5	13	2	20	5	51	6	62	145
% 2 Axle Vehicles	2.1	0.9	1.5	1.2	0.7	1.1	0.5	1	0.5	0.7	3.2	0.7	1.1	1.6	1	1.5	1.1
3+ Axle Trucks	1	3	0	4	0	7	0	7	0	4	0	4	0	16	0	16	31
% 3+ Axle Trucks	0.2	0.2	0	0.2	0	0.3	0	0.2	0	0.2	0	0.1	0	0.5	0	0.4	0.2

	Normandie Avenue Southbound				Redondo Beach Boulevard Westbound				Normandie Avenue Northbound				Redondo Beach Boulevard 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 03:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 05:00 PM																	
05:00 PM	**46**	149	42	237	45	199	36	280	70	174	3	247	**47**	266	46	**359**	1123
05:15 PM	39	**152**	**48**	**239**	44	186	31	261	83	152	**10**	245	35	**275**	42	352	1097
05:30 PM	42	131	32	205	50	232	**41**	**323**	80	**176**	3	259	32	262	46	340	1127
05:45 PM	34	151	34	219	**54**	**234**	27	315	**90**	165	5	**260**	46	261	**51**	358	**1152**
Total Volume	161	583	156	900	193	851	135	1179	323	667	21	1011	160	1064	185	1409	4499
% App. Total	17.9	64.8	17.3		16.4	72.2	11.5		31.9	66	2.1		11.4	75.5	13.1		
PHF	.875	.959	.813	.941	.894	.909	.823	.913	.897	.947	.525	.972	.851	.967	.907	.981	.976

Counts Unlimited
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City of Gardena
N/S: Normandie Avenue
E/W: Redondo Beach Boulevard
Weather: Clear

File Name : 01_GDA_Normandie_Redondo Beach PM
Site Code : 05719380
Start Date : 5/23/2019
Page No : 2



Peak Hour Analysis From 03:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:30 PM				04:15 PM				04:45 PM				03:00 PM			
+0 mins.	33	147	43	223	**51**	209	**41**	301	73	**187**	4	**264**	41	248	64	353
+15 mins.	39	140	37	216	43	**226**	40	**309**	70	174	3	247	31	**262**	49	342
+30 mins.	**46**	149	42	237	44	225	32	301	**83**	152	**10**	245	38	244	**68**	350
+45 mins.	39	**152**	**48**	**239**	45	199	36	280	80	176	3	259	**49**	259	64	**372**
Total Volume	157	588	170	915	183	859	149	1191	306	689	20	1015	159	1013	245	1417
% App. Total	17.2	64.3	18.6		15.4	72.1	12.5		30.1	67.9	2		11.2	71.5	17.3	
PHF	.853	.967	.885	.957	.897	.950	.909	.964	.922	.921	.500	.961	.811	.967	.901	.952

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City of Gardena
N/S: Normandie Avenue
E/W: Redondo Beach Boulevard
Weather: Clear

File Name : 01_GDA_Normandie_Redondo Beach PM
Site Code : 05719380
Start Date : 5/23/2019
Page No : 1

Groups Printed- Passenger Vehicles

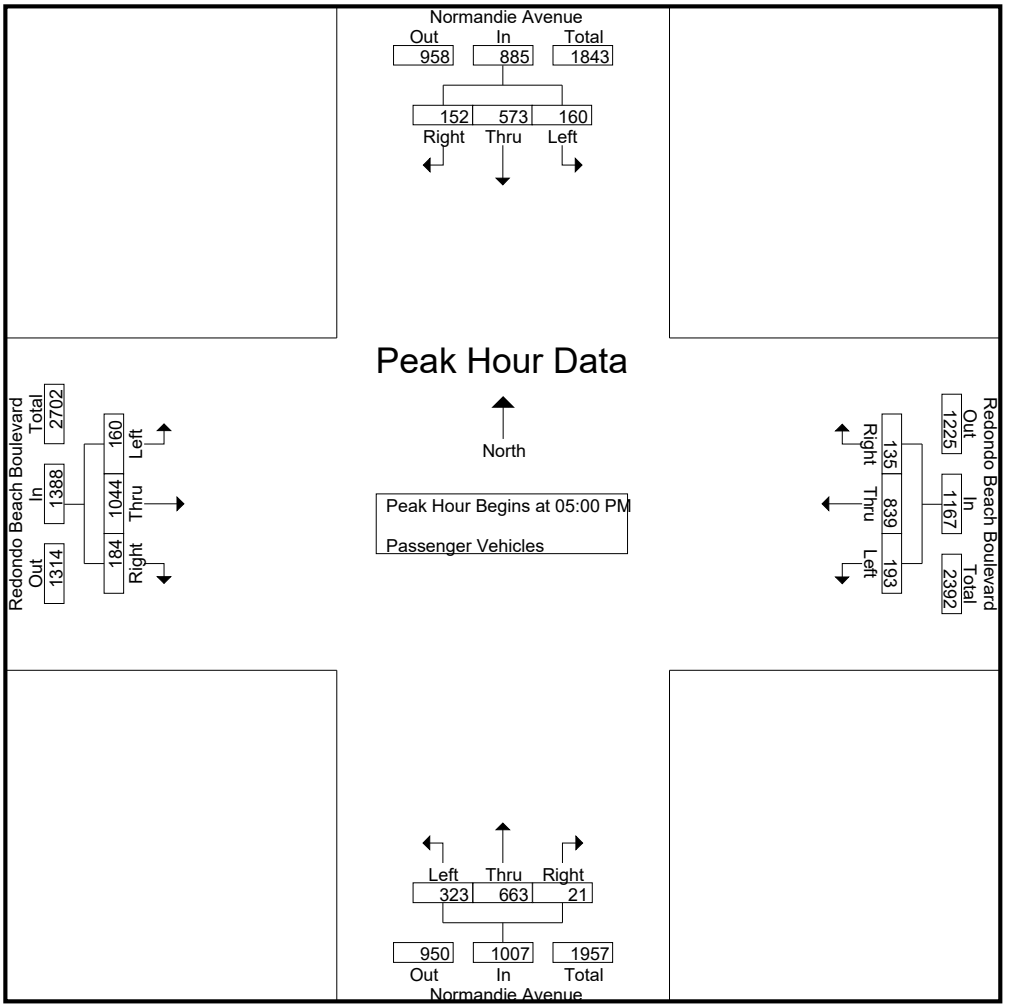
	Normandie Avenue Southbound				Redondo Beach Boulevard Westbound				Normandie Avenue Northbound				Redondo Beach Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
03:00 PM	27	100	10	137	47	197	34	278	67	129	10	206	40	238	62	340	961
03:15 PM	20	95	21	136	35	183	28	246	70	132	4	206	31	255	48	334	922
03:30 PM	27	115	20	162	42	198	26	266	75	158	9	242	38	241	67	346	1016
03:45 PM	42	150	41	233	37	221	29	287	76	136	1	213	47	248	64	359	1092
Total	116	460	92	668	161	799	117	1077	288	555	24	867	156	982	241	1379	3991
04:00 PM	42	147	24	213	39	174	36	249	73	137	4	214	36	252	44	332	1008
04:15 PM	37	138	33	208	51	206	40	297	75	137	5	217	35	253	35	323	1045
04:30 PM	31	143	43	217	43	221	40	304	75	155	3	233	34	263	51	348	1102
04:45 PM	36	139	37	212	43	223	32	298	73	183	4	260	33	248	53	334	1104
Total	146	567	137	850	176	824	148	1148	296	612	16	924	138	1016	183	1337	4259
05:00 PM	46	146	42	234	45	196	36	277	70	174	3	247	47	260	46	353	1111
05:15 PM	39	150	46	235	44	183	31	258	83	152	10	245	35	269	41	345	1083
05:30 PM	42	128	31	201	50	230	41	321	80	173	3	256	32	258	46	336	1114
05:45 PM	33	149	33	215	54	230	27	311	90	164	5	259	46	257	51	354	1139
Total	160	573	152	885	193	839	135	1167	323	663	21	1007	160	1044	184	1388	4447
Grand Total	422	1600	381	2403	530	2462	400	3392	907	1830	61	2798	454	3042	608	4104	12697
Apprch %	17.6	66.6	15.9		15.6	72.6	11.8		32.4	65.4	2.2		11.1	74.1	14.8		
Total %	3.3	12.6	3	18.9	4.2	19.4	3.2	26.7	7.1	14.4	0.5	22	3.6	24	4.8	32.3	

	Normandie Avenue Southbound				Redondo Beach Boulevard Westbound				Normandie Avenue Northbound				Redondo Beach Boulevard 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 05:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 05:00 PM																	
05:00 PM	**46**	146	42	234	45	196	36	277	70	**174**	3	247	**47**	260	46	353	1111
05:15 PM	39	**150**	**46**	**235**	44	183	31	258	83	152	**10**	245	35	**269**	41	345	1083
05:30 PM	42	128	31	201	50	**230**	**41**	**321**	80	173	3	256	32	258	46	336	1114
05:45 PM	33	149	33	215	**54**	230	27	311	**90**	164	5	**259**	46	257	**51**	**354**	**1139**
Total Volume	160	573	152	885	193	839	135	1167	323	663	21	1007	160	1044	184	1388	4447
% App. Total	18.1	64.7	17.2		16.5	71.9	11.6		32.1	65.8	2.1		11.5	75.2	13.3		
PHF	.870	.955	.826	.941	.894	.912	.823	.909	.897	.953	.525	.972	.851	.970	.902	.980	.976

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City of Gardena
N/S: Normandie Avenue
E/W: Redondo Beach Boulevard
Weather: Clear

File Name : 01_GDA_Normandie_Redondo Beach PM
Site Code : 05719380
Start Date : 5/23/2019
Page No : 2



Peak Hour Analysis From 05:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	05:00 PM				05:00 PM				05:00 PM				05:00 PM			
+0 mins.	**46**	146	42	234	45	196	36	277	70	**174**	3	247	**47**	260	46	353
+15 mins.	39	**150**	**46**	**235**	44	183	31	258	83	152	**10**	245	35	**269**	41	345
+30 mins.	42	128	31	201	50	**230**	**41**	**321**	80	173	3	256	32	258	46	336
+45 mins.	33	149	33	215	**54**	230	27	311	**90**	164	5	**259**	46	257	**51**	**354**
Total Volume	160	573	152	885	193	839	135	1167	323	663	21	1007	160	1044	184	1388
% App. Total	18.1	64.7	17.2		16.5	71.9	11.6		32.1	65.8	2.1		11.5	75.2	13.3	
PHF	.870	.955	.826	.941	.894	.912	.823	.909	.897	.953	.525	.972	.851	.970	.902	.980

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City of Gardena
N/S: Normandie Avenue
E/W: Redondo Beach Boulevard
Weather: Clear

File Name : 01_GDA_Normandie_Redondo Beach PM
Site Code : 05719380
Start Date : 5/23/2019
Page No : 1

Groups Printed- Buses

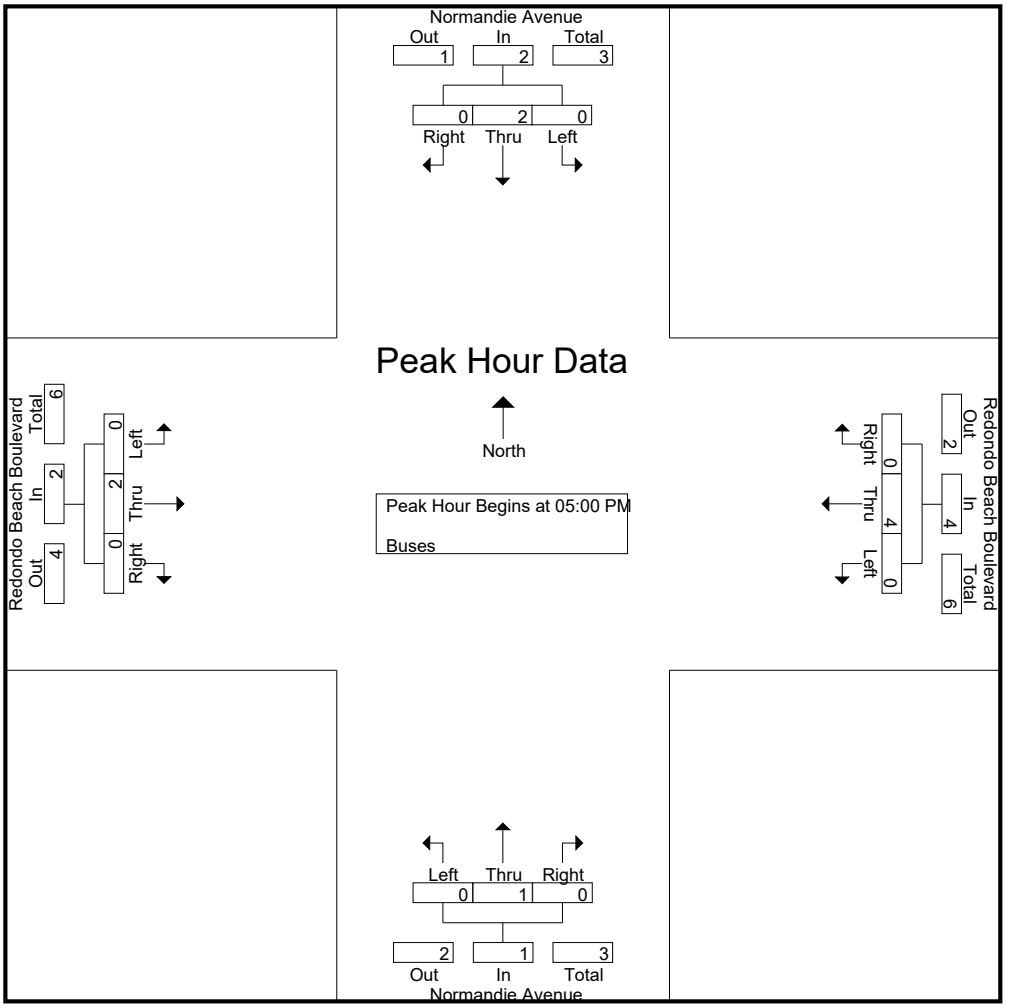
	Normandie Avenue Southbound				Redondo Beach Boulevard Westbound				Normandie Avenue Northbound				Redondo Beach Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
03:00 PM	0	1	0	1	0	1	0	1	1	0	0	1	1	1	0	2	5
03:15 PM	0	3	0	3	0	2	0	2	0	1	0	1	0	1	0	1	7
03:30 PM	0	1	0	1	0	1	0	1	1	2	0	3	0	1	0	1	6
03:45 PM	0	2	0	2	0	0	0	0	0	0	0	0	0	1	0	1	3
Total	0	7	0	7	0	4	0	4	2	3	0	5	1	4	0	5	21
04:00 PM	0	4	0	4	0	2	0	2	0	1	0	1	0	2	0	2	9
04:15 PM	0	1	1	2	0	0	0	0	0	0	0	0	0	3	0	3	5
04:30 PM	1	3	0	4	0	2	0	2	0	0	0	0	0	1	0	1	7
04:45 PM	0	1	0	1	0	0	0	0	0	1	0	1	0	4	0	4	6
Total	1	9	1	11	0	4	0	4	0	2	0	2	0	10	0	10	27
05:00 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
05:15 PM	0	1	0	1	0	2	0	2	0	0	0	0	0	1	0	1	4
05:30 PM	0	1	0	1	0	1	0	1	0	1	0	1	0	0	0	0	3
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
Total	0	2	0	2	0	4	0	4	0	1	0	1	0	2	0	2	9
Grand Total	1	18	1	20	0	12	0	12	2	6	0	8	1	16	0	17	57
Apprch %	5	90	5		0	100	0		25	75	0		5.9	94.1	0		
Total %	1.8	31.6	1.8	35.1	0	21.1	0	21.1	3.5	10.5	0	14	1.8	28.1	0	29.8	

	Normandie Avenue Southbound				Redondo Beach Boulevard Westbound				Normandie Avenue Northbound				Redondo Beach Boulevard 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 05:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 05:00 PM																	
05:00 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
05:15 PM	0	**1**	0	**1**	0	**2**	0	**2**	0	0	0	0	0	**1**	0	**1**	**4**
05:30 PM	0	1	0	1	0	1	0	1	0	**1**	0	**1**	0	0	0	0	3
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
Total Volume	0	2	0	2	0	4	0	4	0	1	0	1	0	2	0	2	9
% App. Total	0	100	0		0	100	0		0	100	0		0	100	0		
PHF	.000	.500	.000	.500	.000	.500	.000	.500	.000	.250	.000	.250	.000	.500	.000	.500	.563

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City of Gardena
N/S: Normandie Avenue
E/W: Redondo Beach Boulevard
Weather: Clear

File Name : 01_GDA_Normandie_Redondo Beach PM
Site Code : 05719380
Start Date : 5/23/2019
Page No : 2



Peak Hour Analysis From 05:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	05:00 PM				05:00 PM				05:00 PM				05:00 PM			
+0 mins.	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0
+15 mins.	0	**1**	0	**1**	0	**2**	0	**2**	0	0	0	0	0	**1**	0	**1**
+30 mins.	0	1	0	1	0	1	0	1	0	**1**	0	**1**	0	0	0	0
+45 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1
Total Volume	0	2	0	2	0	4	0	4	0	1	0	1	0	2	0	2
% App. Total	0	100	0		0	100	0		0	100	0		0	100	0	
PHF	.000	.500	.000	.500	.000	.500	.000	.500	.000	.250	.000	.250	.000	.500	.000	.500

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City of Gardena
N/S: Normandie Avenue
E/W: Redondo Beach Boulevard
Weather: Clear

File Name : 01_GDA_Normandie_Redondo Beach PM
Site Code : 05719380
Start Date : 5/23/2019
Page No : 1

Groups Printed- 2 Axle Vehicles

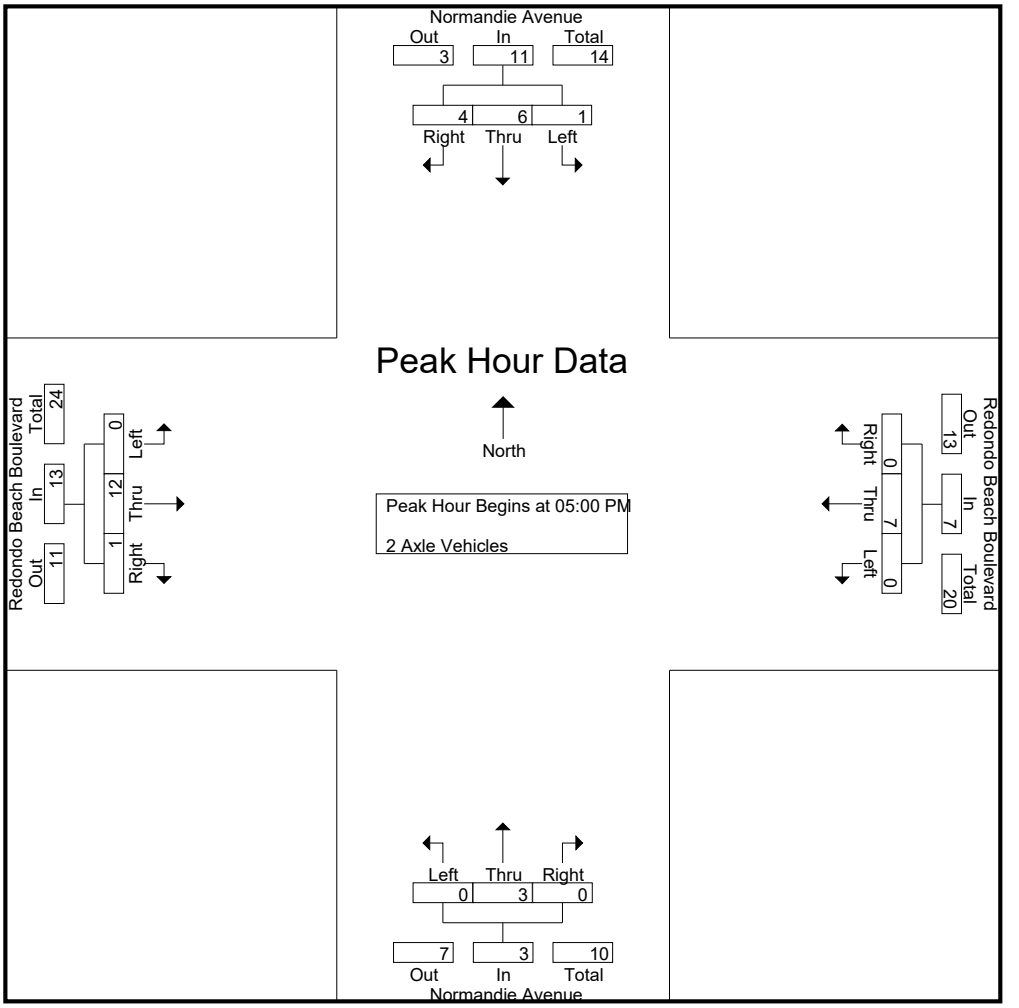
	Normandie Avenue Southbound				Redondo Beach Boulevard Westbound				Normandie Avenue Northbound				Redondo Beach Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
03:00 PM	1	1	0	2	0	3	1	4	0	2	0	2	0	8	2	10	18
03:15 PM	1	1	1	3	2	3	0	5	1	1	0	2	0	2	1	3	13
03:30 PM	0	1	1	2	1	3	0	4	0	0	0	0	0	1	1	2	8
03:45 PM	2	3	0	5	0	2	0	2	1	1	0	2	2	10	0	12	21
Total	4	6	2	12	3	11	1	15	2	4	0	6	2	21	4	27	60
04:00 PM	0	0	0	0	0	4	0	4	1	3	0	4	1	6	1	8	16
04:15 PM	1	1	0	2	0	3	1	4	1	0	2	3	1	4	0	5	14
04:30 PM	1	1	0	2	0	2	0	2	1	0	0	1	0	6	0	6	11
04:45 PM	2	0	0	2	1	1	0	2	0	3	0	3	1	2	0	3	10
Total	4	2	0	6	1	10	1	12	3	6	2	11	3	18	1	22	51
05:00 PM	0	3	0	3	0	2	0	2	0	0	0	0	0	5	0	5	10
05:15 PM	0	1	2	3	0	1	0	1	0	0	0	0	0	3	1	4	8
05:30 PM	0	1	1	2	0	1	0	1	0	2	0	2	0	3	0	3	8
05:45 PM	1	1	1	3	0	3	0	3	0	1	0	1	0	1	0	1	8
Total	1	6	4	11	0	7	0	7	0	3	0	3	0	12	1	13	34
Grand Total	9	14	6	29	4	28	2	34	5	13	2	20	5	51	6	62	145
Apprch %	31	48.3	20.7		11.8	82.4	5.9		25	65	10		8.1	82.3	9.7		
Total %	6.2	9.7	4.1	20	2.8	19.3	1.4	23.4	3.4	9	1.4	13.8	3.4	35.2	4.1	42.8	

	Normandie Avenue Southbound				Redondo Beach Boulevard Westbound				Normandie Avenue Northbound				Redondo Beach Boulevard 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 05:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 05:00 PM																	
05:00 PM	0	**3**	0	**3**	0	2	0	2	0	0	0	0	0	**5**	0	**5**	**10**
05:15 PM	0	1	**2**	3	0	1	0	1	0	0	0	0	0	3	**1**	4	8
05:30 PM	0	1	1	2	0	1	0	1	0	**2**	0	**2**	0	3	0	3	8
05:45 PM	**1**	1	1	3	0	**3**	0	**3**	0	1	0	1	0	1	0	1	8
Total Volume	1	6	4	11	0	7	0	7	0	3	0	3	0	12	1	13	34
% App. Total	9.1	54.5	36.4		0	100	0		0	100	0		0	92.3	7.7		
PHF	.250	.500	.500	.917	.000	.583	.000	.583	.000	.375	.000	.375	.000	.600	.250	.650	.850

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City of Gardena
N/S: Normandie Avenue
E/W: Redondo Beach Boulevard
Weather: Clear

File Name : 01_GDA_Normandie_Redondo Beach PM
Site Code : 05719380
Start Date : 5/23/2019
Page No : 2



Peak Hour Analysis From 05:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	05:00 PM				05:00 PM				05:00 PM				05:00 PM			
+0 mins.	0	**3**	0	**3**	0	2	0	2	0	0	0	0	0	**5**	0	**5**
+15 mins.	0	1	**2**	3	0	1	0	1	0	0	0	0	0	3	**1**	4
+30 mins.	0	1	1	2	0	1	0	1	0	**2**	0	**2**	0	3	0	3
+45 mins.	**1**	1	1	3	0	**3**	0	**3**	0	1	0	1	0	1	0	1
Total Volume	1	6	4	11	0	7	0	7	0	3	0	3	0	12	1	13
% App. Total	9.1	54.5	36.4		0	100	0		0	100	0		0	92.3	7.7	
PHF	.250	.500	.500	.917	.000	.583	.000	.583	.000	.375	.000	.375	.000	.600	.250	.650

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City of Gardena
N/S: Normandie Avenue
E/W: Redondo Beach Boulevard
Weather: Clear

File Name : 01_GDA_Normandie_Redondo Beach PM
Site Code : 05719380
Start Date : 5/23/2019
Page No : 1

Groups Printed- 3+ Axle Trucks

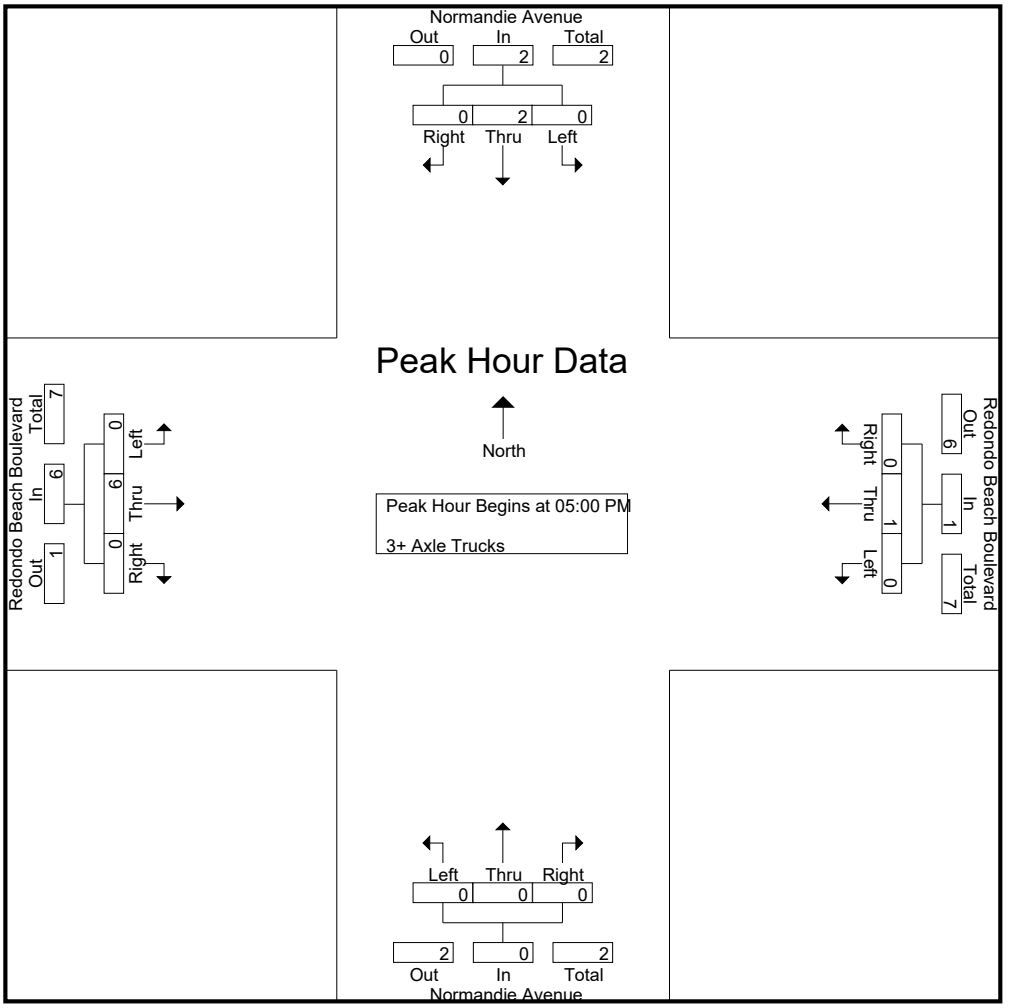
	Normandie Avenue Southbound				Redondo Beach Boulevard Westbound				Normandie Avenue Northbound				Redondo Beach Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
03:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
03:15 PM	0	0	0	0	0	0	0	0	0	2	0	2	0	4	0	4	6
03:30 PM	0	0	0	0	0	0	0	0	0	2	0	2	0	1	0	1	3
03:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	4	0	4	0	6	0	6	10
04:00 PM	0	0	0	0	0	4	0	4	0	0	0	0	0	1	0	1	5
04:15 PM	0	1	0	1	0	0	0	0	0	0	0	0	0	2	0	2	3
04:30 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
04:45 PM	1	0	0	1	0	1	0	1	0	0	0	0	0	1	0	1	3
Total	1	1	0	2	0	6	0	6	0	0	0	0	0	4	0	4	12
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2	2
05:30 PM	0	1	0	1	0	0	0	0	0	0	0	0	0	1	0	1	2
05:45 PM	0	1	0	1	0	1	0	1	0	0	0	0	0	2	0	2	4
Total	0	2	0	2	0	1	0	1	0	0	0	0	0	6	0	6	9
Grand Total	1	3	0	4	0	7	0	7	0	4	0	4	0	16	0	16	31
Apprch %	25	75	0		0	100	0		0	100	0		0	100	0		
Total %	3.2	9.7	0	12.9	0	22.6	0	22.6	0	12.9	0	12.9	0	51.6	0	51.6	

	Normandie Avenue Southbound				Redondo Beach Boulevard Westbound				Normandie Avenue Northbound				Redondo Beach Boulevard 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 05:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 05:00 PM																	
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	**2**	0	**2**	2
05:30 PM	0	**1**	0	**1**	0	0	0	0	0	0	0	0	0	1	0	1	2
05:45 PM	0	1	0	1	0	**1**	0	**1**	0	0	0	0	0	2	0	2	**4**
Total Volume	0	2	0	2	0	1	0	1	0	0	0	0	0	6	0	6	9
% App. Total	0	100	0		0	100	0		0	0	0		0	100	0		
PHF	.000	.500	.000	.500	.000	.250	.000	.250	.000	.000	.000	.000	.000	.750	.000	.750	.563

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City of Gardena
N/S: Normandie Avenue
E/W: Redondo Beach Boulevard
Weather: Clear

File Name : 01_GDA_Normandie_Redondo Beach PM
Site Code : 05719380
Start Date : 5/23/2019
Page No : 2



Peak Hour Analysis From 05:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	05:00 PM				05:00 PM				05:00 PM				05:00 PM			
+0 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1
+15 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	**2**	0	**2**
+30 mins.	0	**1**	0	**1**	0	0	0	0	0	0	0	0	0	1	0	1
+45 mins.	0	1	0	1	0	**1**	0	**1**	0	0	0	0	0	2	0	2
Total Volume	0	2	0	2	0	1	0	1	0	0	0	0	0	6	0	6
% App. Total	0	100	0		0	100	0		0	0	0		0	100	0	
PHF	.000	.500	.000	.500	.000	.250	.000	.250	.000	.000	.000	.000	.000	.750	.000	.750

Location: Gardena
N/S: Normandie Avenue
E/W: Redondo Beach Blvd

Date: 5/23/2019
Day: Thursday

PEDESTRIANS

	North Leg Normandie Avenue	East Leg Redondo Beach Blvd	South Leg Normandie Avenue	West Leg Redondo Beach Blvd	
	Pedestrians	Pedestrians	Pedestrians	Pedestrians	
7:00 AM	0	1	1	3	5
7:15 AM	0	0	2	0	2
7:30 AM	0	1	2	4	7
7:45 AM	3	2	1	11	17
8:00 AM	4	1	3	3	11
8:15 AM	0	1	3	9	13
8:30 AM	6	3	4	1	14
8:45 AM	3	2	2	10	17
9:00 AM	5	1	6	4	16
9:15 AM	12	5	7	5	29
9:30 AM	5	6	4	14	29
9:45 AM	3	9	14	8	34
TOTAL VOLUMES:	41	32	49	72	194

	North Leg Normandie Avenue	East Leg Redondo Beach Blvd	South Leg Normandie Avenue	West Leg Redondo Beach Blvd	
	Pedestrians	Pedestrians	Pedestrians	Pedestrians	
3:00 PM	3	10	16	34	63
3:15 PM	5	2	8	7	22
3:30 PM	7	5	4	8	24
3:45 PM	1	2	7	13	23
4:00 PM	3	3	5	14	25
4:15 PM	0	0	1	5	6
4:30 PM	2	3	3	5	13
4:45 PM	4	2	7	10	23
5:00 PM	7	0	8	9	24
5:15 PM	0	1	12	8	21
5:30 PM	5	2	7	10	24
5:45 PM	4	1	6	7	18
TOTAL VOLUMES:	41	31	84	130	286

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Location: Gardena
N/S: Normandie Avenue
E/W: Redondo Beach Blvd

Date: 5/23/2019
Day: Thursday

BICYCLES

	Southbound Normandie Avenue			Westbound Redondo Beach Blvd			Northbound Normandie Avenue			Eastbound Redondo Beach Blvd			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
7:00 AM	0	1	0	0	0	0	1	0	0	0	0	0	2
7:15 AM	1	1	0	0	1	0	0	0	0	0	1	0	4
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	1	0	0	0	0	1
8:00 AM	0	1	0	0	0	0	0	0	0	0	0	0	1
8:15 AM	0	1	0	0	0	0	1	0	1	0	0	0	3
8:30 AM	0	0	0	0	1	0	0	0	0	0	1	0	2
8:45 AM	0	0	0	0	0	0	0	1	0	0	1	0	2
9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
9:15 AM	0	0	0	0	1	0	0	0	0	0	0	0	1
9:30 AM	0	0	0	0	1	1	0	0	0	0	0	0	2
9:45 AM	0	1	0	0	0	0	2	0	0	0	0	0	3
TOTAL VOLUMES:	1	5	0	0	4	1	4	2	1	0	3	0	21

	Southbound Normandie Avenue			Westbound Redondo Beach Blvd			Northbound Normandie Avenue			Eastbound Redondo Beach Blvd			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
3:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
3:15 PM	0	1	0	0	1	0	0	0	0	0	0	0	2
3:30 PM	0	1	0	0	0	0	0	0	0	0	0	0	1
3:45 PM	0	0	0	0	0	0	0	0	0	1	2	0	3
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	1	1
4:15 PM	0	0	0	0	0	0	0	0	0	0	1	0	1
4:30 PM	0	0	1	0	1	0	0	0	1	0	0	0	3
4:45 PM	0	0	1	0	0	0	0	3	0	0	3	1	8
5:00 PM	0	1	0	0	1	0	0	1	0	0	1	0	4
5:15 PM	0	0	0	0	0	0	0	1	0	0	0	0	1
5:30 PM	0	0	0	0	1	0	0	0	0	0	1	0	2
5:45 PM	0	0	0	0	0	0	0	0	0	0	1	0	1
TOTAL VOLUMES:	0	3	2	0	4	0	0	5	1	1	9	2	27

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City of Gardena
N/S: Budlong Avenue
E/W: Redondo Beach Boulevard
Weather: Clear

File Name : 02_GDA_Budlong_Redondo Beach AM
Site Code : 05719380
Start Date : 5/23/2019
Page No : 1

Groups Printed- Passenger Vehicles - Buses - 2 Axle Vehicles - 3+ Axle Trucks

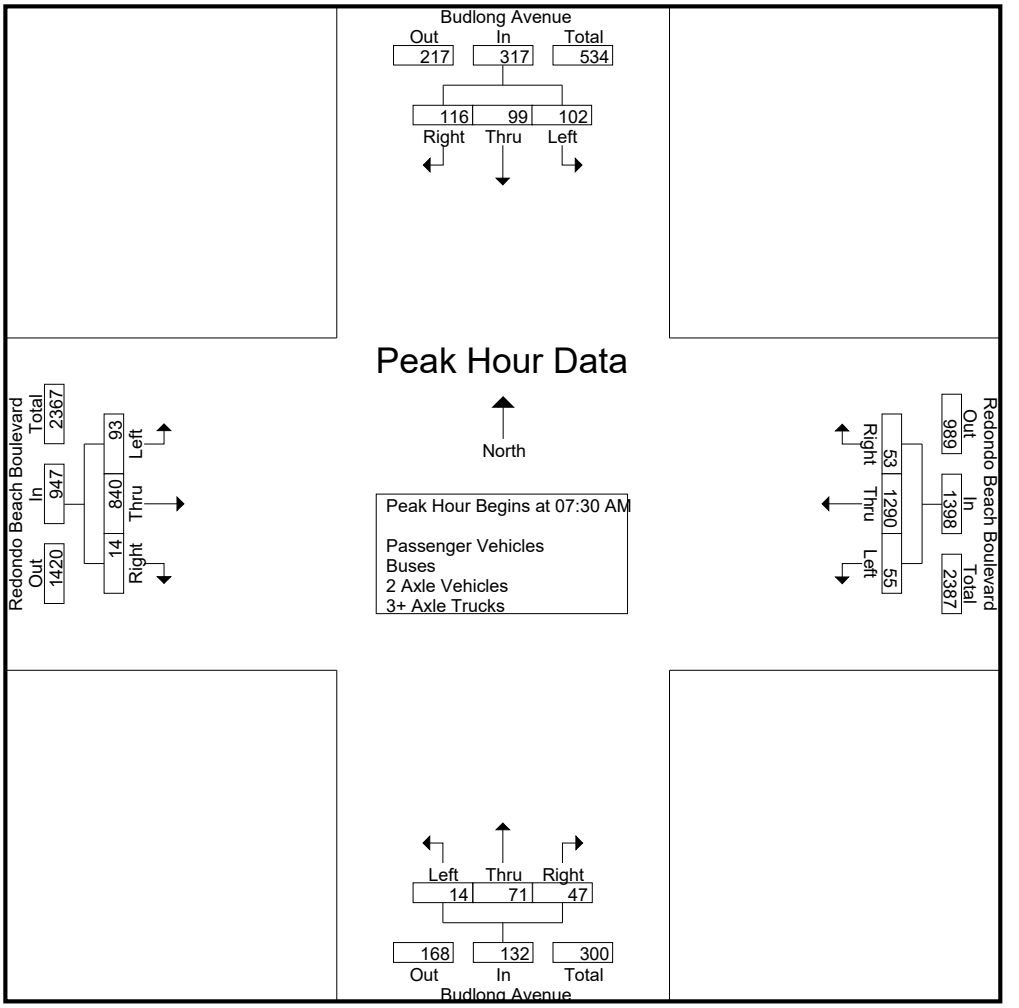
	Budlong Avenue Southbound				Redondo Beach Boulevard Westbound				Budlong Avenue Northbound				Redondo Beach Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	16	12	16	44	9	286	9	304	6	7	9	22	18	138	1	157	527
07:15 AM	26	17	24	67	11	278	17	306	5	10	14	29	19	165	1	185	587
07:30 AM	39	35	33	107	15	325	18	358	3	15	10	28	15	212	2	229	722
07:45 AM	24	39	30	93	17	378	11	406	5	23	13	41	27	228	3	258	798
Total	105	103	103	311	52	1267	55	1374	19	55	46	120	79	743	7	829	2634
08:00 AM	18	17	27	62	12	277	12	301	3	22	9	34	30	216	6	252	649
08:15 AM	21	8	26	55	11	310	12	333	3	11	15	29	21	184	3	208	625
08:30 AM	15	5	19	39	13	283	13	309	9	3	3	15	17	175	6	198	561
08:45 AM	13	8	18	39	14	244	15	273	5	9	10	24	20	166	4	190	526
Total	67	38	90	195	50	1114	52	1216	20	45	37	102	88	741	19	848	2361
09:00 AM	16	4	14	34	9	246	14	269	6	6	9	21	22	179	6	207	531
09:15 AM	19	9	18	46	14	243	10	267	9	9	9	27	16	186	3	205	545
09:30 AM	18	7	23	48	16	226	4	246	2	14	9	25	14	192	4	210	529
09:45 AM	12	13	22	47	15	235	14	264	5	13	12	30	22	161	6	189	530
Total	65	33	77	175	54	950	42	1046	22	42	39	103	74	718	19	811	2135
Grand Total	237	174	270	681	156	3331	149	3636	61	142	122	325	241	2202	45	2488	7130
Apprch %	34.8	25.6	39.6		4.3	91.6	4.1		18.8	43.7	37.5		9.7	88.5	1.8		
Total %	3.3	2.4	3.8	9.6	2.2	46.7	2.1	51	0.9	2	1.7	4.6	3.4	30.9	0.6	34.9	
Passenger Vehicles	234	173	249	656	154	3203	140	3497	56	139	121	316	239	2114	44	2397	6866
% Passenger Vehicles	98.7	99.4	92.2	96.3	98.7	96.2	94	96.2	91.8	97.9	99.2	97.2	99.2	96	97.8	96.3	96.3
Buses	0	1	2	3	1	20	3	24	0	1	0	1	0	24	0	24	52
% Buses	0	0.6	0.7	0.4	0.6	0.6	2	0.7	0	0.7	0	0.3	0	1.1	0	1	0.7
2 Axle Vehicles	3	0	16	19	1	83	6	90	2	2	1	5	2	44	1	47	161
% 2 Axle Vehicles	1.3	0	5.9	2.8	0.6	2.5	4	2.5	3.3	1.4	0.8	1.5	0.8	2	2.2	1.9	2.3
3+ Axle Trucks	0	0	3	3	0	25	0	25	3	0	0	3	0	20	0	20	51
% 3+ Axle Trucks	0	0	1.1	0.4	0	0.8	0	0.7	4.9	0	0	0.9	0	0.9	0	0.8	0.7

	Budlong Avenue Southbound				Redondo Beach Boulevard Westbound				Budlong Avenue Northbound				Redondo Beach Boulevard 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 09:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	**39**	35	**33**	**107**	15	325	**18**	358	3	15	10	28	15	212	2	229	722
07:45 AM	24	**39**	30	93	**17**	**378**	11	**406**	**5**	**23**	13	**41**	27	**228**	3	**258**	**798**
08:00 AM	18	17	27	62	12	277	12	301	3	22	9	34	**30**	216	**6**	252	649
08:15 AM	21	8	26	55	11	310	12	333	3	11	**15**	29	21	184	3	208	625
Total Volume	102	99	116	317	55	1290	53	1398	14	71	47	132	93	840	14	947	2794
% App. Total	32.2	31.2	36.6		3.9	92.3	3.8		10.6	53.8	35.6		9.8	88.7	1.5		
PHF	.654	.635	.879	.741	.809	.853	.736	.861	.700	.772	.783	.805	.775	.921	.583	.918	.875

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City of Gardena
N/S: Budlong Avenue
E/W: Redondo Beach Boulevard
Weather: Clear

File Name : 02_GDA_Budlong_Redondo Beach AM
Site Code : 05719380
Start Date : 5/23/2019



Peak Hour Analysis From 07:00 AM to 09:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:15 AM				07:30 AM				07:15 AM				07:30 AM			
+0 mins.	26	17	24	67	15	325	**18**	358	**5**	10	**14**	29	15	212	2	229
+15 mins.	**39**	35	**33**	**107**	**17**	**378**	11	**406**	3	15	10	28	27	**228**	3	**258**
+30 mins.	24	**39**	30	93	12	277	12	301	5	**23**	13	**41**	**30**	216	**6**	252
+45 mins.	18	17	27	62	11	310	12	333	3	22	9	34	21	184	3	208
Total Volume	107	108	114	329	55	1290	53	1398	16	70	46	132	93	840	14	947
% App. Total	32.5	32.8	34.7		3.9	92.3	3.8		12.1	53	34.8		9.8	88.7	1.5	
PHF	.686	.692	.864	.769	.809	.853	.736	.861	.800	.761	.821	.805	.775	.921	.583	.918

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City of Gardena
N/S: Budlong Avenue
E/W: Redondo Beach Boulevard
Weather: Clear

File Name : 02_GDA_Budlong_Redondo Beach AM
Site Code : 05719380
Start Date : 5/23/2019
Page No : 1

Groups Printed- Passenger Vehicles

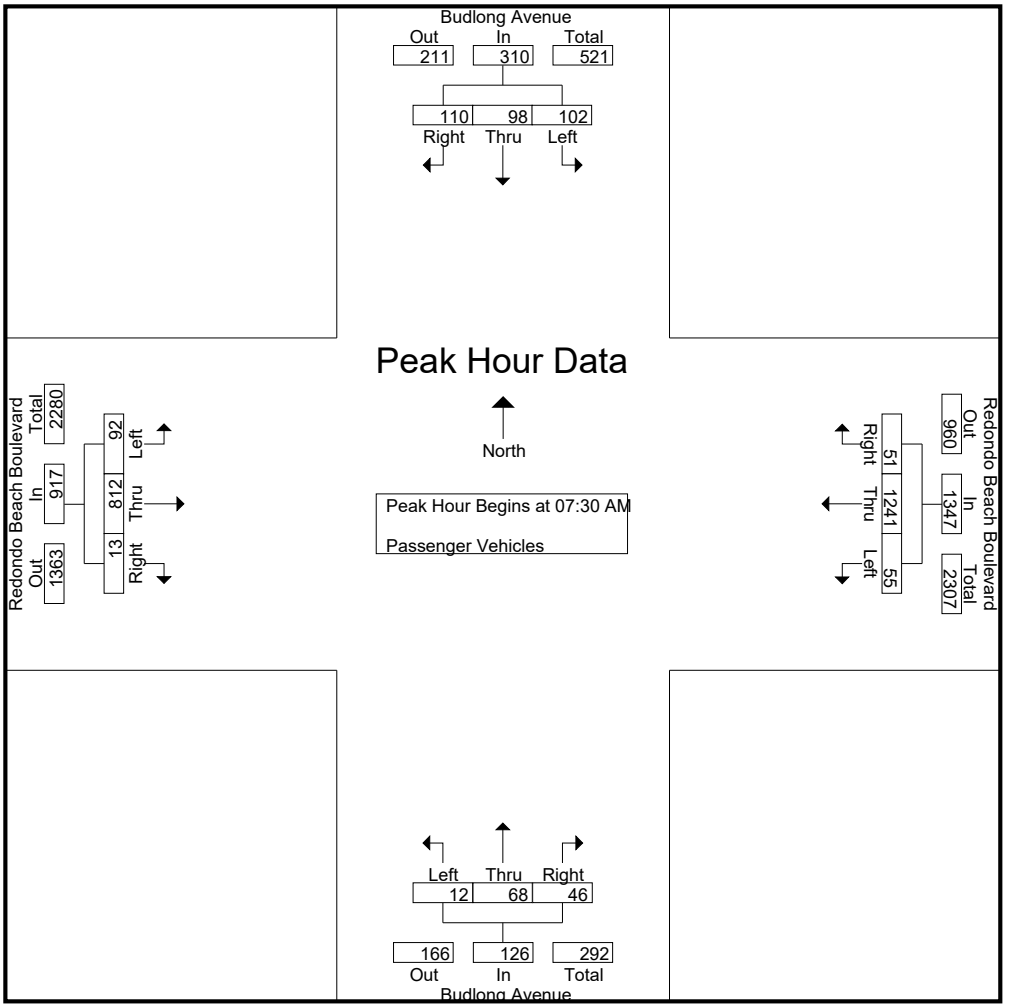
	Budlong Avenue Southbound				Redondo Beach Boulevard Westbound				Budlong Avenue Northbound				Redondo Beach Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	15	12	13	40	9	272	8	289	5	7	9	21	18	133	1	152	502
07:15 AM	26	17	23	66	11	269	16	296	4	10	14	28	19	161	1	181	571
07:30 AM	39	34	32	105	15	310	17	342	3	15	10	28	15	203	1	219	694
07:45 AM	24	39	30	93	17	366	11	394	4	23	12	39	27	222	3	252	778
Total	104	102	98	304	52	1217	52	1321	16	55	45	116	79	719	6	804	2545
08:00 AM	18	17	25	60	12	263	12	287	3	19	9	31	30	209	6	245	623
08:15 AM	21	8	23	52	11	302	11	324	2	11	15	28	20	178	3	201	605
08:30 AM	15	5	17	37	13	274	13	300	9	3	3	15	17	165	6	188	540
08:45 AM	12	8	15	35	14	235	12	261	5	9	10	24	20	160	4	184	504
Total	66	38	80	184	50	1074	48	1172	19	42	37	98	87	712	19	818	2272
09:00 AM	16	4	13	33	9	234	13	256	6	6	9	21	22	172	6	200	510
09:15 AM	19	9	16	44	13	233	9	255	8	9	9	26	16	175	3	194	519
09:30 AM	17	7	21	45	15	220	4	239	2	14	9	25	14	180	4	198	507
09:45 AM	12	13	21	46	15	225	14	254	5	13	12	30	21	156	6	183	513
Total	64	33	71	168	52	912	40	1004	21	42	39	102	73	683	19	775	2049
Grand Total	234	173	249	656	154	3203	140	3497	56	139	121	316	239	2114	44	2397	6866
Apprch %	35.7	26.4	38		4.4	91.6	4		17.7	44	38.3		10	88.2	1.8		
Total %	3.4	2.5	3.6	9.6	2.2	46.7	2	50.9	0.8	2	1.8	4.6	3.5	30.8	0.6	34.9	

	Budlong Avenue Southbound				Redondo Beach Boulevard Westbound				Budlong Avenue Northbound				Redondo Beach Boulevard 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 07:30 AM to 08:15 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	**39**	34	**32**	**105**	15	310	**17**	342	3	15	10	28	15	203	1	219	694
07:45 AM	24	**39**	30	93	**17**	**366**	11	**394**	**4**	**23**	12	**39**	27	**222**	3	**252**	**778**
08:00 AM	18	17	25	60	12	263	12	287	3	19	9	31	**30**	209	**6**	245	623
08:15 AM	21	8	23	52	11	302	11	324	2	11	**15**	28	20	178	3	201	605
Total Volume	102	98	110	310	55	1241	51	1347	12	68	46	126	92	812	13	917	2700
% App. Total	32.9	31.6	35.5		4.1	92.1	3.8		9.5	54	36.5		10	88.5	1.4		
PHF	.654	.628	.859	.738	.809	.848	.750	.855	.750	.739	.767	.808	.767	.914	.542	.910	.868

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City of Gardena
N/S: Budlong Avenue
E/W: Redondo Beach Boulevard
Weather: Clear

File Name : 02_GDA_Budlong_Redondo Beach AM
Site Code : 05719380
Start Date : 5/23/2019



Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:30 AM				07:30 AM				07:30 AM				07:30 AM			
+0 mins.	**39**	34	**32**	**105**	15	310	**17**	342	3	15	10	28	15	203	1	219
+15 mins.	24	**39**	30	93	**17**	**366**	11	**394**	**4**	**23**	12	**39**	27	**222**	3	**252**
+30 mins.	18	17	25	60	12	263	12	287	3	19	9	31	**30**	209	**6**	245
+45 mins.	21	8	23	52	11	302	11	324	2	11	**15**	28	20	178	3	201
Total Volume	102	98	110	310	55	1241	51	1347	12	68	46	126	92	812	13	917
% App. Total	32.9	31.6	35.5		4.1	92.1	3.8		9.5	54	36.5		10	88.5	1.4	
PHF	.654	.628	.859	.738	.809	.848	.750	.855	.750	.739	.767	.808	.767	.914	.542	.910

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City of Gardena
N/S: Budlong Avenue
E/W: Redondo Beach Boulevard
Weather: Clear

File Name : 02_GDA_Budlong_Redondo Beach AM
Site Code : 05719380
Start Date : 5/23/2019
Page No : 1

Groups Printed- Buses

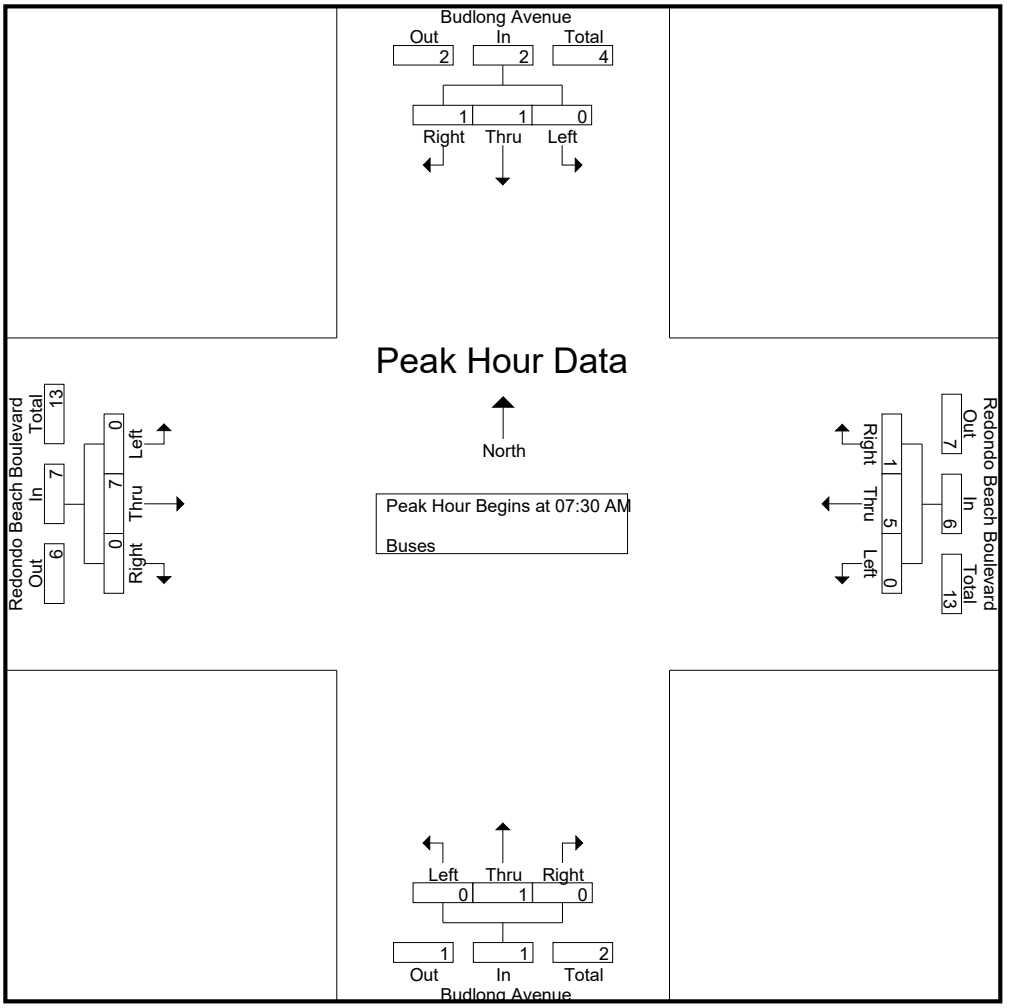
	Budlong Avenue Southbound				Redondo Beach Boulevard Westbound				Budlong Avenue Northbound				Redondo Beach Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	0	0	0	0	0	3	0	3	0	0	0	0	0	1	0	1	4
07:15 AM	0	0	1	1	0	4	1	5	0	0	0	0	0	2	0	2	8
07:30 AM	0	1	1	2	0	0	1	1	0	0	0	0	0	1	0	1	4
07:45 AM	0	0	0	0	0	3	0	3	0	0	0	0	0	2	0	2	5
Total	0	1	2	3	0	10	2	12	0	0	0	0	0	6	0	6	21
08:00 AM	0	0	0	0	0	0	0	0	0	1	0	1	0	2	0	2	3
08:15 AM	0	0	0	0	0	2	0	2	0	0	0	0	0	2	0	2	4
08:30 AM	0	0	0	0	0	1	0	1	0	0	0	0	0	3	0	3	4
08:45 AM	0	0	0	0	0	1	1	2	0	0	0	0	0	1	0	1	3
Total	0	0	0	0	0	4	1	5	0	1	0	1	0	8	0	8	14
09:00 AM	0	0	0	0	0	2	0	2	0	0	0	0	0	3	0	3	5
09:15 AM	0	0	0	0	1	2	0	3	0	0	0	0	0	5	0	5	8
09:30 AM	0	0	0	0	0	1	0	1	0	0	0	0	0	1	0	1	2
09:45 AM	0	0	0	0	0	1	0	1	0	0	0	0	0	1	0	1	2
Total	0	0	0	0	1	6	0	7	0	0	0	0	0	10	0	10	17
Grand Total	0	1	2	3	1	20	3	24	0	1	0	1	0	24	0	24	52
Apprch %	0	33.3	66.7		4.2	83.3	12.5		0	100	0		0	100	0		
Total %	0	1.9	3.8	5.8	1.9	38.5	5.8	46.2	0	1.9	0	1.9	0	46.2	0	46.2	

	Budlong Avenue Southbound				Redondo Beach Boulevard Westbound				Budlong Avenue Northbound				Redondo Beach Boulevard 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 07:30 AM to 08:15 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	0	**1**	**1**	**2**	0	0	**1**	1	0	0	0	0	0	1	0	1	4
07:45 AM	0	0	0	0	0	**3**	0	**3**	0	0	0	0	0	**2**	0	**2**	**5**
08:00 AM	0	0	0	0	0	0	0	0	0	**1**	0	**1**	0	2	0	2	3
08:15 AM	0	0	0	0	0	2	0	2	0	0	0	0	0	2	0	2	4
Total Volume	0	1	1	2	0	5	1	6	0	1	0	1	0	7	0	7	16
% App. Total	0	50	50		0	83.3	16.7		0	100	0		0	100	0		
PHF	.000	.250	.250	.250	.000	.417	.250	.500	.000	.250	.000	.250	.000	.875	.000	.875	.800

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City of Gardena
N/S: Budlong Avenue
E/W: Redondo Beach Boulevard
Weather: Clear

File Name : 02_GDA_Budlong_Redondo Beach AM
Site Code : 05719380
Start Date : 5/23/2019



Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:30 AM				07:30 AM				07:30 AM				07:30 AM			
+0 mins.	0	**1**	**1**	**2**	0	0	**1**	1	0	0	0	0	0	1	0	1
+15 mins.	0	0	0	0	0	**3**	0	**3**	0	0	0	0	0	**2**	0	**2**
+30 mins.	0	0	0	0	0	0	0	0	0	**1**	0	**1**	0	2	0	2
+45 mins.	0	0	0	0	0	2	0	2	0	0	0	0	0	2	0	2
Total Volume	0	1	1	2	0	5	1	6	0	1	0	1	0	7	0	7
% App. Total	0	50	50		0	83.3	16.7		0	100	0		0	100	0	
PHF	.000	.250	.250	.250	.000	.417	.250	.500	.000	.250	.000	.250	.000	.875	.000	.875

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City of Gardena
N/S: Budlong Avenue
E/W: Redondo Beach Boulevard
Weather: Clear

File Name : 02_GDA_Budlong_Redondo Beach AM
Site Code : 05719380
Start Date : 5/23/2019
Page No : 1

Groups Printed- 2 Axle Vehicles

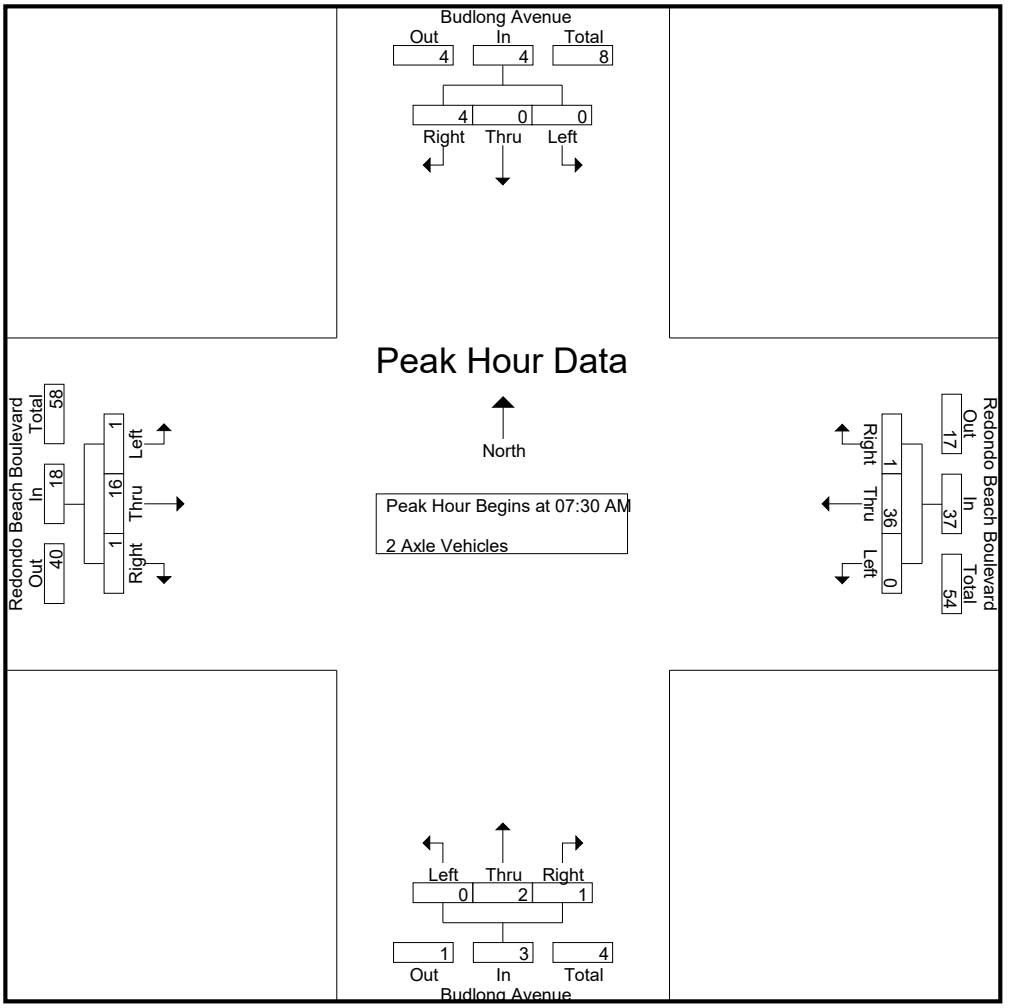
	Budlong Avenue Southbound				Redondo Beach Boulevard Westbound				Budlong Avenue Northbound				Redondo Beach Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	1	0	3	4	0	9	1	10	1	0	0	1	0	2	0	2	17
07:15 AM	0	0	0	0	0	4	0	4	0	0	0	0	0	1	0	1	5
07:30 AM	0	0	0	0	0	12	0	12	0	0	0	0	0	5	1	6	18
07:45 AM	0	0	0	0	0	8	0	8	0	0	1	1	0	3	0	3	12
Total	1	0	3	4	0	33	1	34	1	0	1	2	0	11	1	12	52
08:00 AM	0	0	2	2	0	11	0	11	0	2	0	2	0	5	0	5	20
08:15 AM	0	0	2	2	0	5	1	6	0	0	0	0	1	3	0	4	12
08:30 AM	0	0	1	1	0	5	0	5	0	0	0	0	0	6	0	6	12
08:45 AM	1	0	3	4	0	8	2	10	0	0	0	0	0	3	0	3	17
Total	1	0	8	9	0	29	3	32	0	2	0	2	1	17	0	18	61
09:00 AM	0	0	1	1	0	6	1	7	0	0	0	0	0	3	0	3	11
09:15 AM	0	0	2	2	0	7	1	8	1	0	0	1	0	4	0	4	15
09:30 AM	1	0	1	2	1	5	0	6	0	0	0	0	0	8	0	8	16
09:45 AM	0	0	1	1	0	3	0	3	0	0	0	0	1	1	0	2	6
Total	1	0	5	6	1	21	2	24	1	0	0	1	1	16	0	17	48
Grand Total	3	0	16	19	1	83	6	90	2	2	1	5	2	44	1	47	161
Apprch %	15.8	0	84.2		1.1	92.2	6.7		40	40	20		4.3	93.6	2.1		
Total %	1.9	0	9.9	11.8	0.6	51.6	3.7	55.9	1.2	1.2	0.6	3.1	1.2	27.3	0.6	29.2	

	Budlong Avenue Southbound				Redondo Beach Boulevard Westbound				Budlong Avenue Northbound				Redondo Beach Boulevard 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 07:30 AM to 08:15 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	0	0	0	0	0	**12**	0	**12**	0	0	0	0	0	**5**	**1**	**6**	18
07:45 AM	0	0	0	0	0	8	0	8	0	0	**1**	1	0	3	0	3	12
08:00 AM	0	0	**2**	**2**	0	11	0	11	0	**2**	0	**2**	0	5	0	5	**20**
08:15 AM	0	0	2	2	0	5	**1**	6	0	0	0	0	**1**	3	0	4	12
Total Volume	0	0	4	4	0	36	1	37	0	2	1	3	1	16	1	18	62
% App. Total	0	0	100		0	97.3	2.7		0	66.7	33.3		5.6	88.9	5.6		
PHF	.000	.000	.500	.500	.000	.750	.250	.771	.000	.250	.250	.375	.250	.800	.250	.750	.775

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City of Gardena
N/S: Budlong Avenue
E/W: Redondo Beach Boulevard
Weather: Clear

File Name : 02_GDA_Budlong_Redondo Beach AM
Site Code : 05719380
Start Date : 5/23/2019



Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:30 AM				07:30 AM				07:30 AM				07:30 AM			
+0 mins.	0	0	0	0	0	**12**	0	**12**	0	0	0	0	0	**5**	**1**	**6**
+15 mins.	0	0	0	0	0	8	0	8	0	0	**1**	1	0	3	0	3
+30 mins.	0	0	**2**	**2**	0	11	0	11	0	**2**	0	**2**	0	5	0	5
+45 mins.	0	0	2	2	0	5	**1**	6	0	0	0	0	**1**	3	0	4
Total Volume	0	0	4	4	0	36	1	37	0	2	1	3	1	16	1	18
% App. Total	0	0	100		0	97.3	2.7		0	66.7	33.3		5.6	88.9	5.6	
PHF	.000	.000	.500	.500	.000	.750	.250	.771	.000	.250	.250	.375	.250	.800	.250	.750

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City of Gardena
N/S: Budlong Avenue
E/W: Redondo Beach Boulevard
Weather: Clear

File Name : 02_GDA_Budlong_Redondo Beach AM
Site Code : 05719380
Start Date : 5/23/2019
Page No : 1

Groups Printed- 3+ Axle Trucks

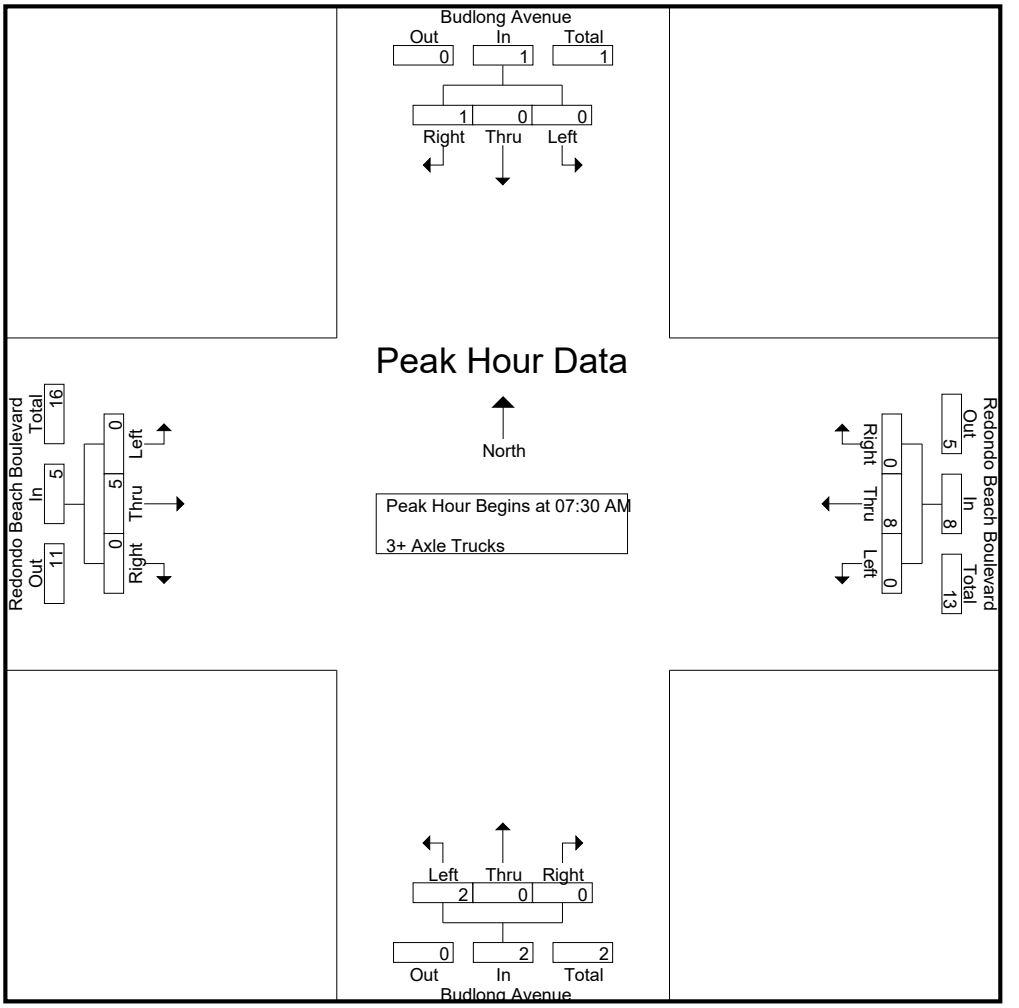
	Budlong Avenue Southbound				Redondo Beach Boulevard Westbound				Budlong Avenue Northbound				Redondo Beach Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	0	0	0	0	0	2	0	2	0	0	0	0	0	2	0	2	4
07:15 AM	0	0	0	0	0	1	0	1	1	0	0	1	0	1	0	1	3
07:30 AM	0	0	0	0	0	3	0	3	0	0	0	0	0	3	0	3	6
07:45 AM	0	0	0	0	0	1	0	1	1	0	0	1	0	1	0	1	3
Total	0	0	0	0	0	7	0	7	2	0	0	2	0	7	0	7	16
08:00 AM	0	0	0	0	0	3	0	3	0	0	0	0	0	0	0	0	3
08:15 AM	0	0	1	1	0	1	0	1	1	0	0	1	0	1	0	1	4
08:30 AM	0	0	1	1	0	3	0	3	0	0	0	0	0	1	0	1	5
08:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2	2
Total	0	0	2	2	0	7	0	7	1	0	0	1	0	4	0	4	14
09:00 AM	0	0	0	0	0	4	0	4	0	0	0	0	0	1	0	1	5
09:15 AM	0	0	0	0	0	1	0	1	0	0	0	0	0	2	0	2	3
09:30 AM	0	0	1	1	0	0	0	0	0	0	0	0	0	3	0	3	4
09:45 AM	0	0	0	0	0	6	0	6	0	0	0	0	0	3	0	3	9
Total	0	0	1	1	0	11	0	11	0	0	0	0	0	9	0	9	21
Grand Total	0	0	3	3	0	25	0	25	3	0	0	3	0	20	0	20	51
Apprch %	0	0	100		0	100	0		100	0	0		0	100	0		
Total %	0	0	5.9	5.9	0	49	0	49	5.9	0	0	5.9	0	39.2	0	39.2	

	Budlong Avenue Southbound				Redondo Beach Boulevard Westbound				Budlong Avenue Northbound				Redondo Beach Boulevard 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 07:30 AM to 08:15 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	0	0	0	0	0	**3**	0	**3**	0	0	0	0	0	**3**	0	**3**	**6**
07:45 AM	0	0	0	0	0	1	0	1	**1**	0	0	**1**	0	1	0	1	3
08:00 AM	0	0	0	0	0	3	0	3	0	0	0	0	0	0	0	0	3
08:15 AM	0	0	**1**	**1**	0	1	0	1	1	0	0	1	0	1	0	1	4
Total Volume	0	0	1	1	0	8	0	8	2	0	0	2	0	5	0	5	16
% App. Total	0	0	100		0	100	0		100	0	0		0	100	0		
PHF	.000	.000	.250	.250	.000	.667	.000	.667	.500	.000	.000	.500	.000	.417	.000	.417	.667

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City of Gardena
N/S: Budlong Avenue
E/W: Redondo Beach Boulevard
Weather: Clear

File Name : 02_GDA_Budlong_Redondo Beach AM
Site Code : 05719380
Start Date : 5/23/2019



Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:30 AM				07:30 AM				07:30 AM				07:30 AM			
+0 mins.	0	0	0	0	0	**3**	0	**3**	0	0	0	0	0	**3**	0	**3**
+15 mins.	0	0	0	0	0	1	0	1	**1**	0	0	**1**	0	1	0	1
+30 mins.	0	0	0	0	0	3	0	3	0	0	0	0	0	0	0	0
+45 mins.	0	0	**1**	**1**	0	1	0	1	1	0	0	1	0	1	0	1
Total Volume	0	0	1	1	0	8	0	8	2	0	0	2	0	5	0	5
% App. Total	0	0	100		0	100	0		100	0	0		0	100	0	
PHF	.000	.000	.250	.250	.000	.667	.000	.667	.500	.000	.000	.500	.000	.417	.000	.417

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City of Gardena
N/S: Budlong Avenue
E/W: Redondo Beach Boulevard
Weather: Clear

File Name : 02_GDA_Budlong_Redondo Beach PM
Site Code : 05719380
Start Date : 5/23/2019
Page No : 1

Groups Printed- Passenger Vehicles - Buses - 2 Axle Vehicles - 3+ Axle Trucks

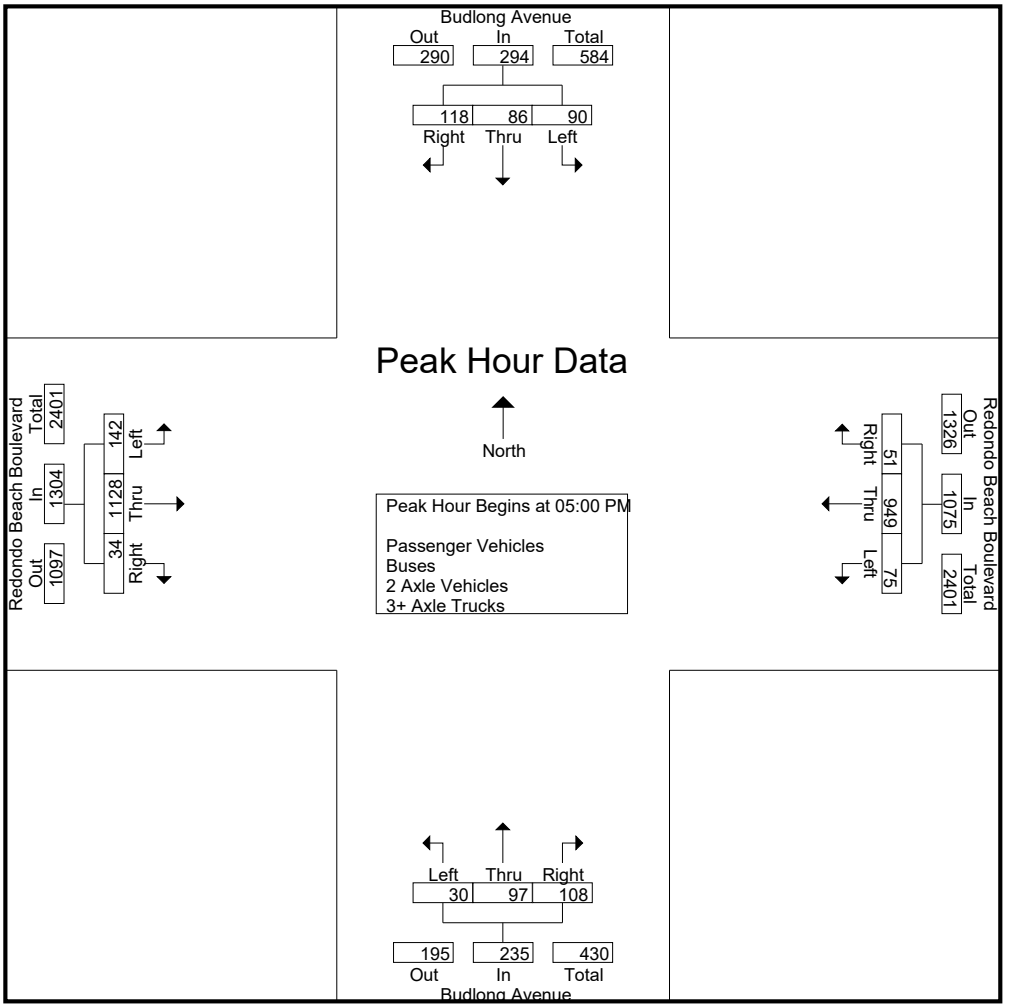
	Budlong Avenue Southbound				Redondo Beach Boulevard Westbound				Budlong Avenue Northbound				Redondo Beach Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
03:00 PM	29	30	30	89	18	226	15	259	11	26	21	58	27	288	6	321	727
03:15 PM	29	30	42	101	17	211	13	241	6	31	25	62	26	278	7	311	715
03:30 PM	24	32	48	104	11	223	17	251	8	25	27	60	32	261	9	302	717
03:45 PM	25	18	34	77	18	221	16	255	9	19	22	50	39	276	16	331	713
Total	107	110	154	371	64	881	61	1006	34	101	95	230	124	1103	38	1265	2872
04:00 PM	37	29	22	88	12	230	6	248	10	20	22	52	34	289	5	328	716
04:15 PM	30	22	31	83	16	211	18	245	15	26	21	62	33	284	4	321	711
04:30 PM	31	18	26	75	15	244	11	270	10	20	32	62	32	269	7	308	715
04:45 PM	21	27	20	68	14	236	8	258	9	24	16	49	29	252	6	287	662
Total	119	96	99	314	57	921	43	1021	44	90	91	225	128	1094	22	1244	2804
05:00 PM	21	15	23	59	19	223	14	256	2	17	29	48	31	284	11	326	689
05:15 PM	24	23	30	77	19	222	9	250	11	26	24	61	45	305	7	357	745
05:30 PM	26	29	33	88	14	259	14	287	8	28	29	65	31	271	4	306	746
05:45 PM	19	19	32	70	23	245	14	282	9	26	26	61	35	268	12	315	728
Total	90	86	118	294	75	949	51	1075	30	97	108	235	142	1128	34	1304	2908
Grand Total	316	292	371	979	196	2751	155	3102	108	288	294	690	394	3325	94	3813	8584
Apprch %	32.3	29.8	37.9		6.3	88.7	5		15.7	41.7	42.6		10.3	87.2	2.5		
Total %	3.7	3.4	4.3	11.4	2.3	32	1.8	36.1	1.3	3.4	3.4	8	4.6	38.7	1.1	44.4	
Passenger Vehicles	311	289	370	970	195	2692	152	3039	107	288	294	689	391	3213	92	3696	8394
% Passenger Vehicles	98.4	99	99.7	99.1	99.5	97.9	98.1	98	99.1	100	100	99.9	99.2	96.6	97.9	96.9	97.8
Buses	0	0	0	0	0	12	0	12	0	0	0	0	1	19	0	20	32
% Buses	0	0	0	0	0	0.4	0	0.4	0	0	0	0	0.3	0.6	0	0.5	0.4
2 Axle Vehicles	5	3	1	9	1	40	3	44	1	0	0	1	2	75	1	78	132
% 2 Axle Vehicles	1.6	1	0.3	0.9	0.5	1.5	1.9	1.4	0.9	0	0	0.1	0.5	2.3	1.1	2	1.5
3+ Axle Trucks	0	0	0	0	0	7	0	7	0	0	0	0	0	18	1	19	26
% 3+ Axle Trucks	0	0	0	0	0	0.3	0	0.2	0	0	0	0	0	0.5	1.1	0.5	0.3

	Budlong Avenue Southbound				Redondo Beach Boulevard Westbound				Budlong Avenue Northbound				Redondo Beach Boulevard 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 03:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 05:00 PM																	
05:00 PM	21	15	23	59	19	223	**14**	256	2	17	**29**	48	31	284	11	326	689
05:15 PM	24	23	30	77	19	222	9	250	**11**	26	24	61	**45**	**305**	7	**357**	745
05:30 PM	**26**	**29**	**33**	**88**	14	**259**	14	**287**	8	**28**	29	**65**	31	271	4	306	**746**
05:45 PM	19	19	32	70	**23**	245	14	282	9	26	26	61	35	268	**12**	315	728
Total Volume	90	86	118	294	75	949	51	1075	30	97	108	235	142	1128	34	1304	2908
% App. Total	30.6	29.3	40.1		7	88.3	4.7		12.8	41.3	46		10.9	86.5	2.6		
PHF	.865	.741	.894	.835	.815	.916	.911	.936	.682	.866	.931	.904	.789	.925	.708	.913	.975

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City of Gardena
N/S: Budlong Avenue
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Weather: Clear

File Name : 02_GDA_Budlong_Redondo Beach PM
Site Code : 05719380
Start Date : 5/23/2019



Peak Hour Analysis From 03:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	03:00 PM				05:00 PM				05:00 PM				05:00 PM			
+0 mins.	**29**	30	30	89	19	223	**14**	256	2	17	**29**	48	31	284	11	326
+15 mins.	29	30	42	101	19	222	9	250	**11**	26	24	61	**45**	**305**	7	**357**
+30 mins.	24	**32**	**48**	**104**	14	**259**	14	**287**	8	**28**	29	**65**	31	271	4	306
+45 mins.	25	18	34	77	**23**	245	14	282	9	26	26	61	35	268	**12**	315
Total Volume	107	110	154	371	75	949	51	1075	30	97	108	235	142	1128	34	1304
% App. Total	28.8	29.6	41.5		7	88.3	4.7		12.8	41.3	46		10.9	86.5	2.6	
PHF	.922	.859	.802	.892	.815	.916	.911	.936	.682	.866	.931	.904	.789	.925	.708	.913

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City of Gardena
N/S: Budlong Avenue
E/W: Redondo Beach Boulevard
Weather: Clear

File Name : 02_GDA_Budlong_Redondo Beach PM
Site Code : 05719380
Start Date : 5/23/2019
Page No : 1

Groups Printed- Passenger Vehicles

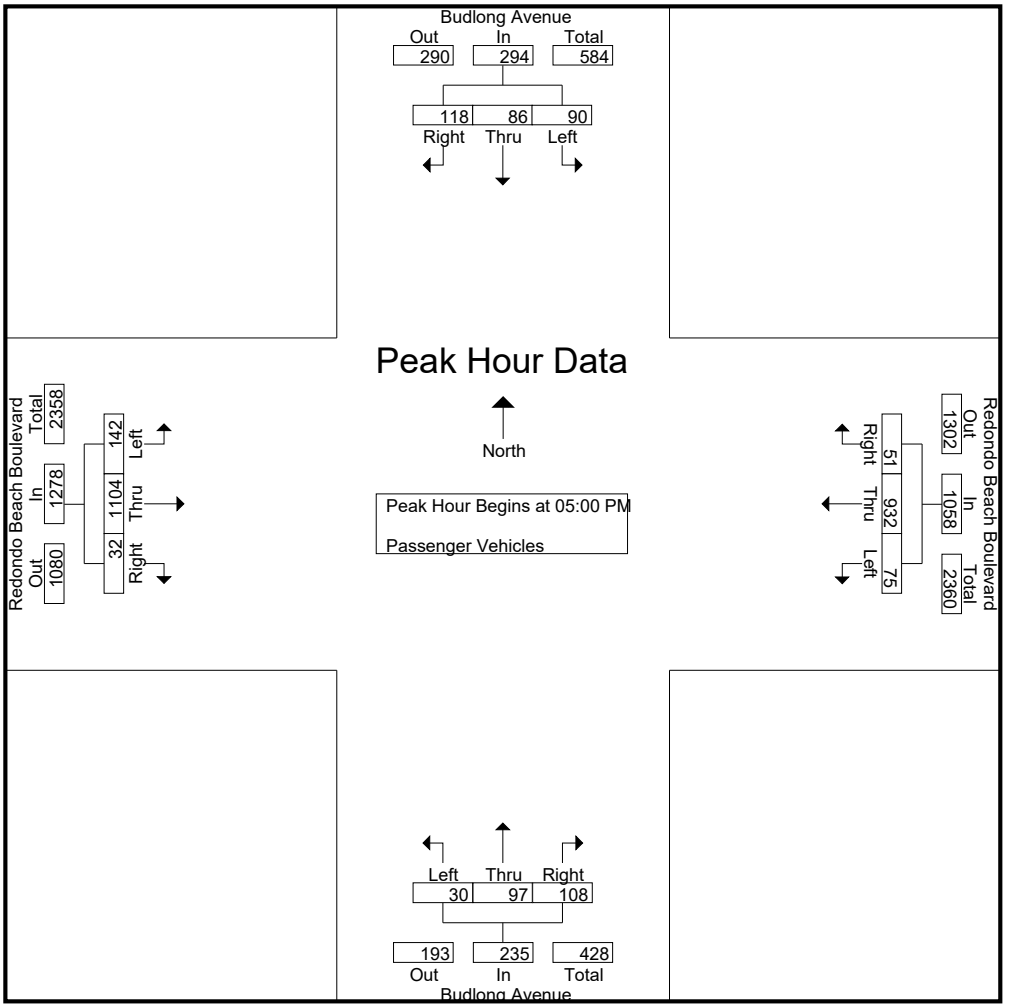
	Budlong Avenue Southbound				Redondo Beach Boulevard Westbound				Budlong Avenue Northbound				Redondo Beach Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
03:00 PM	27	30	30	87	17	224	14	255	11	26	21	58	27	276	6	309	709
03:15 PM	29	29	42	100	17	204	12	233	6	31	25	62	25	267	7	299	694
03:30 PM	23	32	48	103	11	218	17	246	8	25	27	60	32	255	9	296	705
03:45 PM	25	18	34	77	18	215	16	249	9	19	22	50	39	262	16	317	693
Total	104	109	154	367	63	861	59	983	34	101	95	230	123	1060	38	1221	2801
04:00 PM	37	28	22	87	12	223	6	241	9	20	22	51	34	278	5	317	696
04:15 PM	29	22	30	81	16	208	18	242	15	26	21	62	31	273	4	308	693
04:30 PM	30	18	26	74	15	237	11	263	10	20	32	62	32	261	7	300	699
04:45 PM	21	26	20	67	14	231	7	252	9	24	16	49	29	237	6	272	640
Total	117	94	98	309	57	899	42	998	43	90	91	224	126	1049	22	1197	2728
05:00 PM	21	15	23	59	19	219	14	252	2	17	29	48	31	278	10	319	678
05:15 PM	24	23	30	77	19	217	9	245	11	26	24	61	45	298	6	349	732
05:30 PM	26	29	33	88	14	257	14	285	8	28	29	65	31	268	4	303	741
05:45 PM	19	19	32	70	23	239	14	276	9	26	26	61	35	260	12	307	714
Total	90	86	118	294	75	932	51	1058	30	97	108	235	142	1104	32	1278	2865
Grand Total	311	289	370	970	195	2692	152	3039	107	288	294	689	391	3213	92	3696	8394
Apprch %	32.1	29.8	38.1		6.4	88.6	5		15.5	41.8	42.7		10.6	86.9	2.5		
Total %	3.7	3.4	4.4	11.6	2.3	32.1	1.8	36.2	1.3	3.4	3.5	8.2	4.7	38.3	1.1	44	

	Budlong Avenue Southbound				Redondo Beach Boulevard Westbound				Budlong Avenue Northbound				Redondo Beach Boulevard 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 05:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 05:00 PM																	
05:00 PM	21	15	23	59	19	219	**14**	252	2	17	**29**	48	31	278	10	319	678
05:15 PM	24	23	30	77	19	217	9	245	**11**	26	24	61	**45**	**298**	6	**349**	732
05:30 PM	**26**	**29**	**33**	**88**	14	**257**	14	**285**	8	**28**	29	**65**	31	268	4	303	**741**
05:45 PM	19	19	32	70	**23**	239	14	276	9	26	26	61	35	260	**12**	307	714
Total Volume	90	86	118	294	75	932	51	1058	30	97	108	235	142	1104	32	1278	2865
% App. Total	30.6	29.3	40.1		7.1	88.1	4.8		12.8	41.3	46		11.1	86.4	2.5		
PHF	.865	.741	.894	.835	.815	.907	.911	.928	.682	.866	.931	.904	.789	.926	.667	.915	.967

Counts Unlimited
PO Box 1178
Corona, CA 92878
(951) 268-6268

City of Gardena
N/S: Budlong Avenue
E/W: Redondo Beach Boulevard
Weather: Clear

File Name : 02_GDA_Budlong_Redondo Beach PM
Site Code : 05719380
Start Date : 5/23/2019



Peak Hour Analysis From 05:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	05:00 PM				05:00 PM				05:00 PM				05:00 PM			
+0 mins.	21	15	23	59	19	219	**14**	252	2	17	**29**	48	31	278	10	319
+15 mins.	24	23	30	77	19	217	9	245	**11**	26	24	61	**45**	**298**	6	**349**
+30 mins.	**26**	**29**	**33**	**88**	14	**257**	14	**285**	8	**28**	29	**65**	31	268	4	303
+45 mins.	19	19	32	70	**23**	239	14	276	9	26	26	61	35	260	**12**	307
Total Volume	90	86	118	294	75	932	51	1058	30	97	108	235	142	1104	32	1278
% App. Total	30.6	29.3	40.1		7.1	88.1	4.8		12.8	41.3	46		11.1	86.4	2.5	
PHF	.865	.741	.894	.835	.815	.907	.911	.928	.682	.866	.931	.904	.789	.926	.667	.915

Counts Unlimited
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Corona, CA 92878
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City of Gardena
N/S: Budlong Avenue
E/W: Redondo Beach Boulevard
Weather: Clear

File Name : 02_GDA_Budlong_Redondo Beach PM
Site Code : 05719380
Start Date : 5/23/2019
Page No : 1

Groups Printed- Buses

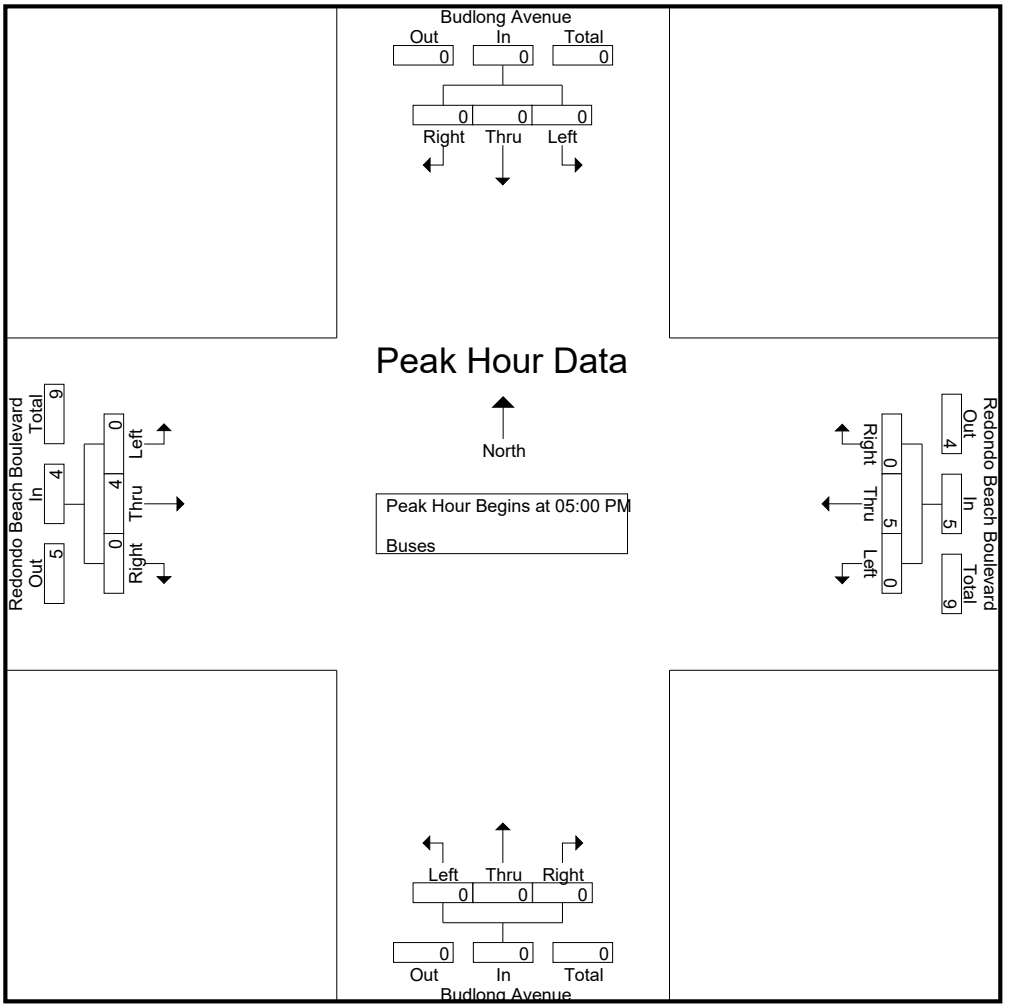
	Budlong Avenue Southbound				Redondo Beach Boulevard Westbound				Budlong Avenue Northbound				Redondo Beach Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
03:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
03:15 PM	0	0	0	0	0	2	0	2	0	0	0	0	1	1	0	2	4
03:30 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	1	0	1	2
03:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
Total	0	0	0	0	0	3	0	3	0	0	0	0	1	4	0	5	8
04:00 PM	0	0	0	0	0	2	0	2	0	0	0	0	0	2	0	2	4
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0	4	4
04:30 PM	0	0	0	0	0	2	0	2	0	0	0	0	0	2	0	2	4
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	3	3
Total	0	0	0	0	0	4	0	4	0	0	0	0	0	11	0	11	15
05:00 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	1	0	1	2
05:15 PM	0	0	0	0	0	2	0	2	0	0	0	0	0	1	0	1	3
05:30 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
05:45 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	2	0	2	3
Total	0	0	0	0	0	5	0	5	0	0	0	0	0	4	0	4	9
Grand Total	0	0	0	0	0	12	0	12	0	0	0	0	1	19	0	20	32
Apprch %	0	0	0		0	100	0		0	0	0		5	95	0		
Total %	0	0	0	0	0	37.5	0	37.5	0	0	0	0	3.1	59.4	0	62.5	

	Budlong Avenue Southbound				Redondo Beach Boulevard Westbound				Budlong Avenue Northbound				Redondo Beach Boulevard 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 05:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 05:00 PM																	
05:00 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	1	0	1	2
05:15 PM	0	0	0	0	0	**2**	0	**2**	0	0	0	0	0	1	0	1	**3**
05:30 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
05:45 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	**2**	0	**2**	3
Total Volume	0	0	0	0	0	5	0	5	0	0	0	0	0	4	0	4	9
% App. Total	0	0	0		0	100	0		0	0	0		0	100	0		
PHF	.000	.000	.000	.000	.000	.625	.000	.625	.000	.000	.000	.000	.000	.500	.000	.500	.750

Counts Unlimited
PO Box 1178
Corona, CA 92878
(951) 268-6268

City of Gardena
N/S: Budlong Avenue
E/W: Redondo Beach Boulevard
Weather: Clear

File Name : 02_GDA_Budlong_Redondo Beach PM
Site Code : 05719380
Start Date : 5/23/2019



Peak Hour Analysis From 05:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	05:00 PM				05:00 PM				05:00 PM				05:00 PM			
+0 mins.	0	0	0	0	0	1	0	1	0	0	0	0	0	1	0	1
+15 mins.	0	0	0	0	0	**2**	0	**2**	0	0	0	0	0	1	0	1
+30 mins.	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0
+45 mins.	0	0	0	0	0	1	0	1	0	0	0	0	0	**2**	0	**2**
Total Volume	0	0	0	0	0	5	0	5	0	0	0	0	0	4	0	4
% App. Total	0	0	0		0	100	0		0	0	0		0	100	0	
PHF	.000	.000	.000	.000	.000	.625	.000	.625	.000	.000	.000	.000	.000	.500	.000	.500

Counts Unlimited
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Corona, CA 92878
(951) 268-6268

City of Gardena
N/S: Budlong Avenue
E/W: Redondo Beach Boulevard
Weather: Clear

File Name : 02_GDA_Budlong_Redondo Beach PM
Site Code : 05719380
Start Date : 5/23/2019
Page No : 1

Groups Printed- 2 Axle Vehicles

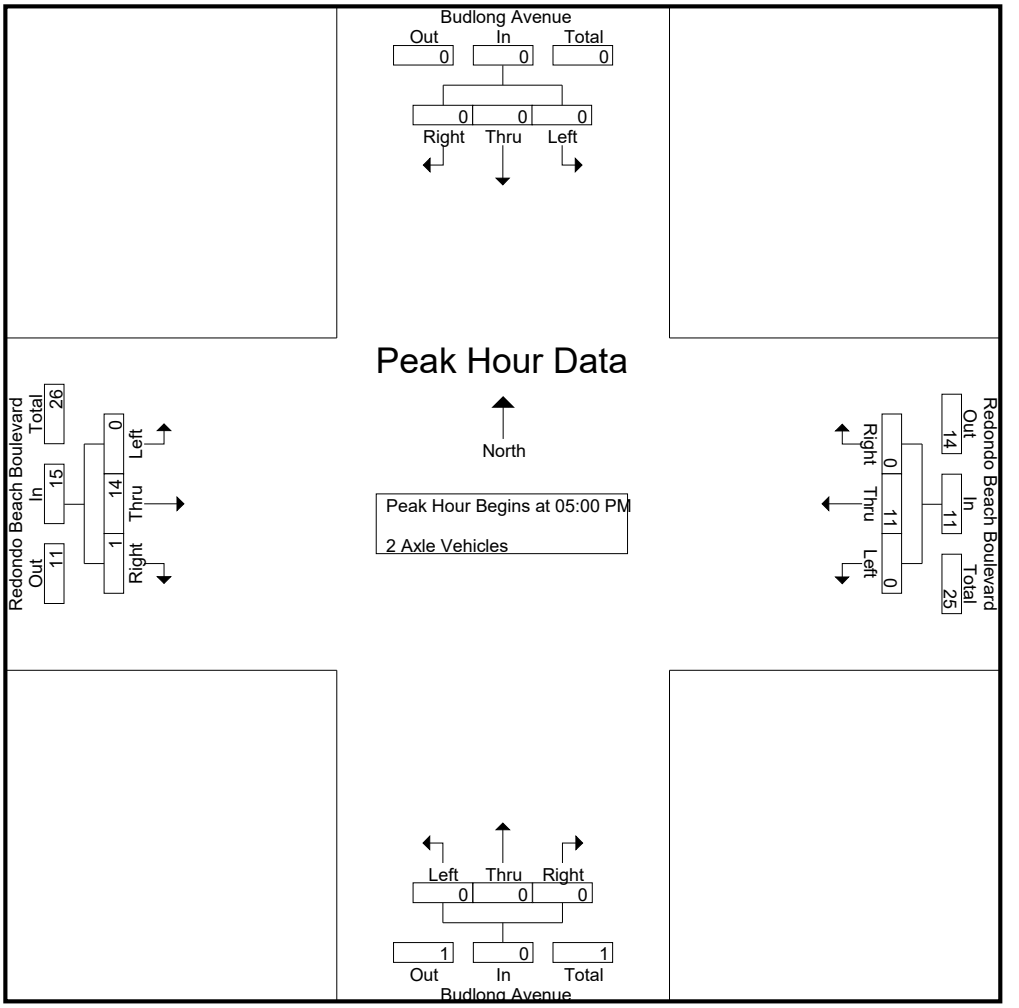
	Budlong Avenue Southbound				Redondo Beach Boulevard Westbound				Budlong Avenue Northbound				Redondo Beach Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
03:00 PM	2	0	0	2	1	2	1	4	0	0	0	0	0	10	0	10	16
03:15 PM	0	1	0	1	0	5	1	6	0	0	0	0	0	5	0	5	12
03:30 PM	1	0	0	1	0	4	0	4	0	0	0	0	0	5	0	5	10
03:45 PM	0	0	0	0	0	4	0	4	0	0	0	0	0	12	0	12	16
Total	3	1	0	4	1	15	2	18	0	0	0	0	0	32	0	32	54
04:00 PM	0	1	0	1	0	3	0	3	1	0	0	1	0	8	0	8	13
04:15 PM	1	0	1	2	0	3	0	3	0	0	0	0	2	5	0	7	12
04:30 PM	1	0	0	1	0	4	0	4	0	0	0	0	0	6	0	6	11
04:45 PM	0	1	0	1	0	4	1	5	0	0	0	0	0	10	0	10	16
Total	2	2	1	5	0	14	1	15	1	0	0	1	2	29	0	31	52
05:00 PM	0	0	0	0	0	3	0	3	0	0	0	0	0	4	1	5	8
05:15 PM	0	0	0	0	0	3	0	3	0	0	0	0	0	5	0	5	8
05:30 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	2	0	2	3
05:45 PM	0	0	0	0	0	4	0	4	0	0	0	0	0	3	0	3	7
Total	0	0	0	0	0	11	0	11	0	0	0	0	0	14	1	15	26
Grand Total	5	3	1	9	1	40	3	44	1	0	0	1	2	75	1	78	132
Apprch %	55.6	33.3	11.1		2.3	90.9	6.8		100	0	0		2.6	96.2	1.3		
Total %	3.8	2.3	0.8	6.8	0.8	30.3	2.3	33.3	0.8	0	0	0.8	1.5	56.8	0.8	59.1	

	Budlong Avenue Southbound				Redondo Beach Boulevard Westbound				Budlong Avenue Northbound				Redondo Beach Boulevard 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 05:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 05:00 PM																	
05:00 PM	0	0	0	0	0	3	0	3	0	0	0	0	0	4	**1**	**5**	**8**
05:15 PM	0	0	0	0	0	3	0	3	0	0	0	0	0	**5**	0	5	8
05:30 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	2	0	2	3
05:45 PM	0	0	0	0	0	**4**	0	**4**	0	0	0	0	0	3	0	3	7
Total Volume	0	0	0	0	0	11	0	11	0	0	0	0	0	14	1	15	26
% App. Total	0	0	0		0	100	0		0	0	0		0	93.3	6.7		
PHF	.000	.000	.000	.000	.000	.688	.000	.688	.000	.000	.000	.000	.000	.700	.250	.750	.813

Counts Unlimited
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(951) 268-6268

City of Gardena
N/S: Budlong Avenue
E/W: Redondo Beach Boulevard
Weather: Clear

File Name : 02_GDA_Budlong_Redondo Beach PM
Site Code : 05719380
Start Date : 5/23/2019



Peak Hour Analysis From 05:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	05:00 PM				05:00 PM				05:00 PM				05:00 PM			
+0 mins.	0	0	0	0	0	3	0	3	0	0	0	0	0	4	**1**	**5**
+15 mins.	0	0	0	0	0	3	0	3	0	0	0	0	0	**5**	0	5
+30 mins.	0	0	0	0	0	1	0	1	0	0	0	0	0	2	0	2
+45 mins.	0	0	0	0	0	**4**	0	**4**	0	0	0	0	0	3	0	3
Total Volume	0	0	0	0	0	11	0	11	0	0	0	0	0	14	1	15
% App. Total	0	0	0		0	100	0		0	0	0		0	93.3	6.7	
PHF	.000	.000	.000	.000	.000	.688	.000	.688	.000	.000	.000	.000	.000	.700	.250	.750

Counts Unlimited
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(951) 268-6268

City of Gardena
N/S: Budlong Avenue
E/W: Redondo Beach Boulevard
Weather: Clear

File Name : 02_GDA_Budlong_Redondo Beach PM
Site Code : 05719380
Start Date : 5/23/2019
Page No : 1

Groups Printed- 3+ Axle Trucks

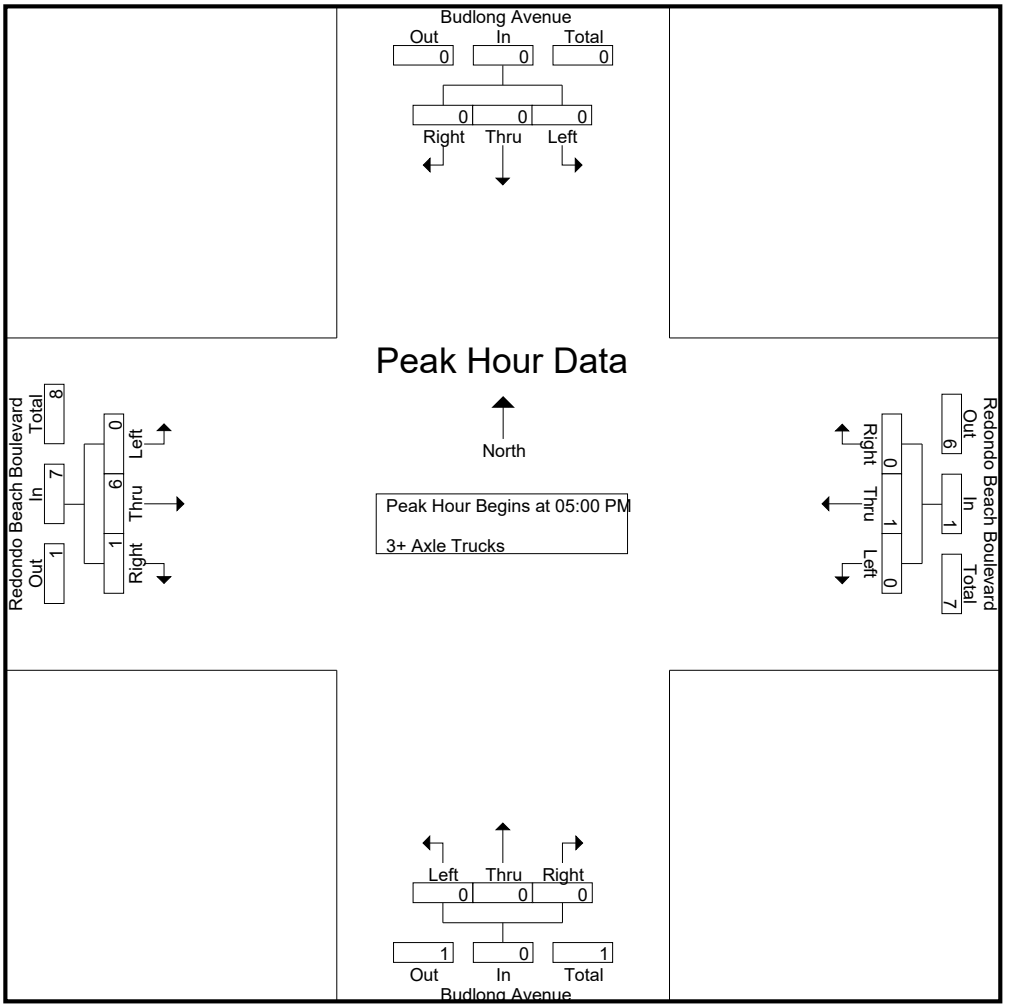
	Budlong Avenue Southbound				Redondo Beach Boulevard Westbound				Budlong Avenue Northbound				Redondo Beach Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
03:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
03:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	5	0	5	5
03:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:45 PM	0	0	0	0	0	2	0	2	0	0	0	0	0	1	0	1	3
Total	0	0	0	0	0	2	0	2	0	0	0	0	0	7	0	7	9
04:00 PM	0	0	0	0	0	2	0	2	0	0	0	0	0	1	0	1	3
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2	2
04:30 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
04:45 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	2	0	2	3
Total	0	0	0	0	0	4	0	4	0	0	0	0	0	5	0	5	9
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	2	2
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
05:45 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	3	0	3	4
Total	0	0	0	0	0	1	0	1	0	0	0	0	0	6	1	7	8
Grand Total	0	0	0	0	0	7	0	7	0	0	0	0	0	18	1	19	26
Apprch %	0	0	0		0	100	0		0	0	0		0	94.7	5.3		
Total %	0	0	0	0	0	26.9	0	26.9	0	0	0	0	0	69.2	3.8	73.1	

	Budlong Avenue Southbound				Redondo Beach Boulevard Westbound				Budlong Avenue Northbound				Redondo Beach Boulevard 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 05:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 05:00 PM																	
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	**1**	2	2
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
05:45 PM	0	0	0	0	0	**1**	0	**1**	0	0	0	0	0	**3**	0	**3**	**4**
Total Volume	0	0	0	0	0	1	0	1	0	0	0	0	0	6	1	7	8
% App. Total	0	0	0		0	100	0		0	0	0		0	85.7	14.3		
PHF	.000	.000	.000	.000	.000	.250	.000	.250	.000	.000	.000	.000	.000	.500	.250	.583	.500

Counts Unlimited
PO Box 1178
Corona, CA 92878
(951) 268-6268

City of Gardena
N/S: Budlong Avenue
E/W: Redondo Beach Boulevard
Weather: Clear

File Name : 02_GDA_Budlong_Redondo Beach PM
Site Code : 05719380
Start Date : 5/23/2019



Peak Hour Analysis From 05:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	05:00 PM				05:00 PM				05:00 PM				05:00 PM			
+0 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1
+15 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	1	**1**	2
+30 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1
+45 mins.	0	0	0	0	0	**1**	0	**1**	0	0	0	0	0	**3**	0	**3**
Total Volume	0	0	0	0	0	1	0	1	0	0	0	0	0	6	1	7
% App. Total	0	0	0		0	100	0		0	0	0		0	85.7	14.3	
PHF	.000	.000	.000	.000	.000	.250	.000	.250	.000	.000	.000	.000	.000	.500	.250	.583

Location: Gardena
N/S: Budlong Avenue
E/W: Redondo Beach Blvd

Date: 5/23/2019
Day: Thursday

PEDESTRIANS

	North Leg Budlong Avenue	East Leg Redondo Beach Blvd	South Leg Budlong Avenue	West Leg Redondo Beach Blvd	
	Pedestrians	Pedestrians	Pedestrians	Pedestrians	
7:00 AM	0	3	2	0	5
7:15 AM	0	2	3	1	6
7:30 AM	1	0	0	1	2
7:45 AM	0	0	3	3	6
8:00 AM	5	1	0	1	7
8:15 AM	2	1	2	0	5
8:30 AM	4	1	3	1	9
8:45 AM	0	2	1	3	6
9:00 AM	4	2	2	1	9
9:15 AM	7	8	6	0	21
9:30 AM	3	4	0	0	7
9:45 AM	2	3	3	2	10
TOTAL VOLUMES:	28	27	25	13	93

	North Leg Budlong Avenue	East Leg Redondo Beach Blvd	South Leg Budlong Avenue	West Leg Redondo Beach Blvd	
	Pedestrians	Pedestrians	Pedestrians	Pedestrians	
3:00 PM	6	3	6	5	20
3:15 PM	6	3	7	10	26
3:30 PM	8	4	10	5	27
3:45 PM	5	2	5	4	16
4:00 PM	1	5	5	3	14
4:15 PM	9	4	0	5	18
4:30 PM	2	6	5	3	16
4:45 PM	4	4	7	5	20
5:00 PM	8	2	5	1	16
5:15 PM	1	6	1	1	9
5:30 PM	3	3	4	4	14
5:45 PM	1	2	4	5	12
TOTAL VOLUMES:	54	44	59	51	208

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Location: Gardena
N/S: Budlong Avenue
E/W: Redondo Beach Blvd

Date: 5/23/2019
Day: Thursday

BICYCLES

	Southbound Budlong Avenue			Westbound Redondo Beach Blvd			Northbound Budlong Avenue			Eastbound Redondo Beach Blvd			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
7:00 AM	0	1	0	0	1	0	0	0	0	0	1	0	3
7:15 AM	0	2	0	0	0	0	0	0	0	0	1	0	3
7:30 AM	0	0	0	0	1	0	0	0	0	0	0	0	1
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM	0	1	0	0	0	0	0	0	0	0	1	0	2
8:15 AM	0	0	0	0	0	0	0	1	0	0	0	0	1
8:30 AM	0	0	0	0	3	0	0	0	0	0	2	0	5
8:45 AM	0	0	0	0	1	0	0	0	0	0	1	0	2
9:00 AM	0	0	0	0	1	0	0	0	0	0	0	0	1
9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
9:30 AM	0	0	0	0	0	0	0	0	0	0	1	0	1
9:45 AM	0	0	0	0	0	0	0	0	0	0	1	0	1
TOTAL VOLUMES:	0	4	0	0	7	0	0	1	0	0	8	0	20

	Southbound Budlong Avenue			Westbound Redondo Beach Blvd			Northbound Budlong Avenue			Eastbound Redondo Beach Blvd			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
3:00 PM	0	0	0	0	0	0	0	0	0	1	2	0	3
3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
3:45 PM	0	0	0	0	1	0	0	0	0	0	1	0	2
4:00 PM	0	2	0	0	3	0	0	1	0	0	1	0	7
4:15 PM	0	0	0	0	1	0	0	1	0	0	1	0	3
4:30 PM	0	0	0	1	1	0	0	0	0	0	2	0	4
4:45 PM	0	0	0	0	0	0	0	2	0	0	2	0	4
5:00 PM	0	0	0	0	0	0	0	0	0	0	2	0	2
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	1	0	0	1	0	0	2	0	0	0	0	4
5:45 PM	0	0	0	0	0	0	0	1	0	0	0	0	1
TOTAL VOLUMES:	0	3	0	1	7	0	0	7	0	1	11	0	30

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City of Gardena
N/S: Vermont Avenue
E/W: Rosecrans Avenue
Weather: Clear

File Name : 03_GDA_Vermont_Rosecrans AM
Site Code : 05719380
Start Date : 5/23/2019

Groups Printed- Passenger Vehicles - Buses - 2 Axle Vehicles - 3+ Axle Trucks

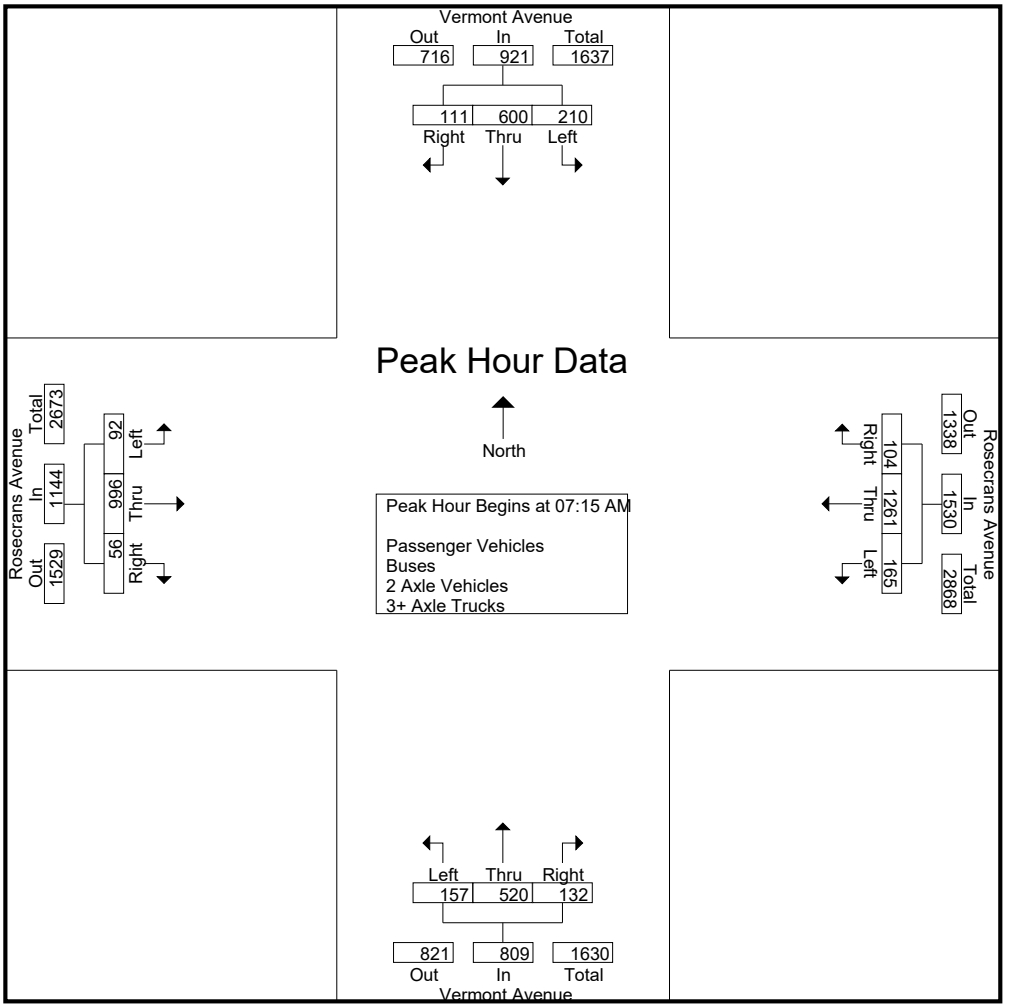
	Vermont Avenue Southbound				Rosecrans Avenue Westbound				Vermont Avenue Northbound				Rosecrans Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	43	113	26	182	28	269	23	320	27	107	22	156	16	163	8	187	845
07:15 AM	52	112	24	188	44	305	32	381	34	108	29	171	17	220	6	243	983
07:30 AM	56	177	24	257	42	304	18	364	39	129	36	204	27	270	18	315	1140
07:45 AM	53	174	34	261	34	350	29	413	41	141	31	213	24	291	19	334	1221
Total	204	576	108	888	148	1228	102	1478	141	485	118	744	84	944	51	1079	4189
08:00 AM	49	137	29	215	45	302	25	372	43	142	36	221	24	215	13	252	1060
08:15 AM	45	123	20	188	35	283	38	356	25	104	37	166	25	222	14	261	971
08:30 AM	59	92	18	169	34	278	35	347	28	96	22	146	19	184	10	213	875
08:45 AM	38	82	29	149	54	296	43	393	25	75	18	118	19	204	12	235	895
Total	191	434	96	721	168	1159	141	1468	121	417	113	651	87	825	49	961	3801
09:00 AM	40	63	19	122	27	217	34	278	26	75	32	133	22	131	14	167	700
09:15 AM	38	67	24	129	26	241	26	293	22	112	30	164	14	196	13	223	809
09:30 AM	45	70	19	134	32	199	29	260	25	88	18	131	18	166	13	197	722
09:45 AM	33	75	27	135	26	237	29	292	35	79	22	136	15	181	11	207	770
Total	156	275	89	520	111	894	118	1123	108	354	102	564	69	674	51	794	3001
Grand Total	551	1285	293	2129	427	3281	361	4069	370	1256	333	1959	240	2443	151	2834	10991
Apprch %	25.9	60.4	13.8		10.5	80.6	8.9		18.9	64.1	17		8.5	86.2	5.3		
Total %	5	11.7	2.7	19.4	3.9	29.9	3.3	37	3.4	11.4	3	17.8	2.2	22.2	1.4	25.8	
Passenger Vehicles	525	1236	285	2046	411	3063	337	3811	353	1207	300	1860	237	2260	144	2641	10358
% Passenger Vehicles	95.3	96.2	97.3	96.1	96.3	93.4	93.4	93.7	95.4	96.1	90.1	94.9	98.8	92.5	95.4	93.2	94.2
Buses	4	24	1	29	9	18	1	28	0	19	6	25	1	25	0	26	108
% Buses	0.7	1.9	0.3	1.4	2.1	0.5	0.3	0.7	0	1.5	1.8	1.3	0.4	1	0	0.9	1
2 Axle Vehicles	20	25	4	49	5	123	13	141	14	20	20	54	2	109	7	118	362
% 2 Axle Vehicles	3.6	1.9	1.4	2.3	1.2	3.7	3.6	3.5	3.8	1.6	6	2.8	0.8	4.5	4.6	4.2	3.3
3+ Axle Trucks	2	0	3	5	2	77	10	89	3	10	7	20	0	49	0	49	163
% 3+ Axle Trucks	0.4	0	1	0.2	0.5	2.3	2.8	2.2	0.8	0.8	2.1	1	0	2	0	1.7	1.5

	Vermont Avenue Southbound				Rosecrans Avenue Westbound				Vermont Avenue Northbound				Rosecrans Avenue 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 09:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	52	112	24	188	44	305	**32**	381	34	108	29	171	17	220	6	243	983
07:30 AM	**56**	**177**	24	257	42	304	18	364	39	129	**36**	204	**27**	270	18	315	1140
07:45 AM	53	174	**34**	**261**	34	**350**	29	**413**	41	141	31	213	24	**291**	**19**	**334**	**1221**
08:00 AM	49	137	29	215	**45**	302	25	372	**43**	**142**	36	**221**	24	215	13	252	1060
Total Volume	210	600	111	921	165	1261	104	1530	157	520	132	809	92	996	56	1144	4404
% App. Total	22.8	65.1	12.1		10.8	82.4	6.8		19.4	64.3	16.3		8	87.1	4.9		
PHF	.938	.847	.816	.882	.917	.901	.813	.926	.913	.915	.917	.915	.852	.856	.737	.856	.902

Counts Unlimited
PO Box 1178
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City of Gardena
N/S: Vermont Avenue
E/W: Rosecrans Avenue
Weather: Clear

File Name : 03_GDA_Vermont_Rosecrans AM
Site Code : 05719380
Start Date : 5/23/2019



Peak Hour Analysis From 07:00 AM to 09:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:15 AM				07:15 AM				07:15 AM				07:30 AM			
+0 mins.	52	112	24	188	44	305	**32**	381	34	108	29	171	**27**	270	18	315
+15 mins.	**56**	**177**	24	257	42	304	18	364	39	129	**36**	204	24	**291**	**19**	**334**
+30 mins.	53	174	**34**	**261**	34	**350**	29	**413**	41	141	31	213	24	215	13	252
+45 mins.	49	137	29	215	**45**	302	25	372	**43**	**142**	36	**221**	25	222	14	261
Total Volume	210	600	111	921	165	1261	104	1530	157	520	132	809	100	998	64	1162
% App. Total	22.8	65.1	12.1		10.8	82.4	6.8		19.4	64.3	16.3		8.6	85.9	5.5	
PHF	.938	.847	.816	.882	.917	.901	.813	.926	.913	.915	.917	.915	.926	.857	.842	.870

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City of Gardena
N/S: Vermont Avenue
E/W: Rosecrans Avenue
Weather: Clear

File Name : 03_GDA_Vermont_Rosecrans AM
Site Code : 05719380
Start Date : 5/23/2019
Page No : 1

Groups Printed- Passenger Vehicles

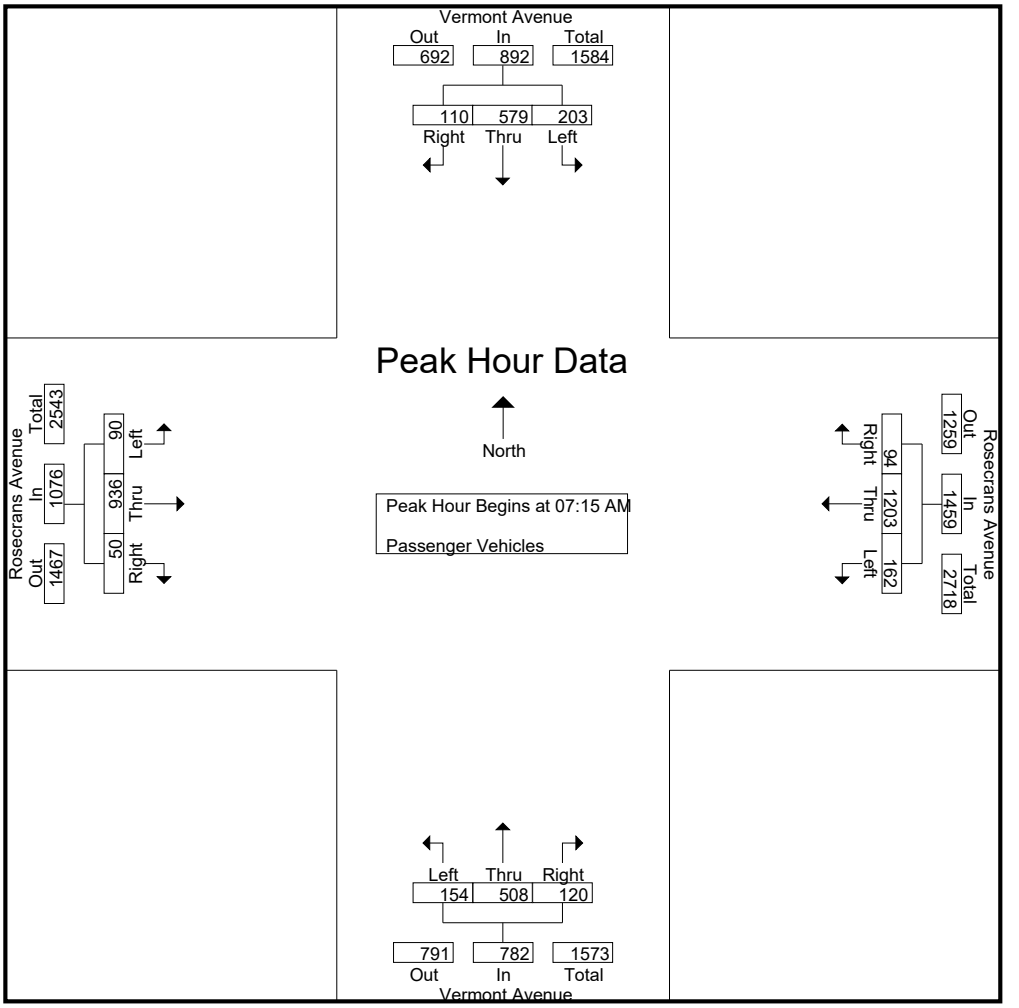
	Vermont Avenue Southbound				Rosecrans Avenue Westbound				Vermont Avenue Northbound				Rosecrans Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	41	107	26	174	26	254	22	302	27	102	21	150	16	152	7	175	801
07:15 AM	52	107	24	183	43	292	29	364	34	105	25	164	17	199	4	220	931
07:30 AM	54	172	24	250	41	289	17	347	38	126	34	198	26	257	17	300	1095
07:45 AM	50	166	33	249	34	337	25	396	40	138	28	206	23	276	17	316	1167
Total	197	552	107	856	144	1172	93	1409	139	471	108	718	82	884	45	1011	3994
08:00 AM	47	134	29	210	44	285	23	352	42	139	33	214	24	204	12	240	1016
08:15 AM	40	119	20	179	30	266	36	332	22	98	33	153	25	208	14	247	911
08:30 AM	59	90	16	165	33	253	35	321	27	91	20	138	19	169	10	198	822
08:45 AM	36	80	28	144	52	275	40	367	24	72	16	112	19	187	12	218	841
Total	182	423	93	698	159	1079	134	1372	115	400	102	617	87	768	48	903	3590
09:00 AM	38	59	19	116	27	199	30	256	24	74	29	127	22	117	14	153	652
09:15 AM	35	65	23	123	26	218	25	269	19	103	27	149	14	178	13	205	746
09:30 AM	42	66	18	126	30	178	27	235	24	82	15	121	17	148	13	178	660
09:45 AM	31	71	25	127	25	217	28	270	32	77	19	128	15	165	11	191	716
Total	146	261	85	492	108	812	110	1030	99	336	90	525	68	608	51	727	2774
Grand Total	525	1236	285	2046	411	3063	337	3811	353	1207	300	1860	237	2260	144	2641	10358
Apprch %	25.7	60.4	13.9		10.8	80.4	8.8		19	64.9	16.1		9	85.6	5.5		
Total %	5.1	11.9	2.8	19.8	4	29.6	3.3	36.8	3.4	11.7	2.9	18	2.3	21.8	1.4	25.5	

	Vermont Avenue Southbound				Rosecrans Avenue Westbound				Vermont Avenue Northbound				Rosecrans Avenue 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 07:15 AM to 08:00 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	52	107	24	183	43	292	**29**	364	34	105	25	164	17	199	4	220	931
07:30 AM	**54**	**172**	24	**250**	41	289	17	347	38	126	**34**	198	**26**	257	**17**	300	1095
07:45 AM	50	166	**33**	249	34	**337**	25	**396**	40	138	28	206	23	**276**	17	**316**	**1167**
08:00 AM	47	134	29	210	**44**	285	23	352	**42**	**139**	33	**214**	24	204	12	240	1016
Total Volume	203	579	110	892	162	1203	94	1459	154	508	120	782	90	936	50	1076	4209
% App. Total	22.8	64.9	12.3		11.1	82.5	6.4		19.7	65	15.3		8.4	87	4.6		
PHF	.940	.842	.833	.892	.920	.892	.810	.921	.917	.914	.882	.914	.865	.848	.735	.851	.902

Counts Unlimited
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City of Gardena
N/S: Vermont Avenue
E/W: Rosecrans Avenue
Weather: Clear

File Name : 03_GDA_Vermont_Rosecrans AM
Site Code : 05719380
Start Date : 5/23/2019
Page No : 2



Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:15 AM				07:15 AM				07:15 AM				07:15 AM			
+0 mins.	52	107	24	183	43	292	**29**	364	34	105	25	164	17	199	4	220
+15 mins.	**54**	**172**	24	**250**	41	289	17	347	38	126	**34**	198	**26**	257	**17**	300
+30 mins.	50	166	**33**	249	34	**337**	25	**396**	40	138	28	206	23	**276**	17	**316**
+45 mins.	47	134	29	210	**44**	285	23	352	**42**	**139**	33	**214**	24	204	12	240
Total Volume	203	579	110	892	162	1203	94	1459	154	508	120	782	90	936	50	1076
% App. Total	22.8	64.9	12.3		11.1	82.5	6.4		19.7	65	15.3		8.4	87	4.6	
PHF	.940	.842	.833	.892	.920	.892	.810	.921	.917	.914	.882	.914	.865	.848	.735	.851

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City of Gardena
N/S: Vermont Avenue
E/W: Rosecrans Avenue
Weather: Clear

File Name : 03_GDA_Vermont_Rosecrans AM
Site Code : 05719380
Start Date : 5/23/2019
Page No : 1

Groups Printed- Buses

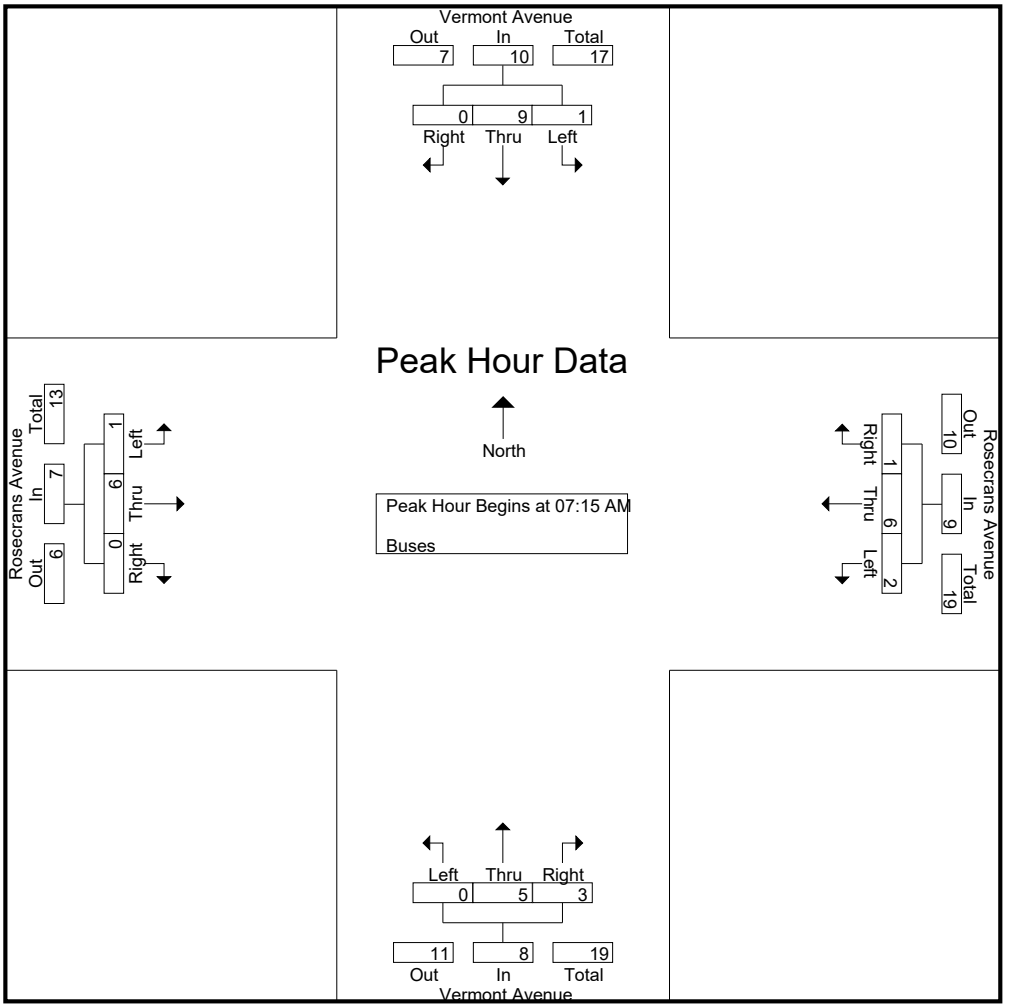
	Vermont Avenue Southbound				Rosecrans Avenue Westbound				Vermont Avenue Northbound				Rosecrans Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	0	3	0	3	2	2	0	4	0	3	0	3	0	1	0	1	11
07:15 AM	0	3	0	3	1	2	0	3	0	1	1	2	0	1	0	1	9
07:30 AM	1	2	0	3	1	0	0	1	0	1	0	1	1	1	0	2	7
07:45 AM	0	3	0	3	0	1	1	2	0	1	1	2	0	2	0	2	9
Total	1	11	0	12	4	5	1	10	0	6	2	8	1	5	0	6	36
08:00 AM	0	1	0	1	0	3	0	3	0	2	1	3	0	2	0	2	9
08:15 AM	0	2	0	2	2	2	0	4	0	1	1	2	0	2	0	2	10
08:30 AM	0	2	1	3	0	2	0	2	0	2	0	2	0	3	0	3	10
08:45 AM	0	1	0	1	1	2	0	3	0	1	0	1	0	4	0	4	9
Total	0	6	1	7	3	9	0	12	0	6	2	8	0	11	0	11	38
09:00 AM	0	3	0	3	0	1	0	1	0	1	1	2	0	3	0	3	9
09:15 AM	1	1	0	2	0	1	0	1	0	2	0	2	0	2	0	2	7
09:30 AM	1	1	0	2	2	1	0	3	0	2	1	3	0	1	0	1	9
09:45 AM	1	2	0	3	0	1	0	1	0	2	0	2	0	3	0	3	9
Total	3	7	0	10	2	4	0	6	0	7	2	9	0	9	0	9	34
Grand Total	4	24	1	29	9	18	1	28	0	19	6	25	1	25	0	26	108
Apprch %	13.8	82.8	3.4		32.1	64.3	3.6		0	76	24		3.8	96.2	0		
Total %	3.7	22.2	0.9	26.9	8.3	16.7	0.9	25.9	0	17.6	5.6	23.1	0.9	23.1	0	24.1	

	Vermont Avenue Southbound				Rosecrans Avenue Westbound				Vermont Avenue Northbound				Rosecrans Avenue 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 07:15 AM to 08:00 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	0	**3**	0	**3**	**1**	2	0	**3**	0	1	**1**	2	0	1	0	1	**9**
07:30 AM	**1**	2	0	3	1	0	0	1	0	1	0	1	**1**	1	0	**2**	7
07:45 AM	0	3	0	3	0	1	**1**	2	0	1	1	2	0	**2**	0	2	9
08:00 AM	0	1	0	1	0	**3**	0	3	0	**2**	1	**3**	0	2	0	2	9
Total Volume	1	9	0	10	2	6	1	9	0	5	3	8	1	6	0	7	34
% App. Total	10	90	0		22.2	66.7	11.1		0	62.5	37.5		14.3	85.7	0		
PHF	.250	.750	.000	.833	.500	.500	.250	.750	.000	.625	.750	.667	.250	.750	.000	.875	.944

Counts Unlimited
PO Box 1178
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City of Gardena
N/S: Vermont Avenue
E/W: Rosecrans Avenue
Weather: Clear

File Name : 03_GDA_Vermont_Rosecrans AM
Site Code : 05719380
Start Date : 5/23/2019
Page No : 2



Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:15 AM				07:15 AM				07:15 AM				07:15 AM			
+0 mins.	0	**3**	0	**3**	**1**	2	0	**3**	0	1	**1**	2	0	1	0	1
+15 mins.	**1**	2	0	3	1	0	0	1	0	1	0	1	**1**	1	0	**2**
+30 mins.	0	3	0	3	0	1	**1**	2	0	1	1	2	0	**2**	0	2
+45 mins.	0	1	0	1	0	**3**	0	3	0	**2**	1	**3**	0	2	0	2
Total Volume	1	9	0	10	2	6	1	9	0	5	3	8	1	6	0	7
% App. Total	10	90	0		22.2	66.7	11.1		0	62.5	37.5		14.3	85.7	0	
PHF	.250	.750	.000	.833	.500	.500	.250	.750	.000	.625	.750	.667	.250	.750	.000	.875

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City of Gardena
N/S: Vermont Avenue
E/W: Rosecrans Avenue
Weather: Clear

File Name : 03_GDA_Vermont_Rosecrans AM
Site Code : 05719380
Start Date : 5/23/2019
Page No : 1

Groups Printed- 2 Axle Vehicles

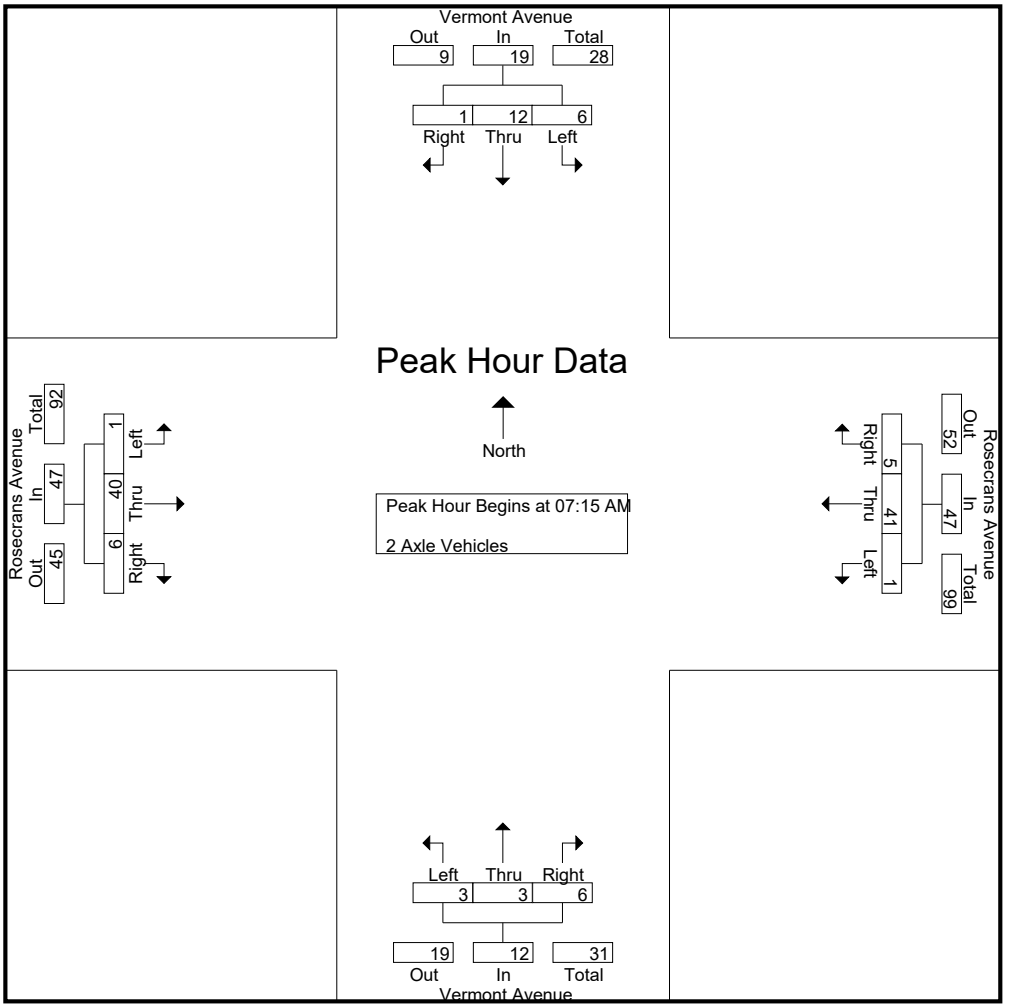
	Vermont Avenue Southbound				Rosecrans Avenue Westbound				Vermont Avenue Northbound				Rosecrans Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	2	3	0	5	0	7	1	8	0	1	1	2	0	7	1	8	23
07:15 AM	0	2	0	2	0	7	2	9	0	2	2	4	0	16	2	18	33
07:30 AM	1	3	0	4	0	12	1	13	1	0	2	3	0	10	1	11	31
07:45 AM	3	5	1	9	0	10	1	11	1	0	1	2	1	9	2	12	34
Total	6	13	1	20	0	36	5	41	2	3	6	11	1	42	6	49	121
08:00 AM	2	2	0	4	1	12	1	14	1	1	1	3	0	5	1	6	27
08:15 AM	4	2	0	6	3	11	0	14	3	4	3	10	0	8	0	8	38
08:30 AM	0	0	0	0	0	17	0	17	1	1	1	3	0	9	0	9	29
08:45 AM	2	1	1	4	1	12	2	15	1	1	2	4	0	9	0	9	32
Total	8	5	1	14	5	52	3	60	6	7	7	20	0	31	1	32	126
09:00 AM	2	1	0	3	0	10	3	13	2	0	2	4	0	7	0	7	27
09:15 AM	1	1	1	3	0	10	1	11	1	7	1	9	0	11	0	11	34
09:30 AM	2	3	0	5	0	7	1	8	1	3	2	6	1	10	0	11	30
09:45 AM	1	2	1	4	0	8	0	8	2	0	2	4	0	8	0	8	24
Total	6	7	2	15	0	35	5	40	6	10	7	23	1	36	0	37	115
Grand Total	20	25	4	49	5	123	13	141	14	20	20	54	2	109	7	118	362
Apprch %	40.8	51	8.2		3.5	87.2	9.2		25.9	37	37		1.7	92.4	5.9		
Total %	5.5	6.9	1.1	13.5	1.4	34	3.6	39	3.9	5.5	5.5	14.9	0.6	30.1	1.9	32.6	

	Vermont Avenue Southbound				Rosecrans Avenue Westbound				Vermont Avenue Northbound				Rosecrans Avenue 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 07:15 AM to 08:00 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	0	2	0	2	0	7	**2**	9	0	**2**	**2**	**4**	0	**16**	**2**	**18**	33
07:30 AM	1	3	0	4	0	**12**	1	13	**1**	0	2	3	0	10	1	11	31
07:45 AM	**3**	**5**	**1**	**9**	0	10	1	11	1	0	1	2	**1**	9	2	12	**34**
08:00 AM	2	2	0	4	**1**	12	1	**14**	1	1	1	3	0	5	1	6	27
Total Volume	6	12	1	19	1	41	5	47	3	3	6	12	1	40	6	47	125
% App. Total	31.6	63.2	5.3		2.1	87.2	10.6		25	25	50		2.1	85.1	12.8		
PHF	.500	.600	.250	.528	.250	.854	.625	.839	.750	.375	.750	.750	.250	.625	.750	.653	.919

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City of Gardena
N/S: Vermont Avenue
E/W: Rosecrans Avenue
Weather: Clear

File Name : 03_GDA_Vermont_Rosecrans AM
Site Code : 05719380
Start Date : 5/23/2019



Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:15 AM				07:15 AM				07:15 AM				07:15 AM			
+0 mins.	0	2	0	2	0	7	**2**	9	0	**2**	**2**	**4**	0	**16**	**2**	**18**
+15 mins.	1	3	0	4	0	**12**	1	13	**1**	0	2	3	0	10	1	11
+30 mins.	**3**	**5**	**1**	**9**	0	10	1	11	1	0	1	2	**1**	9	2	12
+45 mins.	2	2	0	4	**1**	12	1	**14**	1	1	1	3	0	5	1	6
Total Volume	6	12	1	19	1	41	5	47	3	3	6	12	1	40	6	47
% App. Total	31.6	63.2	5.3		2.1	87.2	10.6		25	25	50		2.1	85.1	12.8	
PHF	.500	.600	.250	.528	.250	.854	.625	.839	.750	.375	.750	.750	.250	.625	.750	.653

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City of Gardena
N/S: Vermont Avenue
E/W: Rosecrans Avenue
Weather: Clear

File Name : 03_GDA_Vermont_Rosecrans AM
Site Code : 05719380
Start Date : 5/23/2019
Page No : 1

Groups Printed- 3+ Axle Trucks

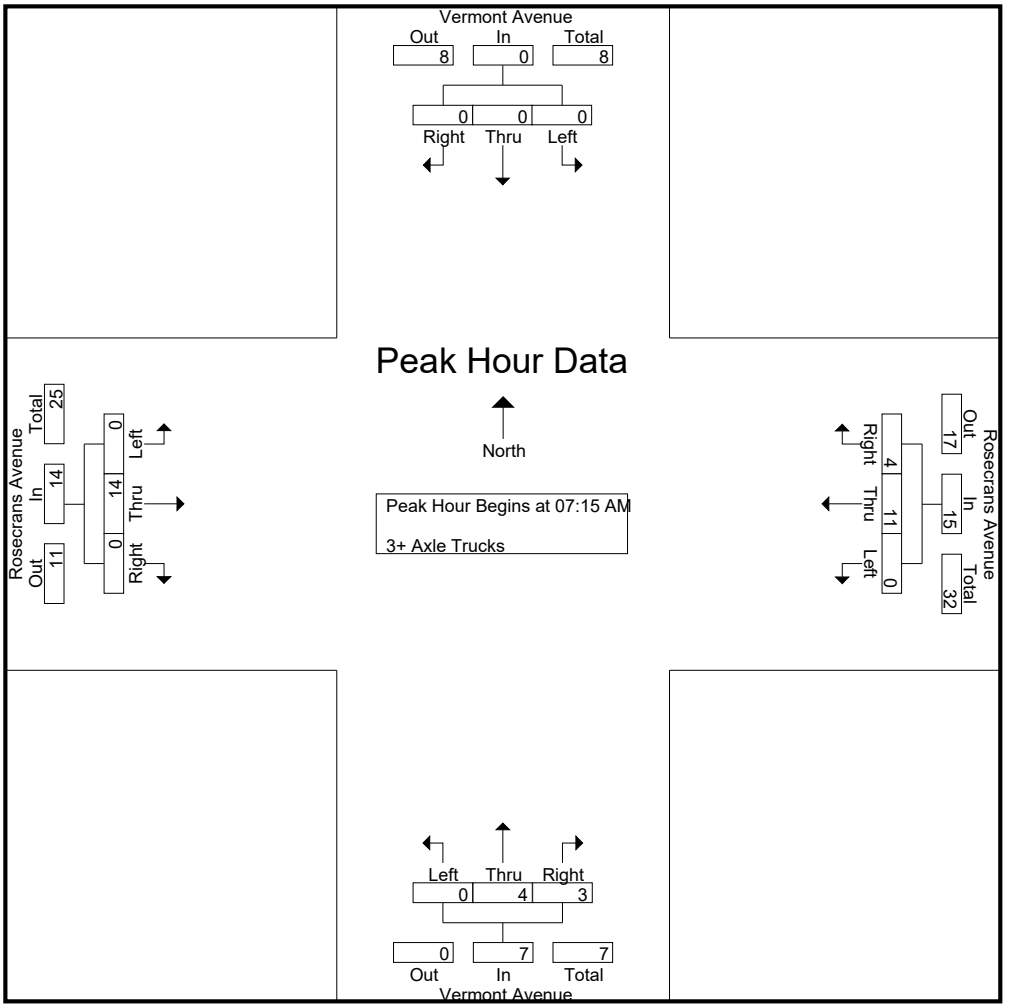
	Vermont Avenue Southbound				Rosecrans Avenue Westbound				Vermont Avenue Northbound				Rosecrans Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	0	0	0	0	0	6	0	6	0	1	0	1	0	3	0	3	10
07:15 AM	0	0	0	0	0	4	1	5	0	0	1	1	0	4	0	4	10
07:30 AM	0	0	0	0	0	3	0	3	0	2	0	2	0	2	0	2	7
07:45 AM	0	0	0	0	0	2	2	4	0	2	1	3	0	4	0	4	11
Total	0	0	0	0	0	15	3	18	0	5	2	7	0	13	0	13	38
08:00 AM	0	0	0	0	0	2	1	3	0	0	1	1	0	4	0	4	8
08:15 AM	1	0	0	1	0	4	2	6	0	1	0	1	0	4	0	4	12
08:30 AM	0	0	1	1	1	6	0	7	0	2	1	3	0	3	0	3	14
08:45 AM	0	0	0	0	0	7	1	8	0	1	0	1	0	4	0	4	13
Total	1	0	1	2	1	19	4	24	0	4	2	6	0	15	0	15	47
09:00 AM	0	0	0	0	0	7	1	8	0	0	0	0	0	4	0	4	12
09:15 AM	1	0	0	1	0	12	0	12	2	0	2	4	0	5	0	5	22
09:30 AM	0	0	1	1	0	13	1	14	0	1	0	1	0	7	0	7	23
09:45 AM	0	0	1	1	1	11	1	13	1	0	1	2	0	5	0	5	21
Total	1	0	2	3	1	43	3	47	3	1	3	7	0	21	0	21	78
Grand Total	2	0	3	5	2	77	10	89	3	10	7	20	0	49	0	49	163
Apprch %	40	0	60		2.2	86.5	11.2		15	50	35		0	100	0		
Total %	1.2	0	1.8	3.1	1.2	47.2	6.1	54.6	1.8	6.1	4.3	12.3	0	30.1	0	30.1	

	Vermont Avenue Southbound				Rosecrans Avenue Westbound				Vermont Avenue Northbound				Rosecrans Avenue 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 07:15 AM to 08:00 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	0	0	0	0	0	**4**	1	**5**	0	0	**1**	1	0	**4**	0	**4**	10
07:30 AM	0	0	0	0	0	3	0	3	0	**2**	0	2	0	2	0	2	7
07:45 AM	0	0	0	0	0	2	**2**	4	0	2	1	**3**	0	4	0	4	**11**
08:00 AM	0	0	0	0	0	2	1	3	0	0	1	1	0	4	0	4	8
Total Volume	0	0	0	0	0	11	4	15	0	4	3	7	0	14	0	14	36
% App. Total	0	0	0		0	73.3	26.7		0	57.1	42.9		0	100	0		
PHF	.000	.000	.000	.000	.000	.688	.500	.750	.000	.500	.750	.583	.000	.875	.000	.875	.818

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City of Gardena
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E/W: Rosecrans Avenue
Weather: Clear

File Name : 03_GDA_Vermont_Rosecrans AM
Site Code : 05719380
Start Date : 5/23/2019



Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:15 AM				07:15 AM				07:15 AM				07:15 AM			
+0 mins.	0	0	0	0	0	**4**	1	**5**	0	0	**1**	1	0	**4**	0	**4**
+15 mins.	0	0	0	0	0	3	0	3	0	**2**	0	2	0	2	0	2
+30 mins.	0	0	0	0	0	2	**2**	4	0	2	1	**3**	0	4	0	4
+45 mins.	0	0	0	0	0	2	1	3	0	0	1	1	0	4	0	4
Total Volume	0	0	0	0	0	11	4	15	0	4	3	7	0	14	0	14
% App. Total	0	0	0		0	73.3	26.7		0	57.1	42.9		0	100	0	
PHF	.000	.000	.000	.000	.000	.688	.500	.750	.000	.500	.750	.583	.000	.875	.000	.875

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City of Gardena
N/S: Vermont Avenue
E/W: Rosecrans Avenue
Weather: Clear

File Name : 03_GDA_Vermont_Rosecrans PM
Site Code : 05719380
Start Date : 5/23/2019

Groups Printed- Passenger Vehicles - Buses - 2 Axle Vehicles - 3+ Axle Trucks

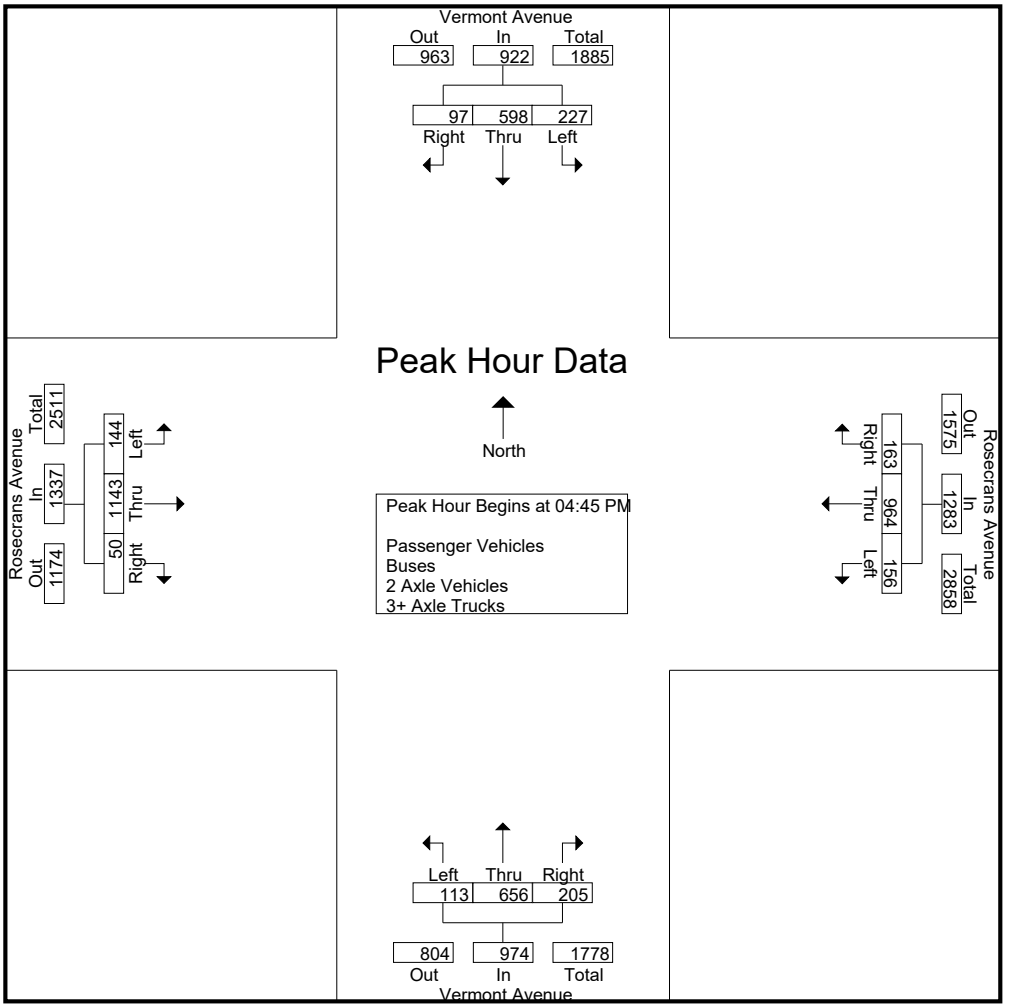
	Vermont Avenue Southbound				Rosecrans Avenue Westbound				Vermont Avenue Northbound				Rosecrans Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
03:00 PM	55	123	22	200	28	227	36	291	28	163	39	230	36	268	18	322	1043
03:15 PM	64	137	27	228	38	249	31	318	28	134	38	200	40	259	27	326	1072
03:30 PM	57	169	30	256	34	239	44	317	22	138	43	203	30	302	16	348	1124
03:45 PM	60	148	33	241	41	215	27	283	45	161	44	250	17	265	11	293	1067
Total	236	577	112	925	141	930	138	1209	123	596	164	883	123	1094	72	1289	4306
04:00 PM	64	124	26	214	37	200	38	275	25	145	38	208	34	260	15	309	1006
04:15 PM	62	125	23	210	30	219	33	282	37	164	57	258	27	265	7	299	1049
04:30 PM	63	159	32	254	44	211	41	296	29	138	58	225	31	257	13	301	1076
04:45 PM	56	170	30	256	30	229	37	296	25	163	58	246	27	276	13	316	1114
Total	245	578	111	934	141	859	149	1149	116	610	211	937	119	1058	48	1225	4245
05:00 PM	58	140	20	218	42	235	40	317	37	163	45	245	44	295	11	350	1130
05:15 PM	63	150	24	237	44	242	52	338	30	161	54	245	36	277	16	329	1149
05:30 PM	50	138	23	211	40	258	34	332	21	169	48	238	37	295	10	342	1123
05:45 PM	60	126	21	207	40	240	34	314	33	135	59	227	34	276	14	324	1072
Total	231	554	88	873	166	975	160	1301	121	628	206	955	151	1143	51	1345	4474
Grand Total	712	1709	311	2732	448	2764	447	3659	360	1834	581	2775	393	3295	171	3859	13025
Apprch %	26.1	62.6	11.4		12.2	75.5	12.2		13	66.1	20.9		10.2	85.4	4.4		
Total %	5.5	13.1	2.4	21	3.4	21.2	3.4	28.1	2.8	14.1	4.5	21.3	3	25.3	1.3	29.6	
Passenger Vehicles	692	1647	304	2643	440	2643	436	3519	350	1788	567	2705	389	3068	165	3622	12489
% Passenger Vehicles	97.2	96.4	97.7	96.7	98.2	95.6	97.5	96.2	97.2	97.5	97.6	97.5	99	93.1	96.5	93.9	95.9
Buses	1	43	4	48	5	13	0	18	0	20	7	27	0	27	2	29	122
% Buses	0.1	2.5	1.3	1.8	1.1	0.5	0	0.5	0	1.1	1.2	1	0	0.8	1.2	0.8	0.9
2 Axle Vehicles	13	17	2	32	1	57	8	66	8	21	5	34	3	86	2	91	223
% 2 Axle Vehicles	1.8	1	0.6	1.2	0.2	2.1	1.8	1.8	2.2	1.1	0.9	1.2	0.8	2.6	1.2	2.4	1.7
3+ Axle Trucks	6	2	1	9	2	51	3	56	2	5	2	9	1	114	2	117	191
% 3+ Axle Trucks	0.8	0.1	0.3	0.3	0.4	1.8	0.7	1.5	0.6	0.3	0.3	0.3	0.3	3.5	1.2	3	1.5

	Vermont Avenue Southbound				Rosecrans Avenue Westbound				Vermont Avenue Northbound				Rosecrans Avenue 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 03:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	56	**170**	**30**	**256**	30	229	37	296	25	163	**58**	**246**	27	276	13	316	1114
05:00 PM	58	140	20	218	42	235	40	317	**37**	163	45	245	**44**	**295**	11	**350**	1130
05:15 PM	**63**	150	24	237	**44**	242	**52**	**338**	30	161	54	245	36	277	**16**	329	**1149**
05:30 PM	50	138	23	211	40	**258**	34	332	21	**169**	48	238	37	295	10	342	1123
Total Volume	227	598	97	922	156	964	163	1283	113	656	205	974	144	1143	50	1337	4516
% App. Total	24.6	64.9	10.5		12.2	75.1	12.7		11.6	67.4	21		10.8	85.5	3.7		
PHF	.901	.879	.808	.900	.886	.934	.784	.949	.764	.970	.884	.990	.818	.969	.781	.955	.983

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City of Gardena
N/S: Vermont Avenue
E/W: Rosecrans Avenue
Weather: Clear

File Name : 03_GDA_Vermont_Rosecrans PM
Site Code : 05719380
Start Date : 5/23/2019
Page No : 2



Peak Hour Analysis From 03:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:30 PM				05:00 PM				04:15 PM				05:00 PM			
+0 mins.	**63**	159	**32**	254	42	235	40	317	**37**	**164**	57	**258**	**44**	**295**	11	**350**
+15 mins.	56	**170**	30	**256**	**44**	242	**52**	**338**	29	138	**58**	225	36	277	**16**	329
+30 mins.	58	140	20	218	40	**258**	34	332	25	163	58	246	37	295	10	342
+45 mins.	63	150	24	237	40	240	34	314	37	163	45	245	34	276	14	324
Total Volume	240	619	106	965	166	975	160	1301	128	628	218	974	151	1143	51	1345
% App. Total	24.9	64.1	11		12.8	74.9	12.3		13.1	64.5	22.4		11.2	85	3.8	
PHF	.952	.910	.828	.942	.943	.945	.769	.962	.865	.957	.940	.944	.858	.969	.797	.961

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City of Gardena
N/S: Vermont Avenue
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Weather: Clear

File Name : 03_GDA_Vermont_Rosecrans PM
Site Code : 05719380
Start Date : 5/23/2019

Groups Printed- Passenger Vehicles

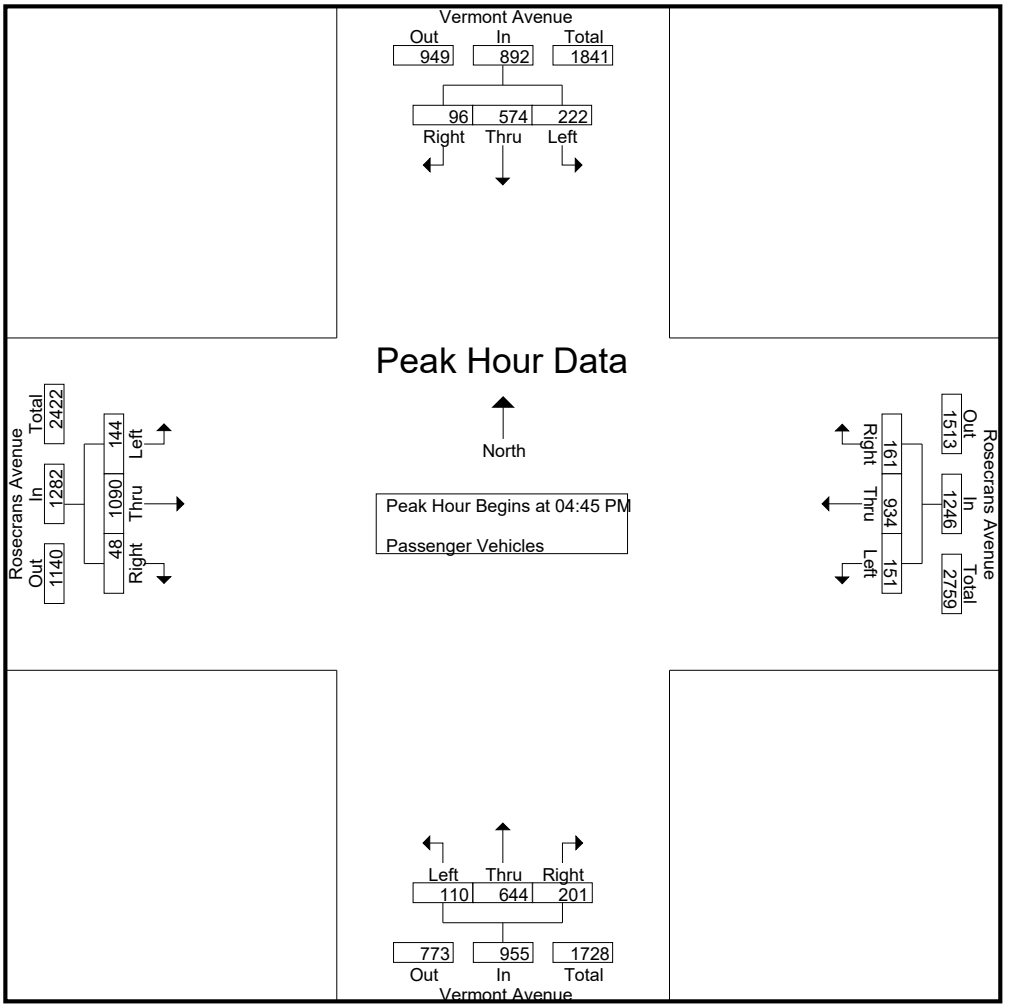
	Vermont Avenue Southbound				Rosecrans Avenue Westbound				Vermont Avenue Northbound				Rosecrans Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
03:00 PM	52	118	22	192	28	214	35	277	28	159	35	222	35	242	17	294	985
03:15 PM	61	133	26	220	37	234	29	300	26	130	36	192	39	243	27	309	1021
03:30 PM	56	165	27	248	34	222	43	299	19	132	42	193	29	273	15	317	1057
03:45 PM	59	142	31	232	40	206	25	271	45	158	44	247	17	241	11	269	1019
Total	228	558	106	892	139	876	132	1147	118	579	157	854	120	999	70	1189	4082
04:00 PM	61	119	26	206	37	189	37	263	25	141	36	202	34	235	14	283	954
04:15 PM	60	121	23	204	29	208	31	268	36	160	57	253	27	236	7	270	995
04:30 PM	61	154	32	247	44	200	41	285	28	133	57	218	30	238	12	280	1030
04:45 PM	54	163	30	247	27	226	35	288	25	162	57	244	27	261	13	301	1080
Total	236	557	111	904	137	823	144	1104	114	596	207	917	118	970	46	1134	4059
05:00 PM	57	133	20	210	41	227	40	308	34	157	44	235	44	281	9	334	1087
05:15 PM	62	146	24	232	44	232	52	328	30	156	54	240	36	259	16	311	1111
05:30 PM	49	132	22	203	39	249	34	322	21	169	46	236	37	289	10	336	1097
05:45 PM	60	121	21	202	40	236	34	310	33	131	59	223	34	270	14	318	1053
Total	228	532	87	847	164	944	160	1268	118	613	203	934	151	1099	49	1299	4348
Grand Total	692	1647	304	2643	440	2643	436	3519	350	1788	567	2705	389	3068	165	3622	12489
Apprch %	26.2	62.3	11.5		12.5	75.1	12.4		12.9	66.1	21		10.7	84.7	4.6		
Total %	5.5	13.2	2.4	21.2	3.5	21.2	3.5	28.2	2.8	14.3	4.5	21.7	3.1	24.6	1.3	29	

	Vermont Avenue Southbound				Rosecrans Avenue Westbound				Vermont Avenue Northbound				Rosecrans Avenue 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 04:45 PM to 05:30 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	54	**163**	**30**	**247**	27	226	35	288	25	162	**57**	**244**	27	261	13	301	1080
05:00 PM	57	133	20	210	41	227	40	308	**34**	157	44	235	**44**	281	9	334	1087
05:15 PM	**62**	146	24	232	**44**	232	**52**	**328**	30	156	54	240	36	259	**16**	311	**1111**
05:30 PM	49	132	22	203	39	**249**	34	322	21	**169**	46	236	37	**289**	10	**336**	1097
Total Volume	222	574	96	892	151	934	161	1246	110	644	201	955	144	1090	48	1282	4375
% App. Total	24.9	64.3	10.8		12.1	75	12.9		11.5	67.4	21		11.2	85	3.7		
PHF	.895	.880	.800	.903	.858	.938	.774	.950	.809	.953	.882	.978	.818	.943	.750	.954	.984

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City of Gardena
N/S: Vermont Avenue
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File Name : 03_GDA_Vermont_Rosecrans PM
Site Code : 05719380
Start Date : 5/23/2019
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Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:45 PM				04:45 PM				04:45 PM				04:45 PM			
+0 mins.	54	**163**	**30**	**247**	27	226	35	288	25	162	**57**	**244**	27	261	13	301
+15 mins.	57	133	20	210	41	227	40	308	**34**	157	44	235	**44**	281	9	334
+30 mins.	**62**	146	24	232	**44**	232	**52**	**328**	30	156	54	240	36	259	**16**	311
+45 mins.	49	132	22	203	39	**249**	34	322	21	**169**	46	236	37	**289**	10	**336**
Total Volume	222	574	96	892	151	934	161	1246	110	644	201	955	144	1090	48	1282
% App. Total	24.9	64.3	10.8		12.1	75	12.9		11.5	67.4	21		11.2	85	3.7	
PHF	.895	.880	.800	.903	.858	.938	.774	.950	.809	.953	.882	.978	.818	.943	.750	.954

Counts Unlimited
PO Box 1178
Corona, CA 92878
(951) 268-6268

City of Gardena
N/S: Vermont Avenue
E/W: Rosecrans Avenue
Weather: Clear

File Name : 03_GDA_Vermont_Rosecrans PM
Site Code : 05719380
Start Date : 5/23/2019
Page No : 1

Groups Printed- Buses

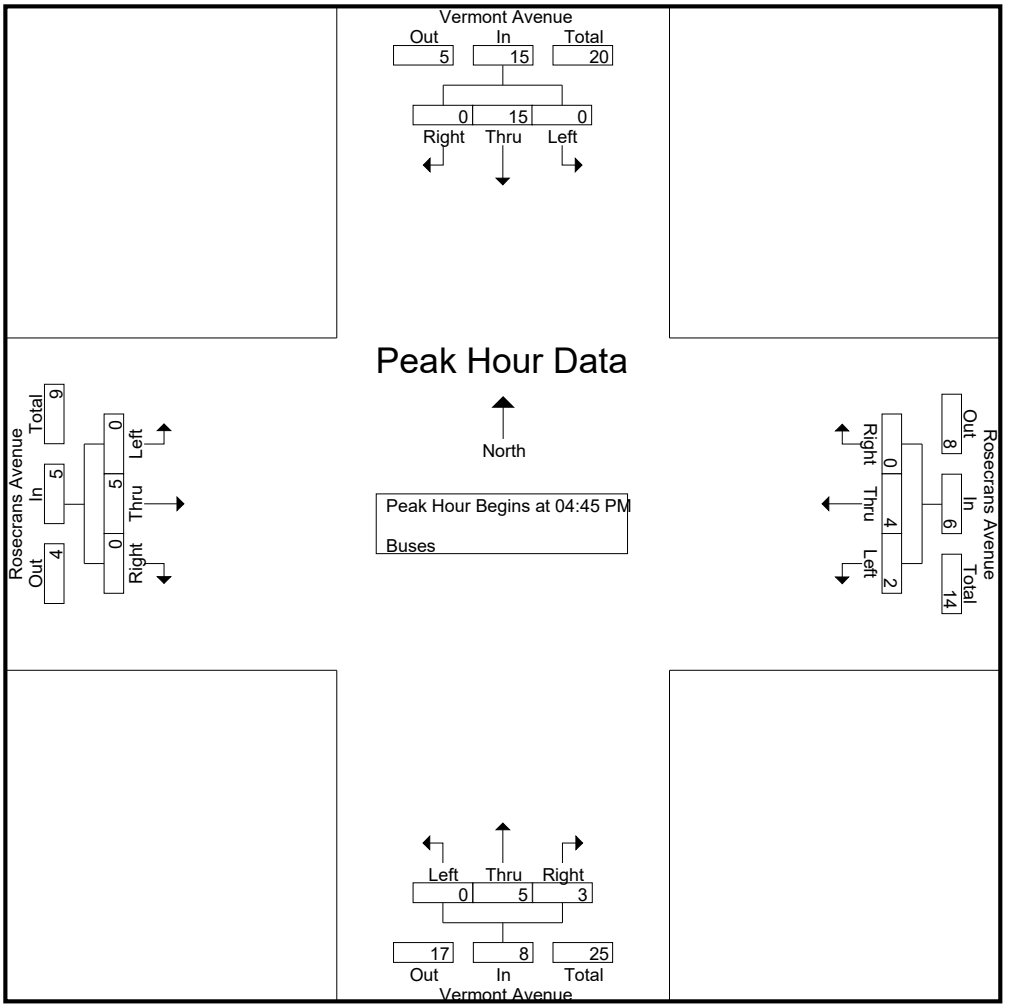
	Vermont Avenue Southbound				Rosecrans Avenue Westbound				Vermont Avenue Northbound				Rosecrans Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
03:00 PM	0	4	0	4	0	1	0	1	0	1	1	2	0	1	1	2	9
03:15 PM	0	4	1	5	1	2	0	3	0	1	0	1	0	4	0	4	13
03:30 PM	0	1	2	3	0	2	0	2	0	4	1	5	0	1	1	2	12
03:45 PM	0	6	1	7	1	0	0	1	0	2	0	2	0	8	0	8	18
Total	0	15	4	19	2	5	0	7	0	8	2	10	0	14	2	16	52
04:00 PM	0	4	0	4	0	2	0	2	0	2	1	3	0	1	0	1	10
04:15 PM	0	3	0	3	1	1	0	2	0	1	0	1	0	4	0	4	10
04:30 PM	1	4	0	5	0	0	0	0	0	2	1	3	0	3	0	3	11
04:45 PM	0	5	0	5	0	1	0	1	0	0	0	0	0	0	0	0	6
Total	1	16	0	17	1	4	0	5	0	5	2	7	0	8	0	8	37
05:00 PM	0	4	0	4	1	0	0	1	0	2	1	3	0	3	0	3	11
05:15 PM	0	1	0	1	0	1	0	1	0	3	0	3	0	0	0	0	5
05:30 PM	0	5	0	5	1	2	0	3	0	0	2	2	0	2	0	2	12
05:45 PM	0	2	0	2	0	1	0	1	0	2	0	2	0	0	0	0	5
Total	0	12	0	12	2	4	0	6	0	7	3	10	0	5	0	5	33
Grand Total	1	43	4	48	5	13	0	18	0	20	7	27	0	27	2	29	122
Apprch %	2.1	89.6	8.3		27.8	72.2	0		0	74.1	25.9		0	93.1	6.9		
Total %	0.8	35.2	3.3	39.3	4.1	10.7	0	14.8	0	16.4	5.7	22.1	0	22.1	1.6	23.8	

	Vermont Avenue Southbound				Rosecrans Avenue Westbound				Vermont Avenue Northbound				Rosecrans Avenue 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 04:45 PM to 05:30 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	0	**5**	0	**5**	0	1	0	1	0	0	0	0	0	0	0	0	6
05:00 PM	0	4	0	4	**1**	0	0	1	0	2	1	**3**	0	**3**	0	**3**	11
05:15 PM	0	1	0	1	0	1	0	1	0	**3**	0	3	0	0	0	0	5
05:30 PM	0	5	0	5	1	**2**	0	**3**	0	0	**2**	2	0	2	0	2	**12**
Total Volume	0	15	0	15	2	4	0	6	0	5	3	8	0	5	0	5	34
% App. Total	0	100	0		33.3	66.7	0		0	62.5	37.5		0	100	0		
PHF	.000	.750	.000	.750	.500	.500	.000	.500	.000	.417	.375	.667	.000	.417	.000	.417	.708

Counts Unlimited
PO Box 1178
Corona, CA 92878
(951) 268-6268

City of Gardena
N/S: Vermont Avenue
E/W: Rosecrans Avenue
Weather: Clear

File Name : 03_GDA_Vermont_Rosecrans PM
Site Code : 05719380
Start Date : 5/23/2019
Page No : 2



Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:45 PM				04:45 PM				04:45 PM				04:45 PM			
+0 mins.	0	**5**	0	**5**	0	1	0	1	0	0	0	0	0	0	0	0
+15 mins.	0	4	0	4	**1**	0	0	1	0	2	1	**3**	0	**3**	0	**3**
+30 mins.	0	1	0	1	0	1	0	1	0	**3**	0	3	0	0	0	0
+45 mins.	0	5	0	5	1	**2**	0	**3**	0	0	**2**	2	0	2	0	2
Total Volume	0	15	0	15	2	4	0	6	0	5	3	8	0	5	0	5
% App. Total	0	100	0		33.3	66.7	0		0	62.5	37.5		0	100	0	
PHF	.000	.750	.000	.750	.500	.500	.000	.500	.000	.417	.375	.667	.000	.417	.000	.417

Counts Unlimited
PO Box 1178
Corona, CA 92878
(951) 268-6268

City of Gardena
N/S: Vermont Avenue
E/W: Rosecrans Avenue
Weather: Clear

File Name : 03_GDA_Vermont_Rosecrans PM
Site Code : 05719380
Start Date : 5/23/2019
Page No : 1

Groups Printed- 2 Axle Vehicles

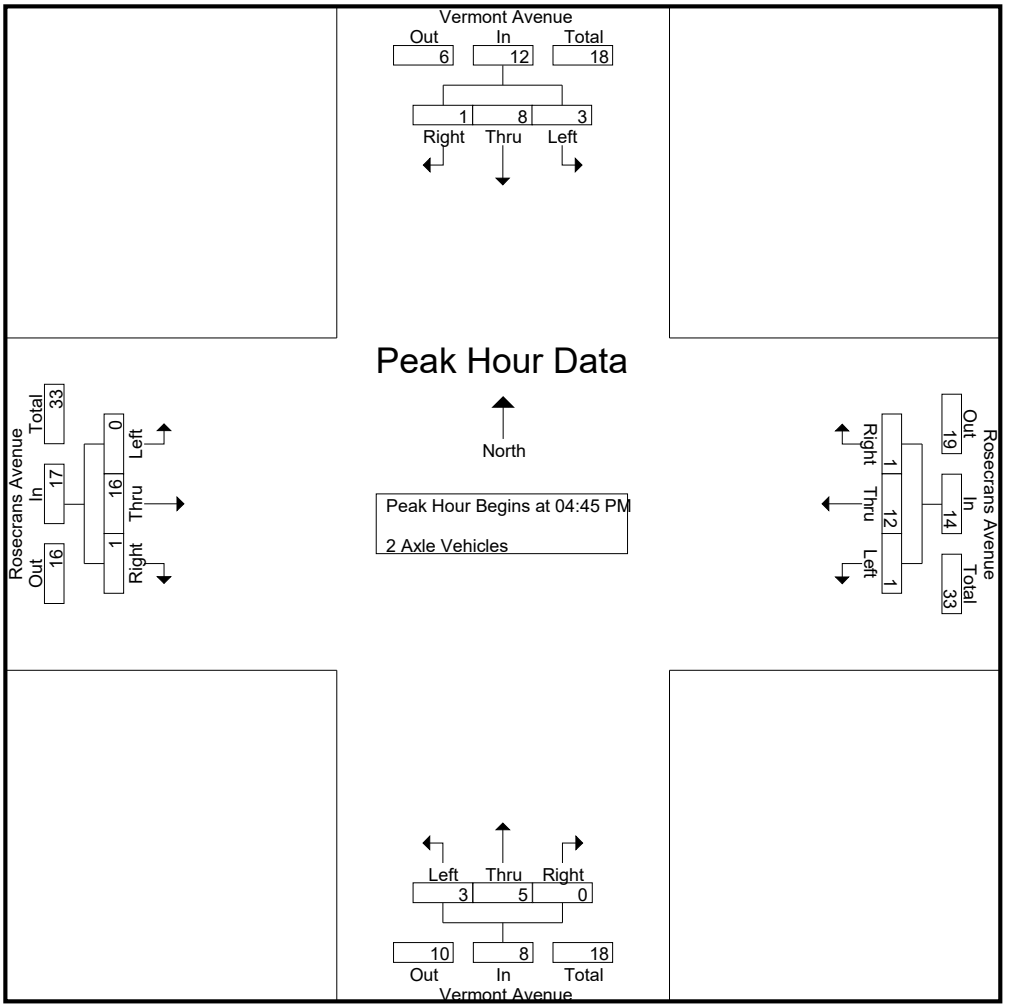
	Vermont Avenue Southbound				Rosecrans Avenue Westbound				Vermont Avenue Northbound				Rosecrans Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
03:00 PM	3	1	0	4	0	5	0	5	0	3	3	6	1	10	0	11	26
03:15 PM	1	0	0	1	0	7	2	9	2	3	1	6	0	5	0	5	21
03:30 PM	1	2	0	3	0	11	1	12	1	1	0	2	1	18	0	19	36
03:45 PM	1	0	1	2	0	5	1	6	0	1	0	1	0	9	0	9	18
Total	6	3	1	10	0	28	4	32	3	8	4	15	2	42	0	44	101
04:00 PM	1	1	0	2	0	4	1	5	0	2	1	3	0	11	1	12	22
04:15 PM	2	1	0	3	0	6	2	8	1	2	0	3	0	7	0	7	21
04:30 PM	1	1	0	2	0	6	0	6	1	3	0	4	1	5	0	6	18
04:45 PM	0	2	0	2	1	1	1	3	0	1	0	1	0	3	0	3	9
Total	4	5	0	9	1	17	4	22	2	8	1	11	1	26	1	28	70
05:00 PM	1	2	0	3	0	3	0	3	3	2	0	5	0	5	1	6	17
05:15 PM	1	3	0	4	0	4	0	4	0	2	0	2	0	7	0	7	17
05:30 PM	1	1	1	3	0	4	0	4	0	0	0	0	0	1	0	1	8
05:45 PM	0	3	0	3	0	1	0	1	0	1	0	1	0	5	0	5	10
Total	3	9	1	13	0	12	0	12	3	5	0	8	0	18	1	19	52
Grand Total	13	17	2	32	1	57	8	66	8	21	5	34	3	86	2	91	223
Apprch %	40.6	53.1	6.2		1.5	86.4	12.1		23.5	61.8	14.7		3.3	94.5	2.2		
Total %	5.8	7.6	0.9	14.3	0.4	25.6	3.6	29.6	3.6	9.4	2.2	15.2	1.3	38.6	0.9	40.8	

	Vermont Avenue Southbound				Rosecrans Avenue Westbound				Vermont Avenue Northbound				Rosecrans Avenue 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 04:45 PM to 05:30 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	0	2	0	2	**1**	1	**1**	3	0	1	0	1	0	3	0	3	9
05:00 PM	**1**	2	0	3	0	3	0	3	**3**	**2**	0	**5**	0	5	**1**	6	**17**
05:15 PM	1	**3**	0	**4**	0	**4**	0	**4**	0	2	0	2	0	**7**	0	**7**	17
05:30 PM	1	1	**1**	3	0	4	0	4	0	0	0	0	0	1	0	1	8
Total Volume	3	8	1	12	1	12	1	14	3	5	0	8	0	16	1	17	51
% App. Total	25	66.7	8.3		7.1	85.7	7.1		37.5	62.5	0		0	94.1	5.9		
PHF	.750	.667	.250	.750	.250	.750	.250	.875	.250	.625	.000	.400	.000	.571	.250	.607	.750

Counts Unlimited
PO Box 1178
Corona, CA 92878
(951) 268-6268

City of Gardena
N/S: Vermont Avenue
E/W: Rosecrans Avenue
Weather: Clear

File Name : 03_GDA_Vermont_Rosecrans PM
Site Code : 05719380
Start Date : 5/23/2019
Page No : 2



Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:45 PM				04:45 PM				04:45 PM				04:45 PM			
+0 mins.	0	2	0	2	**1**	1	**1**	3	0	1	0	1	0	3	0	3
+15 mins.	**1**	2	0	3	0	3	0	3	**3**	**2**	0	**5**	0	5	**1**	6
+30 mins.	1	**3**	0	**4**	0	**4**	0	**4**	0	2	0	2	0	**7**	0	**7**
+45 mins.	1	1	**1**	3	0	4	0	4	0	0	0	0	0	1	0	1
Total Volume	3	8	1	12	1	12	1	14	3	5	0	8	0	16	1	17
% App. Total	25	66.7	8.3		7.1	85.7	7.1		37.5	62.5	0		0	94.1	5.9	
PHF	.750	.667	.250	.750	.250	.750	.250	.875	.250	.625	.000	.400	.000	.571	.250	.607

Counts Unlimited
PO Box 1178
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(951) 268-6268

City of Gardena
N/S: Vermont Avenue
E/W: Rosecrans Avenue
Weather: Clear

File Name : 03_GDA_Vermont_Rosecrans PM
Site Code : 05719380
Start Date : 5/23/2019
Page No : 1

Groups Printed- 3+ Axle Trucks

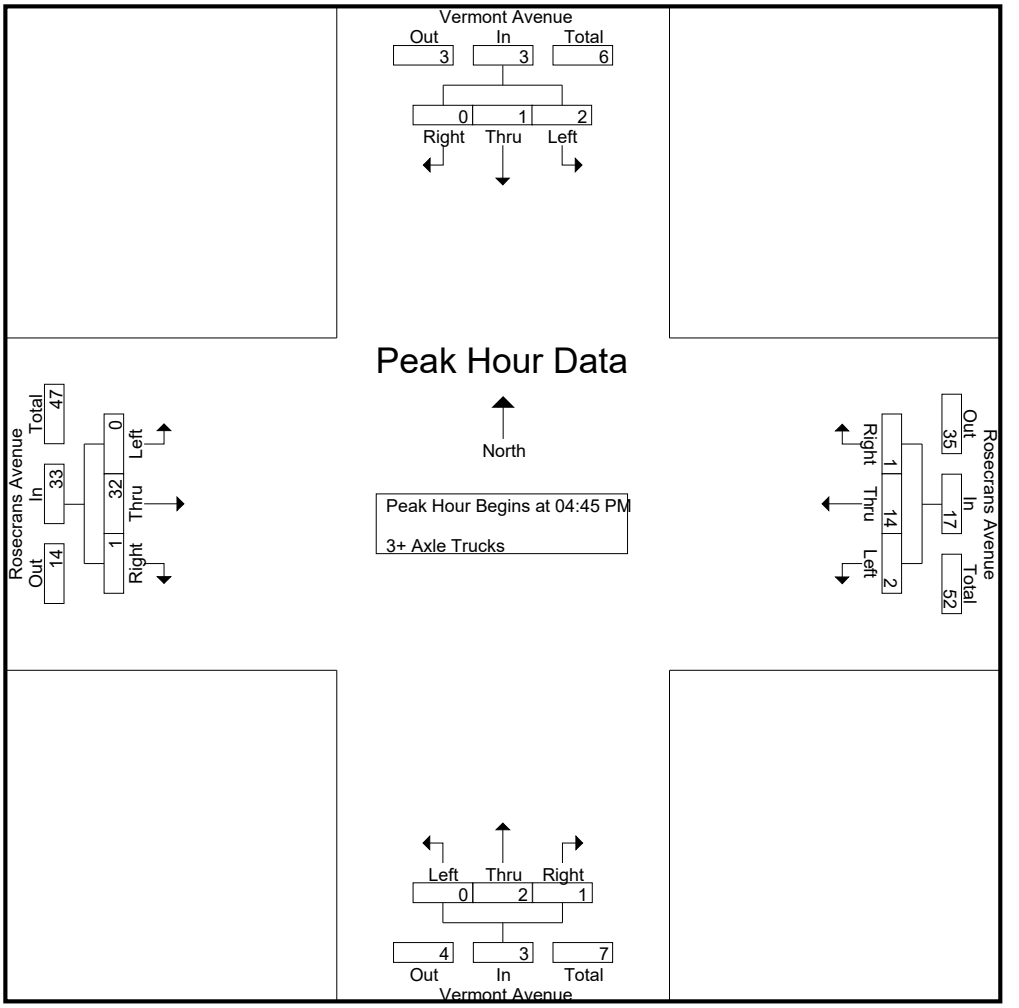
	Vermont Avenue Southbound				Rosecrans Avenue Westbound				Vermont Avenue Northbound				Rosecrans Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
03:00 PM	0	0	0	0	0	7	1	8	0	0	0	0	0	15	0	15	23
03:15 PM	2	0	0	2	0	6	0	6	0	0	1	1	1	7	0	8	17
03:30 PM	0	1	1	2	0	4	0	4	2	1	0	3	0	10	0	10	19
03:45 PM	0	0	0	0	0	4	1	5	0	0	0	0	0	7	0	7	12
Total	2	1	1	4	0	21	2	23	2	1	1	4	1	39	0	40	71
04:00 PM	2	0	0	2	0	5	0	5	0	0	0	0	0	13	0	13	20
04:15 PM	0	0	0	0	0	4	0	4	0	1	0	1	0	18	0	18	23
04:30 PM	0	0	0	0	0	5	0	5	0	0	0	0	0	11	1	12	17
04:45 PM	2	0	0	2	2	1	1	4	0	0	1	1	0	12	0	12	19
Total	4	0	0	4	2	15	1	18	0	1	1	2	0	54	1	55	79
05:00 PM	0	1	0	1	0	5	0	5	0	2	0	2	0	6	1	7	15
05:15 PM	0	0	0	0	0	5	0	5	0	0	0	0	0	11	0	11	16
05:30 PM	0	0	0	0	0	3	0	3	0	0	0	0	0	3	0	3	6
05:45 PM	0	0	0	0	0	2	0	2	0	1	0	1	0	1	0	1	4
Total	0	1	0	1	0	15	0	15	0	3	0	3	0	21	1	22	41
Grand Total	6	2	1	9	2	51	3	56	2	5	2	9	1	114	2	117	191
Apprch %	66.7	22.2	11.1		3.6	91.1	5.4		22.2	55.6	22.2		0.9	97.4	1.7		
Total %	3.1	1	0.5	4.7	1	26.7	1.6	29.3	1	2.6	1	4.7	0.5	59.7	1	61.3	

	Vermont Avenue Southbound				Rosecrans Avenue Westbound				Vermont Avenue Northbound				Rosecrans Avenue 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 04:45 PM to 05:30 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	**2**	0	0	**2**	**2**	1	**1**	4	0	0	**1**	1	0	**12**	0	**12**	**19**
05:00 PM	0	**1**	0	1	0	**5**	0	**5**	0	**2**	0	**2**	0	6	**1**	7	15
05:15 PM	0	0	0	0	0	5	0	5	0	0	0	0	0	11	0	11	16
05:30 PM	0	0	0	0	0	3	0	3	0	0	0	0	0	3	0	3	6
Total Volume	2	1	0	3	2	14	1	17	0	2	1	3	0	32	1	33	56
% App. Total	66.7	33.3	0		11.8	82.4	5.9		0	66.7	33.3		0	97	3		
PHF	.250	.250	.000	.375	.250	.700	.250	.850	.000	.250	.250	.375	.000	.667	.250	.688	.737

Counts Unlimited
PO Box 1178
Corona, CA 92878
(951) 268-6268

City of Gardena
N/S: Vermont Avenue
E/W: Rosecrans Avenue
Weather: Clear

File Name : 03_GDA_Vermont_Rosecrans PM
Site Code : 05719380
Start Date : 5/23/2019



Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:45 PM				04:45 PM				04:45 PM				04:45 PM			
+0 mins.	**2**	0	0	**2**	**2**	1	**1**	4	0	0	**1**	1	0	**12**	0	**12**
+15 mins.	0	**1**	0	1	0	**5**	0	**5**	0	**2**	0	**2**	0	6	**1**	7
+30 mins.	0	0	0	0	0	5	0	5	0	0	0	0	0	11	0	11
+45 mins.	0	0	0	0	0	3	0	3	0	0	0	0	0	3	0	3
Total Volume	2	1	0	3	2	14	1	17	0	2	1	3	0	32	1	33
% App. Total	66.7	33.3	0		11.8	82.4	5.9		0	66.7	33.3		0	97	3	
PHF	.250	.250	.000	.375	.250	.700	.250	.850	.000	.250	.250	.375	.000	.667	.250	.688

Location: Gardena
N/S: Vermont Avenue
E/W: Rosecrans Avenue

Date: 5/23/2019
Day: Thursday

PEDESTRIANS

	North Leg Vermont Avenue Pedestrians	East Leg Rosecrans Avenue Pedestrians	South Leg Vermont Avenue Pedestrians	West Leg Rosecrans Avenue Pedestrians	
7:00 AM	2	2	9	8	21
7:15 AM	6	3	7	5	21
7:30 AM	2	1	5	7	15
7:45 AM	2	5	5	6	18
8:00 AM	2	4	5	3	14
8:15 AM	3	3	2	4	12
8:30 AM	2	3	1	4	10
8:45 AM	2	2	5	2	11
9:00 AM	5	6	6	5	22
9:15 AM	0	0	3	3	6
9:30 AM	3	7	3	5	18
9:45 AM	3	4	1	9	17
TOTAL VOLUMES:	32	40	52	61	185

	North Leg Vermont Avenue Pedestrians	East Leg Rosecrans Avenue Pedestrians	South Leg Vermont Avenue Pedestrians	West Leg Rosecrans Avenue Pedestrians	
3:00 PM	6	3	7	7	23
3:15 PM	8	8	6	3	25
3:30 PM	1	10	5	6	22
3:45 PM	4	11	11	12	38
4:00 PM	10	5	18	12	45
4:15 PM	4	9	7	9	29
4:30 PM	9	13	16	14	52
4:45 PM	8	1	8	12	29
5:00 PM	4	5	3	7	19
5:15 PM	7	7	12	4	30
5:30 PM	4	7	11	6	28
5:45 PM	5	6	6	7	24
TOTAL VOLUMES:	70	85	110	99	364

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
951-268-6268

Location: Gardena
N/S: Vermont Avenue
E/W: Rosecrans Avenue

Date: 5/23/2019
Day: Thursday

BICYCLES

	Southbound Vermont Avenue			Westbound Rosecrans Avenue			Northbound Vermont Avenue			Eastbound Rosecrans Avenue			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
7:00 AM	0	0	0	0	1	0	0	0	0	0	0	0	1
7:15 AM	0	1	0	0	0	0	0	0	0	0	0	0	1
7:30 AM	0	0	0	0	0	0	0	0	0	0	1	0	1
7:45 AM	0	0	0	0	1	0	1	0	0	0	0	0	2
8:00 AM	0	0	0	0	2	0	0	0	0	0	0	0	2
8:15 AM	0	0	0	0	0	0	0	0	0	0	1	0	1
8:30 AM	0	1	0	0	0	0	0	0	0	0	0	0	1
8:45 AM	0	0	0	0	0	0	0	2	0	0	0	0	2
9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
9:45 AM	0	1	0	0	1	0	0	0	0	0	0	0	2
TOTAL VOLUMES:	0	3	0	0	5	0	1	2	0	0	2	0	13

	Southbound Vermont Avenue			Westbound Rosecrans Avenue			Northbound Vermont Avenue			Eastbound Rosecrans Avenue			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
3:00 PM	0	0	0	0	0	0	0	0	0	0	1	0	1
3:15 PM	0	4	0	0	1	0	0	2	0	0	2	0	9
3:30 PM	0	0	0	0	0	0	0	0	0	1	0	0	1
3:45 PM	0	0	0	0	0	0	0	1	0	0	0	1	2
4:00 PM	0	0	0	0	1	0	0	0	0	0	0	0	1
4:15 PM	0	1	0	0	0	0	0	0	0	0	0	0	1
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	4	0	0	0	0	4
5:00 PM	0	1	0	0	0	0	0	1	0	0	2	0	4
5:15 PM	0	1	0	0	0	0	0	2	0	0	2	0	5
5:30 PM	0	1	0	0	0	0	0	0	0	0	0	0	1
5:45 PM	1	3	0	0	0	0	0	1	0	0	2	0	7
TOTAL VOLUMES:	1	11	0	0	2	0	0	11	0	1	9	1	36

Counts Unlimited, Inc.
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951-268-6268

Counts Unlimited
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(951) 268-6268

City of Gardena
N/S: Vermont Avenue
E/W: 149th Street
Weather: Clear

File Name : 04_GDA_Vermont_149th AM
Site Code : 05719380
Start Date : 5/23/2019
Page No : 1

Groups Printed- Passenger Vehicles - Buses - 2 Axle Vehicles - 3+ Axle Trucks

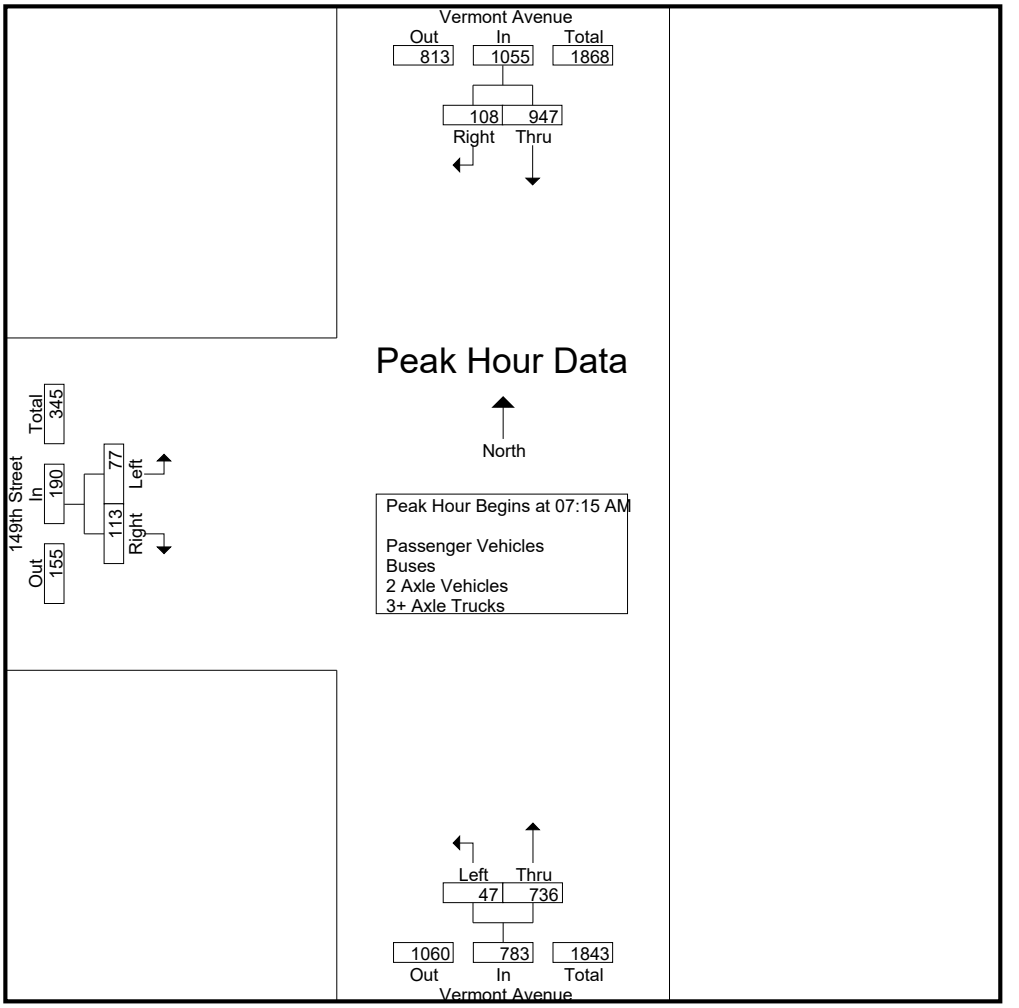
	Vermont Avenue Southbound			Vermont Avenue Northbound			149th Street Eastbound			
Start Time	Thru	Right	App. Total	Left	Thru	App. Total	Left	Right	App. Total	Int. Total
07:00 AM	159	9	168	6	121	127	6	11	17	312
07:15 AM	191	23	214	5	150	155	10	13	23	392
07:30 AM	274	27	301	16	174	190	23	32	55	546
07:45 AM	276	35	311	20	220	240	23	44	67	618
Total	900	94	994	47	665	712	62	100	162	1868
08:00 AM	206	23	229	6	192	198	21	24	45	472
08:15 AM	162	7	169	2	156	158	8	8	16	343
08:30 AM	163	4	167	1	142	143	6	4	10	320
08:45 AM	153	8	161	5	119	124	5	1	6	291
Total	684	42	726	14	609	623	40	37	77	1426
09:00 AM	116	4	120	1	139	140	2	4	6	266
09:15 AM	126	8	134	1	141	142	3	4	7	283
09:30 AM	119	6	125	7	124	131	6	7	13	269
09:45 AM	122	4	126	6	140	146	5	4	9	281
Total	483	22	505	15	544	559	16	19	35	1099
Grand Total	2067	158	2225	76	1818	1894	118	156	274	4393
Apprch %	92.9	7.1		4	96		43.1	56.9		
Total %	47.1	3.6	50.6	1.7	41.4	43.1	2.7	3.6	6.2	
Passenger Vehicles	1978	155	2133	74	1724	1798	116	148	264	4195
% Passenger Vehicles	95.7	98.1	95.9	97.4	94.8	94.9	98.3	94.9	96.4	95.5
Buses	37	0	37	0	26	26	1	5	6	69
% Buses	1.8	0	1.7	0	1.4	1.4	0.8	3.2	2.2	1.6
2 Axle Vehicles	47	3	50	2	46	48	1	3	4	102
% 2 Axle Vehicles	2.3	1.9	2.2	2.6	2.5	2.5	0.8	1.9	1.5	2.3
3+ Axle Trucks	5	0	5	0	22	22	0	0	0	27
% 3+ Axle Trucks	0.2	0	0.2	0	1.2	1.2	0	0	0	0.6

	Vermont Avenue Southbound			Vermont Avenue Northbound			149th Street Eastbound			
Start Time	Thru	Right	App. Total	Left	Thru	App. Total	Left	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 09:45 AM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 07:15 AM										
07:15 AM	191	23	214	5	150	155	10	13	23	392
07:30 AM	274	27	301	16	174	190	**23**	32	55	546
07:45 AM	**276**	**35**	**311**	**20**	**220**	**240**	23	**44**	**67**	**618**
08:00 AM	206	23	229	6	192	198	21	24	45	472
Total Volume	947	108	1055	47	736	783	77	113	190	2028
% App. Total	89.8	10.2		6	94		40.5	59.5		
PHF	.858	.771	.848	.588	.836	.816	.837	.642	.709	.820

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City of Gardena
N/S: Vermont Avenue
E/W: 149th Street
Weather: Clear

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Peak Hour Analysis From 07:00 AM to 09:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:15 AM			07:30 AM			07:15 AM		
+0 mins.	191	23	214	16	174	190	10	13	23
+15 mins.	274	27	301	**20**	**220**	**240**	**23**	32	55
+30 mins.	**276**	**35**	**311**	6	192	198	23	**44**	**67**
+45 mins.	206	23	229	2	156	158	21	24	45
Total Volume	947	108	1055	44	742	786	77	113	190
% App. Total	89.8	10.2		5.6	94.4		40.5	59.5	
PHF	.858	.771	.848	.550	.843	.819	.837	.642	.709

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City of Gardena
N/S: Vermont Avenue
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Groups Printed- Passenger Vehicles

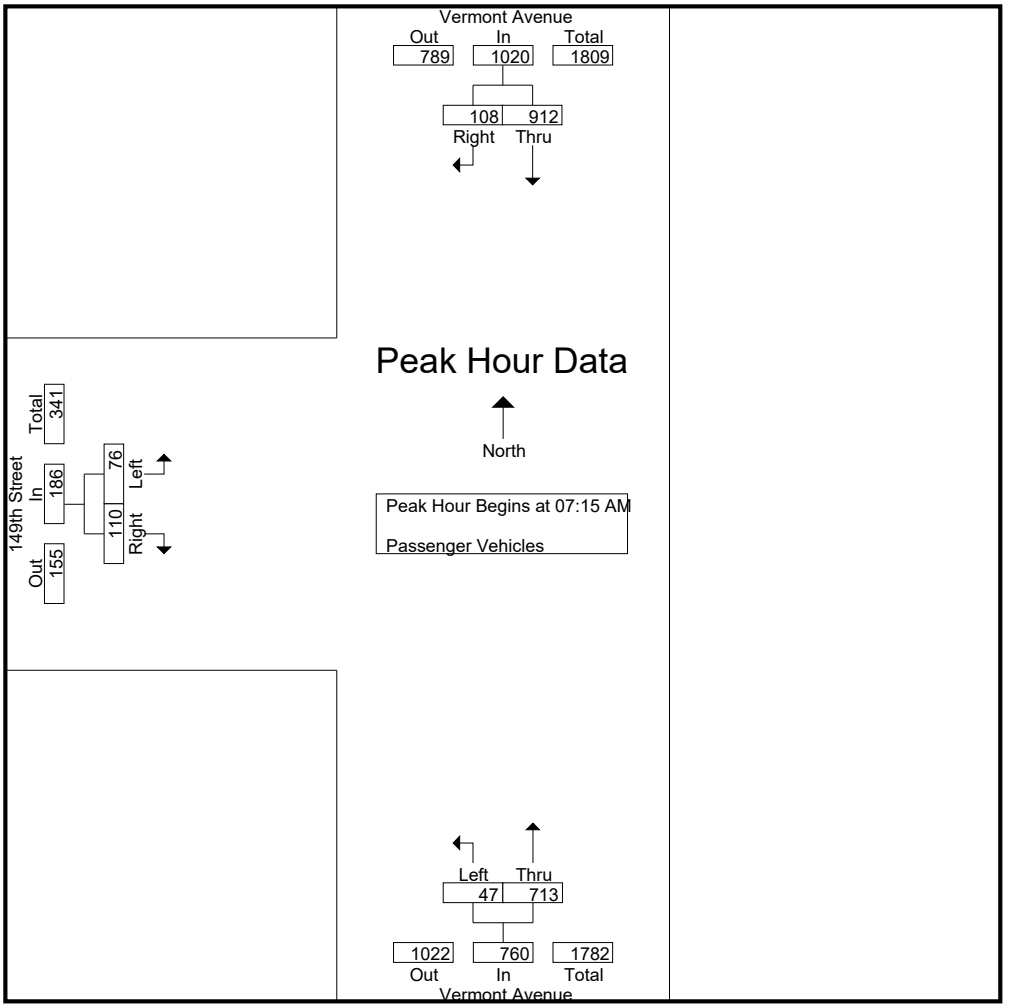
	Vermont Avenue Southbound			Vermont Avenue Northbound			149th Street Eastbound			
Start Time	Thru	Right	App. Total	Left	Thru	App. Total	Left	Right	App. Total	Int. Total
07:00 AM	149	9	158	5	115	120	6	9	15	293
07:15 AM	180	23	203	5	146	151	10	13	23	377
07:30 AM	264	27	291	16	169	185	23	29	52	528
07:45 AM	266	35	301	20	210	230	23	44	67	598
Total	859	94	953	46	640	686	62	95	157	1796
08:00 AM	202	23	225	6	188	194	20	24	44	463
08:15 AM	157	7	164	2	144	146	8	7	15	325
08:30 AM	156	4	160	1	132	133	6	4	10	303
08:45 AM	146	7	153	5	113	118	5	1	6	277
Total	661	41	702	14	577	591	39	36	75	1368
09:00 AM	111	4	115	1	135	136	2	3	5	256
09:15 AM	122	8	130	1	125	126	3	4	7	263
09:30 AM	112	4	116	7	113	120	5	6	11	247
09:45 AM	113	4	117	5	134	139	5	4	9	265
Total	458	20	478	14	507	521	15	17	32	1031
Grand Total	1978	155	2133	74	1724	1798	116	148	264	4195
Apprch %	92.7	7.3		4.1	95.9		43.9	56.1		
Total %	47.2	3.7	50.8	1.8	41.1	42.9	2.8	3.5	6.3	

	Vermont Avenue Southbound			Vermont Avenue Northbound			149th Street Eastbound			
Start Time	Thru	Right	App. Total	Left	Thru	App. Total	Left	Right	App. Total	Int. Total
Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 07:15 AM										
07:15 AM	180	23	203	5	146	151	10	13	23	377
07:30 AM	264	27	291	16	169	185	**23**	29	52	528
07:45 AM	**266**	**35**	**301**	**20**	**210**	**230**	23	**44**	**67**	**598**
08:00 AM	202	23	225	6	188	194	20	24	44	463
Total Volume	912	108	1020	47	713	760	76	110	186	1966
% App. Total	89.4	10.6		6.2	93.8		40.9	59.1		
PHF	.857	.771	.847	.588	.849	.826	.826	.625	.694	.822

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Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:15 AM			07:15 AM			07:15 AM		
+0 mins.	180	23	203	5	146	151	10	13	23
+15 mins.	264	27	291	16	169	185	**23**	29	52
+30 mins.	**266**	**35**	**301**	**20**	**210**	**230**	23	**44**	**67**
+45 mins.	202	23	225	6	188	194	20	24	44
Total Volume	912	108	1020	47	713	760	76	110	186
% App. Total	89.4	10.6		6.2	93.8		40.9	59.1	
PHF	.857	.771	.847	.588	.849	.826	.826	.625	.694

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Weather: Clear

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Groups Printed- Buses

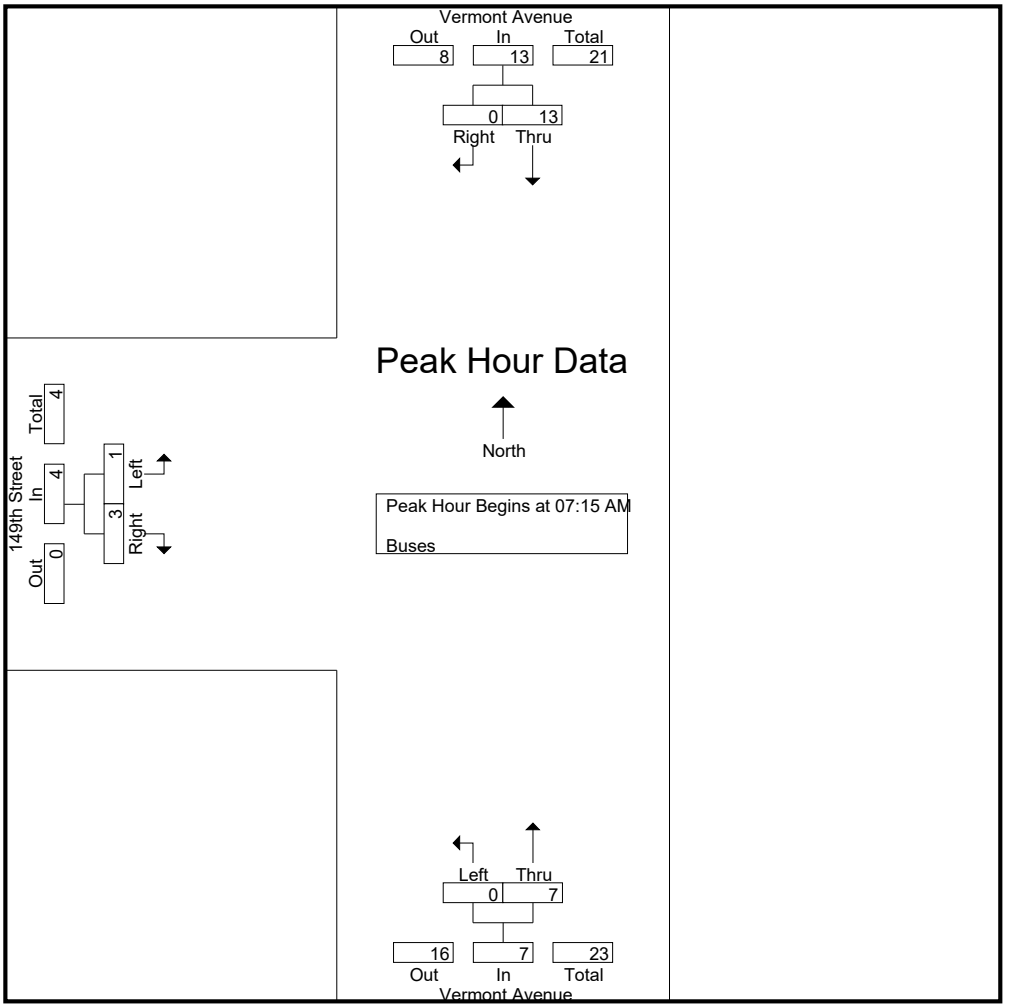
	Vermont Avenue Southbound			Vermont Avenue Northbound			149th Street Eastbound			
Start Time	Thru	Right	App. Total	Left	Thru	App. Total	Left	Right	App. Total	Int. Total
07:00 AM	5	0	5	0	3	3	0	2	2	10
07:15 AM	6	0	6	0	2	2	0	0	0	8
07:30 AM	3	0	3	0	1	1	0	3	3	7
07:45 AM	3	0	3	0	2	2	0	0	0	5
Total	17	0	17	0	8	8	0	5	5	30
08:00 AM	1	0	1	0	2	2	1	0	1	4
08:15 AM	1	0	1	0	3	3	0	0	0	4
08:30 AM	6	0	6	0	2	2	0	0	0	8
08:45 AM	2	0	2	0	2	2	0	0	0	4
Total	10	0	10	0	9	9	1	0	1	20
09:00 AM	3	0	3	0	1	1	0	0	0	4
09:15 AM	0	0	0	0	3	3	0	0	0	3
09:30 AM	3	0	3	0	3	3	0	0	0	6
09:45 AM	4	0	4	0	2	2	0	0	0	6
Total	10	0	10	0	9	9	0	0	0	19
Grand Total	37	0	37	0	26	26	1	5	6	69
Apprch %	100	0		0	100		16.7	83.3		
Total %	53.6	0	53.6	0	37.7	37.7	1.4	7.2	8.7	

	Vermont Avenue Southbound			Vermont Avenue Northbound			149th Street Eastbound			
Start Time	Thru	Right	App. Total	Left	Thru	App. Total	Left	Right	App. Total	Int. Total
Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 07:15 AM										
07:15 AM	**6**	0	**6**	0	**2**	**2**	0	0	0	**8**
07:30 AM	3	0	3	0	1	1	0	**3**	**3**	7
07:45 AM	3	0	3	0	2	2	0	0	0	5
08:00 AM	1	0	1	0	2	2	**1**	0	1	4
Total Volume	13	0	13	0	7	7	1	3	4	24
% App. Total	100	0		0	100		25	75		
PHF	.542	.000	.542	.000	.875	.875	.250	.250	.333	.750

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Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:15 AM			07:15 AM			07:15 AM		
+0 mins.	**6**	0	**6**	0	**2**	**2**	0	0	0
+15 mins.	3	0	3	0	1	1	0	**3**	**3**
+30 mins.	3	0	3	0	2	2	0	0	0
+45 mins.	1	0	1	0	2	2	**1**	0	1
Total Volume	13	0	13	0	7	7	1	3	4
% App. Total	100	0		0	100		25	75	
PHF	.542	.000	.542	.000	.875	.875	.250	.250	.333

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City of Gardena
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File Name : 04_GDA_Vermont_149th AM
Site Code : 05719380
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Groups Printed- 2 Axle Vehicles

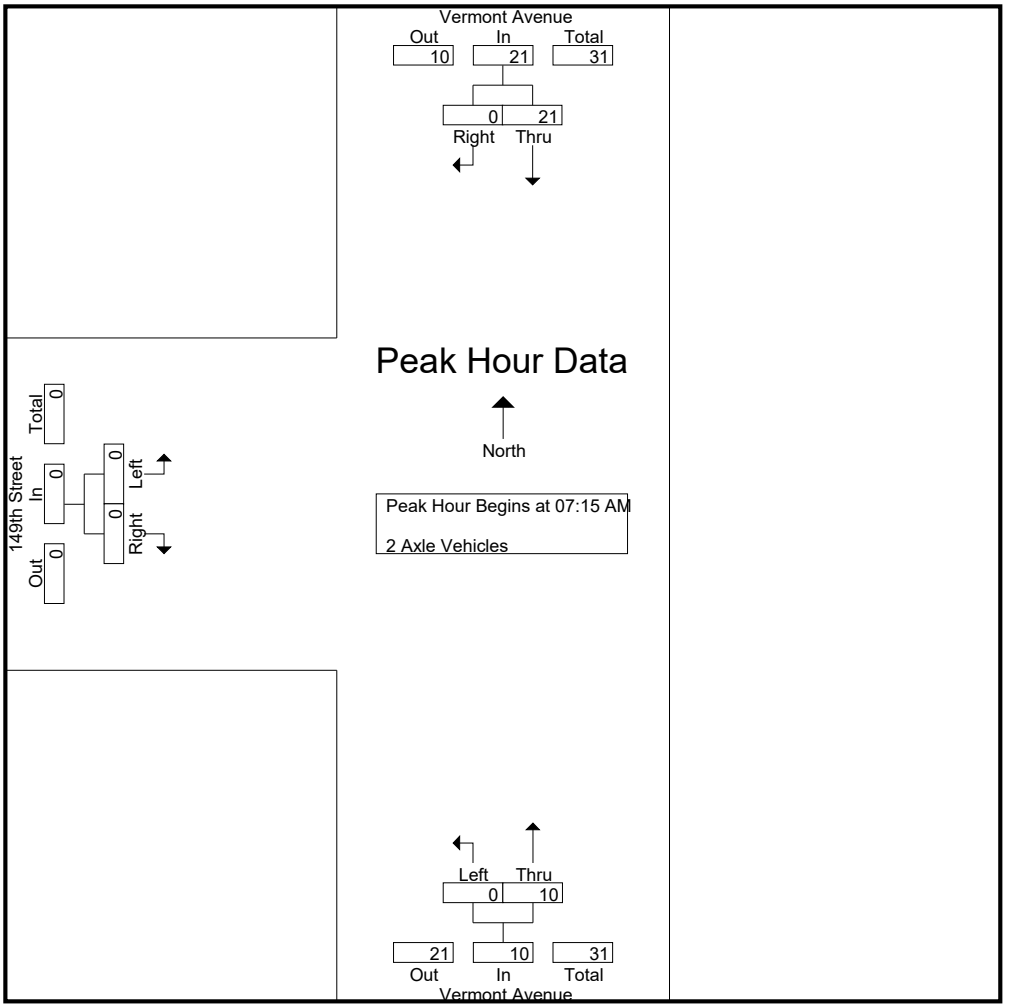
	Vermont Avenue Southbound			Vermont Avenue Northbound			149th Street Eastbound			
Start Time	Thru	Right	App. Total	Left	Thru	App. Total	Left	Right	App. Total	Int. Total
07:00 AM	5	0	5	1	2	3	0	0	0	8
07:15 AM	5	0	5	0	2	2	0	0	0	7
07:30 AM	7	0	7	0	1	1	0	0	0	8
07:45 AM	6	0	6	0	6	6	0	0	0	12
Total	23	0	23	1	11	12	0	0	0	35
08:00 AM	3	0	3	0	1	1	0	0	0	4
08:15 AM	4	0	4	0	9	9	0	1	1	14
08:30 AM	0	0	0	0	4	4	0	0	0	4
08:45 AM	5	1	6	0	3	3	0	0	0	9
Total	12	1	13	0	17	17	0	1	1	31
09:00 AM	2	0	2	0	3	3	0	1	1	6
09:15 AM	4	0	4	0	7	7	0	0	0	11
09:30 AM	2	2	4	0	6	6	1	1	2	12
09:45 AM	4	0	4	1	2	3	0	0	0	7
Total	12	2	14	1	18	19	1	2	3	36
Grand Total	47	3	50	2	46	48	1	3	4	102
Apprch %	94	6		4.2	95.8		25	75		
Total %	46.1	2.9	49	2	45.1	47.1	1	2.9	3.9	

	Vermont Avenue Southbound			Vermont Avenue Northbound			149th Street Eastbound			
Start Time	Thru	Right	App. Total	Left	Thru	App. Total	Left	Right	App. Total	Int. Total
Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 07:15 AM										
07:15 AM	5	0	5	0	2	2	0	0	0	7
07:30 AM	**7**	0	**7**	0	1	1	0	0	0	8
07:45 AM	6	0	6	0	**6**	**6**	0	0	0	**12**
08:00 AM	3	0	3	0	1	1	0	0	0	4
Total Volume	21	0	21	0	10	10	0	0	0	31
% App. Total	100	0		0	100		0	0		
PHF	.750	.000	.750	.000	.417	.417	.000	.000	.000	.646

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Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:15 AM			07:15 AM			07:15 AM		
+0 mins.	5	0	5	0	2	2	0	0	0
+15 mins.	**7**	0	**7**	0	1	1	0	0	0
+30 mins.	6	0	6	0	**6**	**6**	0	0	0
+45 mins.	3	0	3	0	1	1	0	0	0
Total Volume	21	0	21	0	10	10	0	0	0
% App. Total	100	0		0	100		0	0	
PHF	.750	.000	.750	.000	.417	.417	.000	.000	.000

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City of Gardena
N/S: Vermont Avenue
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File Name : 04_GDA_Vermont_149th AM
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Groups Printed- 3+ Axle Trucks

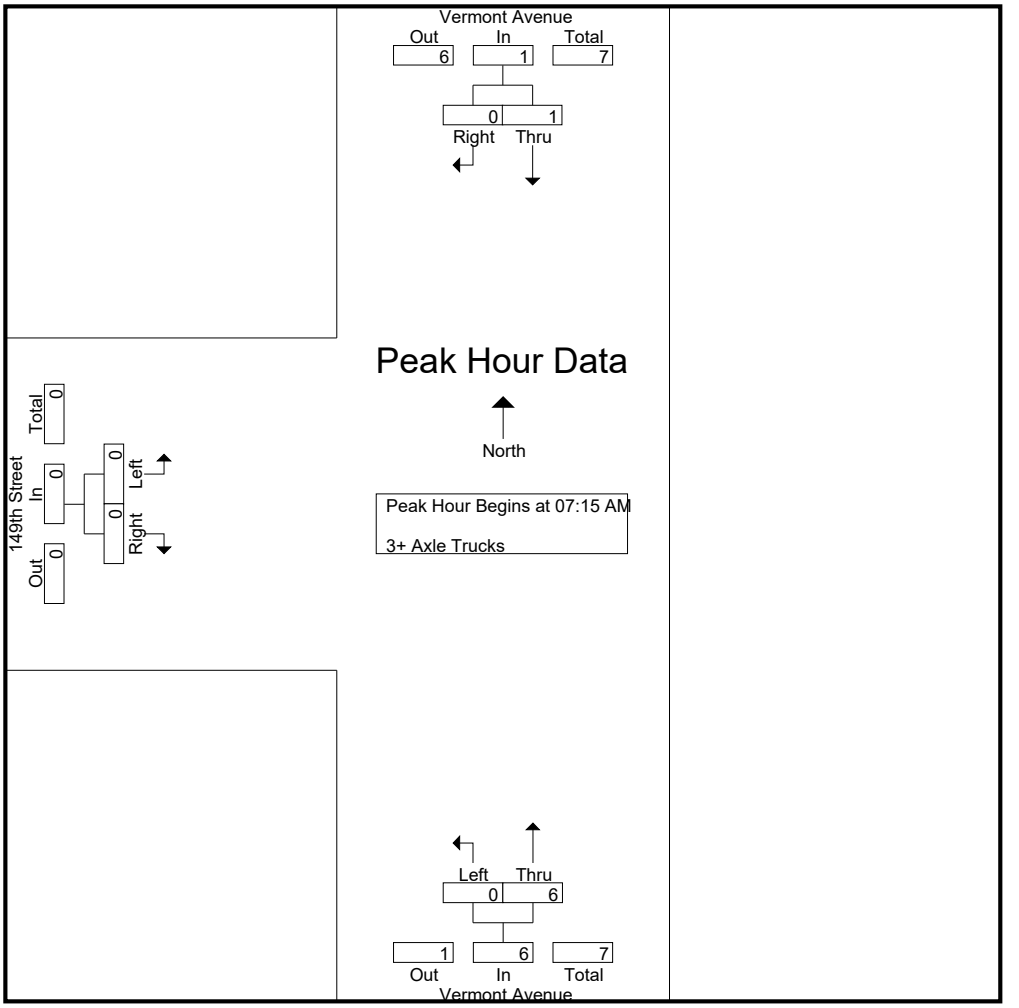
	Vermont Avenue Southbound			Vermont Avenue Northbound			149th Street Eastbound			
Start Time	Thru	Right	App. Total	Left	Thru	App. Total	Left	Right	App. Total	Int. Total
07:00 AM	0	0	0	0	1	1	0	0	0	1
07:15 AM	0	0	0	0	0	0	0	0	0	0
07:30 AM	0	0	0	0	3	3	0	0	0	3
07:45 AM	1	0	1	0	2	2	0	0	0	3
Total	1	0	1	0	6	6	0	0	0	7
08:00 AM	0	0	0	0	1	1	0	0	0	1
08:15 AM	0	0	0	0	0	0	0	0	0	0
08:30 AM	1	0	1	0	4	4	0	0	0	5
08:45 AM	0	0	0	0	1	1	0	0	0	1
Total	1	0	1	0	6	6	0	0	0	7
09:00 AM	0	0	0	0	0	0	0	0	0	0
09:15 AM	0	0	0	0	6	6	0	0	0	6
09:30 AM	2	0	2	0	2	2	0	0	0	4
09:45 AM	1	0	1	0	2	2	0	0	0	3
Total	3	0	3	0	10	10	0	0	0	13
Grand Total	5	0	5	0	22	22	0	0	0	27
Apprch %	100	0		0	100		0	0		
Total %	18.5	0	18.5	0	81.5	81.5	0	0	0	

	Vermont Avenue Southbound			Vermont Avenue Northbound			149th Street Eastbound			
Start Time	Thru	Right	App. Total	Left	Thru	App. Total	Left	Right	App. Total	Int. Total
Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 07:15 AM										
07:15 AM	0	0	0	0	0	0	0	0	0	0
07:30 AM	0	0	0	0	**3**	**3**	0	0	0	**3**
07:45 AM	**1**	0	**1**	0	2	2	0	0	0	3
08:00 AM	0	0	0	0	1	1	0	0	0	1
Total Volume	1	0	1	0	6	6	0	0	0	7
% App. Total	100	0		0	100		0	0		
PHF	.250	.000	.250	.000	.500	.500	.000	.000	.000	.583

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Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:15 AM			07:15 AM			07:15 AM		
+0 mins.	0	0	0	0	0	0	0	0	0
+15 mins.	0	0	0	0	**3**	**3**	0	0	0
+30 mins.	**1**	0	**1**	0	2	2	0	0	0
+45 mins.	0	0	0	0	1	1	0	0	0
Total Volume	1	0	1	0	6	6	0	0	0
% App. Total	100	0		0	100		0	0	
PHF	.250	.000	.250	.000	.500	.500	.000	.000	.000

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City of Gardena
N/S: Vermont Avenue
E/W: 149th Street
Weather: Clear

File Name : 04_GDA_Vermont_149th PM
Site Code : 05719380
Start Date : 5/23/2019
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Groups Printed- Passenger Vehicles - Buses - 2 Axle Vehicles - 3+ Axle Trucks

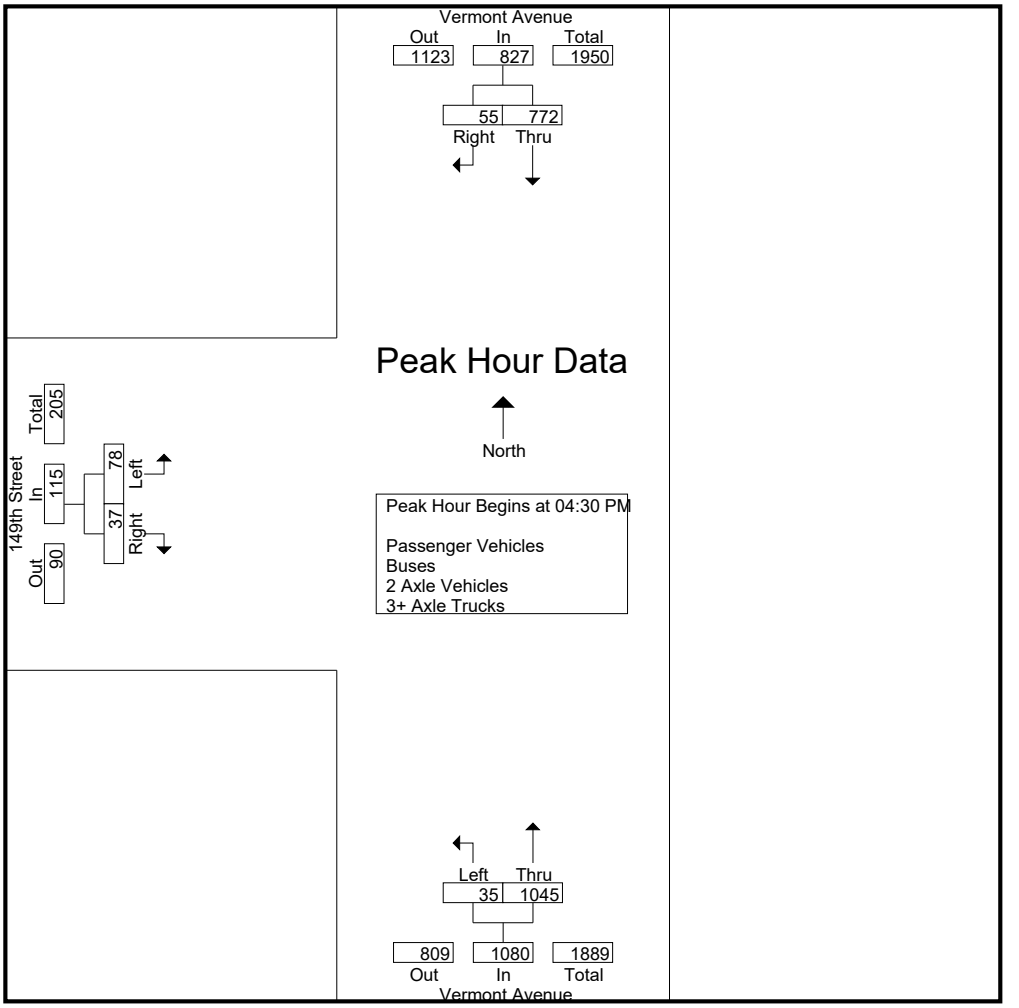
	Vermont Avenue Southbound			Vermont Avenue Northbound			149th Street Eastbound			
Start Time	Thru	Right	App. Total	Left	Thru	App. Total	Left	Right	App. Total	Int. Total
03:00 PM	173	13	186	1	239	240	18	10	28	454
03:15 PM	193	14	207	14	219	233	15	7	22	462
03:30 PM	201	10	211	12	260	272	15	11	26	509
03:45 PM	208	16	224	7	256	263	19	16	35	522
Total	775	53	828	34	974	1008	67	44	111	1947
04:00 PM	177	9	186	7	225	232	13	14	27	445
04:15 PM	159	10	169	3	258	261	16	13	29	459
04:30 PM	195	19	214	8	246	254	13	11	24	492
04:45 PM	198	11	209	8	243	251	17	11	28	488
Total	729	49	778	26	972	998	59	49	108	1884
05:00 PM	179	17	196	6	284	290	18	9	27	513
05:15 PM	200	8	208	13	272	285	30	6	36	529
05:30 PM	178	11	189	4	248	252	18	10	28	469
05:45 PM	179	14	193	8	231	239	13	9	22	454
Total	736	50	786	31	1035	1066	79	34	113	1965
Grand Total	2240	152	2392	91	2981	3072	205	127	332	5796
Apprch %	93.6	6.4		3	97		61.7	38.3		
Total %	38.6	2.6	41.3	1.6	51.4	53	3.5	2.2	5.7	
Passenger Vehicles	2162	152	2314	89	2906	2995	204	125	329	5638
% Passenger Vehicles	96.5	100	96.7	97.8	97.5	97.5	99.5	98.4	99.1	97.3
Buses	49	0	49	0	28	28	1	2	3	80
% Buses	2.2	0	2	0	0.9	0.9	0.5	1.6	0.9	1.4
2 Axle Vehicles	23	0	23	2	38	40	0	0	0	63
% 2 Axle Vehicles	1	0	1	2.2	1.3	1.3	0	0	0	1.1
3+ Axle Trucks	6	0	6	0	9	9	0	0	0	15
% 3+ Axle Trucks	0.3	0	0.3	0	0.3	0.3	0	0	0	0.3

	Vermont Avenue Southbound			Vermont Avenue Northbound			149th Street Eastbound			
Start Time	Thru	Right	App. Total	Left	Thru	App. Total	Left	Right	App. Total	Int. Total
Peak Hour Analysis From 03:00 PM to 05:45 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 04:30 PM										
04:30 PM	195	**19**	**214**	8	246	254	13	**11**	24	492
04:45 PM	198	11	209	8	243	251	17	11	28	488
05:00 PM	179	17	196	6	**284**	**290**	18	9	27	513
05:15 PM	**200**	8	208	**13**	272	285	**30**	6	**36**	**529**
Total Volume	772	55	827	35	1045	1080	78	37	115	2022
% App. Total	93.3	6.7		3.2	96.8		67.8	32.2		
PHF	.965	.724	.966	.673	.920	.931	.650	.841	.799	.956

Counts Unlimited
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City of Gardena
N/S: Vermont Avenue
E/W: 149th Street
Weather: Clear

File Name : 04_GDA_Vermont_149th PM
Site Code : 05719380
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Peak Hour Analysis From 03:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	03:00 PM			04:30 PM			04:45 PM		
+0 mins.	173	13	186	8	246	254	17	**11**	28
+15 mins.	193	14	207	8	243	251	18	9	27
+30 mins.	201	10	211	6	**284**	**290**	**30**	6	**36**
+45 mins.	**208**	**16**	**224**	**13**	272	285	18	10	28
Total Volume	775	53	828	35	1045	1080	83	36	119
% App. Total	93.6	6.4		3.2	96.8		69.7	30.3	
PHF	.931	.828	.924	.673	.920	.931	.692	.818	.826

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City of Gardena
N/S: Vermont Avenue
E/W: 149th Street
Weather: Clear

File Name : 04_GDA_Vermont_149th PM
Site Code : 05719380
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Page No : 1

Groups Printed- Passenger Vehicles

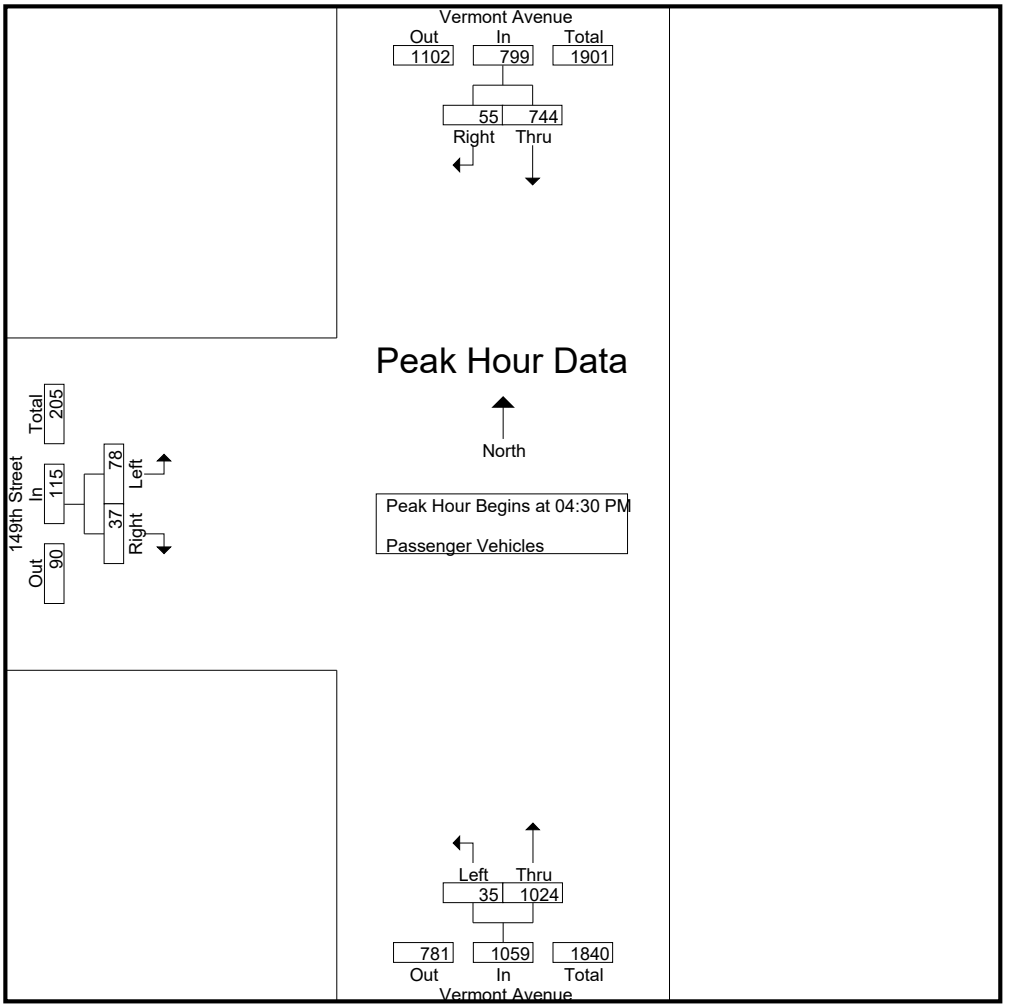
	Vermont Avenue Southbound			Vermont Avenue Northbound			149th Street Eastbound			
Start Time	Thru	Right	App. Total	Left	Thru	App. Total	Left	Right	App. Total	Int. Total
03:00 PM	168	13	181	1	230	231	18	10	28	440
03:15 PM	185	14	199	13	211	224	15	7	22	445
03:30 PM	195	10	205	12	248	260	14	11	25	490
03:45 PM	201	16	217	7	254	261	19	14	33	511
Total	749	53	802	33	943	976	66	42	108	1886
04:00 PM	171	9	180	7	218	225	13	14	27	432
04:15 PM	154	10	164	3	249	252	16	13	29	445
04:30 PM	190	19	209	8	243	251	13	11	24	484
04:45 PM	187	11	198	8	239	247	17	11	28	473
Total	702	49	751	26	949	975	59	49	108	1834
05:00 PM	171	17	188	6	272	278	18	9	27	493
05:15 PM	196	8	204	13	270	283	30	6	36	523
05:30 PM	171	11	182	4	245	249	18	10	28	459
05:45 PM	173	14	187	7	227	234	13	9	22	443
Total	711	50	761	30	1014	1044	79	34	113	1918
Grand Total	2162	152	2314	89	2906	2995	204	125	329	5638
Apprch %	93.4	6.6		3	97		62	38		
Total %	38.3	2.7	41	1.6	51.5	53.1	3.6	2.2	5.8	

	Vermont Avenue Southbound			Vermont Avenue Northbound			149th Street Eastbound			
Start Time	Thru	Right	App. Total	Left	Thru	App. Total	Left	Right	App. Total	Int. Total
Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 04:30 PM										
04:30 PM	190	**19**	**209**	8	243	251	13	**11**	24	484
04:45 PM	187	11	198	8	239	247	17	11	28	473
05:00 PM	171	17	188	6	**272**	278	18	9	27	493
05:15 PM	**196**	8	204	**13**	270	**283**	**30**	6	**36**	**523**
Total Volume	744	55	799	35	1024	1059	78	37	115	1973
% App. Total	93.1	6.9		3.3	96.7		67.8	32.2		
PHF	.949	.724	.956	.673	.941	.936	.650	.841	.799	.943

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City of Gardena
N/S: Vermont Avenue
E/W: 149th Street
Weather: Clear

File Name : 04_GDA_Vermont_149th PM
Site Code : 05719380
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Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:30 PM			04:30 PM			04:30 PM		
+0 mins.	190	**19**	**209**	8	243	251	13	**11**	24
+15 mins.	187	11	198	8	239	247	17	11	28
+30 mins.	171	17	188	6	**272**	278	18	9	27
+45 mins.	**196**	8	204	**13**	270	**283**	**30**	6	**36**
Total Volume	744	55	799	35	1024	1059	78	37	115
% App. Total	93.1	6.9		3.3	96.7		67.8	32.2	
PHF	.949	.724	.956	.673	.941	.936	.650	.841	.799

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City of Gardena
N/S: Vermont Avenue
E/W: 149th Street
Weather: Clear

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Groups Printed- Buses

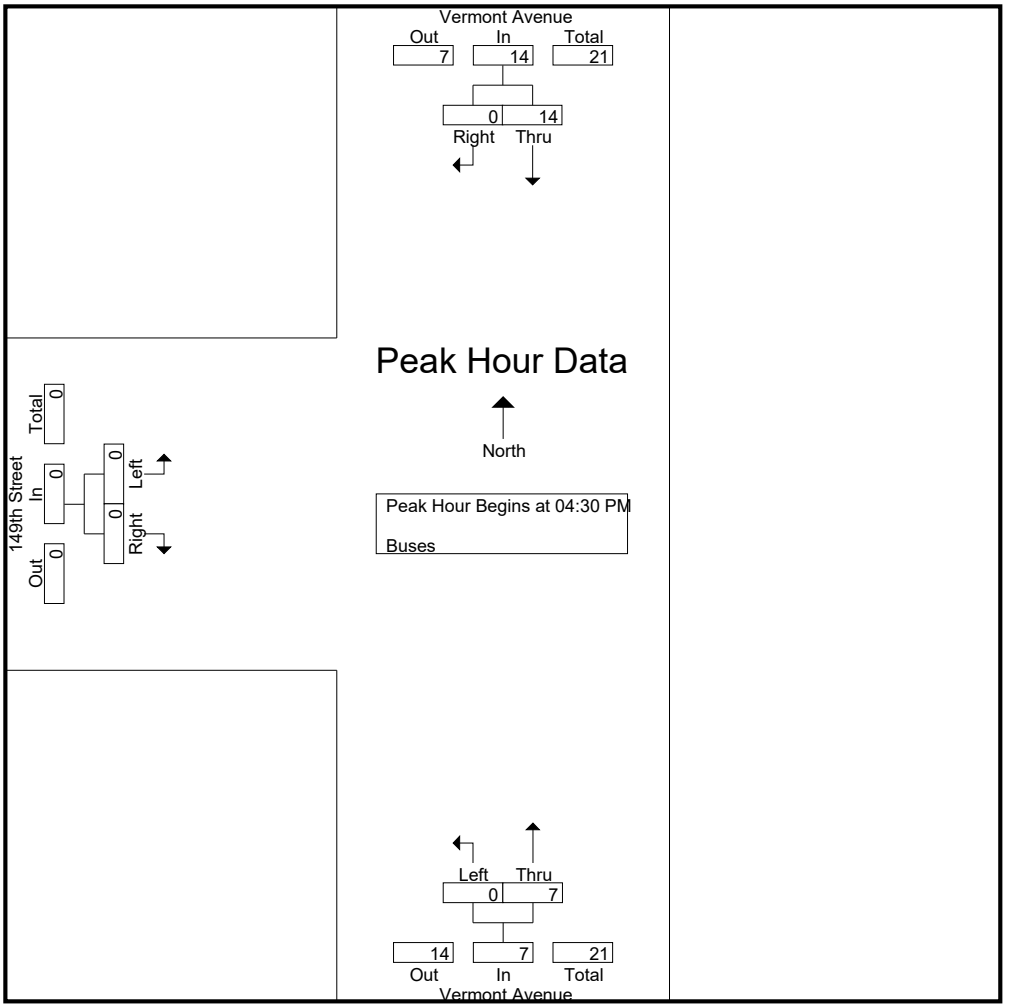
	Vermont Avenue Southbound			Vermont Avenue Northbound			149th Street Eastbound			
Start Time	Thru	Right	App. Total	Left	Thru	App. Total	Left	Right	App. Total	Int. Total
03:00 PM	4	0	4	0	2	2	0	0	0	6
03:15 PM	6	0	6	0	2	2	0	0	0	8
03:30 PM	2	0	2	0	7	7	1	0	1	10
03:45 PM	7	0	7	0	1	1	0	2	2	10
Total	19	0	19	0	12	12	1	2	3	34
04:00 PM	4	0	4	0	3	3	0	0	0	7
04:15 PM	4	0	4	0	2	2	0	0	0	6
04:30 PM	3	0	3	0	1	1	0	0	0	4
04:45 PM	6	0	6	0	0	0	0	0	0	6
Total	17	0	17	0	6	6	0	0	0	23
05:00 PM	5	0	5	0	4	4	0	0	0	9
05:15 PM	0	0	0	0	2	2	0	0	0	2
05:30 PM	6	0	6	0	2	2	0	0	0	8
05:45 PM	2	0	2	0	2	2	0	0	0	4
Total	13	0	13	0	10	10	0	0	0	23
Grand Total	49	0	49	0	28	28	1	2	3	80
Apprch %	100	0		0	100		33.3	66.7		
Total %	61.2	0	61.2	0	35	35	1.2	2.5	3.8	

	Vermont Avenue Southbound			Vermont Avenue Northbound			149th Street Eastbound			
Start Time	Thru	Right	App. Total	Left	Thru	App. Total	Left	Right	App. Total	Int. Total
Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 04:30 PM										
04:30 PM	3	0	3	0	1	1	0	0	0	4
04:45 PM	**6**	0	**6**	0	0	0	0	0	0	6
05:00 PM	5	0	5	0	**4**	**4**	0	0	0	**9**
05:15 PM	0	0	0	0	2	2	0	0	0	2
Total Volume	14	0	14	0	7	7	0	0	0	21
% App. Total	100	0		0	100		0	0		
PHF	.583	.000	.583	.000	.438	.438	.000	.000	.000	.583

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City of Gardena
N/S: Vermont Avenue
E/W: 149th Street
Weather: Clear

File Name : 04_GDA_Vermont_149th PM
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Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:30 PM			04:30 PM			04:30 PM		
+0 mins.	3	0	3	0	1	1	0	0	0
+15 mins.	**6**	0	**6**	0	0	0	0	0	0
+30 mins.	5	0	5	0	**4**	**4**	0	0	0
+45 mins.	0	0	0	0	2	2	0	0	0
Total Volume	14	0	14	0	7	7	0	0	0
% App. Total	100	0		0	100		0	0	
PHF	.583	.000	.583	.000	.438	.438	.000	.000	.000

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City of Gardena
N/S: Vermont Avenue
E/W: 149th Street
Weather: Clear

File Name : 04_GDA_Vermont_149th PM
Site Code : 05719380
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Groups Printed- 2 Axle Vehicles

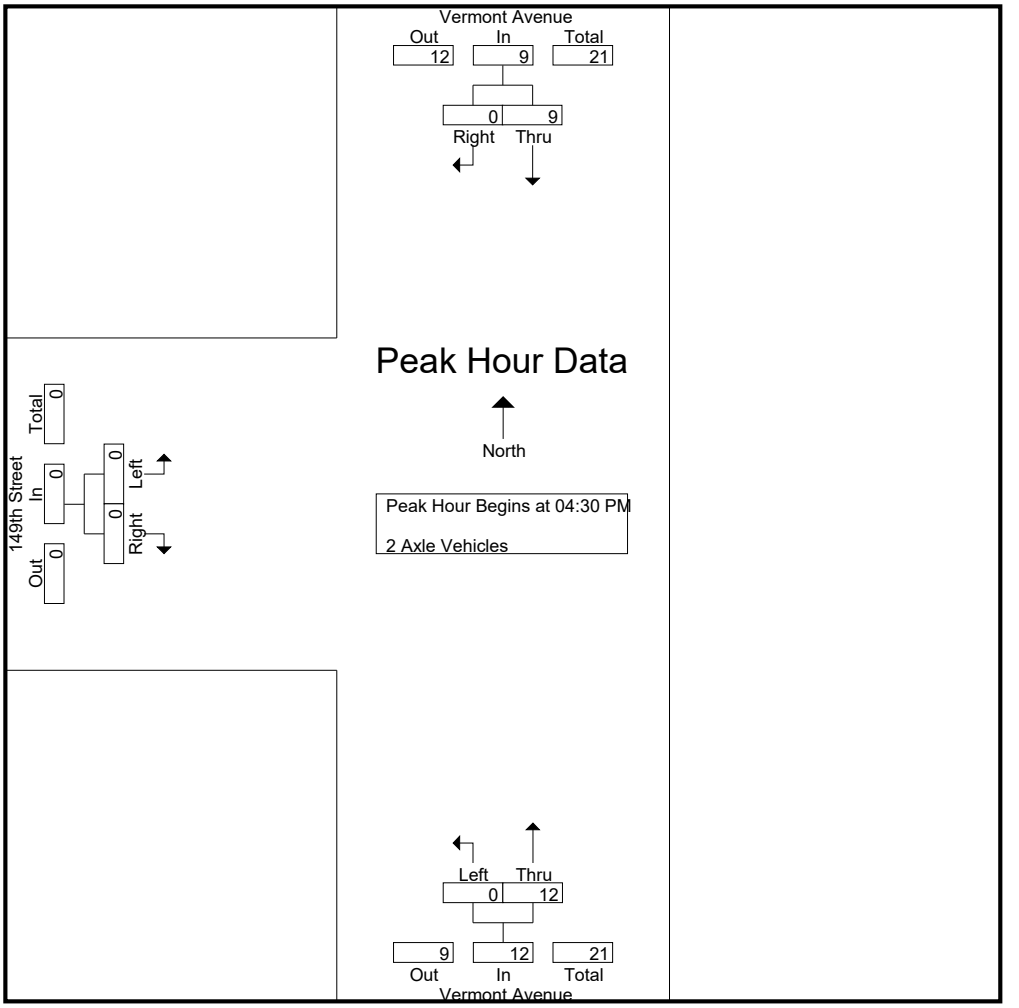
	Vermont Avenue Southbound			Vermont Avenue Northbound			149th Street Eastbound			
Start Time	Thru	Right	App. Total	Left	Thru	App. Total	Left	Right	App. Total	Int. Total
03:00 PM	1	0	1	0	7	7	0	0	0	8
03:15 PM	2	0	2	1	5	6	0	0	0	8
03:30 PM	3	0	3	0	2	2	0	0	0	5
03:45 PM	0	0	0	0	1	1	0	0	0	1
Total	6	0	6	1	15	16	0	0	0	22
04:00 PM	2	0	2	0	3	3	0	0	0	5
04:15 PM	1	0	1	0	7	7	0	0	0	8
04:30 PM	1	0	1	0	2	2	0	0	0	3
04:45 PM	3	0	3	0	3	3	0	0	0	6
Total	7	0	7	0	15	15	0	0	0	22
05:00 PM	2	0	2	0	7	7	0	0	0	9
05:15 PM	3	0	3	0	0	0	0	0	0	3
05:30 PM	1	0	1	0	1	1	0	0	0	2
05:45 PM	4	0	4	1	0	1	0	0	0	5
Total	10	0	10	1	8	9	0	0	0	19
Grand Total	23	0	23	2	38	40	0	0	0	63
Apprch %	100	0		5	95		0	0		
Total %	36.5	0	36.5	3.2	60.3	63.5	0	0	0	

	Vermont Avenue Southbound			Vermont Avenue Northbound			149th Street Eastbound			
Start Time	Thru	Right	App. Total	Left	Thru	App. Total	Left	Right	App. Total	Int. Total
Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 04:30 PM										
04:30 PM	1	0	1	0	2	2	0	0	0	3
04:45 PM	**3**	0	**3**	0	3	3	0	0	0	6
05:00 PM	2	0	2	0	**7**	**7**	0	0	0	**9**
05:15 PM	3	0	3	0	0	0	0	0	0	3
Total Volume	9	0	9	0	12	12	0	0	0	21
% App. Total	100	0		0	100		0	0		
PHF	.750	.000	.750	.000	.429	.429	.000	.000	.000	.583

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City of Gardena
N/S: Vermont Avenue
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Weather: Clear

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Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:30 PM			04:30 PM			04:30 PM		
+0 mins.	1	0	1	0	2	2	0	0	0
+15 mins.	**3**	0	**3**	0	3	3	0	0	0
+30 mins.	2	0	2	0	**7**	**7**	0	0	0
+45 mins.	3	0	3	0	0	0	0	0	0
Total Volume	9	0	9	0	12	12	0	0	0
% App. Total	100	0		0	100		0	0	
PHF	.750	.000	.750	.000	.429	.429	.000	.000	.000

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City of Gardena
N/S: Vermont Avenue
E/W: 149th Street
Weather: Clear

File Name : 04_GDA_Vermont_149th PM
Site Code : 05719380
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Groups Printed- 3+ Axle Trucks

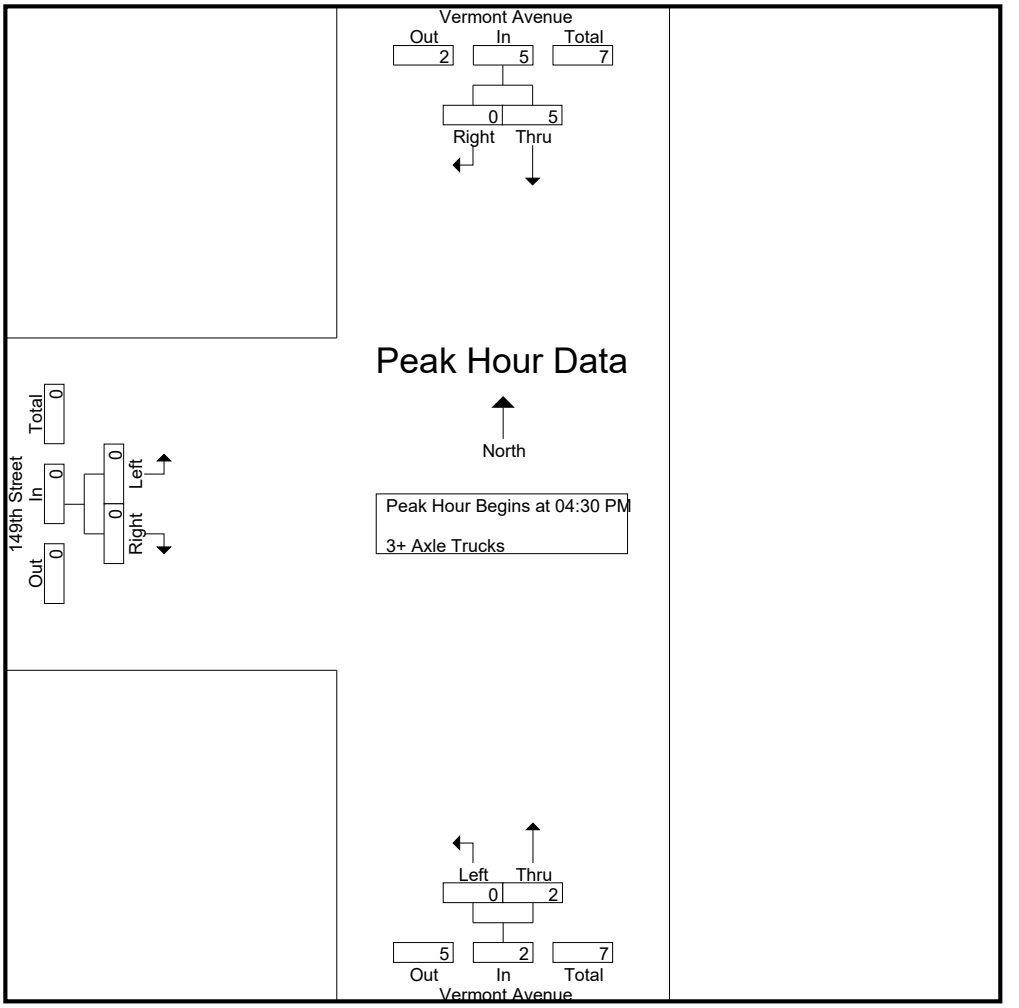
	Vermont Avenue Southbound			Vermont Avenue Northbound			149th Street Eastbound			
Start Time	Thru	Right	App. Total	Left	Thru	App. Total	Left	Right	App. Total	Int. Total
03:00 PM	0	0	0	0	0	0	0	0	0	0
03:15 PM	0	0	0	0	1	1	0	0	0	1
03:30 PM	1	0	1	0	3	3	0	0	0	4
03:45 PM	0	0	0	0	0	0	0	0	0	0
Total	1	0	1	0	4	4	0	0	0	5
04:00 PM	0	0	0	0	1	1	0	0	0	1
04:15 PM	0	0	0	0	0	0	0	0	0	0
04:30 PM	1	0	1	0	0	0	0	0	0	1
04:45 PM	2	0	2	0	1	1	0	0	0	3
Total	3	0	3	0	2	2	0	0	0	5
05:00 PM	1	0	1	0	1	1	0	0	0	2
05:15 PM	1	0	1	0	0	0	0	0	0	1
05:30 PM	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	0	0	0	2	2	0	0	0	2
Total	2	0	2	0	3	3	0	0	0	5
Grand Total	6	0	6	0	9	9	0	0	0	15
Apprch %	100	0		0	100		0	0		
Total %	40	0	40	0	60	60	0	0	0	

	Vermont Avenue Southbound			Vermont Avenue Northbound			149th Street Eastbound			
Start Time	Thru	Right	App. Total	Left	Thru	App. Total	Left	Right	App. Total	Int. Total
Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 04:30 PM										
04:30 PM	1	0	1	0	0	0	0	0	0	1
04:45 PM	**2**	0	**2**	0	**1**	**1**	0	0	0	**3**
05:00 PM	1	0	1	0	1	1	0	0	0	2
05:15 PM	1	0	1	0	0	0	0	0	0	1
Total Volume	5	0	5	0	2	2	0	0	0	7
% App. Total	100	0		0	100		0	0		
PHF	.625	.000	.625	.000	.500	.500	.000	.000	.000	.583

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City of Gardena
N/S: Vermont Avenue
E/W: 149th Street
Weather: Clear

File Name : 04_GDA_Vermont_149th PM
Site Code : 05719380
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Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:30 PM			04:30 PM			04:30 PM		
+0 mins.	1	0	1	0	0	0	0	0	0
+15 mins.	**2**	0	**2**	0	**1**	**1**	0	0	0
+30 mins.	1	0	1	0	1	1	0	0	0
+45 mins.	1	0	1	0	0	0	0	0	0
Total Volume	5	0	5	0	2	2	0	0	0
% App. Total	100	0		0	100		0	0	
PHF	.625	.000	.625	.000	.500	.500	.000	.000	.000

Location: Gardena
N/S: Vermont Avenue
E/W: 149th Street

Date: 5/23/2019
Day: Thursday

PEDESTRIANS

	North Leg Vermont Avenue	East Leg Dead End	South Leg Vermont Avenue	West Leg 149th Street	
	Pedestrians	Pedestrians	Pedestrians	Pedestrians	
7:00 AM	0	0	1	10	11
7:15 AM	0	0	6	9	15
7:30 AM	0	0	3	20	23
7:45 AM	0	0	15	21	36
8:00 AM	0	0	4	5	9
8:15 AM	0	0	1	4	5
8:30 AM	0	0	1	5	6
8:45 AM	0	0	0	1	1
9:00 AM	0	0	3	0	3
9:15 AM	0	0	1	1	2
9:30 AM	0	0	2	3	5
9:45 AM	0	0	2	2	4
TOTAL VOLUMES:	0	0	39	81	120

	North Leg Vermont Avenue	East Leg Dead End	South Leg Vermont Avenue	West Leg 149th Street	
	Pedestrians	Pedestrians	Pedestrians	Pedestrians	
3:00 PM	0	0	4	4	8
3:15 PM	0	0	2	1	3
3:30 PM	0	0	0	2	2
3:45 PM	0	0	16	11	27
4:00 PM	0	0	6	2	8
4:15 PM	0	0	6	11	17
4:30 PM	0	0	7	7	14
4:45 PM	0	0	1	6	7
5:00 PM	0	0	7	3	10
5:15 PM	0	0	7	9	16
5:30 PM	0	0	5	10	15
5:45 PM	0	0	5	6	11
TOTAL VOLUMES:	0	0	66	72	138

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Location: Gardena
N/S: Vermont Avenue
E/W: 149th Street

Date: 5/23/2019
Day: Thursday

BICYCLES

	Southbound Vermont Avenue			Westbound Dead End			Northbound Vermont Avenue			Eastbound 149th Street			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	1	1	0	0	0	0	0	0	0	0	0	2
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	1	0	0	0	0	1
8:00 AM	0	0	1	0	0	0	0	0	0	0	0	0	1
8:15 AM	0	1	0	0	0	0	0	0	0	0	0	0	1
8:30 AM	0	1	0	0	0	0	0	0	0	1	0	0	2
8:45 AM	0	2	0	0	0	0	0	1	0	0	0	0	3
9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
9:15 AM	0	1	0	0	0	0	0	0	0	0	0	0	1
9:30 AM	0	1	0	0	0	0	0	2	0	0	0	0	3
9:45 AM	0	1	0	0	0	0	0	0	0	1	0	0	2
TOTAL VOLUMES:	0	8	2	0	0	0	0	4	0	2	0	0	16

	Southbound Vermont Avenue			Westbound Dead End			Northbound Vermont Avenue			Eastbound 149th Street			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
3:00 PM	0	0	0	0	0	0	0	1	0	1	0	0	2
3:15 PM	0	1	0	0	0	0	0	1	0	0	0	0	2
3:30 PM	0	0	1	0	0	0	0	1	0	0	0	0	2
3:45 PM	0	1	0	0	0	0	0	0	0	0	0	0	1
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	2	0	0	0	0	2
4:30 PM	0	2	0	0	0	0	0	3	0	0	0	0	5
4:45 PM	0	1	1	0	0	0	0	5	0	0	0	0	7
5:00 PM	0	1	0	0	0	0	0	3	0	0	0	0	4
5:15 PM	0	1	0	0	0	0	0	0	0	0	0	0	1
5:30 PM	0	2	1	0	0	0	0	1	0	1	0	0	5
5:45 PM	0	1	0	0	0	0	0	1	0	0	0	0	2
TOTAL VOLUMES:	0	10	3	0	0	0	0	18	0	2	0	0	33

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Counts Unlimited
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Corona, CA 92878
(951) 268-6268

City of Gardena
N/S: Vermont Avenue
E/W: Marine Avenue
Weather: Clear

File Name : 05_GDA_Vermont_Marine AM
Site Code : 05719380
Start Date : 5/23/2019
Page No : 1

Groups Printed- Passenger Vehicles - Buses - 2 Axle Vehicles - 3+ Axle Trucks

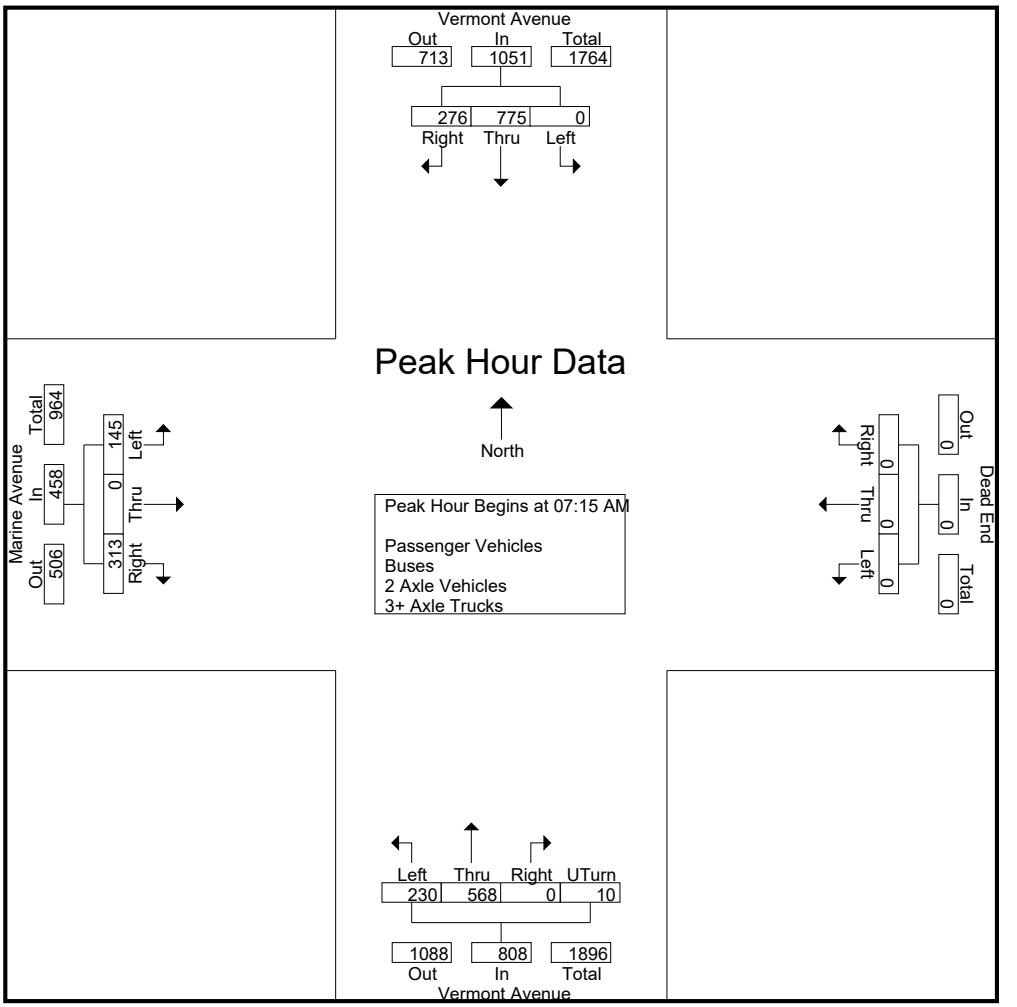
	Vermont Avenue Southbound				Dead End Westbound				Vermont Avenue Northbound					Marine Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	UTurn	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	0	137	34	171	0	0	0	0	54	89	0	10	153	25	0	54	79	403
07:15 AM	0	142	57	199	0	0	0	0	44	126	0	4	174	28	0	69	97	470
07:30 AM	0	211	70	281	0	0	0	0	66	148	0	2	216	39	0	88	127	624
07:45 AM	0	246	88	334	0	0	0	0	68	147	0	3	218	43	0	95	138	690
Total	0	736	249	985	0	0	0	0	232	510	0	19	761	135	0	306	441	2187
08:00 AM	0	176	61	237	0	0	0	0	52	147	0	1	200	35	0	61	96	533
08:15 AM	0	119	43	162	0	0	0	0	38	110	0	1	149	42	0	81	123	434
08:30 AM	0	114	44	158	0	0	0	0	50	113	0	3	166	28	0	51	79	403
08:45 AM	0	112	43	155	0	0	0	0	49	92	0	0	141	24	0	64	88	384
Total	0	521	191	712	0	0	0	0	189	462	0	5	656	129	0	257	386	1754
09:00 AM	0	97	22	119	0	0	0	0	35	104	0	1	140	28	0	56	84	343
09:15 AM	0	91	29	120	0	0	0	0	42	109	0	2	153	24	0	39	63	336
09:30 AM	0	94	33	127	0	0	0	0	38	104	0	1	143	26	0	43	69	339
09:45 AM	0	91	32	123	0	0	0	0	30	113	0	3	146	28	0	40	68	337
Total	0	373	116	489	0	0	0	0	145	430	0	7	582	106	0	178	284	1355
Grand Total	0	1630	556	2186	0	0	0	0	566	1402	0	31	1999	370	0	741	1111	5296
Apprch %	0	74.6	25.4		0	0	0		28.3	70.1	0	1.6		33.3	0	66.7		
Total %	0	30.8	10.5	41.3	0	0	0	0	10.7	26.5	0	0.6	37.7	7	0	14	21	
Passenger Vehicles	0	1549	544	2093	0	0	0	0	565	1329	0	31	1925	362	0	723	1085	5103
% Passenger Vehicles	0	95	97.8	95.7	0	0	0	0	99.8	94.8	0	100	96.3	97.8	0	97.6	97.7	96.4
Buses	0	34	1	35	0	0	0	0	1	37	0	0	38	0	0	1	1	74
% Buses	0	2.1	0.2	1.6	0	0	0	0	0.2	2.6	0	0	1.9	0	0	0.1	0.1	1.4
2 Axle Vehicles	0	46	10	56	0	0	0	0	0	14	0	0	14	8	0	13	21	91
% 2 Axle Vehicles	0	2.8	1.8	2.6	0	0	0	0	0	1	0	0	0.7	2.2	0	1.8	1.9	1.7
3+ Axle Trucks	0	1	1	2	0	0	0	0	0	22	0	0	22	0	0	4	4	28
% 3+ Axle Trucks	0	0.1	0.2	0.1	0	0	0	0	0	1.6	0	0	1.1	0	0	0.5	0.4	0.5

	Vermont Avenue Southbound				Dead End Westbound				Vermont Avenue Northbound					Marine Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	UTurn	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1																		
Peak Hour for Entire Intersection Begins at 07:15 AM																		
07:15 AM	0	142	57	199	0	0	0	0	44	126	0	4	174	28	0	69	97	470
07:30 AM	0	211	70	281	0	0	0	0	66	148	0	2	216	39	0	88	127	624
07:45 AM	0	246	88	334	0	0	0	0	68	147	0	3	218	43	0	95	138	690
08:00 AM	0	176	61	237	0	0	0	0	52	147	0	1	200	35	0	61	96	533
Total Volume	0	775	276	1051	0	0	0	0	230	568	0	10	808	145	0	313	458	2317
% App. Total	0	73.7	26.3		0	0	0		28.5	70.3	0	1.2		31.7	0	68.3		
PHF	.000	.788	.784	.787	.000	.000	.000	.000	.846	.959	.000	.625	.927	.843	.000	.824	.830	.839

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City of Gardena
N/S: Vermont Avenue
E/W: Marine Avenue
Weather: Clear

File Name : 05_GDA_Vermont_Marine AM
Site Code : 05719380
Start Date : 5/23/2019



Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:15 AM				07:15 AM				07:15 AM					07:15 AM			
+0 mins.	0	142	57	199	0	0	0	0	44	126	0	4	174	28	0	69	97
+15 mins.	0	211	70	281	0	0	0	0	66	148	0	2	216	39	0	88	127
+30 mins.	0	246	88	334	0	0	0	0	68	147	0	3	218	43	0	95	138
+45 mins.	0	176	61	237	0	0	0	0	52	147	0	1	200	35	0	61	96
Total Volume	0	775	276	1051	0	0	0	0	230	568	0	10	808	145	0	313	458
% App. Total	0	73.7	26.3		0	0	0		28.5	70.3	0	1.2		31.7	0	68.3	
PHF	.000	.788	.784	.787	.000	.000	.000	.000	.846	.959	.000	.625	.927	.843	.000	.824	.830

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Site Code : 05719380
Start Date : 5/23/2019
Page No : 1

Groups Printed- Passenger Vehicles

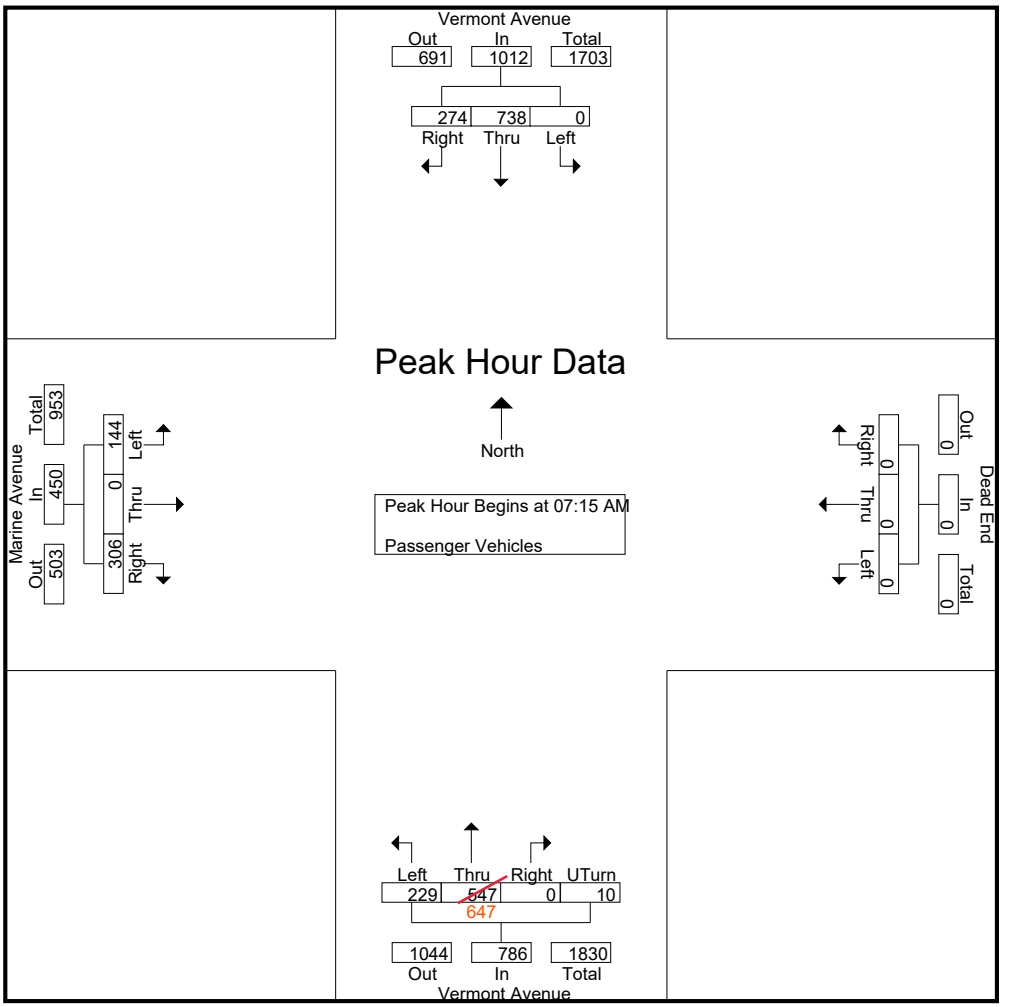
	Vermont Avenue Southbound				Dead End Westbound				Vermont Avenue Northbound					Marine Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	UTurn	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	0	127	33	160	0	0	0	0	54	83	0	10	147	25	0	52	77	384
07:15 AM	0	131	56	187	0	0	0	0	44	124	0	4	172	28	0	67	95	454
07:30 AM	0	199	70	269	0	0	0	0	66	142	0	2	210	39	0	88	127	606
07:45 AM	0	237	87	324	0	0	0	0	68	139	0	3	210	42	0	92	134	668
Total	0	694	246	940	0	0	0	0	232	488	0	19	739	134	0	299	433	2112
08:00 AM	0	171	61	232	0	0	0	0	51	142	0	1	194	35	0	59	94	520
08:15 AM	0	116	40	156	0	0	0	0	38	100	0	1	139	42	0	77	119	414
08:30 AM	0	109	42	151	0	0	0	0	50	104	0	3	157	27	0	51	78	386
08:45 AM	0	105	43	148	0	0	0	0	49	89	0	0	138	24	0	63	87	373
Total	0	501	186	687	0	0	0	0	188	435	0	5	628	128	0	250	378	1693
09:00 AM	0	91	22	113	0	0	0	0	35	100	0	1	136	28	0	54	82	331
09:15 AM	0	89	27	116	0	0	0	0	42	99	0	2	143	22	0	38	60	319
09:30 AM	0	89	32	121	0	0	0	0	38	98	0	1	137	23	0	42	65	323
09:45 AM	0	85	31	116	0	0	0	0	30	109	0	3	142	27	0	40	67	325
Total	0	354	112	466	0	0	0	0	145	406	0	7	558	100	0	174	274	1298
Grand Total	0	1549	544	2093	0	0	0	0	565	1329	0	31	1925	362	0	723	1085	5103
Apprch %	0	74	26		0	0	0		29.4	69	0	1.6		33.4	0	66.6		
Total %	0	30.4	10.7	41	0	0	0	0	11.1	26	0	0.6	37.7	7.1	0	14.2	21.3	

	Vermont Avenue Southbound				Dead End Westbound				Vermont Avenue Northbound					Marine Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	UTurn	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1																		
Peak Hour for Entire Intersection Begins at 07:15 AM																		
07:15 AM	0	131	56	187	0	0	0	0	44	124	0	4	172	28	0	67	95	454
07:30 AM	0	199	70	269	0	0	0	0	66	142	0	2	210	39	0	88	127	606
07:45 AM	0	237	87	324	0	0	0	0	68	139	0	3	210	42	0	92	134	668
08:00 AM	0	171	61	232	0	0	0	0	51	142	0	1	194	35	0	59	94	520
Total Volume	0	738	274	1012	0	0	0	0	229	547	0	10	786	144	0	306	450	2248
% App. Total	0	72.9	27.1		0	0	0		29.1	69.6	0	1.3		32	0	68		
PHF	.000	.778	.787	.781	.000	.000	.000	.000	.842	.963	.000	.625	.936	.857	.000	.832	.840	.841

Counts Unlimited
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E/W: Marine Avenue
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File Name : 05_GDA_Vermont_Marine AM
Site Code : 05719380
Start Date : 5/23/2019
Page No : 2



Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:15 AM				07:15 AM				07:15 AM					07:15 AM			
+0 mins.	0	131	56	187	0	0	0	0	44	124	0	4	172	28	0	67	95
+15 mins.	0	199	70	269	0	0	0	0	66	142	0	2	210	39	0	88	127
+30 mins.	0	237	87	324	0	0	0	0	68	139	0	3	210	42	0	92	134
+45 mins.	0	171	61	232	0	0	0	0	51	142	0	1	194	35	0	59	94
Total Volume	0	738	274	1012	0	0	0	0	229	547	0	10	786	144	0	306	450
% App. Total	0	72.9	27.1		0	0	0		29.1	69.6	0	1.3		32	0	68	
PHF	.000	.778	.787	.781	.000	.000	.000	.000	.842	.963	.000	.625	.936	.857	.000	.832	.840

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City of Gardena
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Start Date : 5/23/2019
Page No : 1

Groups Printed- Buses

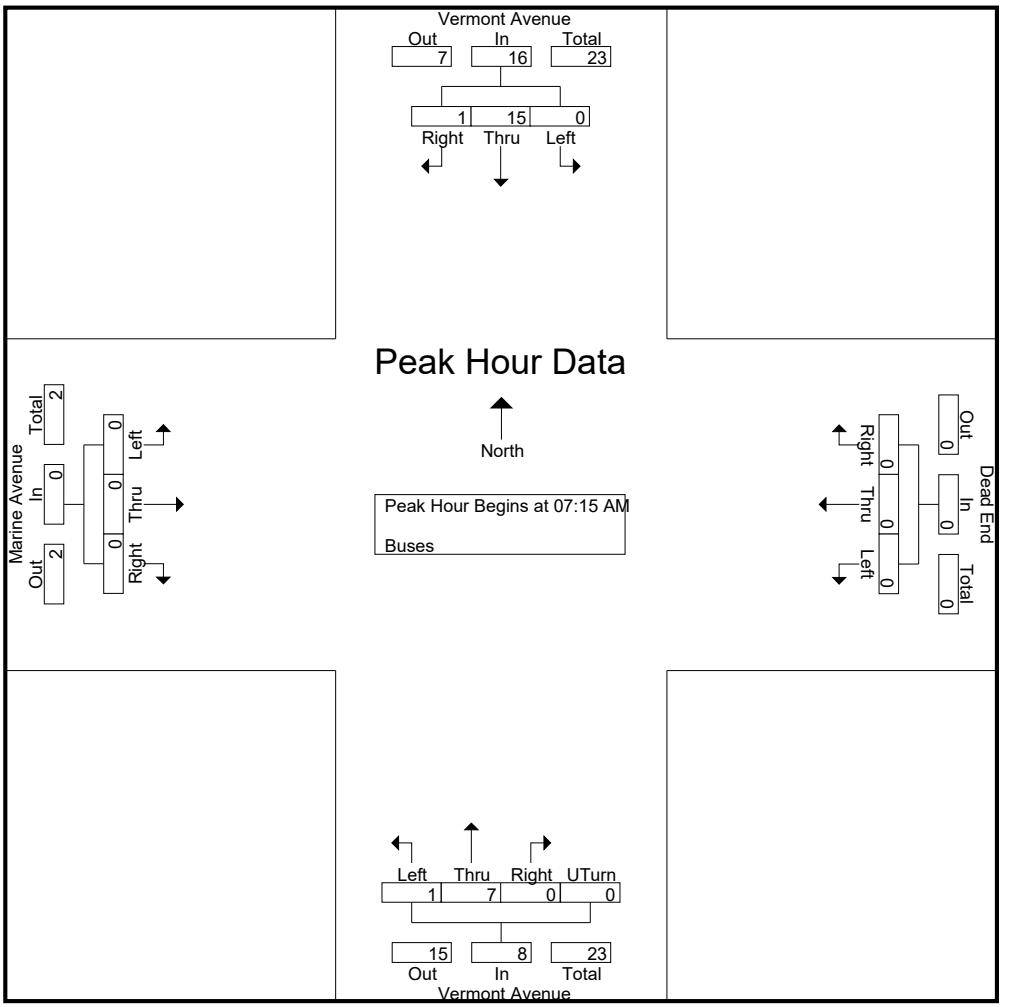
	Vermont Avenue Southbound				Dead End Westbound				Vermont Avenue Northbound					Marine Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	UTurn	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	0	6	0	6	0	0	0	0	0	2	0	0	2	0	0	0	0	8
07:15 AM	0	4	1	5	0	0	0	0	0	2	0	0	2	0	0	0	0	7
07:30 AM	0	7	0	7	0	0	0	0	0	1	0	0	1	0	0	0	0	8
07:45 AM	0	2	0	2	0	0	0	0	0	3	0	0	3	0	0	0	0	5
Total	0	19	1	20	0	0	0	0	0	8	0	0	8	0	0	0	0	28
08:00 AM	0	2	0	2	0	0	0	0	1	1	0	0	2	0	0	0	0	4
08:15 AM	0	0	0	0	0	0	0	0	0	8	0	0	8	0	0	0	0	8
08:30 AM	0	5	0	5	0	0	0	0	0	5	0	0	5	0	0	0	0	10
08:45 AM	0	1	0	1	0	0	0	0	0	2	0	0	2	0	0	0	0	3
Total	0	8	0	8	0	0	0	0	1	16	0	0	17	0	0	0	0	25
09:00 AM	0	3	0	3	0	0	0	0	0	3	0	0	3	0	0	0	0	6
09:15 AM	0	0	0	0	0	0	0	0	0	5	0	0	5	0	0	1	1	6
09:30 AM	0	3	0	3	0	0	0	0	0	3	0	0	3	0	0	0	0	6
09:45 AM	0	1	0	1	0	0	0	0	0	2	0	0	2	0	0	0	0	3
Total	0	7	0	7	0	0	0	0	0	13	0	0	13	0	0	1	1	21
Grand Total	0	34	1	35	0	0	0	0	1	37	0	0	38	0	0	1	1	74
Apprch %	0	97.1	2.9		0	0	0		2.6	97.4	0	0		0	0	100		
Total %	0	45.9	1.4	47.3	0	0	0	0	1.4	50	0	0	51.4	0	0	1.4	1.4	

	Vermont Avenue Southbound				Dead End Westbound				Vermont Avenue Northbound					Marine Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	UTurn	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1																		
Peak Hour for Entire Intersection Begins at 07:15 AM																		
07:15 AM	0	4	1	5	0	0	0	0	0	2	0	0	2	0	0	0	0	7
07:30 AM	0	7	0	7	0	0	0	0	0	1	0	0	1	0	0	0	0	8
07:45 AM	0	2	0	2	0	0	0	0	0	3	0	0	3	0	0	0	0	5
08:00 AM	0	2	0	2	0	0	0	0	1	1	0	0	2	0	0	0	0	4
Total Volume	0	15	1	16	0	0	0	0	1	7	0	0	8	0	0	0	0	24
% App. Total	0	93.8	6.2		0	0	0		12.5	87.5	0	0		0	0	0		
PHF	.000	.536	.250	.571	.000	.000	.000	.000	.250	.583	.000	.000	.667	.000	.000	.000	.000	.750

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Page No : 2



Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:15 AM				07:15 AM				07:15 AM					07:15 AM			
+0 mins.	0	4	1	5	0	0	0	0	0	2	0	0	2	0	0	0	0
+15 mins.	0	7	0	7	0	0	0	0	0	1	0	0	1	0	0	0	0
+30 mins.	0	2	0	2	0	0	0	0	0	3	0	0	3	0	0	0	0
+45 mins.	0	2	0	2	0	0	0	0	1	1	0	0	2	0	0	0	0
Total Volume	0	15	1	16	0	0	0	0	1	7	0	0	8	0	0	0	0
% App. Total	0	93.8	6.2		0	0	0		12.5	87.5	0	0		0	0	0	
PHF	.000	.536	.250	.571	.000	.000	.000	.000	.250	.583	.000	.000	.667	.000	.000	.000	.000

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Groups Printed- 2 Axle Vehicles

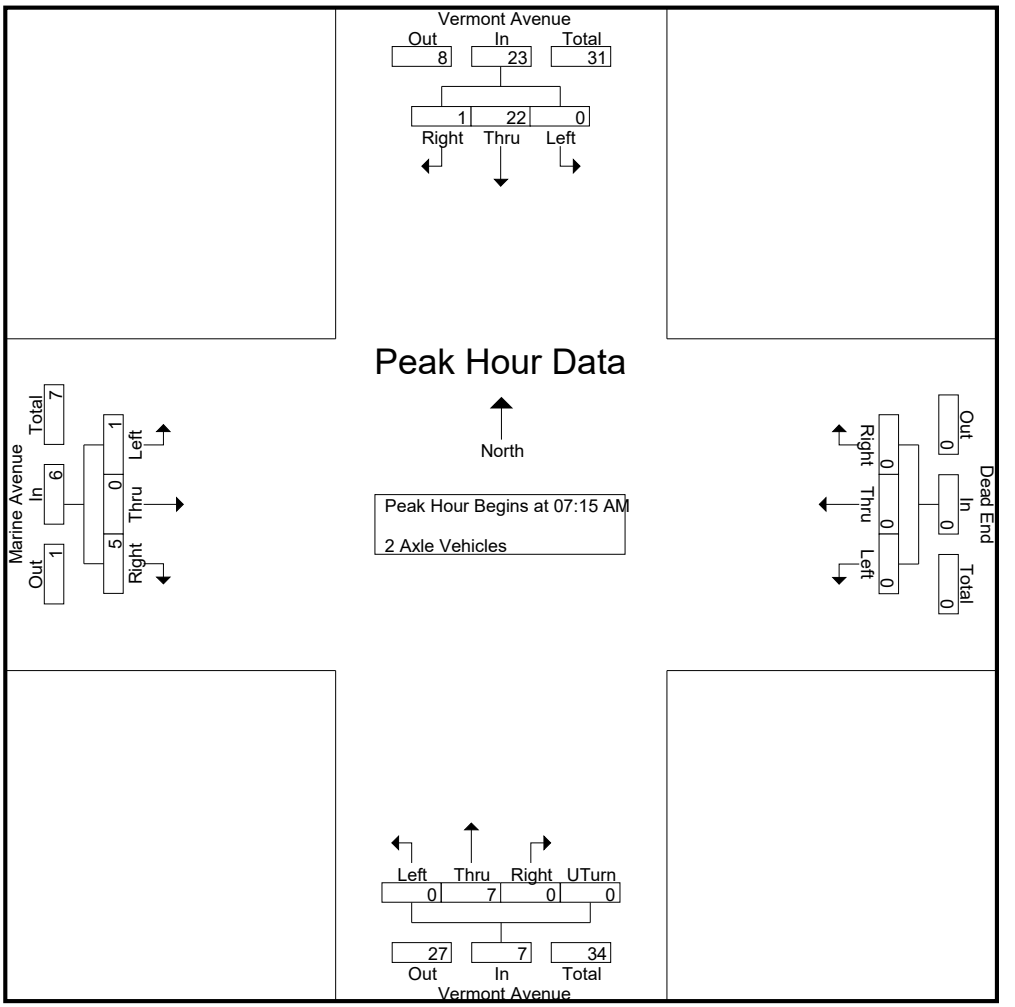
	Vermont Avenue Southbound				Dead End Westbound				Vermont Avenue Northbound					Marine Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	UTurn	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	0	4	1	5	0	0	0	0	0	3	0	0	3	0	0	1	1	9
07:15 AM	0	7	0	7	0	0	0	0	0	0	0	0	0	0	0	2	2	9
07:30 AM	0	5	0	5	0	0	0	0	0	2	0	0	2	0	0	0	0	7
07:45 AM	0	7	1	8	0	0	0	0	0	2	0	0	2	1	0	2	3	13
Total	0	23	2	25	0	0	0	0	0	7	0	0	7	1	0	5	6	38
08:00 AM	0	3	0	3	0	0	0	0	0	3	0	0	3	0	0	1	1	7
08:15 AM	0	3	3	6	0	0	0	0	0	1	0	0	1	0	0	3	3	10
08:30 AM	0	0	1	1	0	0	0	0	0	2	0	0	2	1	0	0	1	4
08:45 AM	0	6	0	6	0	0	0	0	0	0	0	0	0	0	0	1	1	7
Total	0	12	4	16	0	0	0	0	0	6	0	0	6	1	0	5	6	28
09:00 AM	0	3	0	3	0	0	0	0	0	0	0	0	0	0	0	2	2	5
09:15 AM	0	2	2	4	0	0	0	0	0	0	0	0	0	2	0	0	2	6
09:30 AM	0	1	1	2	0	0	0	0	0	1	0	0	1	3	0	1	4	7
09:45 AM	0	5	1	6	0	0	0	0	0	0	0	0	0	1	0	0	1	7
Total	0	11	4	15	0	0	0	0	0	1	0	0	1	6	0	3	9	25
Grand Total	0	46	10	56	0	0	0	0	0	14	0	0	14	8	0	13	21	91
Apprch %	0	82.1	17.9		0	0	0		0	100	0	0		38.1	0	61.9		
Total %	0	50.5	11	61.5	0	0	0	0	0	15.4	0	0	15.4	8.8	0	14.3	23.1	

	Vermont Avenue Southbound				Dead End Westbound				Vermont Avenue Northbound					Marine Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	UTurn	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1																		
Peak Hour for Entire Intersection Begins at 07:15 AM																		
07:15 AM	0	7	0	7	0	0	0	0	0	0	0	0	0	0	0	2	2	9
07:30 AM	0	5	0	5	0	0	0	0	0	2	0	0	2	0	0	0	0	7
07:45 AM	0	7	1	8	0	0	0	0	0	2	0	0	2	1	0	2	3	13
08:00 AM	0	3	0	3	0	0	0	0	0	3	0	0	3	0	0	1	1	7
Total Volume	0	22	1	23	0	0	0	0	0	7	0	0	7	1	0	5	6	36
% App. Total	0	95.7	4.3		0	0	0		0	100	0	0		16.7	0	83.3		
PHF	.000	.786	.250	.719	.000	.000	.000	.000	.000	.583	.000	.000	.583	.250	.000	.625	.500	.692

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Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:15 AM				07:15 AM				07:15 AM					07:15 AM			
+0 mins.	0	7	0	7	0	0	0	0	0	0	0	0	0	0	0	2	2
+15 mins.	0	5	0	5	0	0	0	0	0	2	0	0	2	0	0	0	0
+30 mins.	0	7	1	8	0	0	0	0	0	2	0	0	2	1	0	2	3
+45 mins.	0	3	0	3	0	0	0	0	0	3	0	0	3	0	0	1	1
Total Volume	0	22	1	23	0	0	0	0	0	7	0	0	7	1	0	5	6
% App. Total	0	95.7	4.3		0	0	0		0	100	0	0		16.7	0	83.3	
PHF	.000	.786	.250	.719	.000	.000	.000	.000	.000	.583	.000	.000	.583	.250	.000	.625	.500

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City of Gardena
N/S: Vermont Avenue
E/W: Marine Avenue
Weather: Clear

File Name : 05_GDA_Vermont_Marine AM
Site Code : 05719380
Start Date : 5/23/2019

Groups Printed- 3+ Axle Trucks

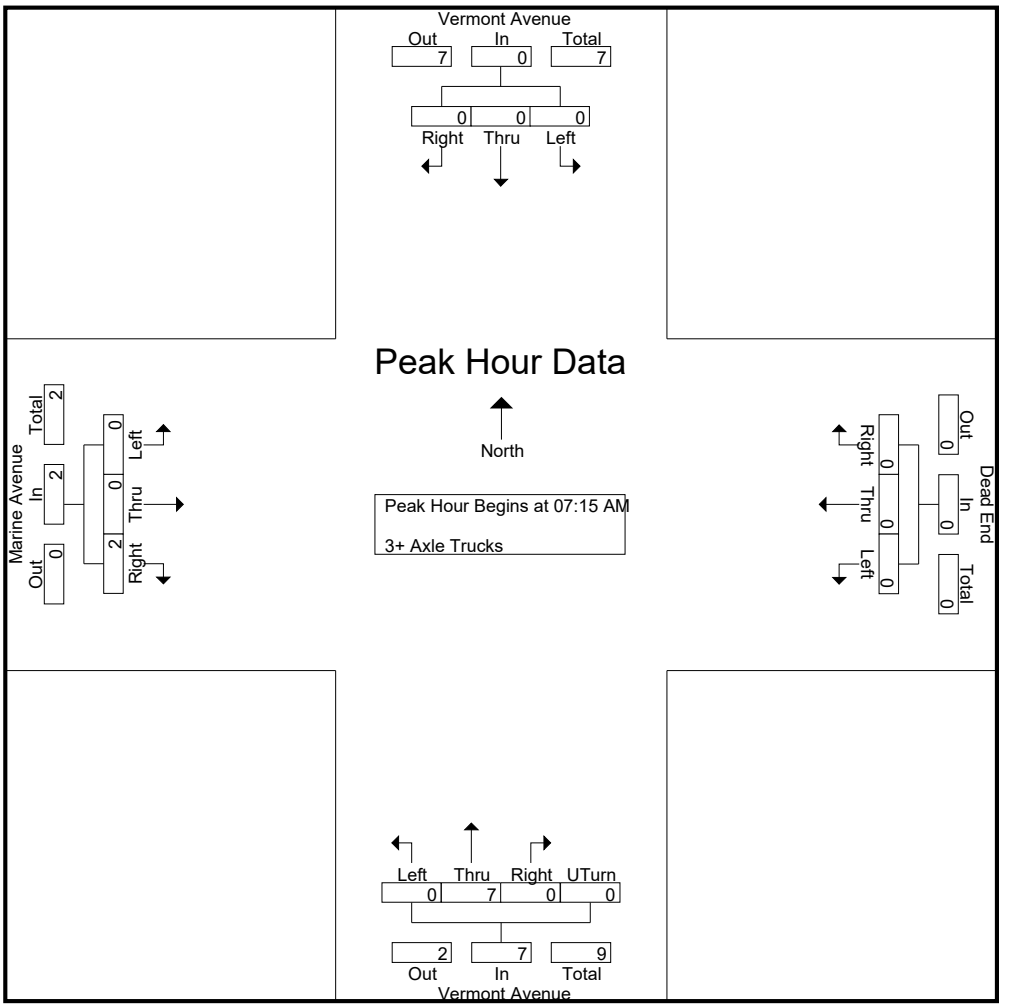
	Vermont Avenue Southbound				Dead End Westbound				Vermont Avenue Northbound					Marine Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	UTurn	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	1	1	2
07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 AM	0	0	0	0	0	0	0	0	0	3	0	0	3	0	0	0	0	3
07:45 AM	0	0	0	0	0	0	0	0	0	3	0	0	3	0	0	1	1	4
Total	0	0	0	0	0	0	0	0	0	7	0	0	7	0	0	2	2	9
08:00 AM	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	1	1	2
08:15 AM	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	1	1	2
08:30 AM	0	0	1	1	0	0	0	0	0	2	0	0	2	0	0	0	0	3
08:45 AM	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	1
Total	0	0	1	1	0	0	0	0	0	5	0	0	5	0	0	2	2	8
09:00 AM	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	1
09:15 AM	0	0	0	0	0	0	0	0	0	5	0	0	5	0	0	0	0	5
09:30 AM	0	1	0	1	0	0	0	0	0	2	0	0	2	0	0	0	0	3
09:45 AM	0	0	0	0	0	0	0	0	0	2	0	0	2	0	0	0	0	2
Total	0	1	0	1	0	0	0	0	0	10	0	0	10	0	0	0	0	11
Grand Total	0	1	1	2	0	0	0	0	0	22	0	0	22	0	0	4	4	28
Apprch %	0	50	50		0	0	0		0	100	0	0		0	0	100		
Total %	0	3.6	3.6	7.1	0	0	0	0	0	78.6	0	0	78.6	0	0	14.3	14.3	

	Vermont Avenue Southbound				Dead End Westbound				Vermont Avenue Northbound					Marine Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	UTurn	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1																		
Peak Hour for Entire Intersection Begins at 07:15 AM																		
07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 AM	0	0	0	0	0	0	0	0	0	3	0	0	3	0	0	0	0	3
07:45 AM	0	0	0	0	0	0	0	0	0	3	0	0	3	0	0	1	1	4
08:00 AM	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	1	1	2
Total Volume	0	0	0	0	0	0	0	0	0	7	0	0	7	0	0	2	2	9
% App. Total	0	0	0		0	0	0		0	100	0	0		0	0	100		
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.583	.000	.000	.583	.000	.000	.500	.500	.563

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City of Gardena
N/S: Vermont Avenue
E/W: Marine Avenue
Weather: Clear

File Name : 05_GDA_Vermont_Marine AM
Site Code : 05719380
Start Date : 5/23/2019
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Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:15 AM				07:15 AM				07:15 AM					07:15 AM			
+0 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+15 mins.	0	0	0	0	0	0	0	0	0	3	0	0	3	0	0	0	0
+30 mins.	0	0	0	0	0	0	0	0	0	3	0	0	3	0	0	1	1
+45 mins.	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	1	1
Total Volume	0	0	0	0	0	0	0	0	0	7	0	0	7	0	0	2	2
% App. Total	0	0	0		0	0	0		0	100	0	0		0	0	100	
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.583	.000	.000	.583	.000	.000	.500	.500

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City of Gardena
N/S: Vermont Avenue
E/W: Marine Avenue
Weather: Clear

File Name : 05_GDA_Vermont_Marine PM
Site Code : 05719380
Start Date : 5/23/2019
Page No : 1

Groups Printed- Passenger Vehicles - Buses - 2 Axle Vehicles - 3+ Axle Trucks

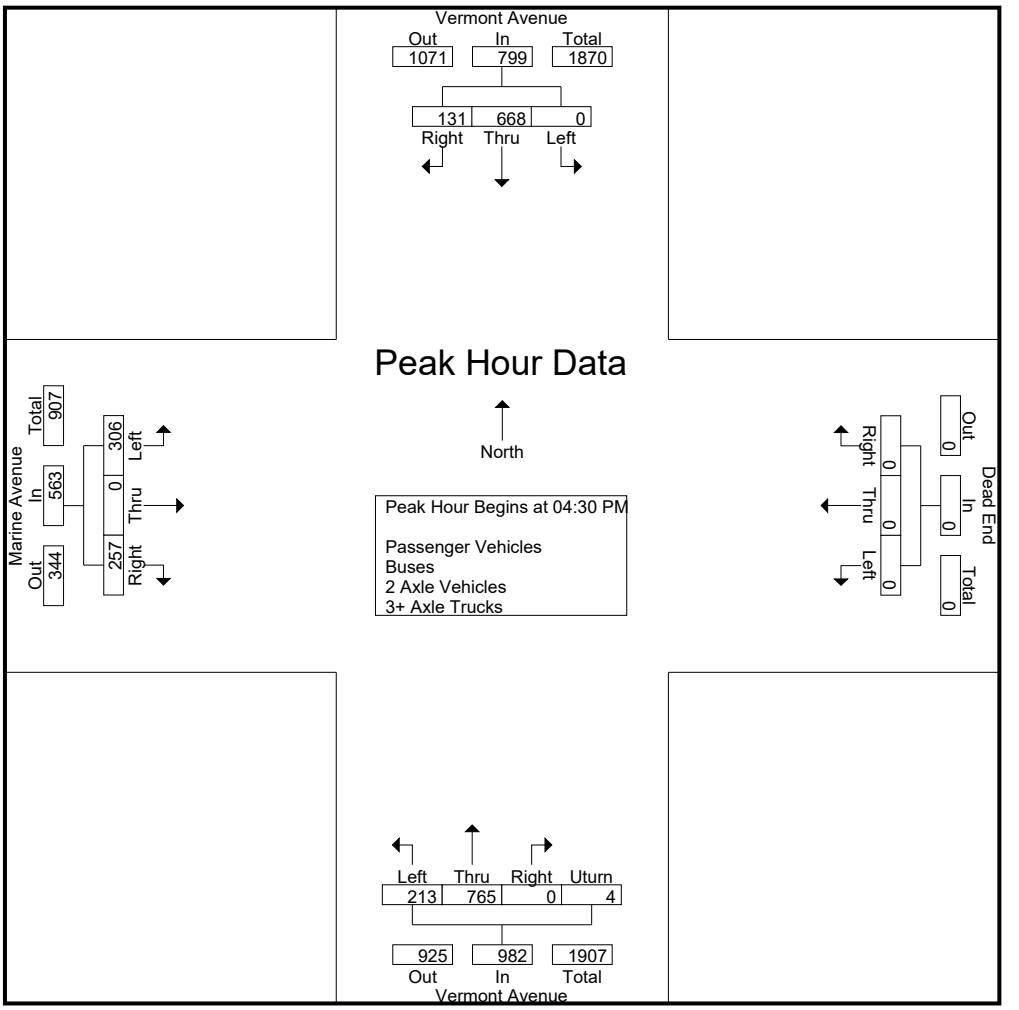
	Vermont Avenue Southbound				Dead End Westbound				Vermont Avenue Northbound					Marine Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	Uturn	App. Total	Left	Thru	Right	App. Total	Int. Total
03:00 PM	0	158	34	192	0	0	0	0	36	183	0	4	223	55	0	82	137	552
03:15 PM	0	163	33	196	0	0	0	0	52	180	0	1	233	50	0	75	125	554
03:30 PM	0	178	26	204	0	0	0	0	46	190	0	9	245	89	0	65	154	603
03:45 PM	0	191	31	222	0	0	0	0	50	185	0	2	237	54	0	72	126	585
Total	0	690	124	814	0	0	0	0	184	738	0	16	938	248	0	294	542	2294
04:00 PM	0	156	37	193	0	0	0	0	57	163	0	4	224	67	0	67	134	551
04:15 PM	0	153	25	178	0	0	0	0	26	194	0	0	220	69	0	72	141	539
04:30 PM	0	171	34	205	0	0	0	0	42	168	0	1	211	83	0	61	144	560
04:45 PM	0	172	31	203	0	0	0	0	46	178	0	0	224	80	0	60	140	567
Total	0	652	127	779	0	0	0	0	171	703	0	5	879	299	0	260	559	2217
05:00 PM	0	149	34	183	0	0	0	0	60	222	0	0	282	71	0	63	134	599
05:15 PM	0	176	32	208	0	0	0	0	65	197	0	3	265	72	0	73	145	618
05:30 PM	0	156	34	190	0	0	0	0	56	168	0	0	224	65	0	60	125	539
05:45 PM	0	152	27	179	0	0	0	0	58	157	0	3	218	70	0	64	134	531
Total	0	633	127	760	0	0	0	0	239	744	0	6	989	278	0	260	538	2287
Grand Total	0	1975	378	2353	0	0	0	0	594	2185	0	27	2806	825	0	814	1639	6798
Apprch %	0	83.9	16.1		0	0	0		21.2	77.9	0	1		50.3	0	49.7		
Total %	0	29.1	5.6	34.6	0	0	0	0	8.7	32.1	0	0.4	41.3	12.1	0	12	24.1	
Passenger Vehicles	0	1899	374	2273	0	0	0	0	585	2123	0	27	2735	815	0	800	1615	6623
% Passenger Vehicles	0	96.2	98.9	96.6	0	0	0	0	98.5	97.2	0	100	97.5	98.8	0	98.3	98.5	97.4
Buses	0	49	0	49	0	0	0	0	0	23	0	0	23	3	0	3	6	78
% Buses	0	2.5	0	2.1	0	0	0	0	0	1.1	0	0	0.8	0.4	0	0.4	0.4	1.1
2 Axle Vehicles	0	20	4	24	0	0	0	0	9	31	0	0	40	7	0	9	16	80
% 2 Axle Vehicles	0	1	1.1	1	0	0	0	0	1.5	1.4	0	0	1.4	0.8	0	1.1	1	1.2
3+ Axle Trucks	0	7	0	7	0	0	0	0	0	8	0	0	8	0	0	2	2	17
% 3+ Axle Trucks	0	0.4	0	0.3	0	0	0	0	0	0.4	0	0	0.3	0	0	0.2	0.1	0.3

	Vermont Avenue Southbound				Dead End Westbound				Vermont Avenue Northbound					Marine Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	Uturn	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 03:00 PM to 05:45 PM - Peak 1 of 1																		
Peak Hour for Entire Intersection Begins at 04:30 PM																		
04:30 PM	0	171	**34**	205	0	0	0	0	42	168	0	1	211	**83**	0	61	144	560
04:45 PM	0	172	31	203	0	0	0	0	46	178	0	0	224	80	0	60	140	567
05:00 PM	0	149	34	183	0	0	0	0	60	**222**	0	0	**282**	71	0	63	134	599
05:15 PM	0	**176**	32	**208**	0	0	0	0	**65**	197	0	**3**	265	72	0	**73**	**145**	**618**
Total Volume	0	668	131	799	0	0	0	0	213	765	0	4	982	306	0	257	563	2344
% App. Total	0	83.6	16.4		0	0	0		21.7	77.9	0	0.4		54.4	0	45.6		
PHF	.000	.949	.963	.960	.000	.000	.000	.000	.819	.861	.000	.333	.871	.922	.000	.880	.971	.948

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City of Gardena
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E/W: Marine Avenue
Weather: Clear

File Name : 05_GDA_Vermont_Marine PM
Site Code : 05719380
Start Date : 5/23/2019
Page No : 2



Peak Hour Analysis From 03:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	03:15 PM				03:00 PM				04:45 PM					04:30 PM			
+0 mins.	0	163	33	196	0	0	0	0	46	178	0	0	224	**83**	0	61	144
+15 mins.	0	178	26	204	0	0	0	0	60	**222**	0	0	**282**	80	0	60	140
+30 mins.	0	**191**	31	**222**	0	0	0	0	**65**	197	0	**3**	265	71	0	63	134
+45 mins.	0	156	**37**	193	0	0	0	0	56	168	0	0	224	72	0	**73**	**145**
Total Volume	0	688	127	815	0	0	0	0	227	765	0	3	995	306	0	257	563
% App. Total	0	84.4	15.6		0	0	0		22.8	76.9	0	0.3		54.4	0	45.6	
PHF	.000	.901	.858	.918	.000	.000	.000	.000	.873	.861	.000	.250	.882	.922	.000	.880	.971

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City of Gardena
N/S: Vermont Avenue
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File Name : 05_GDA_Vermont_Marine PM
Site Code : 05719380
Start Date : 5/23/2019
Page No : 1

Groups Printed- Passenger Vehicles

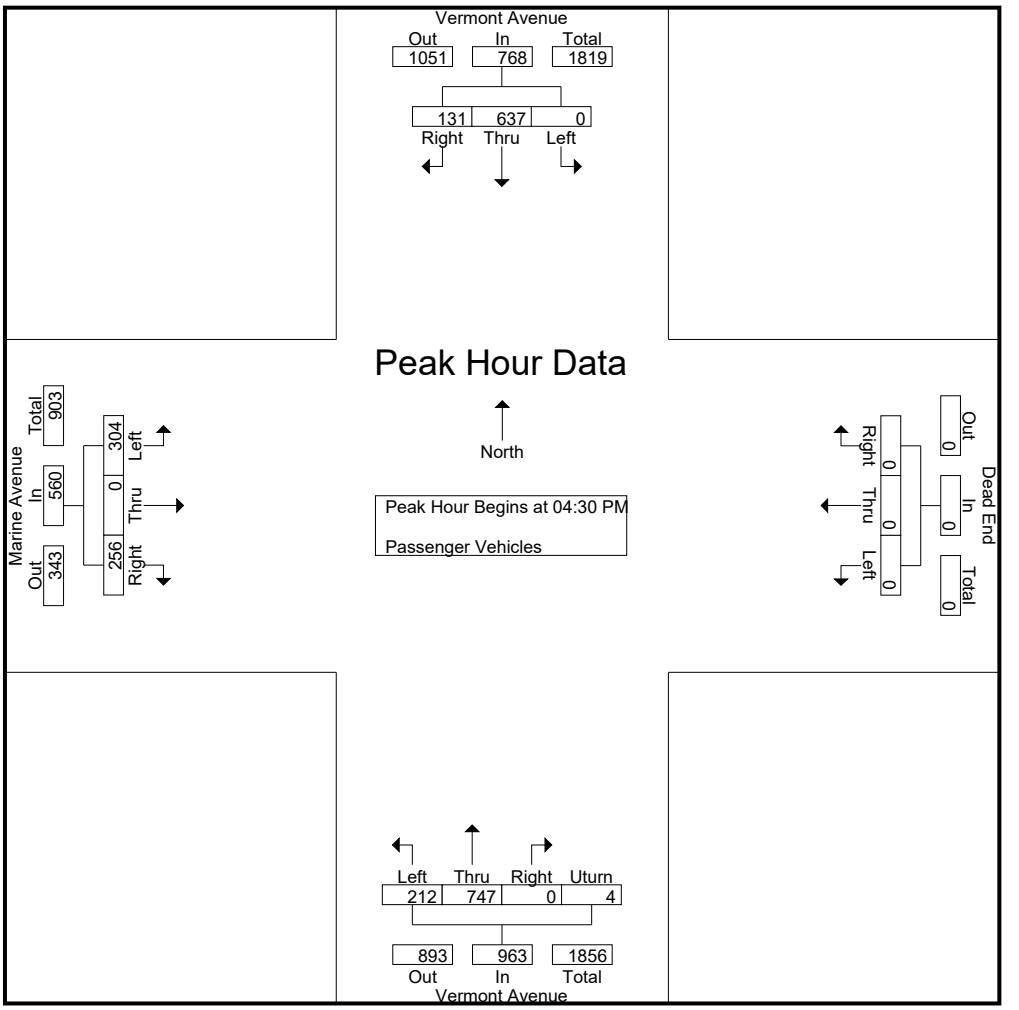
	Vermont Avenue Southbound				Dead End Westbound				Vermont Avenue Northbound					Marine Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	Uturn	App. Total	Left	Thru	Right	App. Total	Int. Total
03:00 PM	0	155	33	188	0	0	0	0	34	175	0	4	213	53	0	79	132	533
03:15 PM	0	155	33	188	0	0	0	0	52	170	0	1	223	49	0	74	123	534
03:30 PM	0	174	25	199	0	0	0	0	45	184	0	9	238	87	0	64	151	588
03:45 PM	0	183	31	214	0	0	0	0	47	182	0	2	231	54	0	70	124	569
Total	0	667	122	789	0	0	0	0	178	711	0	16	905	243	0	287	530	2224
04:00 PM	0	149	37	186	0	0	0	0	56	158	0	4	218	66	0	64	130	534
04:15 PM	0	148	25	173	0	0	0	0	26	187	0	0	213	69	0	70	139	525
04:30 PM	0	164	34	198	0	0	0	0	42	165	0	1	208	82	0	61	143	549
04:45 PM	0	162	31	193	0	0	0	0	46	175	0	0	221	79	0	60	139	553
Total	0	623	127	750	0	0	0	0	170	685	0	5	860	296	0	255	551	2161
05:00 PM	0	140	34	174	0	0	0	0	59	212	0	0	271	71	0	63	134	579
05:15 PM	0	171	32	203	0	0	0	0	65	195	0	3	263	72	0	72	144	610
05:30 PM	0	149	34	183	0	0	0	0	55	166	0	0	221	64	0	59	123	527
05:45 PM	0	149	25	174	0	0	0	0	58	154	0	3	215	69	0	64	133	522
Total	0	609	125	734	0	0	0	0	237	727	0	6	970	276	0	258	534	2238
Grand Total	0	1899	374	2273	0	0	0	0	585	2123	0	27	2735	815	0	800	1615	6623
Apprch %	0	83.5	16.5		0	0	0		21.4	77.6	0	1		50.5	0	49.5		
Total %	0	28.7	5.6	34.3	0	0	0	0	8.8	32.1	0	0.4	41.3	12.3	0	12.1	24.4	

	Vermont Avenue Southbound				Dead End Westbound				Vermont Avenue Northbound					Marine Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	Uturn	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1																		
Peak Hour for Entire Intersection Begins at 04:30 PM																		
04:30 PM	0	164	**34**	198	0	0	0	0	42	165	0	1	208	**82**	0	61	143	549
04:45 PM	0	162	31	193	0	0	0	0	46	175	0	0	221	79	0	60	139	553
05:00 PM	0	140	34	174	0	0	0	0	59	**212**	0	0	**271**	71	0	63	134	579
05:15 PM	0	**171**	32	**203**	0	0	0	0	**65**	195	0	**3**	263	72	0	**72**	**144**	**610**
Total Volume	0	637	131	768	0	0	0	0	212	747	0	4	963	304	0	256	560	2291
% App. Total	0	82.9	17.1		0	0	0		22	77.6	0	0.4		54.3	0	45.7		
PHF	.000	.931	.963	.946	.000	.000	.000	.000	.815	.881	.000	.333	.888	.927	.000	.889	.972	.939

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City of Gardena
N/S: Vermont Avenue
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File Name : 05_GDA_Vermont_Marine PM
Site Code : 05719380
Start Date : 5/23/2019
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Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:30 PM				04:30 PM				04:30 PM					04:30 PM			
+0 mins.	0	164	**34**	198	0	0	0	0	42	165	0	1	208	**82**	0	61	143
+15 mins.	0	162	31	193	0	0	0	0	46	175	0	0	221	79	0	60	139
+30 mins.	0	140	34	174	0	0	0	0	59	**212**	0	0	**271**	71	0	63	134
+45 mins.	0	**171**	32	**203**	0	0	0	0	**65**	195	0	**3**	263	72	0	**72**	**144**
Total Volume	0	637	131	768	0	0	0	0	212	747	0	4	963	304	0	256	560
% App. Total	0	82.9	17.1		0	0	0		22	77.6	0	0.4		54.3	0	45.7	
PHF	.000	.931	.963	.946	.000	.000	.000	.000	.815	.881	.000	.333	.888	.927	.000	.889	.972

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N/S: Vermont Avenue
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File Name : 05_GDA_Vermont_Marine PM
Site Code : 05719380
Start Date : 5/23/2019
Page No : 1

Groups Printed- Buses

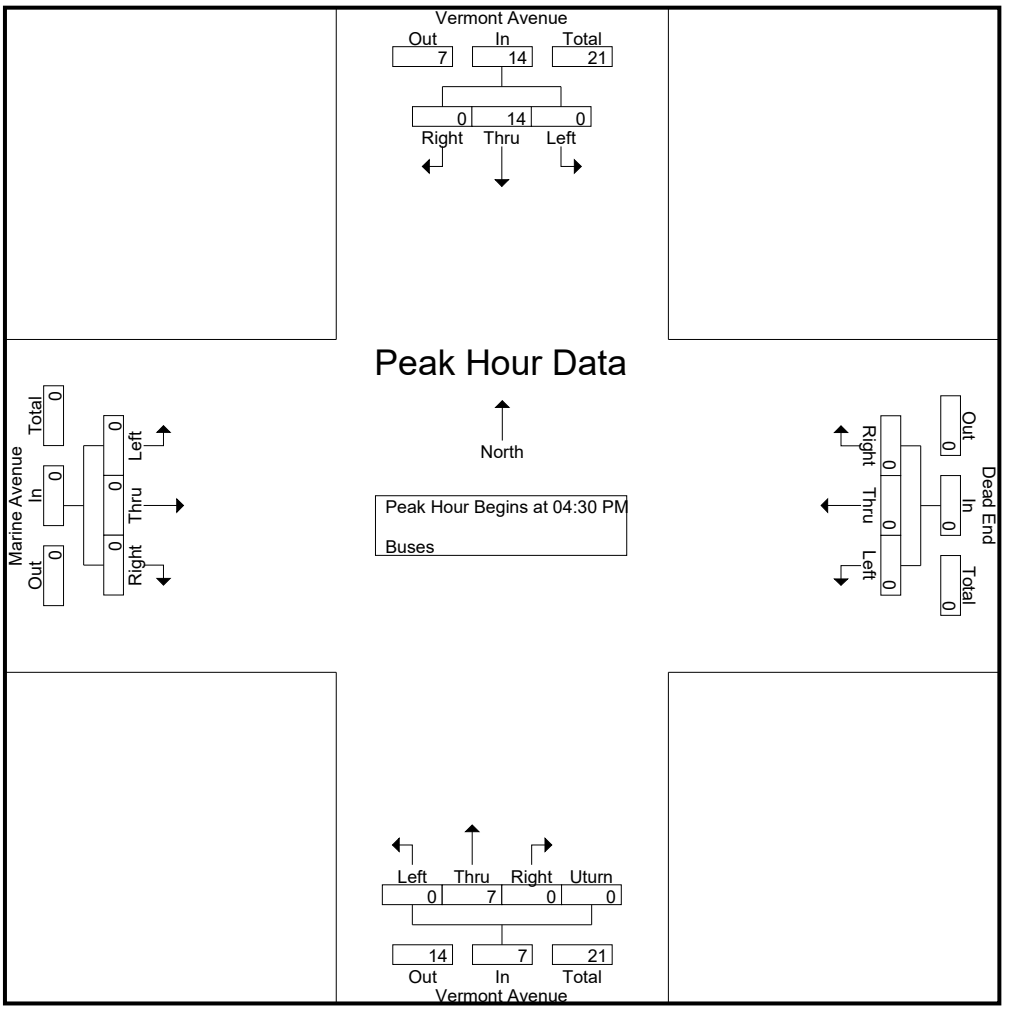
	Vermont Avenue Southbound				Dead End Westbound				Vermont Avenue Northbound					Marine Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	Uturn	App. Total	Left	Thru	Right	App. Total	Int. Total
03:00 PM	0	3	0	3	0	0	0	0	0	2	0	0	2	0	0	2	2	7
03:15 PM	0	6	0	6	0	0	0	0	0	1	0	0	1	1	0	0	1	8
03:30 PM	0	1	0	1	0	0	0	0	0	4	0	0	4	2	0	0	2	7
03:45 PM	0	8	0	8	0	0	0	0	0	1	0	0	1	0	0	0	0	9
Total	0	18	0	18	0	0	0	0	0	8	0	0	8	3	0	2	5	31
04:00 PM	0	5	0	5	0	0	0	0	0	3	0	0	3	0	0	0	0	8
04:15 PM	0	4	0	4	0	0	0	0	0	2	0	0	2	0	0	1	1	7
04:30 PM	0	3	0	3	0	0	0	0	0	1	0	0	1	0	0	0	0	4
04:45 PM	0	6	0	6	0	0	0	0	0	0	0	0	0	0	0	0	0	6
Total	0	18	0	18	0	0	0	0	0	6	0	0	6	0	0	1	1	25
05:00 PM	0	5	0	5	0	0	0	0	0	4	0	0	4	0	0	0	0	9
05:15 PM	0	0	0	0	0	0	0	0	0	2	0	0	2	0	0	0	0	2
05:30 PM	0	6	0	6	0	0	0	0	0	1	0	0	1	0	0	0	0	7
05:45 PM	0	2	0	2	0	0	0	0	0	2	0	0	2	0	0	0	0	4
Total	0	13	0	13	0	0	0	0	0	9	0	0	9	0	0	0	0	22
Grand Total	0	49	0	49	0	0	0	0	0	23	0	0	23	3	0	3	6	78
Apprch %	0	100	0		0	0	0		0	100	0	0		50	0	50		
Total %	0	62.8	0	62.8	0	0	0	0	0	29.5	0	0	29.5	3.8	0	3.8	7.7	

	Vermont Avenue Southbound				Dead End Westbound				Vermont Avenue Northbound					Marine Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	Uturn	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1																		
Peak Hour for Entire Intersection Begins at 04:30 PM																		
04:30 PM	0	3	0	3	0	0	0	0	0	1	0	0	1	0	0	0	0	4
04:45 PM	0	**6**	0	**6**	0	0	0	0	0	0	0	0	0	0	0	0	0	6
05:00 PM	0	5	0	5	0	0	0	0	0	**4**	0	0	**4**	0	0	0	0	**9**
05:15 PM	0	0	0	0	0	0	0	0	0	2	0	0	2	0	0	0	0	2
Total Volume	0	14	0	14	0	0	0	0	0	7	0	0	7	0	0	0	0	21
% App. Total	0	100	0		0	0	0		0	100	0	0		0	0	0		
PHF	.000	.583	.000	.583	.000	.000	.000	.000	.000	.438	.000	.000	.438	.000	.000	.000	.000	.583

Counts Unlimited
PO Box 1178
Corona, CA 92878
(951) 268-6268

City of Gardena
N/S: Vermont Avenue
E/W: Marine Avenue
Weather: Clear

File Name : 05_GDA_Vermont_Marine PM
Site Code : 05719380
Start Date : 5/23/2019
Page No : 2



Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:30 PM				04:30 PM				04:30 PM					04:30 PM			
+0 mins.	0	3	0	3	0	0	0	0	0	1	0	0	1	0	0	0	0
+15 mins.	0	**6**	0	**6**	0	0	0	0	0	0	0	0	0	0	0	0	0
+30 mins.	0	5	0	5	0	0	0	0	0	**4**	0	0	**4**	0	0	0	0
+45 mins.	0	0	0	0	0	0	0	0	0	2	0	0	2	0	0	0	0
Total Volume	0	14	0	14	0	0	0	0	0	7	0	0	7	0	0	0	0
% App. Total	0	100	0		0	0	0		0	100	0	0		0	0	0	
PHF	.000	.583	.000	.583	.000	.000	.000	.000	.000	.438	.000	.000	.438	.000	.000	.000	.000

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City of Gardena
N/S: Vermont Avenue
E/W: Marine Avenue
Weather: Clear

File Name : 05_GDA_Vermont_Marine PM
Site Code : 05719380
Start Date : 5/23/2019
Page No : 1

Groups Printed- 2 Axle Vehicles

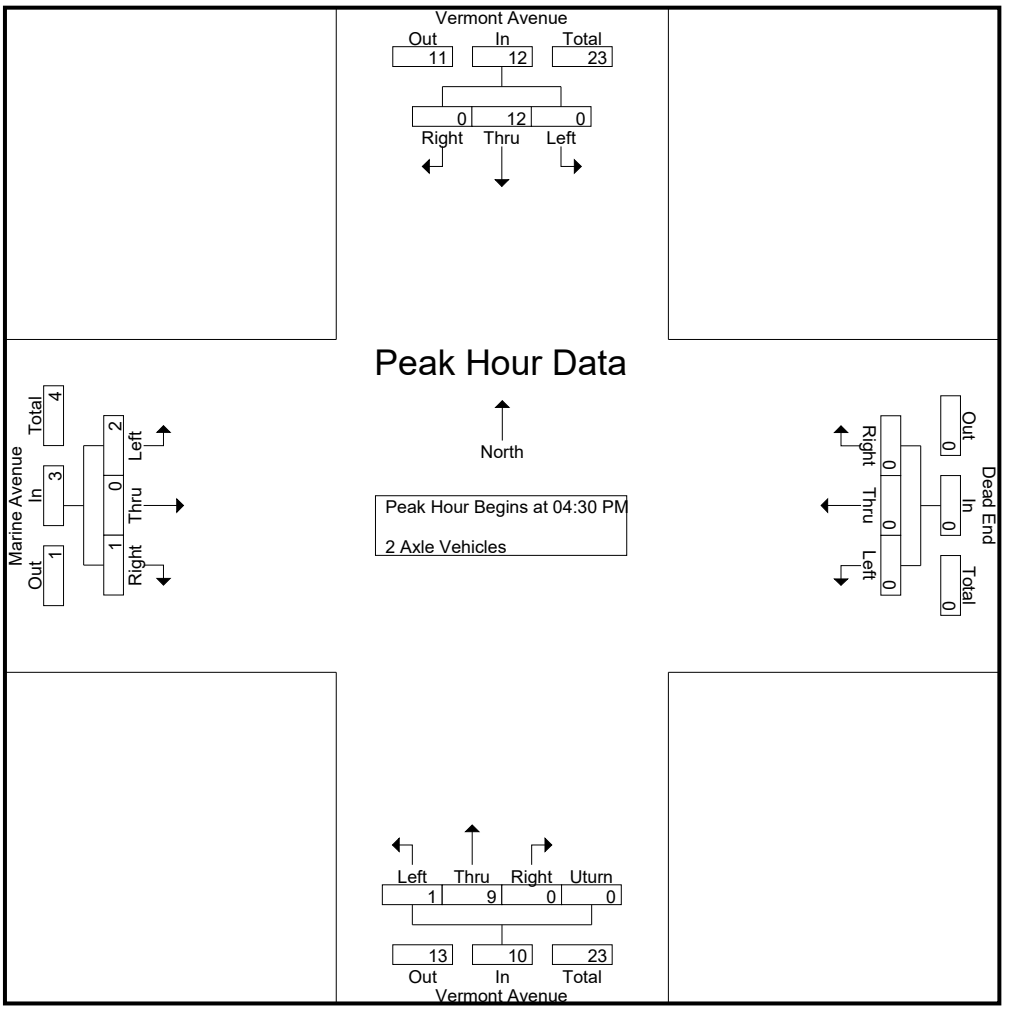
	Vermont Avenue Southbound				Dead End Westbound				Vermont Avenue Northbound					Marine Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	Uturn	App. Total	Left	Thru	Right	App. Total	Int. Total
03:00 PM	0	0	1	1	0	0	0	0	2	5	0	0	7	2	0	1	3	11
03:15 PM	0	2	0	2	0	0	0	0	0	6	0	0	6	0	0	1	1	9
03:30 PM	0	1	1	2	0	0	0	0	1	2	0	0	3	0	0	1	1	6
03:45 PM	0	0	0	0	0	0	0	0	3	1	0	0	4	0	0	2	2	6
Total	0	3	2	5	0	0	0	0	6	14	0	0	20	2	0	5	7	32
04:00 PM	0	2	0	2	0	0	0	0	1	2	0	0	3	1	0	1	2	7
04:15 PM	0	1	0	1	0	0	0	0	0	5	0	0	5	0	0	1	1	7
04:30 PM	0	3	0	3	0	0	0	0	0	1	0	0	1	1	0	0	1	5
04:45 PM	0	3	0	3	0	0	0	0	0	2	0	0	2	1	0	0	1	6
Total	0	9	0	9	0	0	0	0	1	10	0	0	11	3	0	2	5	25
05:00 PM	0	3	0	3	0	0	0	0	1	6	0	0	7	0	0	0	0	10
05:15 PM	0	3	0	3	0	0	0	0	0	0	0	0	0	0	0	1	1	4
05:30 PM	0	1	0	1	0	0	0	0	1	0	0	0	1	1	0	1	2	4
05:45 PM	0	1	2	3	0	0	0	0	0	1	0	0	1	1	0	0	1	5
Total	0	8	2	10	0	0	0	0	2	7	0	0	9	2	0	2	4	23
Grand Total	0	20	4	24	0	0	0	0	9	31	0	0	40	7	0	9	16	80
Apprch %	0	83.3	16.7		0	0	0		22.5	77.5	0	0		43.8	0	56.2		
Total %	0	25	5	30	0	0	0	0	11.2	38.8	0	0	50	8.8	0	11.2	20	

	Vermont Avenue Southbound				Dead End Westbound				Vermont Avenue Northbound					Marine Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	Uturn	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1																		
Peak Hour for Entire Intersection Begins at 04:30 PM																		
04:30 PM	0	**3**	0	**3**	0	0	0	0	0	1	0	0	1	**1**	0	0	**1**	5
04:45 PM	0	3	0	3	0	0	0	0	0	2	0	0	2	1	0	0	1	6
05:00 PM	0	3	0	3	0	0	0	0	**1**	**6**	0	0	**7**	0	0	0	0	**10**
05:15 PM	0	3	0	3	0	0	0	0	0	0	0	0	0	0	0	**1**	1	4
Total Volume	0	12	0	12	0	0	0	0	1	9	0	0	10	2	0	1	3	25
% App. Total	0	100	0		0	0	0		10	90	0	0		66.7	0	33.3		
PHF	.000	1.00	.000	1.00	.000	.000	.000	.000	.250	.375	.000	.000	.357	.500	.000	.250	.750	.625

Counts Unlimited
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Corona, CA 92878
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City of Gardena
N/S: Vermont Avenue
E/W: Marine Avenue
Weather: Clear

File Name : 05_GDA_Vermont_Marine PM
Site Code : 05719380
Start Date : 5/23/2019
Page No : 2



Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:30 PM				04:30 PM				04:30 PM					04:30 PM			
+0 mins.	0	**3**	0	**3**	0	0	0	0	0	1	0	0	1	**1**	0	0	**1**
+15 mins.	0	3	0	3	0	0	0	0	0	2	0	0	2	1	0	0	1
+30 mins.	0	3	0	3	0	0	0	0	**1**	**6**	0	0	**7**	0	0	0	0
+45 mins.	0	3	0	3	0	0	0	0	0	0	0	0	0	0	0	**1**	1
Total Volume	0	12	0	12	0	0	0	0	1	9	0	0	10	2	0	1	3
% App. Total	0	100	0		0	0	0		10	90	0	0		66.7	0	33.3	
PHF	.000	1.000	.000	1.000	.000	.000	.000	.000	.250	.375	.000	.000	.357	.500	.000	.250	.750

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City of Gardena
N/S: Vermont Avenue
E/W: Marine Avenue
Weather: Clear

File Name : 05_GDA_Vermont_Marine PM
Site Code : 05719380
Start Date : 5/23/2019
Page No : 1

Groups Printed- 3+ Axle Trucks

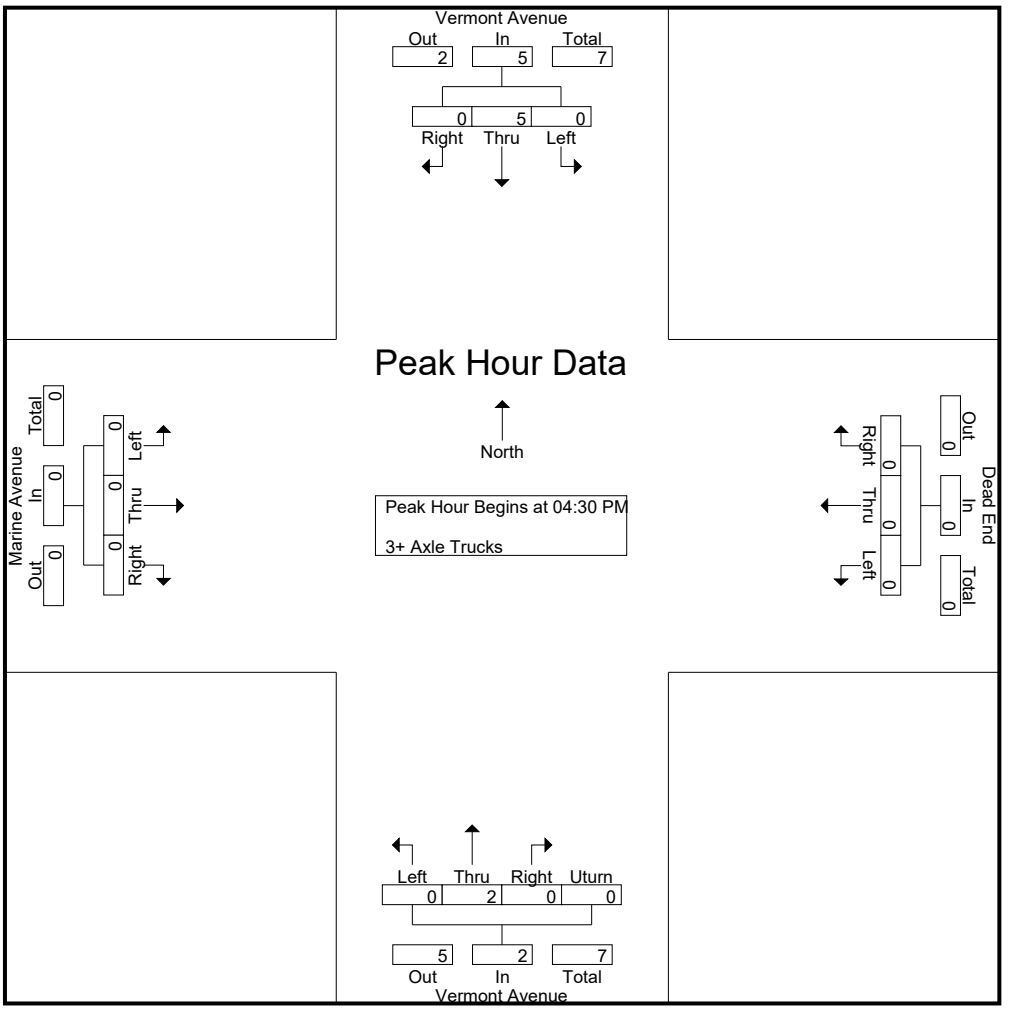
	Vermont Avenue Southbound				Dead End Westbound				Vermont Avenue Northbound					Marine Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	Uturn	App. Total	Left	Thru	Right	App. Total	Int. Total
03:00 PM	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	1
03:15 PM	0	0	0	0	0	0	0	0	0	3	0	0	3	0	0	0	0	3
03:30 PM	0	2	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	2
03:45 PM	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	1
Total	0	2	0	2	0	0	0	0	0	5	0	0	5	0	0	0	0	7
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	2	2
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:30 PM	0	1	0	1	0	0	0	0	0	1	0	0	1	0	0	0	0	2
04:45 PM	0	1	0	1	0	0	0	0	0	1	0	0	1	0	0	0	0	2
Total	0	2	0	2	0	0	0	0	0	2	0	0	2	0	0	2	2	6
05:00 PM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1
05:15 PM	0	2	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	2
05:30 PM	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	1
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	3	0	3	0	0	0	0	0	1	0	0	1	0	0	0	0	4
Grand Total	0	7	0	7	0	0	0	0	0	8	0	0	8	0	0	2	2	17
Apprch %	0	100	0		0	0	0		0	100	0	0		0	0	100		
Total %	0	41.2	0	41.2	0	0	0	0	0	47.1	0	0	47.1	0	0	11.8	11.8	

	Vermont Avenue Southbound				Dead End Westbound				Vermont Avenue Northbound					Marine Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	Uturn	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1																		
Peak Hour for Entire Intersection Begins at 04:30 PM																		
04:30 PM	0	1	0	1	0	0	0	0	0	**1**	0	0	**1**	0	0	0	0	**2**
04:45 PM	0	1	0	1	0	0	0	0	0	1	0	0	1	0	0	0	0	2
05:00 PM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1
05:15 PM	0	**2**	0	**2**	0	0	0	0	0	0	0	0	0	0	0	0	0	2
Total Volume	0	5	0	5	0	0	0	0	0	2	0	0	2	0	0	0	0	7
% App. Total	0	100	0		0	0	0		0	100	0	0		0	0	0		
PHF	.000	.625	.000	.625	.000	.000	.000	.000	.000	.500	.000	.000	.500	.000	.000	.000	.000	.875

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PO Box 1178
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City of Gardena
N/S: Vermont Avenue
E/W: Marine Avenue
Weather: Clear

File Name : 05_GDA_Vermont_Marine PM
Site Code : 05719380
Start Date : 5/23/2019
Page No : 2



Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:30 PM				04:30 PM				04:30 PM					04:30 PM			
+0 mins.	0	1	0	1	0	0	0	0	0	**1**	0	0	**1**	0	0	0	0
+15 mins.	0	1	0	1	0	0	0	0	0	1	0	0	1	0	0	0	0
+30 mins.	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
+45 mins.	0	**2**	0	**2**	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	5	0	5	0	0	0	0	0	2	0	0	2	0	0	0	0
% App. Total	0	100	0		0	0	0		0	100	0	0		0	0	0	
PHF	.000	.625	.000	.625	.000	.000	.000	.000	.000	.500	.000	.000	.500	.000	.000	.000	.000

Location: Gardena
N/S: Vermont Avenue
E/W: Marine Avenue

Date: 5/23/2019
Day: Thursday

PEDESTRIANS

	North Leg Vermont Avenue Pedestrians	East Leg Dead End Pedestrians	South Leg Vermont Avenue Pedestrians	West Leg Marine Avenue Pedestrians	
7:00 AM	1	0	3	3	7
7:15 AM	0	0	0	5	5
7:30 AM	1	0	1	5	7
7:45 AM	0	0	0	7	7
8:00 AM	0	0	1	5	6
8:15 AM	0	0	0	4	4
8:30 AM	1	0	0	3	4
8:45 AM	0	0	2	3	5
9:00 AM	0	0	0	2	2
9:15 AM	0	0	0	3	3
9:30 AM	0	0	0	2	2
9:45 AM	0	0	1	1	2
TOTAL VOLUMES:	3	0	8	43	54

	North Leg Vermont Avenue Pedestrians	East Leg Dead End Pedestrians	South Leg Vermont Avenue Pedestrians	West Leg Marine Avenue Pedestrians	
3:00 PM	0	0	0	2	2
3:15 PM	0	0	1	1	2
3:30 PM	0	0	0	3	3
3:45 PM	0	0	0	3	3
4:00 PM	0	0	0	0	0
4:15 PM	0	0	0	1	1
4:30 PM	1	0	0	3	4
4:45 PM	1	0	0	0	1
5:00 PM	0	0	0	3	3
5:15 PM	0	0	0	5	5
5:30 PM	0	0	0	0	0
5:45 PM	0	0	1	5	6
TOTAL VOLUMES:	2	0	2	26	30

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951-268-6268

Location: Gardena
N/S: Vermont Avenue
E/W: Marine Avenue

Date: 5/23/2019
Day: Thursday

BICYCLES

	Southbound Vermont Avenue			Westbound Dead End			Northbound Vermont Avenue			Eastbound Marine Avenue			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	1	0	0	0	0	0	0	0	0	1	0	2
7:30 AM	0	0	0	0	0	0	0	0	0	0	1	0	1
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	1	0	0	0	0	0	0	0	0	0	0	1
8:30 AM	0	1	0	0	0	0	0	0	0	0	0	0	1
8:45 AM	0	2	0	0	0	0	0	1	0	0	0	0	3
9:00 AM	0	0	0	0	0	0	0	0	0	0	0	1	1
9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
9:30 AM	0	0	0	0	0	0	0	1	1	0	0	0	2
9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES:	0	5	0	0	0	0	0	2	1	0	2	1	11

	Southbound Vermont Avenue			Westbound Dead End			Northbound Vermont Avenue			Eastbound Marine Avenue			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
3:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
3:15 PM	0	0	0	0	0	0	0	1	0	0	0	0	1
3:30 PM	0	1	0	0	0	0	1	1	0	0	0	0	3
3:45 PM	0	2	0	0	0	0	0	0	0	0	0	0	2
4:00 PM	0	0	0	0	0	0	0	1	0	0	0	0	1
4:15 PM	0	0	0	0	0	0	0	1	0	0	0	0	1
4:30 PM	0	0	0	0	0	0	0	1	0	0	0	0	1
4:45 PM	0	0	0	0	0	0	1	1	0	1	1	0	4
5:00 PM	0	0	0	0	0	0	0	1	0	0	1	0	2
5:15 PM	0	1	0	0	0	0	0	0	0	0	0	0	1
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES:	0	4	0	0	0	0	2	7	0	1	2	0	16

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City of Gardena
N/S: Vermont Avenue
E/W: Redondo Beach Boulevard
Weather: Clear

File Name : 06_GDA_Vermont_Redondo Beach AM
Site Code : 05719380
Start Date : 5/23/2019
Page No : 1

Groups Printed- Passenger Vehicles - Buses - 2 Axle Vehicles - 3+ Axle Trucks

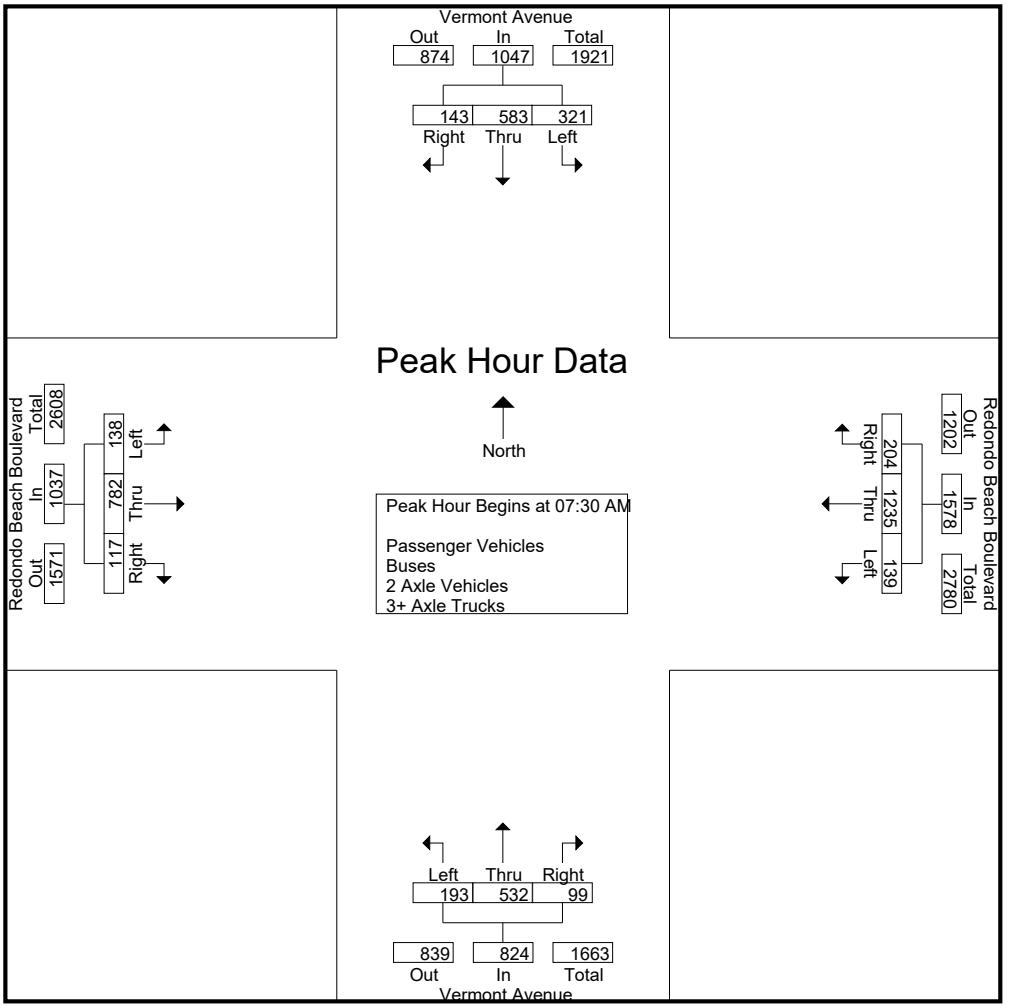
	Vermont Avenue Southbound				Redondo Beach Boulevard Westbound				Vermont Avenue Northbound				Redondo Beach Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	65	89	30	184	20	262	51	333	36	90	21	147	14	160	12	186	850
07:15 AM	73	105	26	204	27	263	62	352	35	91	21	147	20	153	25	198	901
07:30 AM	86	179	25	290	32	319	55	406	39	134	30	203	35	199	30	264	1163
07:45 AM	85	192	51	328	36	321	61	418	55	180	27	262	35	207	37	279	1287
Total	309	565	132	1006	115	1165	229	1509	165	495	99	759	104	719	104	927	4201
08:00 AM	79	119	36	234	45	281	47	373	54	121	21	196	42	209	33	284	1087
08:15 AM	71	93	31	195	26	314	41	381	45	97	21	163	26	167	17	210	949
08:30 AM	62	80	27	169	26	303	48	377	36	74	18	128	28	135	21	184	858
08:45 AM	57	69	34	160	31	232	42	305	43	100	21	164	20	150	17	187	816
Total	269	361	128	758	128	1130	178	1436	178	392	81	651	116	661	88	865	3710
09:00 AM	79	68	25	172	34	244	39	317	36	72	18	126	24	166	18	208	823
09:15 AM	39	60	27	126	17	226	55	298	38	75	11	124	32	162	21	215	763
09:30 AM	48	57	29	134	25	227	44	296	39	77	29	145	21	176	18	215	790
09:45 AM	49	60	27	136	20	233	46	299	52	81	20	153	19	144	14	177	765
Total	215	245	108	568	96	930	184	1210	165	305	78	548	96	648	71	815	3141
Grand Total	793	1171	368	2332	339	3225	591	4155	508	1192	258	1958	316	2028	263	2607	11052
Apprch %	34	50.2	15.8		8.2	77.6	14.2		25.9	60.9	13.2		12.1	77.8	10.1		
Total %	7.2	10.6	3.3	21.1	3.1	29.2	5.3	37.6	4.6	10.8	2.3	17.7	2.9	18.3	2.4	23.6	
Passenger Vehicles	767	1117	358	2242	326	3130	549	4005	486	1143	247	1876	308	1973	245	2526	10649
% Passenger Vehicles	96.7	95.4	97.3	96.1	96.2	97.1	92.9	96.4	95.7	95.9	95.7	95.8	97.5	97.3	93.2	96.9	96.4
Buses	7	29	3	39	4	8	4	16	12	18	3	33	2	9	14	25	113
% Buses	0.9	2.5	0.8	1.7	1.2	0.2	0.7	0.4	2.4	1.5	1.2	1.7	0.6	0.4	5.3	1	1
2 Axle Vehicles	14	25	7	46	4	67	19	90	8	25	5	38	4	30	4	38	212
% 2 Axle Vehicles	1.8	2.1	1.9	2	1.2	2.1	3.2	2.2	1.6	2.1	1.9	1.9	1.3	1.5	1.5	1.5	1.9
3+ Axle Trucks	5	0	0	5	5	20	19	44	2	6	3	11	2	16	0	18	78
% 3+ Axle Trucks	0.6	0	0	0.2	1.5	0.6	3.2	1.1	0.4	0.5	1.2	0.6	0.6	0.8	0	0.7	0.7

	Vermont Avenue Southbound				Redondo Beach Boulevard Westbound				Vermont Avenue Northbound				Redondo Beach Boulevard 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 09:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	**86**	179	25	290	32	319	55	406	39	134	**30**	203	35	199	30	264	1163
07:45 AM	85	**192**	**51**	**328**	36	**321**	**61**	**418**	**55**	**180**	27	**262**	35	207	**37**	279	**1287**
08:00 AM	79	119	36	234	**45**	281	47	373	54	121	21	196	**42**	**209**	33	**284**	1087
08:15 AM	71	93	31	195	26	314	41	381	45	97	21	163	26	167	17	210	949
Total Volume	321	583	143	1047	139	1235	204	1578	193	532	99	824	138	782	117	1037	4486
% App. Total	30.7	55.7	13.7		8.8	78.3	12.9		23.4	64.6	12		13.3	75.4	11.3		
PHF	.933	.759	.701	.798	.772	.962	.836	.944	.877	.739	.825	.786	.821	.935	.791	.913	.871

Counts Unlimited
PO Box 1178
Corona, CA 92878
(951) 268-6268

City of Gardena
N/S: Vermont Avenue
E/W: Redondo Beach Boulevard
Weather: Clear

File Name : 06_GDA_Vermont_Redondo Beach AM
Site Code : 05719380
Start Date : 5/23/2019
Page No : 2



Peak Hour Analysis From 07:00 AM to 09:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:15 AM				07:30 AM				07:30 AM				07:30 AM			
+0 mins.	73	105	26	204	32	319	55	406	39	134	**30**	203	35	199	30	264
+15 mins.	**86**	179	25	290	36	**321**	**61**	**418**	**55**	**180**	27	**262**	35	207	**37**	279
+30 mins.	85	**192**	**51**	**328**	**45**	281	47	373	54	121	21	196	**42**	**209**	33	**284**
+45 mins.	79	119	36	234	26	314	41	381	45	97	21	163	26	167	17	210
Total Volume	323	595	138	1056	139	1235	204	1578	193	532	99	824	138	782	117	1037
% App. Total	30.6	56.3	13.1		8.8	78.3	12.9		23.4	64.6	12		13.3	75.4	11.3	
PHF	.939	.775	.676	.805	.772	.962	.836	.944	.877	.739	.825	.786	.821	.935	.791	.913

Counts Unlimited
PO Box 1178
Corona, CA 92878
(951) 268-6268

City of Gardena
N/S: Vermont Avenue
E/W: Redondo Beach Boulevard
Weather: Clear

File Name : 06_GDA_Vermont_Redondo Beach AM
Site Code : 05719380
Start Date : 5/23/2019
Page No : 1

Groups Printed- Passenger Vehicles

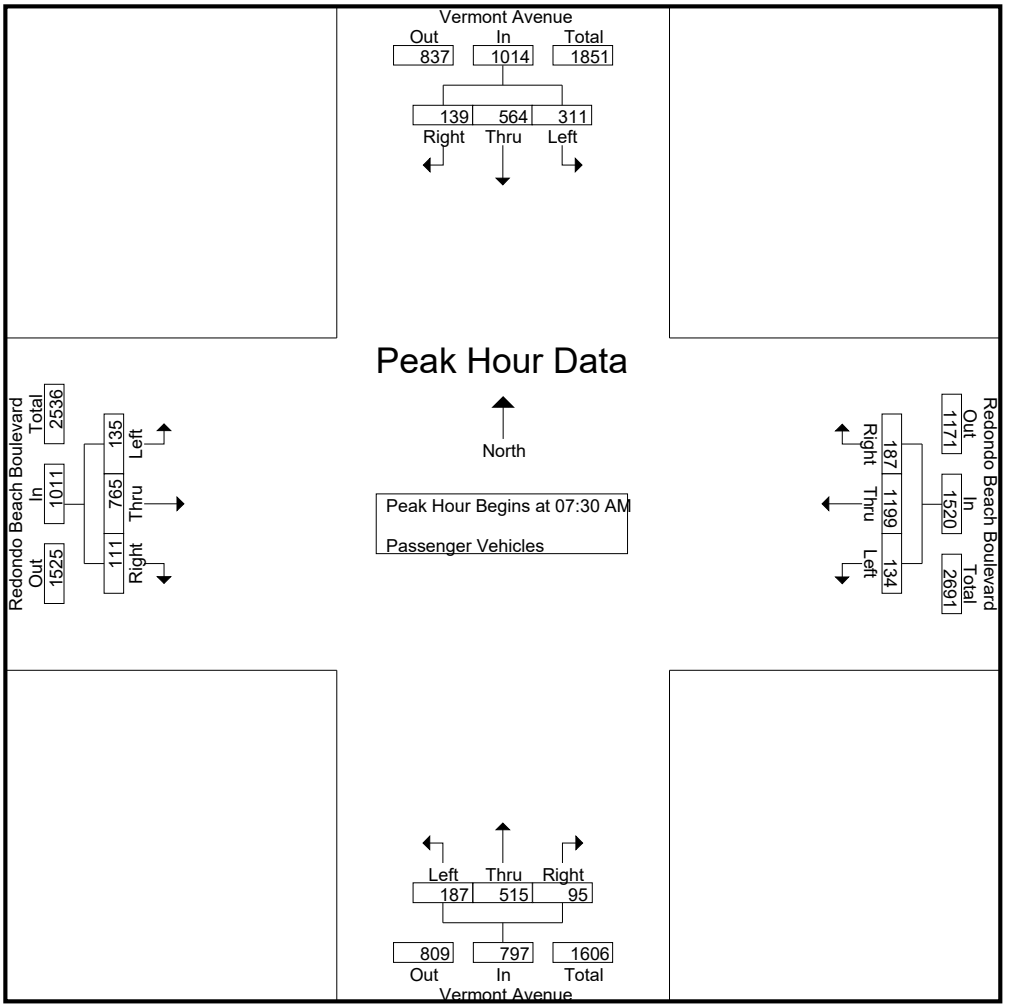
	Vermont Avenue Southbound				Redondo Beach Boulevard Westbound				Vermont Avenue Northbound				Redondo Beach Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	62	82	29	173	19	250	48	317	34	84	21	139	14	156	10	180	809
07:15 AM	67	99	25	191	27	254	61	342	34	88	20	142	20	152	24	196	871
07:30 AM	82	172	24	278	32	311	52	395	38	132	28	198	33	192	30	255	1126
07:45 AM	85	187	49	321	35	316	55	406	53	177	26	256	35	205	35	275	1258
Total	296	540	127	963	113	1131	216	1460	159	481	95	735	102	705	99	906	4064
08:00 AM	76	115	35	226	43	268	44	355	52	117	21	190	42	204	31	277	1048
08:15 AM	68	90	31	189	24	304	36	364	44	89	20	153	25	164	15	204	910
08:30 AM	61	76	27	164	25	294	44	363	34	70	16	120	27	132	18	177	824
08:45 AM	56	65	32	153	28	226	40	294	41	96	19	156	20	143	15	178	781
Total	261	346	125	732	120	1092	164	1376	171	372	76	619	114	643	79	836	3563
09:00 AM	78	62	25	165	32	239	38	309	32	70	18	120	23	162	17	202	796
09:15 AM	39	58	26	123	16	219	46	281	36	73	10	119	29	155	20	204	727
09:30 AM	46	55	29	130	25	222	40	287	37	71	29	137	21	167	17	205	759
09:45 AM	47	56	26	129	20	227	45	292	51	76	19	146	19	141	13	173	740
Total	210	231	106	547	93	907	169	1169	156	290	76	522	92	625	67	784	3022
Grand Total	767	1117	358	2242	326	3130	549	4005	486	1143	247	1876	308	1973	245	2526	10649
Apprch %	34.2	49.8	16		8.1	78.2	13.7		25.9	60.9	13.2		12.2	78.1	9.7		
Total %	7.2	10.5	3.4	21.1	3.1	29.4	5.2	37.6	4.6	10.7	2.3	17.6	2.9	18.5	2.3	23.7	

	Vermont Avenue Southbound				Redondo Beach Boulevard Westbound				Vermont Avenue Northbound				Redondo Beach Boulevard 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 07:30 AM to 08:15 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	82	172	24	278	32	311	52	395	38	132	**28**	198	33	192	30	255	1126
07:45 AM	**85**	**187**	**49**	**321**	35	**316**	**55**	**406**	**53**	**177**	26	**256**	35	**205**	**35**	275	**1258**
08:00 AM	76	115	35	226	**43**	268	44	355	52	117	21	190	**42**	204	31	**277**	1048
08:15 AM	68	90	31	189	24	304	36	364	44	89	20	153	25	164	15	204	910
Total Volume	311	564	139	1014	134	1199	187	1520	187	515	95	797	135	765	111	1011	4342
% App. Total	30.7	55.6	13.7		8.8	78.9	12.3		23.5	64.6	11.9		13.4	75.7	11		
PHF	.915	.754	.709	.790	.779	.949	.850	.936	.882	.727	.848	.778	.804	.933	.793	.912	.863

Counts Unlimited
PO Box 1178
Corona, CA 92878
(951) 268-6268

City of Gardena
N/S: Vermont Avenue
E/W: Redondo Beach Boulevard
Weather: Clear

File Name : 06_GDA_Vermont_Redondo Beach AM
Site Code : 05719380
Start Date : 5/23/2019



Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:30 AM				07:30 AM				07:30 AM				07:30 AM			
+0 mins.	82	172	24	278	32	311	52	395	38	132	**28**	198	33	192	30	255
+15 mins.	**85**	**187**	**49**	**321**	35	**316**	**55**	**406**	**53**	**177**	26	**256**	35	**205**	**35**	275
+30 mins.	76	115	35	226	**43**	268	44	355	52	117	21	190	**42**	204	31	**277**
+45 mins.	68	90	31	189	24	304	36	364	44	89	20	153	25	164	15	204
Total Volume	311	564	139	1014	134	1199	187	1520	187	515	95	797	135	765	111	1011
% App. Total	30.7	55.6	13.7		8.8	78.9	12.3		23.5	64.6	11.9		13.4	75.7	11	
PHF	.915	.754	.709	.790	.779	.949	.850	.936	.882	.727	.848	.778	.804	.933	.793	.912

Counts Unlimited
PO Box 1178
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(951) 268-6268

City of Gardena
N/S: Vermont Avenue
E/W: Redondo Beach Boulevard
Weather: Clear

File Name : 06_GDA_Vermont_Redondo Beach AM
Site Code : 05719380
Start Date : 5/23/2019
Page No : 1

Groups Printed- Buses

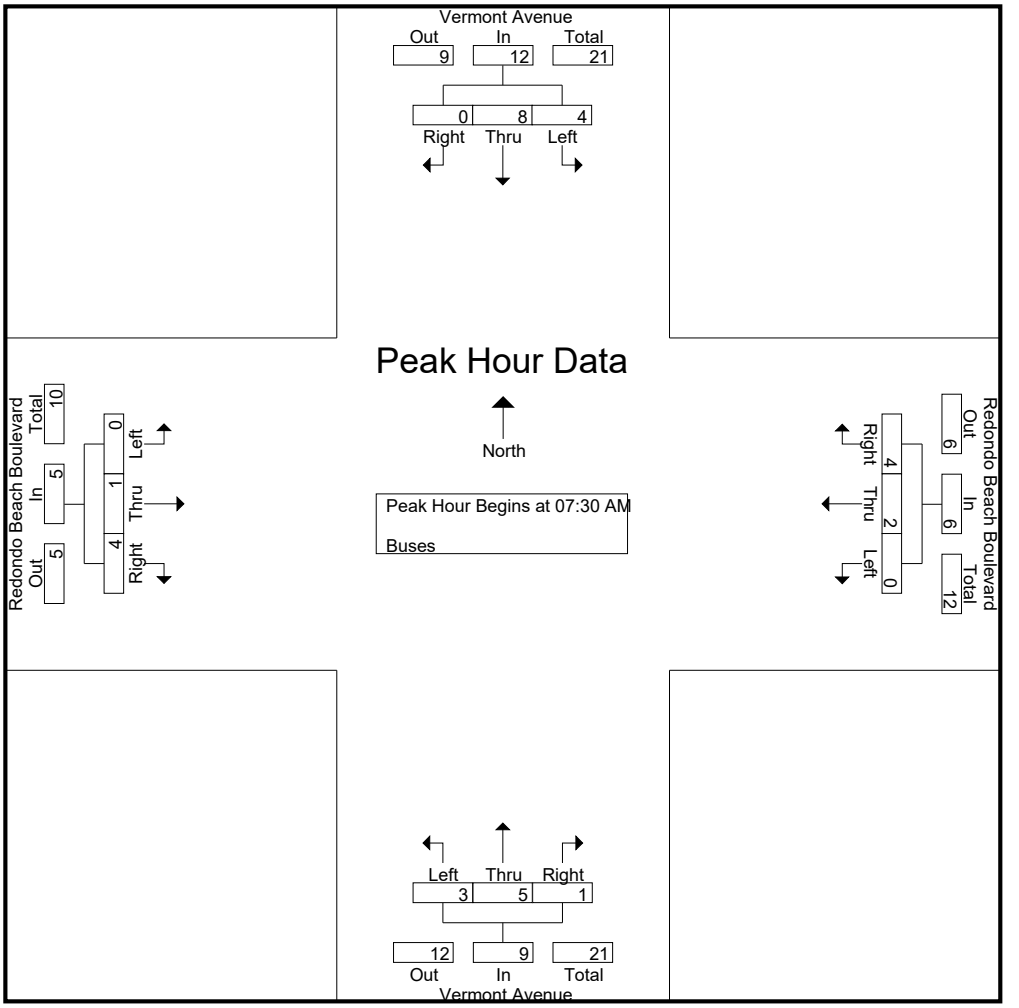
	Vermont Avenue Southbound				Redondo Beach Boulevard Westbound				Vermont Avenue Northbound				Redondo Beach Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	1	6	0	7	0	1	0	1	2	3	0	5	0	0	1	1	14
07:15 AM	2	1	1	4	0	3	0	3	1	2	0	3	0	0	1	1	11
07:30 AM	3	4	0	7	0	0	0	0	0	1	0	1	0	1	0	1	9
07:45 AM	0	1	0	1	0	1	1	2	2	1	1	4	0	0	1	1	8
Total	6	12	1	19	0	5	1	6	5	7	1	13	0	1	3	4	42
08:00 AM	0	2	0	2	0	0	1	1	0	1	0	1	0	0	2	2	6
08:15 AM	1	1	0	2	0	1	2	3	1	2	0	3	0	0	1	1	9
08:30 AM	0	4	0	4	1	0	0	1	1	1	2	4	0	1	3	4	13
08:45 AM	0	2	1	3	2	0	0	2	1	1	0	2	0	2	1	3	10
Total	1	9	1	11	3	1	3	7	3	5	2	10	0	3	7	10	38
09:00 AM	0	3	0	3	0	0	0	0	1	0	0	1	0	2	1	3	7
09:15 AM	0	1	0	1	1	2	0	3	1	1	0	2	2	3	1	6	12
09:30 AM	0	2	0	2	0	0	0	0	1	3	0	4	0	0	1	1	7
09:45 AM	0	2	1	3	0	0	0	0	1	2	0	3	0	0	1	1	7
Total	0	8	1	9	1	2	0	3	4	6	0	10	2	5	4	11	33
Grand Total	7	29	3	39	4	8	4	16	12	18	3	33	2	9	14	25	113
Apprch %	17.9	74.4	7.7		25	50	25		36.4	54.5	9.1		8	36	56		
Total %	6.2	25.7	2.7	34.5	3.5	7.1	3.5	14.2	10.6	15.9	2.7	29.2	1.8	8	12.4	22.1	

	Vermont Avenue Southbound				Redondo Beach Boulevard Westbound				Vermont Avenue Northbound				Redondo Beach Boulevard 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 07:30 AM to 08:15 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	**3**	**4**	0	**7**	0	0	0	0	0	1	0	1	0	**1**	0	1	**9**
07:45 AM	0	1	0	1	0	**1**	1	2	**2**	1	**1**	**4**	0	0	1	1	8
08:00 AM	0	2	0	2	0	0	1	1	0	1	0	1	0	0	**2**	**2**	6
08:15 AM	1	1	0	2	0	1	**2**	**3**	1	**2**	0	3	0	0	1	1	9
Total Volume	4	8	0	12	0	2	4	6	3	5	1	9	0	1	4	5	32
% App. Total	33.3	66.7	0		0	33.3	66.7		33.3	55.6	11.1		0	20	80		
PHF	.333	.500	.000	.429	.000	.500	.500	.500	.375	.625	.250	.563	.000	.250	.500	.625	.889

Counts Unlimited
PO Box 1178
Corona, CA 92878
(951) 268-6268

City of Gardena
N/S: Vermont Avenue
E/W: Redondo Beach Boulevard
Weather: Clear

File Name : 06_GDA_Vermont_Redondo Beach AM
Site Code : 05719380
Start Date : 5/23/2019



Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:30 AM				07:30 AM				07:30 AM				07:30 AM			
+0 mins.	**3**	**4**	0	**7**	0	0	0	0	0	1	0	1	0	**1**	0	1
+15 mins.	0	1	0	1	0	**1**	1	2	**2**	1	**1**	**4**	0	0	1	1
+30 mins.	0	2	0	2	0	0	1	1	0	1	0	1	0	0	**2**	**2**
+45 mins.	1	1	0	2	0	1	**2**	**3**	1	**2**	0	3	0	0	1	1
Total Volume	4	8	0	12	0	2	4	6	3	5	1	9	0	1	4	5
% App. Total	33.3	66.7	0		0	33.3	66.7		33.3	55.6	11.1		0	20	80	
PHF	.333	.500	.000	.429	.000	.500	.500	.500	.375	.625	.250	.563	.000	.250	.500	.625

Counts Unlimited
PO Box 1178
Corona, CA 92878
(951) 268-6268

City of Gardena
N/S: Vermont Avenue
E/W: Redondo Beach Boulevard
Weather: Clear

File Name : 06_GDA_Vermont_Redondo Beach AM
Site Code : 05719380
Start Date : 5/23/2019
Page No : 1

Groups Printed- 2 Axle Vehicles

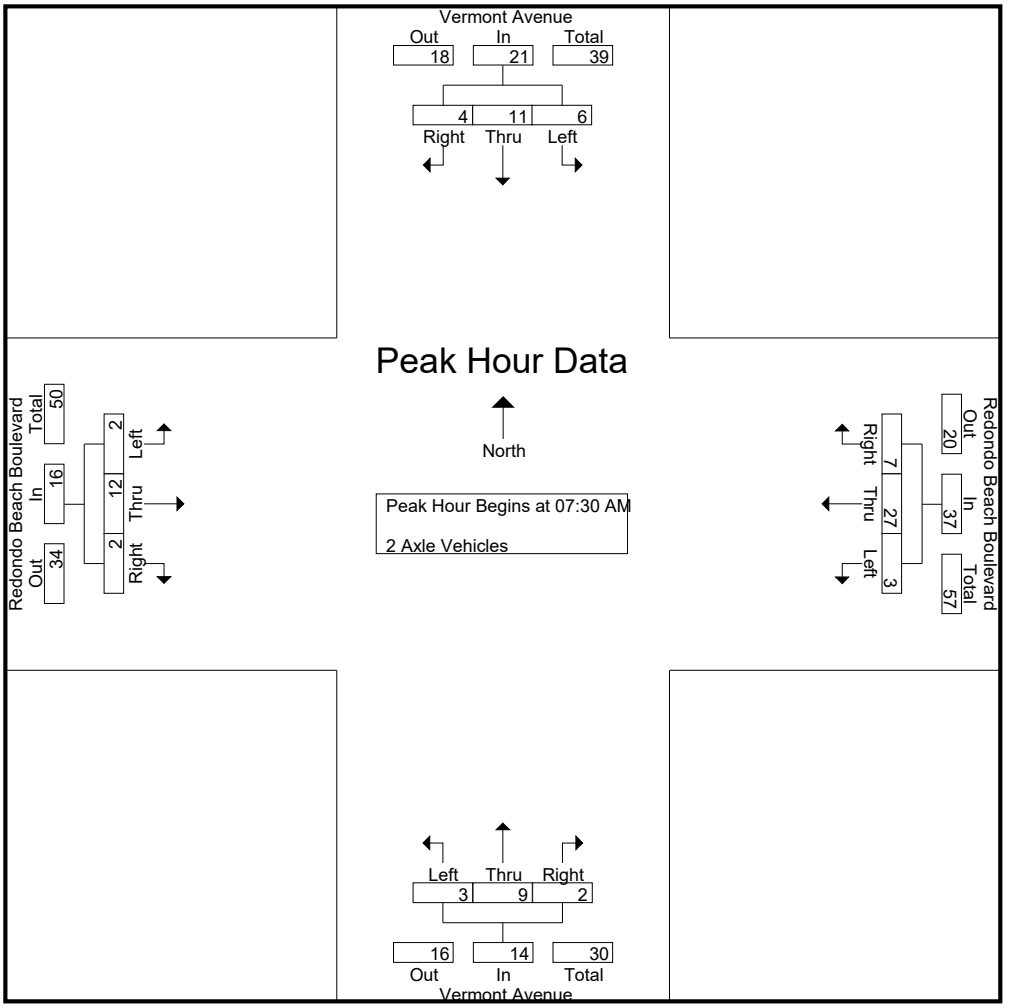
	Vermont Avenue Southbound				Redondo Beach Boulevard Westbound				Vermont Avenue Northbound				Redondo Beach Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	1	1	1	3	0	9	2	11	0	3	0	3	0	1	1	2	19
07:15 AM	3	5	0	8	0	4	1	5	0	1	1	2	0	0	0	0	15
07:30 AM	1	3	1	5	0	6	2	8	1	0	1	2	1	4	0	5	20
07:45 AM	0	4	2	6	1	3	3	7	0	2	0	2	0	1	1	2	17
Total	5	13	4	22	1	22	8	31	1	6	2	9	1	6	2	9	71
08:00 AM	3	2	1	6	1	10	0	11	2	2	0	4	0	5	0	5	26
08:15 AM	2	2	0	4	1	8	2	11	0	5	1	6	1	2	1	4	25
08:30 AM	0	0	0	0	0	6	2	8	1	3	0	4	0	2	0	2	14
08:45 AM	0	2	1	3	0	6	1	7	1	2	1	4	0	4	1	5	19
Total	5	6	2	13	2	30	5	37	4	12	2	18	1	13	2	16	84
09:00 AM	1	3	0	4	1	3	1	5	1	1	0	2	1	1	0	2	13
09:15 AM	0	1	1	2	0	5	4	9	1	1	0	2	1	2	0	3	16
09:30 AM	1	0	0	1	0	5	1	6	1	3	0	4	0	7	0	7	18
09:45 AM	2	2	0	4	0	2	0	2	0	2	1	3	0	1	0	1	10
Total	4	6	1	11	1	15	6	22	3	7	1	11	2	11	0	13	57
Grand Total	14	25	7	46	4	67	19	90	8	25	5	38	4	30	4	38	212
Apprch %	30.4	54.3	15.2		4.4	74.4	21.1		21.1	65.8	13.2		10.5	78.9	10.5		
Total %	6.6	11.8	3.3	21.7	1.9	31.6	9	42.5	3.8	11.8	2.4	17.9	1.9	14.2	1.9	17.9	

	Vermont Avenue Southbound				Redondo Beach Boulevard Westbound				Vermont Avenue Northbound				Redondo Beach Boulevard 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 07:30 AM to 08:15 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	1	3	1	5	0	6	2	8	1	0	**1**	2	**1**	4	0	**5**	20
07:45 AM	0	**4**	**2**	**6**	**1**	3	**3**	7	0	2	0	2	0	1	**1**	2	17
08:00 AM	**3**	2	1	6	1	**10**	0	**11**	**2**	2	0	4	0	**5**	0	5	**26**
08:15 AM	2	2	0	4	1	8	2	11	0	**5**	1	**6**	1	2	1	4	25
Total Volume	6	11	4	21	3	27	7	37	3	9	2	14	2	12	2	16	88
% App. Total	28.6	52.4	19		8.1	73	18.9		21.4	64.3	14.3		12.5	75	12.5		
PHF	.500	.688	.500	.875	.750	.675	.583	.841	.375	.450	.500	.583	.500	.600	.500	.800	.846

Counts Unlimited
PO Box 1178
Corona, CA 92878
(951) 268-6268

City of Gardena
N/S: Vermont Avenue
E/W: Redondo Beach Boulevard
Weather: Clear

File Name : 06_GDA_Vermont_Redondo Beach AM
Site Code : 05719380
Start Date : 5/23/2019



Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:30 AM				07:30 AM				07:30 AM				07:30 AM			
+0 mins.	1	3	1	5	0	6	2	8	1	0	**1**	2	**1**	4	0	**5**
+15 mins.	0	**4**	**2**	**6**	**1**	3	**3**	7	0	2	0	2	0	1	**1**	2
+30 mins.	**3**	2	1	6	1	**10**	0	**11**	**2**	2	0	4	0	**5**	0	5
+45 mins.	2	2	0	4	1	8	2	11	0	**5**	1	**6**	1	2	1	4
Total Volume	6	11	4	21	3	27	7	37	3	9	2	14	2	12	2	16
% App. Total	28.6	52.4	19		8.1	73	18.9		21.4	64.3	14.3		12.5	75	12.5	
PHF	.500	.688	.500	.875	.750	.675	.583	.841	.375	.450	.500	.583	.500	.600	.500	.800

Counts Unlimited
PO Box 1178
Corona, CA 92878
(951) 268-6268

City of Gardena
N/S: Vermont Avenue
E/W: Redondo Beach Boulevard
Weather: Clear

File Name : 06_GDA_Vermont_Redondo Beach AM
Site Code : 05719380
Start Date : 5/23/2019
Page No : 1

Groups Printed- 3+ Axle Trucks

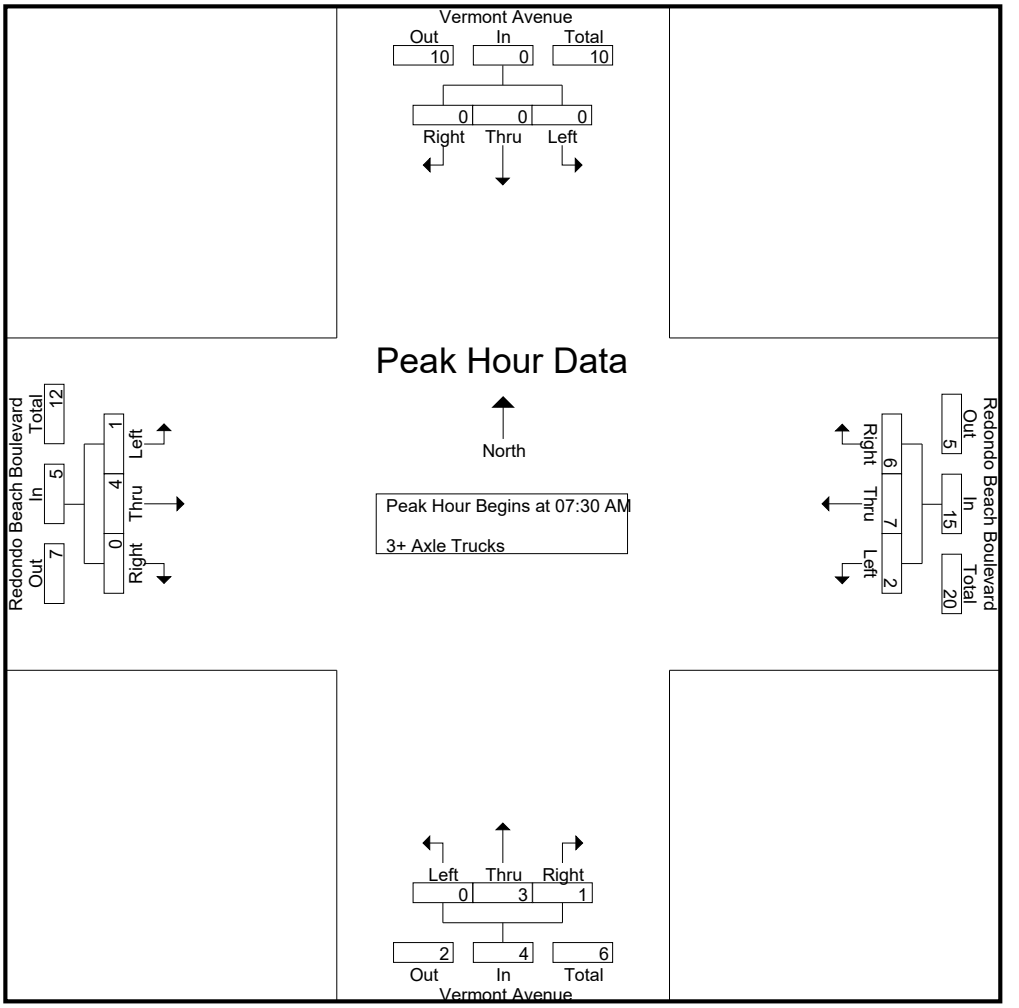
	Vermont Avenue Southbound				Redondo Beach Boulevard Westbound				Vermont Avenue Northbound				Redondo Beach Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	1	0	0	1	1	2	1	4	0	0	0	0	0	3	0	3	8
07:15 AM	1	0	0	1	0	2	0	2	0	0	0	0	0	1	0	1	4
07:30 AM	0	0	0	0	0	2	1	3	0	1	1	2	1	2	0	3	8
07:45 AM	0	0	0	0	0	1	2	3	0	0	0	0	0	1	0	1	4
Total	2	0	0	2	1	7	4	12	0	1	1	2	1	7	0	8	24
08:00 AM	0	0	0	0	1	3	2	6	0	1	0	1	0	0	0	0	7
08:15 AM	0	0	0	0	1	1	1	3	0	1	0	1	0	1	0	1	5
08:30 AM	1	0	0	1	0	3	2	5	0	0	0	0	1	0	0	1	7
08:45 AM	1	0	0	1	1	0	1	2	0	1	1	2	0	1	0	1	6
Total	2	0	0	2	3	7	6	16	0	3	1	4	1	2	0	3	25
09:00 AM	0	0	0	0	1	2	0	3	2	1	0	3	0	1	0	1	7
09:15 AM	0	0	0	0	0	0	5	5	0	0	1	1	0	2	0	2	8
09:30 AM	1	0	0	1	0	0	3	3	0	0	0	0	0	2	0	2	6
09:45 AM	0	0	0	0	0	4	1	5	0	1	0	1	0	2	0	2	8
Total	1	0	0	1	1	6	9	16	2	2	1	5	0	7	0	7	29
Grand Total	5	0	0	5	5	20	19	44	2	6	3	11	2	16	0	18	78
Apprch %	100	0	0		11.4	45.5	43.2		18.2	54.5	27.3		11.1	88.9	0		
Total %	6.4	0	0	6.4	6.4	25.6	24.4	56.4	2.6	7.7	3.8	14.1	2.6	20.5	0	23.1	

	Vermont Avenue Southbound				Redondo Beach Boulevard Westbound				Vermont Avenue Northbound				Redondo Beach Boulevard 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 07:30 AM to 08:15 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	0	0	0	0	0	2	1	3	0	**1**	**1**	**2**	**1**	**2**	0	**3**	**8**
07:45 AM	0	0	0	0	0	1	**2**	3	0	0	0	0	0	1	0	1	4
08:00 AM	0	0	0	0	**1**	**3**	2	**6**	0	1	0	1	0	0	0	0	7
08:15 AM	0	0	0	0	1	1	1	3	0	1	0	1	0	1	0	1	5
Total Volume	0	0	0	0	2	7	6	15	0	3	1	4	1	4	0	5	24
% App. Total	0	0	0		13.3	46.7	40		0	75	25		20	80	0		
PHF	.000	.000	.000	.000	.500	.583	.750	.625	.000	.750	.250	.500	.250	.500	.000	.417	.750

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City of Gardena
N/S: Vermont Avenue
E/W: Redondo Beach Boulevard
Weather: Clear

File Name : 06_GDA_Vermont_Redondo Beach AM
Site Code : 05719380
Start Date : 5/23/2019



Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:30 AM				07:30 AM				07:30 AM				07:30 AM			
+0 mins.	0	0	0	0	0	2	1	3	0	**1**	**1**	**2**	**1**	**2**	0	**3**
+15 mins.	0	0	0	0	0	1	**2**	3	0	0	0	0	0	1	0	1
+30 mins.	0	0	0	0	**1**	**3**	2	**6**	0	1	0	1	0	0	0	0
+45 mins.	0	0	0	0	1	1	1	3	0	1	0	1	0	1	0	1
Total Volume	0	0	0	0	2	7	6	15	0	3	1	4	1	4	0	5
% App. Total	0	0	0		13.3	46.7	40		0	75	25		20	80	0	
PHF	.000	.000	.000	.000	.500	.583	.750	.625	.000	.750	.250	.500	.250	.500	.000	.417

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City of Gardena
N/S: Vermont Avenue
E/W: Redondo Beach Boulevard
Weather: Clear

File Name : 06_GDA_Vermont_Redondo Beach PM
Site Code : 05719380
Start Date : 5/23/2019
Page No : 1

Groups Printed- Passenger Vehicles - Buses - 2 Axle Vehicles - 3+ Axle Trucks

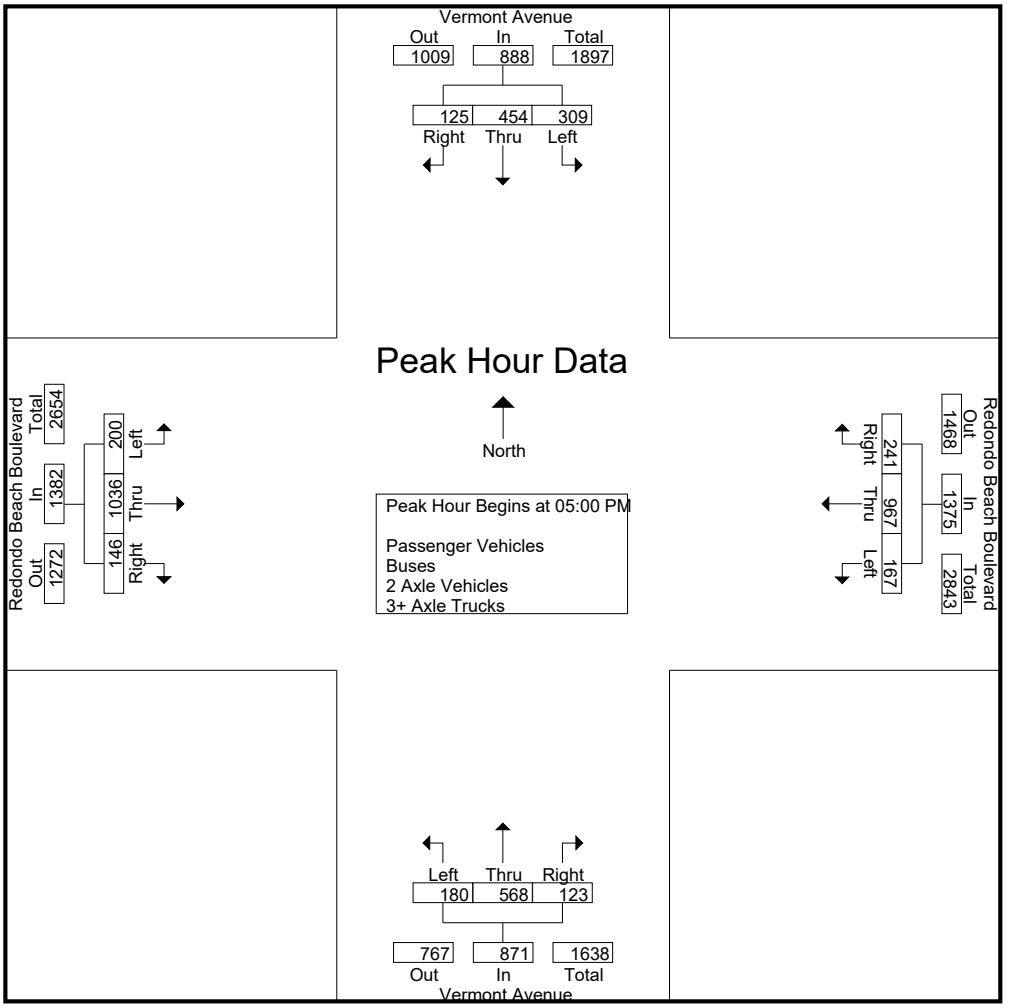
	Vermont Avenue Southbound				Redondo Beach Boulevard Westbound				Vermont Avenue Northbound				Redondo Beach Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
03:00 PM	86	133	42	261	37	222	51	310	33	105	19	157	55	222	42	319	1047
03:15 PM	84	146	33	263	45	209	56	310	45	123	21	189	54	245	30	329	1091
03:30 PM	68	111	36	215	38	218	54	310	37	135	18	190	61	259	34	354	1069
03:45 PM	88	128	31	247	52	223	35	310	51	161	32	244	44	237	35	316	1117
Total	326	518	142	986	172	872	196	1240	166	524	90	780	214	963	141	1318	4324
04:00 PM	75	142	41	258	28	209	55	292	48	119	21	188	47	242	27	316	1054
04:15 PM	76	111	28	215	35	187	40	262	47	123	17	187	50	273	39	362	1026
04:30 PM	70	126	39	235	37	236	49	322	41	112	24	177	43	251	36	330	1064
04:45 PM	70	119	34	223	42	230	55	327	33	118	32	183	56	245	38	339	1072
Total	291	498	142	931	142	862	199	1203	169	472	94	735	196	1011	140	1347	4216
05:00 PM	82	107	25	214	34	214	64	312	44	173	31	248	54	238	33	325	1099
05:15 PM	103	131	27	261	35	204	62	301	43	147	31	221	50	264	48	362	1145
05:30 PM	59	102	41	202	55	267	63	385	41	126	29	196	55	291	35	381	1164
05:45 PM	65	114	32	211	43	282	52	377	52	122	32	206	41	243	30	314	1108
Total	309	454	125	888	167	967	241	1375	180	568	123	871	200	1036	146	1382	4516
Grand Total	926	1470	409	2805	481	2701	636	3818	515	1564	307	2386	610	3010	427	4047	13056
Apprch %	33	52.4	14.6		12.6	70.7	16.7		21.6	65.5	12.9		15.1	74.4	10.6		
Total %	7.1	11.3	3.1	21.5	3.7	20.7	4.9	29.2	3.9	12	2.4	18.3	4.7	23.1	3.3	31	
Passenger Vehicles	908	1402	405	2715	470	2665	616	3751	498	1520	297	2315	606	2924	406	3936	12717
% Passenger Vehicles	98.1	95.4	99	96.8	97.7	98.7	96.9	98.2	96.7	97.2	96.7	97	99.3	97.1	95.1	97.3	97.4
Buses	4	51	0	55	4	2	1	7	13	22	2	37	0	8	14	22	121
% Buses	0.4	3.5	0	2	0.8	0.1	0.2	0.2	2.5	1.4	0.7	1.6	0	0.3	3.3	0.5	0.9
2 Axle Vehicles	8	14	3	25	5	28	15	48	4	18	5	27	4	60	6	70	170
% 2 Axle Vehicles	0.9	1	0.7	0.9	1	1	2.4	1.3	0.8	1.2	1.6	1.1	0.7	2	1.4	1.7	1.3
3+ Axle Trucks	6	3	1	10	2	6	4	12	0	4	3	7	0	18	1	19	48
% 3+ Axle Trucks	0.6	0.2	0.2	0.4	0.4	0.2	0.6	0.3	0	0.3	1	0.3	0	0.6	0.2	0.5	0.4

	Vermont Avenue Southbound				Redondo Beach Boulevard Westbound				Vermont Avenue Northbound				Redondo Beach Boulevard 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 03:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 05:00 PM																	
05:00 PM	82	107	25	214	34	214	**64**	312	44	**173**	31	**248**	54	238	33	325	1099
05:15 PM	**103**	**131**	27	**261**	35	204	62	301	43	147	31	221	50	264	**48**	362	1145
05:30 PM	59	102	**41**	202	**55**	267	63	**385**	41	126	29	196	**55**	**291**	35	**381**	**1164**
05:45 PM	65	114	32	211	43	**282**	52	377	**52**	122	**32**	206	41	243	30	314	1108
Total Volume	309	454	125	888	167	967	241	1375	180	568	123	871	200	1036	146	1382	4516
% App. Total	34.8	51.1	14.1		12.1	70.3	17.5		20.7	65.2	14.1		14.5	75	10.6		
PHF	.750	.866	.762	.851	.759	.857	.941	.893	.865	.821	.961	.878	.909	.890	.760	.907	.970

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City of Gardena
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E/W: Redondo Beach Boulevard
Weather: Clear

File Name : 06_GDA_Vermont_Redondo Beach PM
Site Code : 05719380
Start Date : 5/23/2019



Peak Hour Analysis From 03:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	03:00 PM				05:00 PM				05:00 PM				04:45 PM			
+0 mins.	86	133	**42**	261	34	214	**64**	312	44	**173**	31	**248**	**56**	245	38	339
+15 mins.	84	**146**	33	**263**	35	204	62	301	43	147	31	221	54	238	33	325
+30 mins.	68	111	36	215	**55**	267	63	**385**	41	126	29	196	50	264	**48**	362
+45 mins.	**88**	128	31	247	43	**282**	52	377	**52**	122	**32**	206	55	**291**	35	**381**
Total Volume	326	518	142	986	167	967	241	1375	180	568	123	871	215	1038	154	1407
% App. Total	33.1	52.5	14.4		12.1	70.3	17.5		20.7	65.2	14.1		15.3	73.8	10.9	
PHF	.926	.887	.845	.937	.759	.857	.941	.893	.865	.821	.961	.878	.960	.892	.802	.923

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City of Gardena
N/S: Vermont Avenue
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File Name : 06_GDA_Vermont_Redondo Beach PM
Site Code : 05719380
Start Date : 5/23/2019
Page No : 1

Groups Printed- Passenger Vehicles

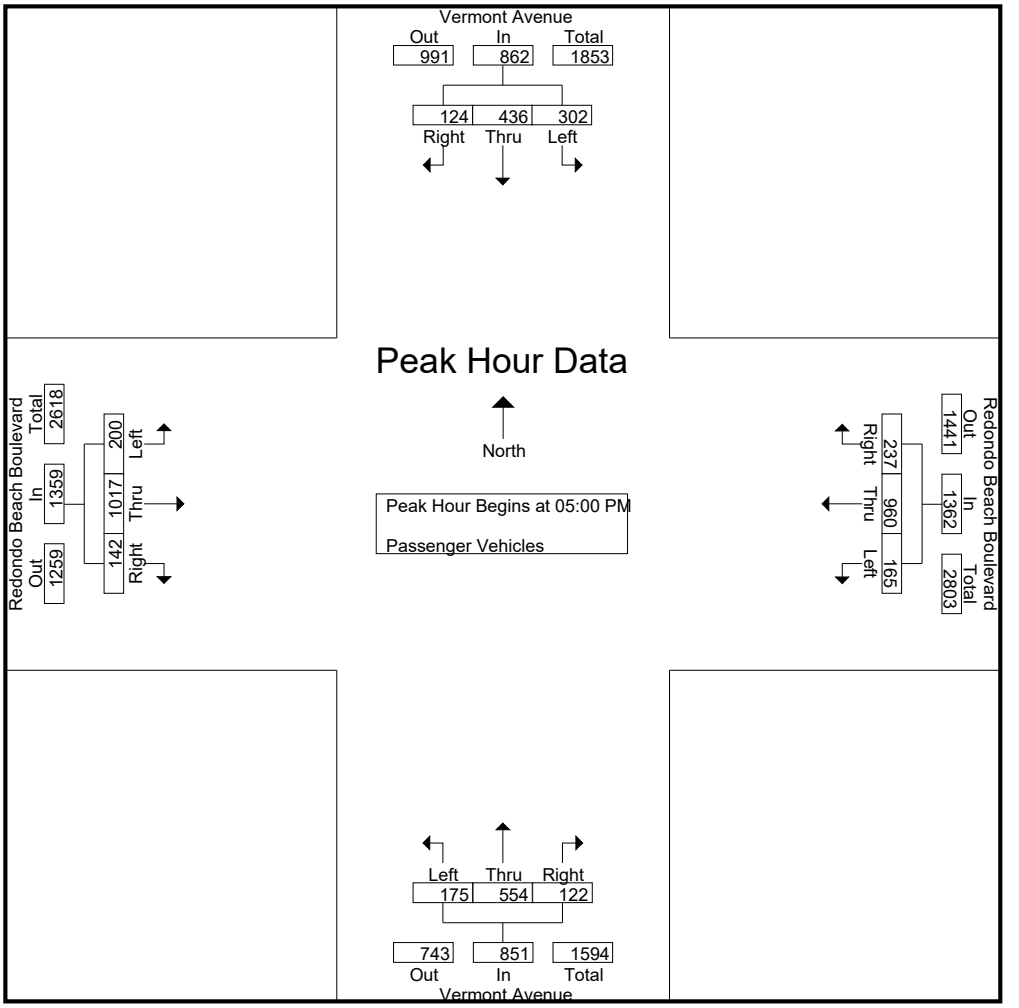
	Vermont Avenue Southbound				Redondo Beach Boulevard Westbound				Vermont Avenue Northbound				Redondo Beach Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
03:00 PM	84	130	41	255	37	218	49	304	33	101	17	151	54	212	40	306	1016
03:15 PM	84	135	32	251	43	205	54	302	42	117	19	178	54	235	27	316	1047
03:30 PM	65	109	36	210	36	214	50	300	35	130	16	181	60	253	32	345	1036
03:45 PM	85	122	31	238	51	217	33	301	51	159	32	242	44	228	34	306	1087
Total	318	496	140	954	167	854	186	1207	161	507	84	752	212	928	133	1273	4186
04:00 PM	74	133	41	248	26	204	53	283	45	115	21	181	46	235	27	308	1020
04:15 PM	75	104	28	207	35	185	38	258	46	118	16	180	49	266	34	349	994
04:30 PM	70	122	38	230	36	233	48	317	39	111	22	172	43	243	34	320	1039
04:45 PM	69	111	34	214	41	229	54	324	32	115	32	179	56	235	36	327	1044
Total	288	470	141	899	138	851	193	1182	162	459	91	712	194	979	131	1304	4097
05:00 PM	80	101	25	206	34	213	60	307	43	166	30	239	54	233	32	319	1071
05:15 PM	100	128	27	255	35	202	62	299	41	145	31	217	50	261	45	356	1127
05:30 PM	58	96	41	195	54	267	63	384	40	125	29	194	55	287	35	377	1150
05:45 PM	64	111	31	206	42	278	52	372	51	118	32	201	41	236	30	307	1086
Total	302	436	124	862	165	960	237	1362	175	554	122	851	200	1017	142	1359	4434
Grand Total	908	1402	405	2715	470	2665	616	3751	498	1520	297	2315	606	2924	406	3936	12717
Apprch %	33.4	51.6	14.9		12.5	71	16.4		21.5	65.7	12.8		15.4	74.3	10.3		
Total %	7.1	11	3.2	21.3	3.7	21	4.8	29.5	3.9	12	2.3	18.2	4.8	23	3.2	31	

	Vermont Avenue Southbound				Redondo Beach Boulevard Westbound				Vermont Avenue Northbound				Redondo Beach Boulevard 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 05:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 05:00 PM																	
05:00 PM	80	101	25	206	34	213	60	307	43	**166**	30	**239**	54	233	32	319	1071
05:15 PM	**100**	**128**	27	**255**	35	202	62	299	41	145	31	217	50	261	**45**	356	1127
05:30 PM	58	96	**41**	195	**54**	267	**63**	**384**	40	125	29	194	**55**	**287**	35	**377**	**1150**
05:45 PM	64	111	31	206	42	**278**	52	372	**51**	118	**32**	201	41	236	30	307	1086
Total Volume	302	436	124	862	165	960	237	1362	175	554	122	851	200	1017	142	1359	4434
% App. Total	35	50.6	14.4		12.1	70.5	17.4		20.6	65.1	14.3		14.7	74.8	10.4		
PHF	.755	.852	.756	.845	.764	.863	.940	.887	.858	.834	.953	.890	.909	.886	.789	.901	.964

Counts Unlimited
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City of Gardena
N/S: Vermont Avenue
E/W: Redondo Beach Boulevard
Weather: Clear

File Name : 06_GDA_Vermont_Redondo Beach PM
Site Code : 05719380
Start Date : 5/23/2019



Peak Hour Analysis From 05:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	05:00 PM				05:00 PM				05:00 PM				05:00 PM			
+0 mins.	80	101	25	206	34	213	60	307	43	**166**	30	**239**	54	233	32	319
+15 mins.	**100**	**128**	27	**255**	35	202	62	299	41	145	31	217	50	261	**45**	356
+30 mins.	58	96	**41**	195	**54**	267	**63**	**384**	40	125	29	194	**55**	**287**	35	**377**
+45 mins.	64	111	31	206	42	**278**	52	372	**51**	118	**32**	201	41	236	30	307
Total Volume	302	436	124	862	165	960	237	1362	175	554	122	851	200	1017	142	1359
% App. Total	35	50.6	14.4		12.1	70.5	17.4		20.6	65.1	14.3		14.7	74.8	10.4	
PHF	.755	.852	.756	.845	.764	.863	.940	.887	.858	.834	.953	.890	.909	.886	.789	.901

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City of Gardena
N/S: Vermont Avenue
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Weather: Clear

File Name : 06_GDA_Vermont_Redondo Beach PM
Site Code : 05719380
Start Date : 5/23/2019
Page No : 1

Groups Printed- Buses

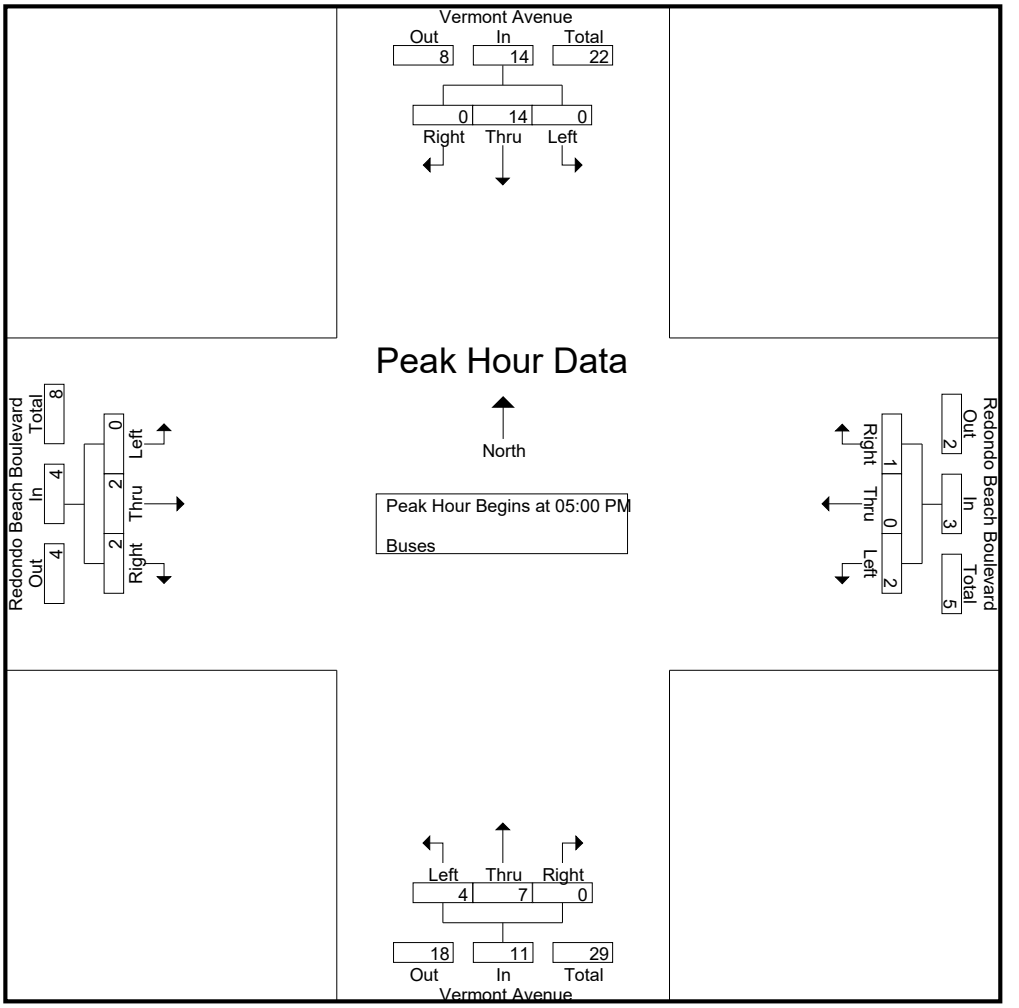
	Vermont Avenue Southbound				Redondo Beach Boulevard Westbound				Vermont Avenue Northbound				Redondo Beach Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
03:00 PM	1	3	0	4	0	0	0	0	0	2	1	3	0	0	2	2	9
03:15 PM	0	8	0	8	0	1	0	1	2	1	0	3	0	0	1	1	13
03:30 PM	2	1	0	3	0	1	0	1	1	4	1	6	0	1	1	2	12
03:45 PM	1	6	0	7	0	0	0	0	0	1	0	1	0	0	1	1	9
Total	4	18	0	22	0	2	0	2	3	8	2	13	0	1	5	6	43
04:00 PM	0	6	0	6	1	0	0	1	3	3	0	6	0	0	0	0	13
04:15 PM	0	5	0	5	0	0	0	0	1	2	0	3	0	0	4	4	12
04:30 PM	0	3	0	3	1	0	0	1	1	1	0	2	0	3	2	5	11
04:45 PM	0	5	0	5	0	0	0	0	1	1	0	2	0	2	1	3	10
Total	0	19	0	19	2	0	0	2	6	7	0	13	0	5	7	12	46
05:00 PM	0	5	0	5	0	0	1	1	0	2	0	2	0	0	1	1	9
05:15 PM	0	1	0	1	0	0	0	0	2	2	0	4	0	0	1	1	6
05:30 PM	0	5	0	5	1	0	0	1	1	1	0	2	0	0	0	0	8
05:45 PM	0	3	0	3	1	0	0	1	1	2	0	3	0	2	0	2	9
Total	0	14	0	14	2	0	1	3	4	7	0	11	0	2	2	4	32
Grand Total	4	51	0	55	4	2	1	7	13	22	2	37	0	8	14	22	121
Apprch %	7.3	92.7	0		57.1	28.6	14.3		35.1	59.5	5.4		0	36.4	63.6		
Total %	3.3	42.1	0	45.5	3.3	1.7	0.8	5.8	10.7	18.2	1.7	30.6	0	6.6	11.6	18.2	

	Vermont Avenue Southbound				Redondo Beach Boulevard Westbound				Vermont Avenue Northbound				Redondo Beach Boulevard 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 05:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 05:00 PM																	
05:00 PM	0	**5**	0	**5**	0	0	**1**	**1**	0	**2**	0	2	0	0	**1**	1	**9**
05:15 PM	0	1	0	1	0	0	0	0	**2**	2	0	**4**	0	0	1	1	6
05:30 PM	0	5	0	5	**1**	0	0	1	1	1	0	2	0	0	0	0	8
05:45 PM	0	3	0	3	1	0	0	1	1	2	0	3	0	**2**	0	**2**	9
Total Volume	0	14	0	14	2	0	1	3	4	7	0	11	0	2	2	4	32
% App. Total	0	100	0		66.7	0	33.3		36.4	63.6	0		0	50	50		
PHF	.000	.700	.000	.700	.500	.000	.250	.750	.500	.875	.000	.688	.000	.250	.500	.500	.889

Counts Unlimited
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City of Gardena
N/S: Vermont Avenue
E/W: Redondo Beach Boulevard
Weather: Clear

File Name : 06_GDA_Vermont_Redondo Beach PM
Site Code : 05719380
Start Date : 5/23/2019



Peak Hour Analysis From 05:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	05:00 PM				05:00 PM				05:00 PM				05:00 PM			
+0 mins.	0	**5**	0	**5**	0	0	**1**	**1**	0	**2**	0	2	0	0	**1**	1
+15 mins.	0	1	0	1	0	0	0	0	**2**	2	0	**4**	0	0	1	1
+30 mins.	0	5	0	5	**1**	0	0	1	1	1	0	2	0	0	0	0
+45 mins.	0	3	0	3	1	0	0	1	1	2	0	3	0	**2**	0	**2**
Total Volume	0	14	0	14	2	0	1	3	4	7	0	11	0	2	2	4
% App. Total	0	100	0		66.7	0	33.3		36.4	63.6	0		0	50	50	
PHF	.000	.700	.000	.700	.500	.000	.250	.750	.500	.875	.000	.688	.000	.250	.500	.500

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City of Gardena
N/S: Vermont Avenue
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Weather: Clear

File Name : 06_GDA_Vermont_Redondo Beach PM
Site Code : 05719380
Start Date : 5/23/2019
Page No : 1

Groups Printed- 2 Axle Vehicles

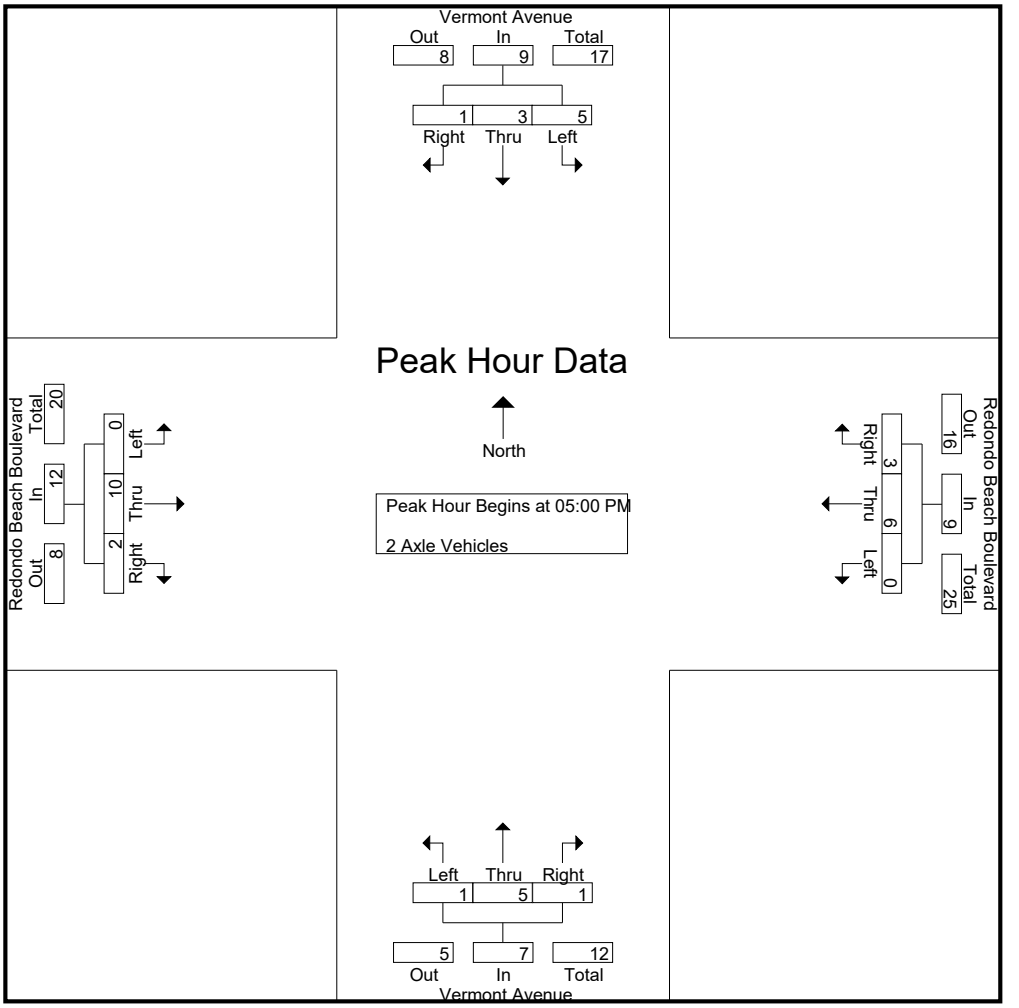
	Vermont Avenue Southbound				Redondo Beach Boulevard Westbound				Vermont Avenue Northbound				Redondo Beach Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
03:00 PM	1	0	1	2	0	4	2	6	0	2	0	2	1	10	0	11	21
03:15 PM	0	2	1	3	2	3	2	7	1	4	2	7	0	4	2	6	23
03:30 PM	0	0	0	0	1	3	1	5	1	1	0	2	1	5	0	6	13
03:45 PM	2	0	0	2	1	3	2	6	0	1	0	1	0	8	0	8	17
Total	3	2	2	7	4	13	7	24	2	8	2	12	2	27	2	31	74
04:00 PM	0	3	0	3	1	4	1	6	0	1	0	1	1	6	0	7	17
04:15 PM	0	2	0	2	0	2	2	4	0	3	0	3	1	5	1	7	16
04:30 PM	0	1	0	1	0	2	1	3	1	0	2	3	0	5	0	5	12
04:45 PM	0	3	0	3	0	1	1	2	0	1	0	1	0	7	1	8	14
Total	0	9	0	9	1	9	5	15	1	5	2	8	2	23	2	27	59
05:00 PM	1	1	0	2	0	1	3	4	1	4	1	6	0	3	0	3	15
05:15 PM	2	1	0	3	0	2	0	2	0	0	0	0	0	2	2	4	9
05:30 PM	1	1	0	2	0	0	0	0	0	0	0	0	0	3	0	3	5
05:45 PM	1	0	1	2	0	3	0	3	0	1	0	1	0	2	0	2	8
Total	5	3	1	9	0	6	3	9	1	5	1	7	0	10	2	12	37
Grand Total	8	14	3	25	5	28	15	48	4	18	5	27	4	60	6	70	170
Apprch %	32	56	12		10.4	58.3	31.2		14.8	66.7	18.5		5.7	85.7	8.6		
Total %	4.7	8.2	1.8	14.7	2.9	16.5	8.8	28.2	2.4	10.6	2.9	15.9	2.4	35.3	3.5	41.2	

	Vermont Avenue Southbound				Redondo Beach Boulevard Westbound				Vermont Avenue Northbound				Redondo Beach Boulevard 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 05:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 05:00 PM																	
05:00 PM	1	**1**	0	2	0	1	**3**	**4**	**1**	**4**	**1**	**6**	0	**3**	0	3	**15**
05:15 PM	**2**	1	0	**3**	0	2	0	2	0	0	0	0	0	2	**2**	**4**	9
05:30 PM	1	1	0	2	0	0	0	0	0	0	0	0	0	3	0	3	5
05:45 PM	1	0	**1**	2	0	**3**	0	3	0	1	0	1	0	2	0	2	8
Total Volume	5	3	1	9	0	6	3	9	1	5	1	7	0	10	2	12	37
% App. Total	55.6	33.3	11.1		0	66.7	33.3		14.3	71.4	14.3		0	83.3	16.7		
PHF	.625	.750	.250	.750	.000	.500	.250	.563	.250	.313	.250	.292	.000	.833	.250	.750	.617

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City of Gardena
N/S: Vermont Avenue
E/W: Redondo Beach Boulevard
Weather: Clear

File Name : 06_GDA_Vermont_Redondo Beach PM
Site Code : 05719380
Start Date : 5/23/2019
Page No : 2



Peak Hour Analysis From 05:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	05:00 PM				05:00 PM				05:00 PM				05:00 PM			
+0 mins.	1	**1**	0	2	0	1	**3**	**4**	**1**	**4**	**1**	**6**	0	**3**	0	3
+15 mins.	**2**	1	0	**3**	0	2	0	2	0	0	0	0	0	2	**2**	**4**
+30 mins.	1	1	0	2	0	0	0	0	0	0	0	0	0	3	0	3
+45 mins.	1	0	**1**	2	0	**3**	0	3	0	1	0	1	0	2	0	2
Total Volume	5	3	1	9	0	6	3	9	1	5	1	7	0	10	2	12
% App. Total	55.6	33.3	11.1		0	66.7	33.3		14.3	71.4	14.3		0	83.3	16.7	
PHF	.625	.750	.250	.750	.000	.500	.250	.563	.250	.313	.250	.292	.000	.833	.250	.750

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City of Gardena
N/S: Vermont Avenue
E/W: Redondo Beach Boulevard
Weather: Clear

File Name : 06_GDA_Vermont_Redondo Beach PM
Site Code : 05719380
Start Date : 5/23/2019
Page No : 1

Groups Printed- 3+ Axle Trucks

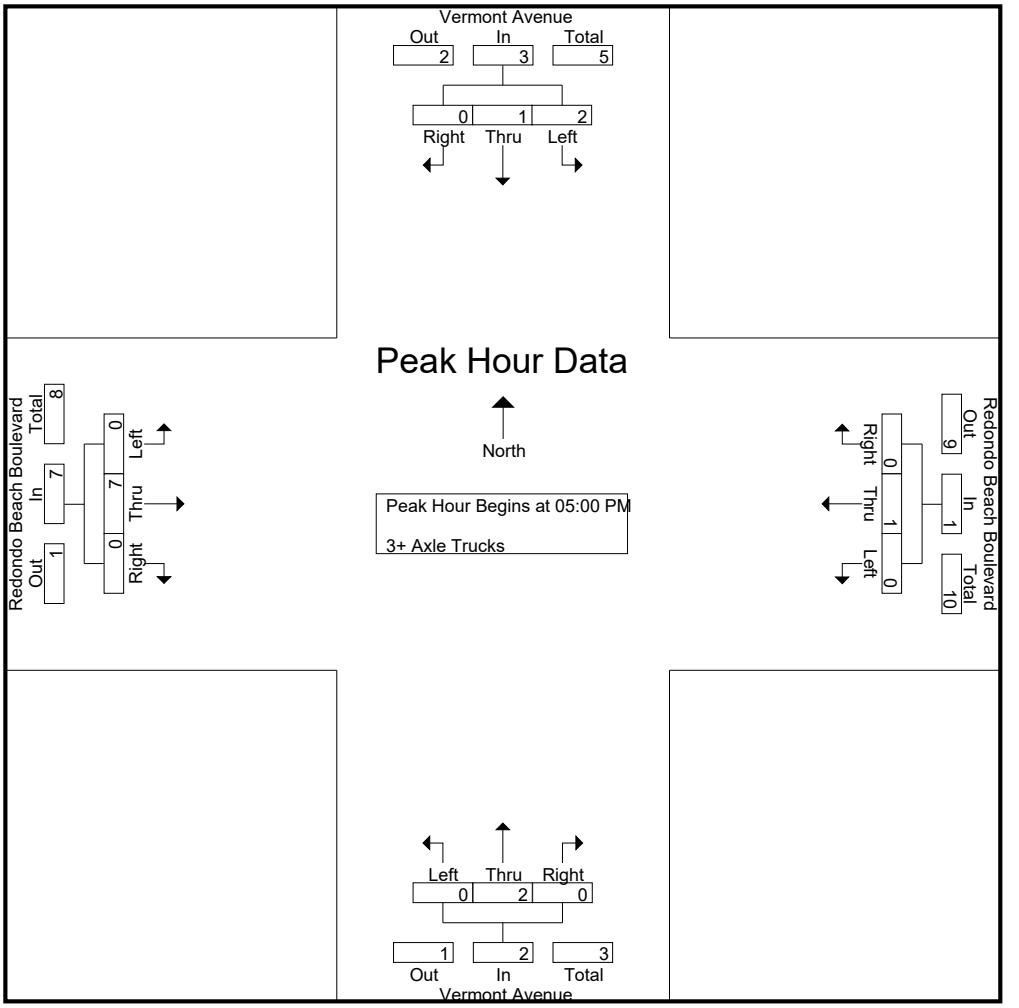
	Vermont Avenue Southbound				Redondo Beach Boulevard Westbound				Vermont Avenue Northbound				Redondo Beach Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
03:00 PM	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	1
03:15 PM	0	1	0	1	0	0	0	0	0	1	0	1	0	6	0	6	8
03:30 PM	1	1	0	2	1	0	3	4	0	0	1	1	0	0	1	1	8
03:45 PM	0	0	0	0	0	3	0	3	0	0	0	0	0	1	0	1	4
Total	1	2	0	3	1	3	3	7	0	1	2	3	0	7	1	8	21
04:00 PM	1	0	0	1	0	1	1	2	0	0	0	0	0	1	0	1	4
04:15 PM	1	0	0	1	0	0	0	0	0	0	1	1	0	2	0	2	4
04:30 PM	0	0	1	1	0	1	0	1	0	0	0	0	0	0	0	0	2
04:45 PM	1	0	0	1	1	0	0	1	0	1	0	1	0	1	0	1	4
Total	3	0	1	4	1	2	1	4	0	1	1	2	0	4	0	4	14
05:00 PM	1	0	0	1	0	0	0	0	0	1	0	1	0	2	0	2	4
05:15 PM	1	1	0	2	0	0	0	0	0	0	0	0	0	1	0	1	3
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
05:45 PM	0	0	0	0	0	1	0	1	0	1	0	1	0	3	0	3	5
Total	2	1	0	3	0	1	0	1	0	2	0	2	0	7	0	7	13
Grand Total	6	3	1	10	2	6	4	12	0	4	3	7	0	18	1	19	48
Apprch %	60	30	10		16.7	50	33.3		0	57.1	42.9		0	94.7	5.3		
Total %	12.5	6.2	2.1	20.8	4.2	12.5	8.3	25	0	8.3	6.2	14.6	0	37.5	2.1	39.6	

	Vermont Avenue Southbound				Redondo Beach Boulevard Westbound				Vermont Avenue Northbound				Redondo Beach Boulevard 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 05:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 05:00 PM																	
05:00 PM	**1**	0	0	1	0	0	0	0	0	**1**	0	**1**	0	2	0	2	4
05:15 PM	1	**1**	0	**2**	0	0	0	0	0	0	0	0	0	1	0	1	3
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
05:45 PM	0	0	0	0	0	**1**	0	**1**	0	1	0	1	0	**3**	0	**3**	**5**
Total Volume	2	1	0	3	0	1	0	1	0	2	0	2	0	7	0	7	13
% App. Total	66.7	33.3	0		0	100	0		0	100	0		0	100	0		
PHF	.500	.250	.000	.375	.000	.250	.000	.250	.000	.500	.000	.500	.000	.583	.000	.583	.650

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City of Gardena
N/S: Vermont Avenue
E/W: Redondo Beach Boulevard
Weather: Clear

File Name : 06_GDA_Vermont_Redondo Beach PM
Site Code : 05719380
Start Date : 5/23/2019



Peak Hour Analysis From 05:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	05:00 PM				05:00 PM				05:00 PM				05:00 PM			
+0 mins.	**1**	0	0	1	0	0	0	0	0	**1**	0	**1**	0	2	0	2
+15 mins.	1	**1**	0	**2**	0	0	0	0	0	0	0	0	0	1	0	1
+30 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1
+45 mins.	0	0	0	0	0	**1**	0	**1**	0	1	0	1	0	**3**	0	**3**
Total Volume	2	1	0	3	0	1	0	1	0	2	0	2	0	7	0	7
% App. Total	66.7	33.3	0		0	100	0		0	100	0		0	100	0	
PHF	.500	.250	.000	.375	.000	.250	.000	.250	.000	.500	.000	.500	.000	.583	.000	.583

Location: Gardena
N/S: Vermont Avenue
E/W: Redondo Beach Blvd

Date: 5/23/2019
Day: Thursday

PEDESTRIANS

	North Leg Vermont Avenue	East Leg Redondo Beach Blvd	South Leg Vermont Avenue	West Leg Redondo Beach Blvd	
	Pedestrians	Pedestrians	Pedestrians	Pedestrians	
7:00 AM	0	2	5	0	7
7:15 AM	3	2	1	3	9
7:30 AM	1	1	4	4	10
7:45 AM	2	2	1	4	9
8:00 AM	3	0	1	8	12
8:15 AM	2	0	3	4	9
8:30 AM	1	0	7	1	9
8:45 AM	4	3	2	4	13
9:00 AM	3	4	3	1	11
9:15 AM	3	4	2	4	13
9:30 AM	2	0	2	3	7
9:45 AM	3	4	10	5	22
TOTAL VOLUMES:	27	22	41	41	131

	North Leg Vermont Avenue	East Leg Redondo Beach Blvd	South Leg Vermont Avenue	West Leg Redondo Beach Blvd	
	Pedestrians	Pedestrians	Pedestrians	Pedestrians	
3:00 PM	3	1	5	6	15
3:15 PM	6	4	6	4	20
3:30 PM	7	4	4	6	21
3:45 PM	0	3	2	2	7
4:00 PM	6	2	6	3	17
4:15 PM	0	3	5	0	8
4:30 PM	0	1	6	2	9
4:45 PM	0	5	5	4	14
5:00 PM	5	0	7	2	14
5:15 PM	3	0	3	1	7
5:30 PM	4	1	6	1	12
5:45 PM	2	0	3	3	8
TOTAL VOLUMES:	36	24	58	34	152

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Location: Gardena
N/S: Vermont Avenue
E/W: Redondo Beach Blvd

Date: 5/23/2019
Day: Thursday

BICYCLES

	Southbound Vermont Avenue			Westbound Redondo Beach Blvd			Northbound Vermont Avenue			Eastbound Redondo Beach Blvd			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
7:00 AM	0	0	0	0	1	0	0	0	0	0	1	0	2
7:15 AM	0	0	0	0	0	0	0	1	0	1	1	0	3
7:30 AM	0	0	0	0	0	0	0	1	0	0	0	0	1
7:45 AM	0	0	0	0	0	0	0	1	0	0	0	0	1
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0	1	0	0	1
8:30 AM	0	0	0	0	0	0	0	0	0	0	1	0	1
8:45 AM	0	2	1	0	0	0	0	0	0	0	0	0	3
9:00 AM	0	1	0	0	1	0	0	0	0	0	0	0	2
9:15 AM	0	0	0	0	0	0	0	0	0	0	1	0	1
9:30 AM	0	0	0	0	0	0	0	0	0	1	0	0	1
9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES:	0	3	1	0	2	0	0	3	0	3	4	0	16

	Southbound Vermont Avenue			Westbound Redondo Beach Blvd			Northbound Vermont Avenue			Eastbound Redondo Beach Blvd			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
3:00 PM	0	0	0	0	1	0	0	0	0	0	0	0	1
3:15 PM	0	0	0	0	0	0	0	3	0	0	0	0	3
3:30 PM	0	0	0	0	1	0	0	0	0	0	0	0	1
3:45 PM	0	2	0	0	0	0	0	0	0	1	0	0	3
4:00 PM	0	0	0	1	0	0	0	1	0	0	0	0	2
4:15 PM	0	0	0	0	0	0	0	1	0	0	0	0	1
4:30 PM	0	0	0	0	1	0	0	1	0	0	1	0	3
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	2	0	0	1	0	3
5:15 PM	0	1	1	0	0	0	0	0	0	0	0	0	2
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES:	0	3	1	1	3	0	0	8	0	1	2	0	19

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City of Gardena
N/S: Vermont Avenue
E/W: 161st Street/Alondra Boulevard
Weather: Clear

File Name : 07_GDA_Vermont_161st_Alondra AM
Site Code : 05719380
Start Date : 5/23/2019
Page No : 1

Groups Printed- Passenger Vehicles - Buses - 2 Axle Vehicles - 3+ Axle Trucks

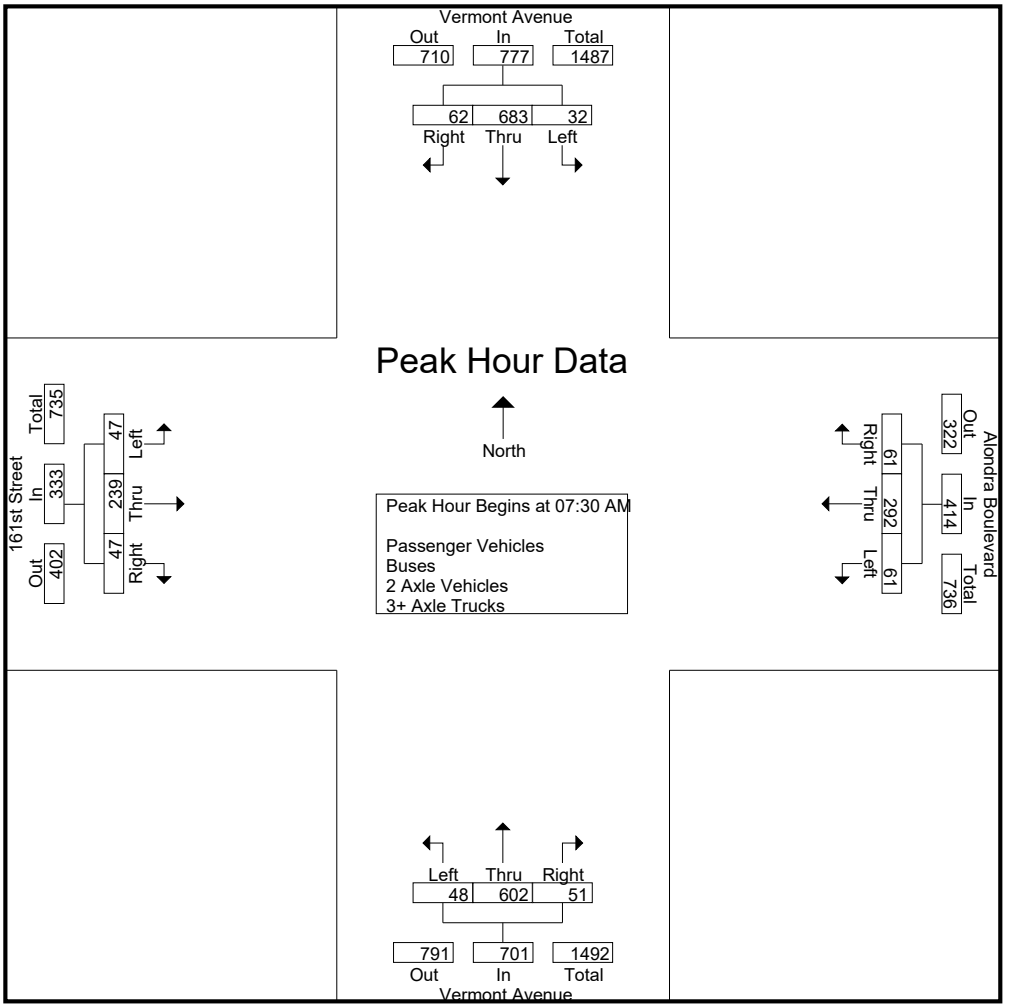
	Vermont Avenue Southbound				Alondra Boulevard Westbound				Vermont Avenue Northbound				161st Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	6	94	4	104	15	68	13	96	2	103	5	110	12	36	2	50	360
07:15 AM	8	145	15	168	10	49	12	71	4	114	16	134	9	18	6	33	406
07:30 AM	3	192	25	220	13	95	14	122	7	165	12	184	17	58	14	89	615
07:45 AM	15	215	22	252	16	73	7	96	18	169	8	195	13	71	18	102	645
Total	32	646	66	744	54	285	46	385	31	551	41	623	51	183	40	274	2026
08:00 AM	6	165	7	178	17	69	28	114	8	130	16	154	13	79	8	100	546
08:15 AM	8	111	8	127	15	55	12	82	15	138	15	168	4	31	7	42	419
08:30 AM	4	125	8	137	23	70	12	105	8	104	11	123	5	39	6	50	415
08:45 AM	9	114	5	128	14	43	7	64	5	129	15	149	9	27	2	38	379
Total	27	515	28	570	69	237	59	365	36	501	57	594	31	176	23	230	1759
09:00 AM	9	98	8	115	18	40	20	78	1	92	6	99	8	33	8	49	341
09:15 AM	5	88	1	94	17	50	7	74	6	111	5	122	5	19	2	26	316
09:30 AM	12	81	2	95	16	39	13	68	7	126	11	144	4	26	2	32	339
09:45 AM	6	77	5	88	11	42	12	65	8	106	5	119	6	27	6	39	311
Total	32	344	16	392	62	171	52	285	22	435	27	484	23	105	18	146	1307
Grand Total	91	1505	110	1706	185	693	157	1035	89	1487	125	1701	105	464	81	650	5092
Apprch %	5.3	88.2	6.4		17.9	67	15.2		5.2	87.4	7.3		16.2	71.4	12.5		
Total %	1.8	29.6	2.2	33.5	3.6	13.6	3.1	20.3	1.7	29.2	2.5	33.4	2.1	9.1	1.6	12.8	
Passenger Vehicles	88	1414	108	1610	176	669	147	992	84	1397	120	1601	104	457	80	641	4844
% Passenger Vehicles	96.7	94	98.2	94.4	95.1	96.5	93.6	95.8	94.4	93.9	96	94.1	99	98.5	98.8	98.6	95.1
Buses	0	43	0	43	2	5	1	8	1	37	1	39	1	2	0	3	93
% Buses	0	2.9	0	2.5	1.1	0.7	0.6	0.8	1.1	2.5	0.8	2.3	1	0.4	0	0.5	1.8
2 Axle Vehicles	3	46	2	51	4	18	8	30	4	48	4	56	0	5	0	5	142
% 2 Axle Vehicles	3.3	3.1	1.8	3	2.2	2.6	5.1	2.9	4.5	3.2	3.2	3.3	0	1.1	0	0.8	2.8
3+ Axle Trucks	0	2	0	2	3	1	1	5	0	5	0	5	0	0	1	1	13
% 3+ Axle Trucks	0	0.1	0	0.1	1.6	0.1	0.6	0.5	0	0.3	0	0.3	0	0	1.2	0.2	0.3

	Vermont Avenue Southbound				Alondra Boulevard Westbound				Vermont Avenue Northbound				161st 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 09:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	3	192	**25**	220	13	**95**	14	**122**	7	165	12	184	**17**	58	14	89	615
07:45 AM	**15**	**215**	22	**252**	16	73	7	96	**18**	**169**	8	**195**	13	71	**18**	**102**	**645**
08:00 AM	6	165	7	178	**17**	69	**28**	114	8	130	**16**	154	13	**79**	8	100	546
08:15 AM	8	111	8	127	15	55	12	82	15	138	15	168	4	31	7	42	419
Total Volume	32	683	62	777	61	292	61	414	48	602	51	701	47	239	47	333	2225
% App. Total	4.1	87.9	8		14.7	70.5	14.7		6.8	85.9	7.3		14.1	71.8	14.1		
PHF	.533	.794	.620	.771	.897	.768	.545	.848	.667	.891	.797	.899	.691	.756	.653	.816	.862

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City of Gardena
N/S: Vermont Avenue
E/W: 161st Street/Alondra Boulevard
Weather: Clear

File Name : 07_GDA_Vermont_161st_Alondra AM
Site Code : 05719380
Start Date : 5/23/2019
Page No : 2



Peak Hour Analysis From 07:00 AM to 09:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:15 AM				07:30 AM				07:30 AM				07:30 AM			
+0 mins.	8	145	15	168	13	**95**	14	**122**	7	165	12	184	**17**	58	14	89
+15 mins.	3	192	**25**	220	16	73	7	96	**18**	**169**	8	**195**	13	71	**18**	**102**
+30 mins.	**15**	**215**	22	**252**	**17**	69	**28**	114	8	130	**16**	154	13	**79**	8	100
+45 mins.	6	165	7	178	15	55	12	82	15	138	15	168	4	31	7	42
Total Volume	32	717	69	818	61	292	61	414	48	602	51	701	47	239	47	333
% App. Total	3.9	87.7	8.4		14.7	70.5	14.7		6.8	85.9	7.3		14.1	71.8	14.1	
PHF	.533	.834	.690	.812	.897	.768	.545	.848	.667	.891	.797	.899	.691	.756	.653	.816

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City of Gardena
N/S: Vermont Avenue
E/W: 161st Street/Alondra Boulevard
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File Name : 07_GDA_Vermont_161st_Alondra AM
Site Code : 05719380
Start Date : 5/23/2019
Page No : 1

Groups Printed- Passenger Vehicles

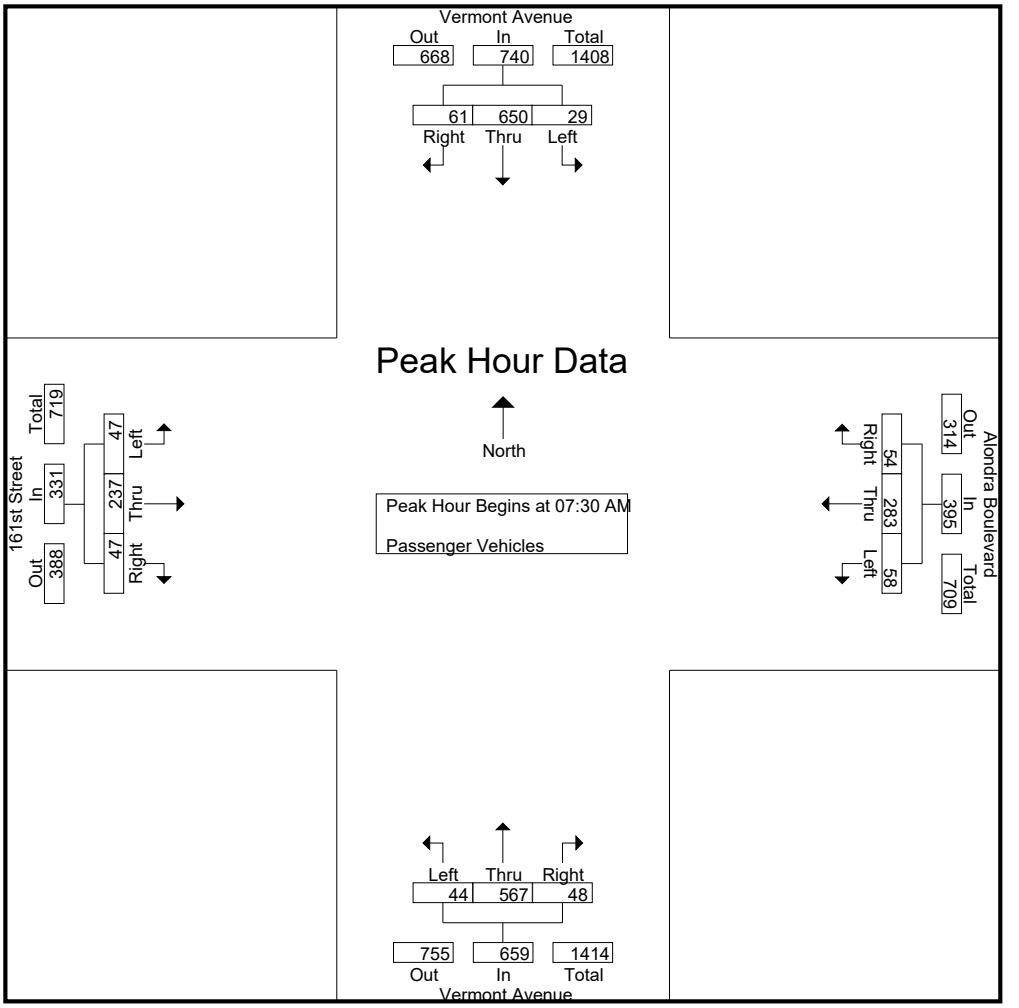
	Vermont Avenue Southbound				Alondra Boulevard Westbound				Vermont Avenue Northbound				161st Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	6	88	4	98	14	63	13	90	1	93	5	99	11	34	2	47	334
07:15 AM	8	136	15	159	10	48	12	70	4	107	16	127	9	18	6	33	389
07:30 AM	3	186	25	214	12	93	13	118	7	157	12	176	17	58	14	89	597
07:45 AM	12	210	21	243	16	72	7	95	17	163	8	188	13	71	18	102	628
Total	29	620	65	714	52	276	45	373	29	520	41	590	50	181	40	271	1948
08:00 AM	6	153	7	166	16	65	23	104	7	123	15	145	13	77	8	98	513
08:15 AM	8	101	8	117	14	53	11	78	13	124	13	150	4	31	7	42	387
08:30 AM	4	118	8	130	23	70	11	104	8	98	11	117	5	39	6	50	401
08:45 AM	9	103	4	116	14	41	7	62	5	122	13	140	9	27	2	38	356
Total	27	475	27	529	67	229	52	348	33	467	52	552	31	174	23	228	1657
09:00 AM	9	90	8	107	18	40	18	76	1	88	6	95	8	33	8	49	327
09:15 AM	5	82	1	88	15	48	7	70	6	104	5	115	5	17	2	24	297
09:30 AM	12	76	2	90	13	36	13	62	7	119	11	137	4	26	2	32	321
09:45 AM	6	71	5	82	11	40	12	63	8	99	5	112	6	26	5	37	294
Total	32	319	16	367	57	164	50	271	22	410	27	459	23	102	17	142	1239
Grand Total	88	1414	108	1610	176	669	147	992	84	1397	120	1601	104	457	80	641	4844
Apprch %	5.5	87.8	6.7		17.7	67.4	14.8		5.2	87.3	7.5		16.2	71.3	12.5		
Total %	1.8	29.2	2.2	33.2	3.6	13.8	3	20.5	1.7	28.8	2.5	33.1	2.1	9.4	1.7	13.2	

	Vermont Avenue Southbound				Alondra Boulevard Westbound				Vermont Avenue Northbound				161st 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 07:30 AM to 08:15 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	3	186	**25**	214	12	**93**	13	**118**	7	157	12	176	**17**	58	14	89	597
07:45 AM	**12**	**210**	21	**243**	**16**	72	7	95	**17**	**163**	8	**188**	13	71	**18**	**102**	**628**
08:00 AM	6	153	7	166	16	65	**23**	104	7	123	**15**	145	13	**77**	8	98	513
08:15 AM	8	101	8	117	14	53	11	78	13	124	13	150	4	31	7	42	387
Total Volume	29	650	61	740	58	283	54	395	44	567	48	659	47	237	47	331	2125
% App. Total	3.9	87.8	8.2		14.7	71.6	13.7		6.7	86	7.3		14.2	71.6	14.2		
PHF	.604	.774	.610	.761	.906	.761	.587	.837	.647	.870	.800	.876	.691	.769	.653	.811	.846

Counts Unlimited
PO Box 1178
Corona, CA 92878
(951) 268-6268

City of Gardena
N/S: Vermont Avenue
E/W: 161st Street/Alondra Boulevard
Weather: Clear

File Name : 07_GDA_Vermont_161st_Alondra AM
Site Code : 05719380
Start Date : 5/23/2019



Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:30 AM				07:30 AM				07:30 AM				07:30 AM			
+0 mins.	3	186	**25**	214	12	**93**	13	**118**	7	157	12	176	**17**	58	14	89
+15 mins.	**12**	**210**	21	**243**	**16**	72	7	95	**17**	**163**	8	**188**	13	71	**18**	**102**
+30 mins.	6	153	7	166	16	65	**23**	104	7	123	**15**	145	13	**77**	8	98
+45 mins.	8	101	8	117	14	53	11	78	13	124	13	150	4	31	7	42
Total Volume	29	650	61	740	58	283	54	395	44	567	48	659	47	237	47	331
% App. Total	3.9	87.8	8.2		14.7	71.6	13.7		6.7	86	7.3		14.2	71.6	14.2	
PHF	.604	.774	.610	.761	.906	.761	.587	.837	.647	.870	.800	.876	.691	.769	.653	.811

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City of Gardena
N/S: Vermont Avenue
E/W: 161st Street/Alondra Boulevard
Weather: Clear

File Name : 07_GDA_Vermont_161st_Alondra AM
Site Code : 05719380
Start Date : 5/23/2019
Page No : 1

Groups Printed- Buses

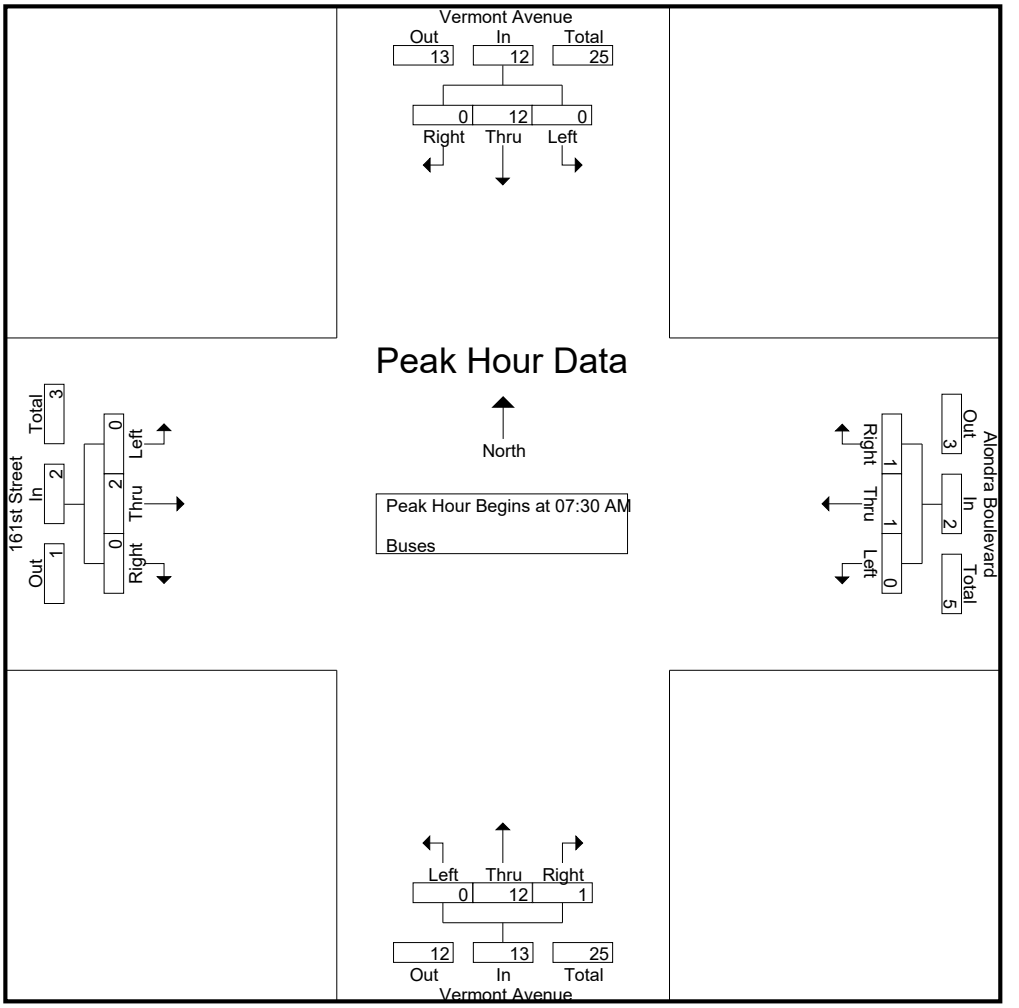
	Vermont Avenue Southbound				Alondra Boulevard Westbound				Vermont Avenue Northbound				161st Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	0	4	0	4	1	4	0	5	1	6	0	7	1	0	0	1	17
07:15 AM	0	3	0	3	0	0	0	0	0	3	0	3	0	0	0	0	6
07:30 AM	0	3	0	3	0	1	1	2	0	3	0	3	0	0	0	0	8
07:45 AM	0	3	0	3	0	0	0	0	0	2	0	2	0	0	0	0	5
Total	0	13	0	13	1	5	1	7	1	14	0	15	1	0	0	1	36
08:00 AM	0	4	0	4	0	0	0	0	0	1	0	1	0	2	0	2	7
08:15 AM	0	2	0	2	0	0	0	0	0	6	1	7	0	0	0	0	9
08:30 AM	0	5	0	5	0	0	0	0	0	2	0	2	0	0	0	0	7
08:45 AM	0	6	0	6	0	0	0	0	0	3	0	3	0	0	0	0	9
Total	0	17	0	17	0	0	0	0	0	12	1	13	0	2	0	2	32
09:00 AM	0	4	0	4	0	0	0	0	0	1	0	1	0	0	0	0	5
09:15 AM	0	2	0	2	0	0	0	0	0	3	0	3	0	0	0	0	5
09:30 AM	0	3	0	3	1	0	0	1	0	3	0	3	0	0	0	0	7
09:45 AM	0	4	0	4	0	0	0	0	0	4	0	4	0	0	0	0	8
Total	0	13	0	13	1	0	0	1	0	11	0	11	0	0	0	0	25
Grand Total	0	43	0	43	2	5	1	8	1	37	1	39	1	2	0	3	93
Apprch %	0	100	0		25	62.5	12.5		2.6	94.9	2.6		33.3	66.7	0		
Total %	0	46.2	0	46.2	2.2	5.4	1.1	8.6	1.1	39.8	1.1	41.9	1.1	2.2	0	3.2	

	Vermont Avenue Southbound				Alondra Boulevard Westbound				Vermont Avenue Northbound				161st 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 07:30 AM to 08:15 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	0	3	0	3	0	**1**	**1**	**2**	0	3	0	3	0	0	0	0	8
07:45 AM	0	3	0	3	0	0	0	0	0	2	0	2	0	0	0	0	5
08:00 AM	0	**4**	0	**4**	0	0	0	0	0	1	0	1	0	**2**	0	**2**	7
08:15 AM	0	2	0	2	0	0	0	0	0	**6**	**1**	**7**	0	0	0	0	**9**
Total Volume	0	12	0	12	0	1	1	2	0	12	1	13	0	2	0	2	29
% App. Total	0	100	0		0	50	50		0	92.3	7.7		0	100	0		
PHF	.000	.750	.000	.750	.000	.250	.250	.250	.000	.500	.250	.464	.000	.250	.000	.250	.806

Counts Unlimited
PO Box 1178
Corona, CA 92878
(951) 268-6268

City of Gardena
N/S: Vermont Avenue
E/W: 161st Street/Alondra Boulevard
Weather: Clear

File Name : 07_GDA_Vermont_161st_Alondra AM
Site Code : 05719380
Start Date : 5/23/2019
Page No : 2



Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:30 AM				07:30 AM				07:30 AM				07:30 AM			
+0 mins.	0	3	0	3	0	**1**	**1**	**2**	0	3	0	3	0	0	0	0
+15 mins.	0	3	0	3	0	0	0	0	0	2	0	2	0	0	0	0
+30 mins.	0	**4**	0	**4**	0	0	0	0	0	1	0	1	0	**2**	0	**2**
+45 mins.	0	2	0	2	0	0	0	0	0	**6**	**1**	**7**	0	0	0	0
Total Volume	0	12	0	12	0	1	1	2	0	12	1	13	0	2	0	2
% App. Total	0	100	0		0	50	50		0	92.3	7.7		0	100	0	
PHF	.000	.750	.000	.750	.000	.250	.250	.250	.000	.500	.250	.464	.000	.250	.000	.250

Counts Unlimited
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Corona, CA 92878
(951) 268-6268

City of Gardena
N/S: Vermont Avenue
E/W: 161st Street/Alondra Boulevard
Weather: Clear

File Name : 07_GDA_Vermont_161st_Alondra AM
Site Code : 05719380
Start Date : 5/23/2019
Page No : 1

Groups Printed- 2 Axle Vehicles

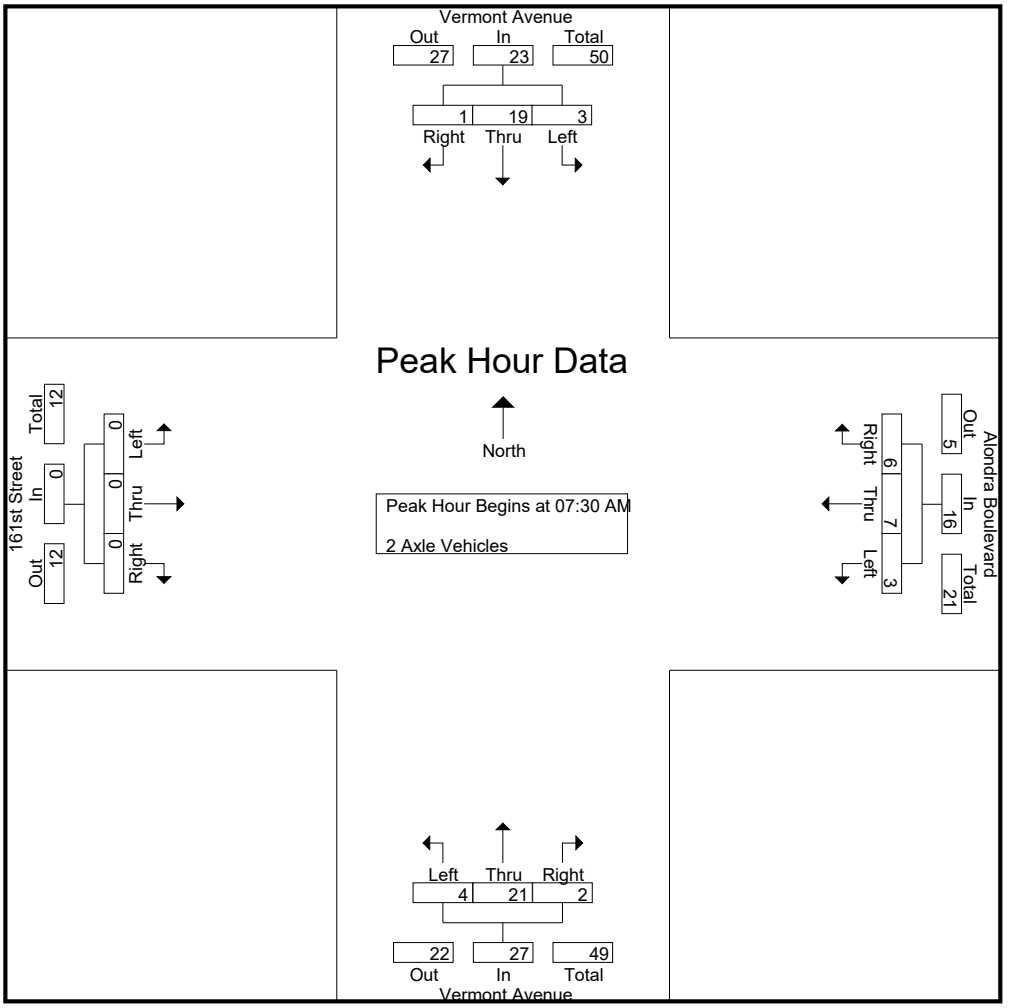
	Vermont Avenue Southbound				Alondra Boulevard Westbound				Vermont Avenue Northbound				161st Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	0	2	0	2	0	1	0	1	0	4	0	4	0	2	0	2	9
07:15 AM	0	6	0	6	0	1	0	1	0	3	0	3	0	0	0	0	10
07:30 AM	0	3	0	3	1	1	0	2	0	4	0	4	0	0	0	0	9
07:45 AM	3	2	1	6	0	1	0	1	1	4	0	5	0	0	0	0	12
Total	3	13	1	17	1	4	0	5	1	15	0	16	0	2	0	2	40
08:00 AM	0	7	0	7	1	3	5	9	1	5	1	7	0	0	0	0	23
08:15 AM	0	7	0	7	1	2	1	4	2	8	1	11	0	0	0	0	22
08:30 AM	0	2	0	2	0	0	1	1	0	4	0	4	0	0	0	0	7
08:45 AM	0	5	1	6	0	2	0	2	0	4	2	6	0	0	0	0	14
Total	0	21	1	22	2	7	7	16	3	21	4	28	0	0	0	0	66
09:00 AM	0	4	0	4	0	0	1	1	0	2	0	2	0	0	0	0	7
09:15 AM	0	4	0	4	0	2	0	2	0	4	0	4	0	2	0	2	12
09:30 AM	0	2	0	2	1	3	0	4	0	4	0	4	0	0	0	0	10
09:45 AM	0	2	0	2	0	2	0	2	0	2	0	2	0	1	0	1	7
Total	0	12	0	12	1	7	1	9	0	12	0	12	0	3	0	3	36
Grand Total	3	46	2	51	4	18	8	30	4	48	4	56	0	5	0	5	142
Apprch %	5.9	90.2	3.9		13.3	60	26.7		7.1	85.7	7.1		0	100	0		
Total %	2.1	32.4	1.4	35.9	2.8	12.7	5.6	21.1	2.8	33.8	2.8	39.4	0	3.5	0	3.5	

	Vermont Avenue Southbound				Alondra Boulevard Westbound				Vermont Avenue Northbound				161st 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 07:30 AM to 08:15 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	0	3	0	3	**1**	1	0	2	0	4	0	4	0	0	0	0	9
07:45 AM	**3**	2	**1**	6	0	1	0	1	1	4	0	5	0	0	0	0	12
08:00 AM	0	**7**	0	**7**	1	**3**	**5**	**9**	1	5	**1**	7	0	0	0	0	**23**
08:15 AM	0	7	0	7	1	2	1	4	**2**	**8**	1	**11**	0	0	0	0	22
Total Volume	3	19	1	23	3	7	6	16	4	21	2	27	0	0	0	0	66
% App. Total	13	82.6	4.3		18.8	43.8	37.5		14.8	77.8	7.4		0	0	0		
PHF	.250	.679	.250	.821	.750	.583	.300	.444	.500	.656	.500	.614	.000	.000	.000	.000	.717

Counts Unlimited
PO Box 1178
Corona, CA 92878
(951) 268-6268

City of Gardena
N/S: Vermont Avenue
E/W: 161st Street/Alondra Boulevard
Weather: Clear

File Name : 07_GDA_Vermont_161st_Alondra AM
Site Code : 05719380
Start Date : 5/23/2019
Page No : 2



Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:30 AM				07:30 AM				07:30 AM				07:30 AM			
+0 mins.	0	3	0	3	**1**	1	0	2	0	4	0	4	0	0	0	0
+15 mins.	**3**	2	**1**	6	0	1	0	1	1	4	0	5	0	0	0	0
+30 mins.	0	**7**	0	**7**	1	**3**	**5**	**9**	1	5	**1**	7	0	0	0	0
+45 mins.	0	7	0	7	1	2	1	4	**2**	**8**	1	**11**	0	0	0	0
Total Volume	3	19	1	23	3	7	6	16	4	21	2	27	0	0	0	0
% App. Total	13	82.6	4.3		18.8	43.8	37.5		14.8	77.8	7.4		0	0	0	
PHF	.250	.679	.250	.821	.750	.583	.300	.444	.500	.656	.500	.614	.000	.000	.000	.000

Counts Unlimited
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City of Gardena
N/S: Vermont Avenue
E/W: 161st Street/Alondra Boulevard
Weather: Clear

File Name : 07_GDA_Vermont_161st_Alondra AM
Site Code : 05719380
Start Date : 5/23/2019
Page No : 1

Groups Printed- 3+ Axle Trucks

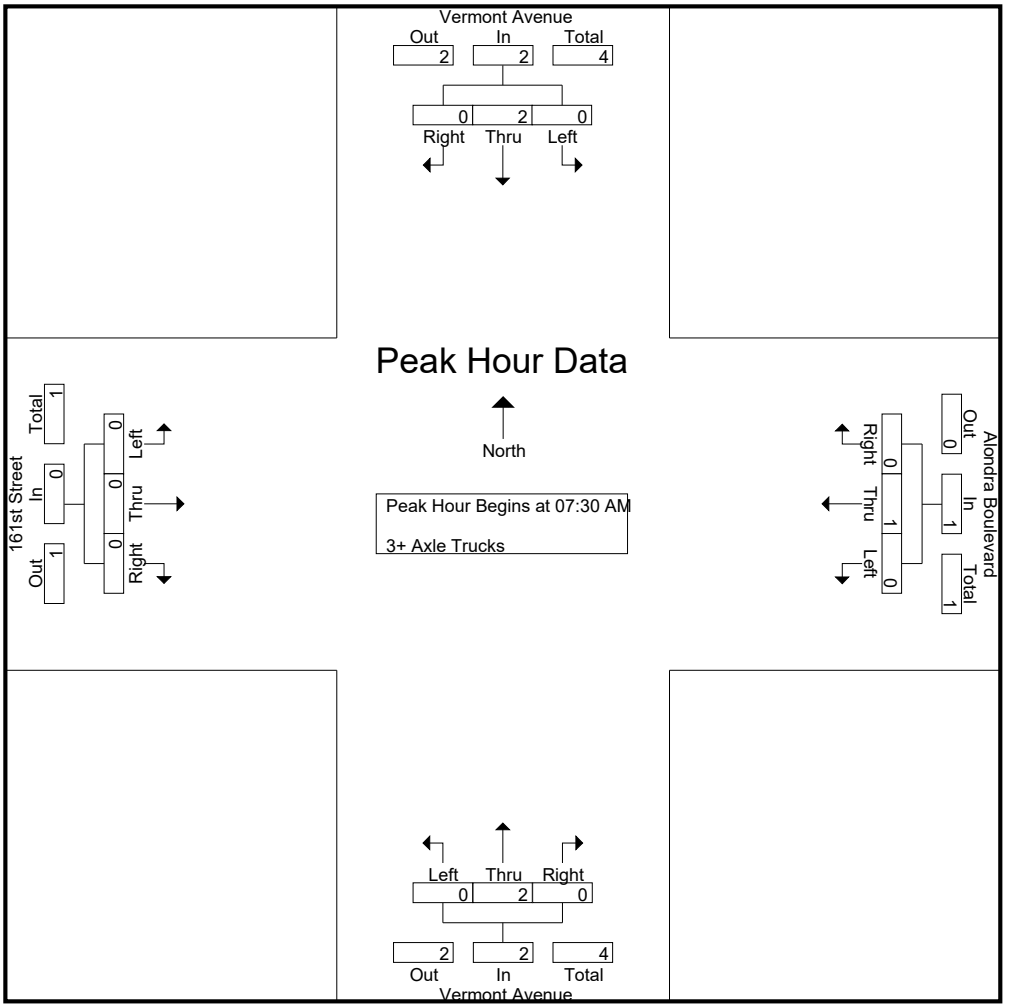
	Vermont Avenue Southbound				Alondra Boulevard Westbound				Vermont Avenue Northbound				161st Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15 AM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
07:30 AM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	2	0	2	0	0	0	0	2
08:00 AM	0	1	0	1	0	1	0	1	0	1	0	1	0	0	0	0	3
08:15 AM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
08:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	2	0	2	0	1	0	1	0	1	0	1	0	0	0	0	4
09:00 AM	0	0	0	0	0	0	1	1	0	1	0	1	0	0	0	0	2
09:15 AM	0	0	0	0	2	0	0	2	0	0	0	0	0	0	0	0	2
09:30 AM	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	1
09:45 AM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	1	1	2
Total	0	0	0	0	3	0	1	4	0	2	0	2	0	0	1	1	7
Grand Total	0	2	0	2	3	1	1	5	0	5	0	5	0	0	1	1	13
Apprch %	0	100	0		60	20	20		0	100	0		0	0	100		
Total %	0	15.4	0	15.4	23.1	7.7	7.7	38.5	0	38.5	0	38.5	0	0	7.7	7.7	

	Vermont Avenue Southbound				Alondra Boulevard Westbound				Vermont Avenue Northbound				161st 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 07:30 AM to 08:15 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	0	0	0	0	0	0	0	0	0	**1**	0	**1**	0	0	0	0	1
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:00 AM	0	**1**	0	**1**	0	**1**	0	**1**	0	1	0	1	0	0	0	0	**3**
08:15 AM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
Total Volume	0	2	0	2	0	1	0	1	0	2	0	2	0	0	0	0	5
% App. Total	0	100	0		0	100	0		0	100	0		0	0	0		
PHF	.000	.500	.000	.500	.000	.250	.000	.250	.000	.500	.000	.500	.000	.000	.000	.000	.417

Counts Unlimited
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City of Gardena
N/S: Vermont Avenue
E/W: 161st Street/Alondra Boulevard
Weather: Clear

File Name : 07_GDA_Vermont_161st_Alondra AM
Site Code : 05719380
Start Date : 5/23/2019
Page No : 2



Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:30 AM				07:30 AM				07:30 AM				07:30 AM			
+0 mins.	0	0	0	0	0	0	0	0	0	**1**	0	**1**	0	0	0	0
+15 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+30 mins.	0	**1**	0	**1**	0	**1**	0	**1**	0	1	0	1	0	0	0	0
+45 mins.	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	2	0	2	0	1	0	1	0	2	0	2	0	0	0	0
% App. Total	0	100	0		0	100	0		0	100	0		0	0	0	
PHF	.000	.500	.000	.500	.000	.250	.000	.250	.000	.500	.000	.500	.000	.000	.000	.000

Counts Unlimited
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City of Gardena
N/S: Vermont Avenue
E/W: 161st Street/Alondra Boulevard
Weather: Clear

File Name : 07_GDA_Vermont_161st_Alondra PM
Site Code : 05719380
Start Date : 5/23/2019
Page No : 1

Groups Printed- Passenger Vehicles - Buses - 2 Axle Vehicles - 3+ Axle Trucks

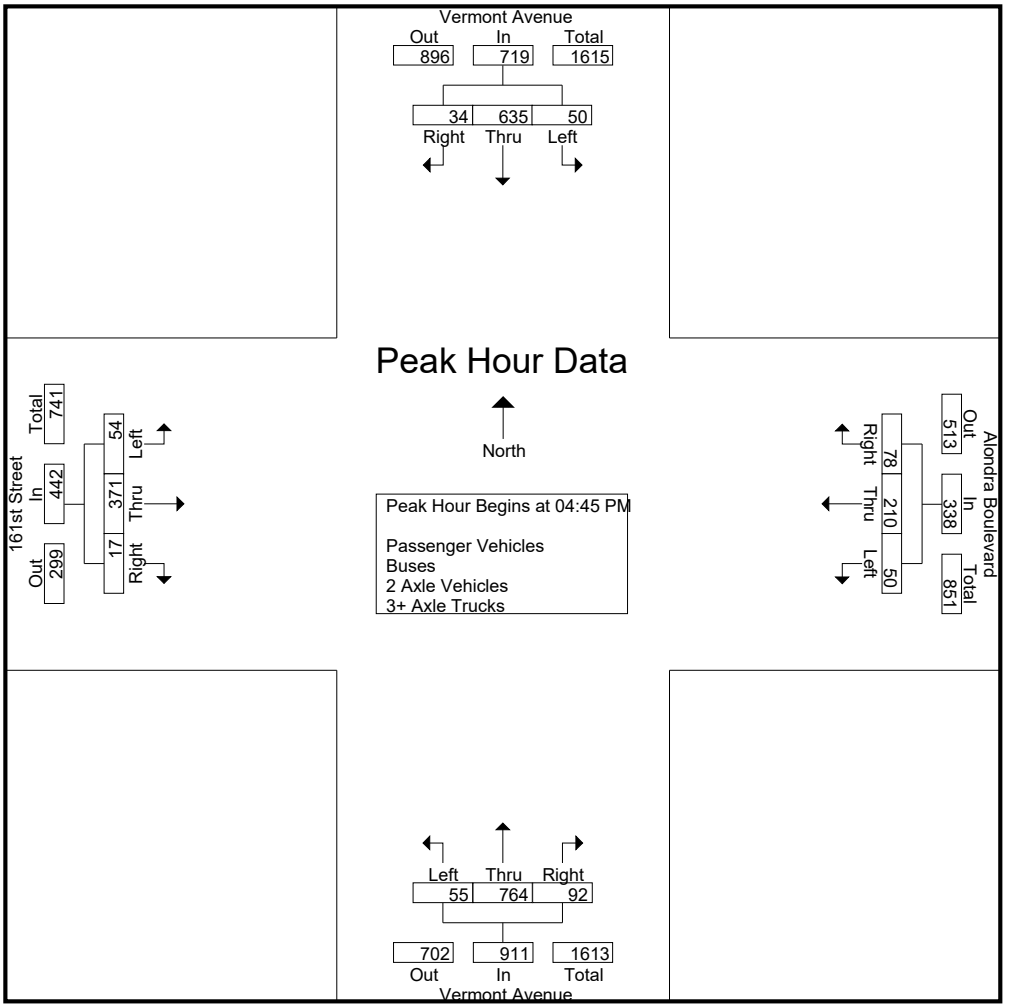
	Vermont Avenue Southbound				Alondra Boulevard Westbound				Vermont Avenue Northbound				161st Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
03:00 PM	15	182	9	206	19	53	16	88	8	123	18	149	18	97	13	128	571
03:15 PM	12	188	8	208	12	38	18	68	9	151	19	179	7	68	11	86	541
03:30 PM	18	167	10	195	18	57	25	100	17	185	24	226	14	74	2	90	611
03:45 PM	10	182	5	197	15	50	19	84	20	177	30	227	19	75	10	104	612
Total	55	719	32	806	64	198	78	340	54	636	91	781	58	314	36	408	2335
04:00 PM	16	152	9	177	15	49	21	85	4	147	25	176	11	97	7	115	553
04:15 PM	17	185	7	209	14	45	22	81	12	168	28	208	15	90	4	109	607
04:30 PM	13	155	7	175	12	53	21	86	9	145	19	173	4	82	2	88	522
04:45 PM	12	169	6	187	9	46	9	64	15	195	19	229	12	83	4	99	579
Total	58	661	29	748	50	193	73	316	40	655	91	786	42	352	17	411	2261
05:00 PM	16	141	9	166	14	47	33	94	12	206	22	240	14	112	6	132	632
05:15 PM	7	160	9	176	16	54	17	87	13	177	24	214	14	82	1	97	574
05:30 PM	15	165	10	190	11	63	19	93	15	186	27	228	14	94	6	114	625
05:45 PM	10	153	7	170	12	71	16	99	12	165	19	196	20	88	3	111	576
Total	48	619	35	702	53	235	85	373	52	734	92	878	62	376	16	454	2407
Grand Total	161	1999	96	2256	167	626	236	1029	146	2025	274	2445	162	1042	69	1273	7003
Apprch %	7.1	88.6	4.3		16.2	60.8	22.9		6	82.8	11.2		12.7	81.9	5.4		
Total %	2.3	28.5	1.4	32.2	2.4	8.9	3.4	14.7	2.1	28.9	3.9	34.9	2.3	14.9	1	18.2	
Passenger Vehicles	156	1897	93	2146	164	617	233	1014	146	1952	261	2359	160	1027	66	1253	6772
% Passenger Vehicles	96.9	94.9	96.9	95.1	98.2	98.6	98.7	98.5	100	96.4	95.3	96.5	98.8	98.6	95.7	98.4	96.7
Buses	1	66	2	69	0	0	0	0	0	36	0	36	0	1	1	2	107
% Buses	0.6	3.3	2.1	3.1	0	0	0	0	0	1.8	0	1.5	0	0.1	1.4	0.2	1.5
2 Axle Vehicles	4	32	1	37	3	9	2	14	0	29	13	42	2	13	2	17	110
% 2 Axle Vehicles	2.5	1.6	1	1.6	1.8	1.4	0.8	1.4	0	1.4	4.7	1.7	1.2	1.2	2.9	1.3	1.6
3+ Axle Trucks	0	4	0	4	0	0	1	1	0	8	0	8	0	1	0	1	14
% 3+ Axle Trucks	0	0.2	0	0.2	0	0	0.4	0.1	0	0.4	0	0.3	0	0.1	0	0.1	0.2

	Vermont Avenue Southbound				Alondra Boulevard Westbound				Vermont Avenue Northbound				161st 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 03:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	12	**169**	6	187	9	46	9	64	**15**	195	19	229	12	83	4	99	579
05:00 PM	**16**	141	9	166	14	47	**33**	**94**	12	**206**	22	**240**	**14**	**112**	**6**	**132**	**632**
05:15 PM	7	160	9	176	**16**	54	17	87	13	177	24	214	14	82	1	97	574
05:30 PM	15	165	**10**	**190**	11	**63**	19	93	15	186	**27**	228	14	94	6	114	625
Total Volume	50	635	34	719	50	210	78	338	55	764	92	911	54	371	17	442	2410
% App. Total	7	88.3	4.7		14.8	62.1	23.1		6	83.9	10.1		12.2	83.9	3.8		
PHF	.781	.939	.850	.946	.781	.833	.591	.899	.917	.927	.852	.949	.964	.828	.708	.837	.953

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City of Gardena
N/S: Vermont Avenue
E/W: 161st Street/Alondra Boulevard
Weather: Clear

File Name : 07_GDA_Vermont_161st_Alondra PM
Site Code : 05719380
Start Date : 5/23/2019
Page No : 2



Peak Hour Analysis From 03:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	03:00 PM				05:00 PM				04:45 PM				05:00 PM			
+0 mins.	15	182	9	206	14	47	**33**	94	**15**	195	19	229	14	**112**	**6**	**132**
+15 mins.	12	**188**	8	**208**	**16**	54	17	87	12	**206**	22	**240**	14	82	1	97
+30 mins.	**18**	167	**10**	195	11	63	19	93	13	177	24	214	14	94	6	114
+45 mins.	10	182	5	197	12	**71**	16	**99**	15	186	**27**	228	**20**	88	3	111
Total Volume	55	719	32	806	53	235	85	373	55	764	92	911	62	376	16	454
% App. Total	6.8	89.2	4		14.2	63	22.8		6	83.9	10.1		13.7	82.8	3.5	
PHF	.764	.956	.800	.969	.828	.827	.644	.942	.917	.927	.852	.949	.775	.839	.667	.860

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City of Gardena
N/S: Vermont Avenue
E/W: 161st Street/Alondra Boulevard
Weather: Clear

File Name : 07_GDA_Vermont_161st_Alondra PM
Site Code : 05719380
Start Date : 5/23/2019
Page No : 1

Groups Printed- Passenger Vehicles

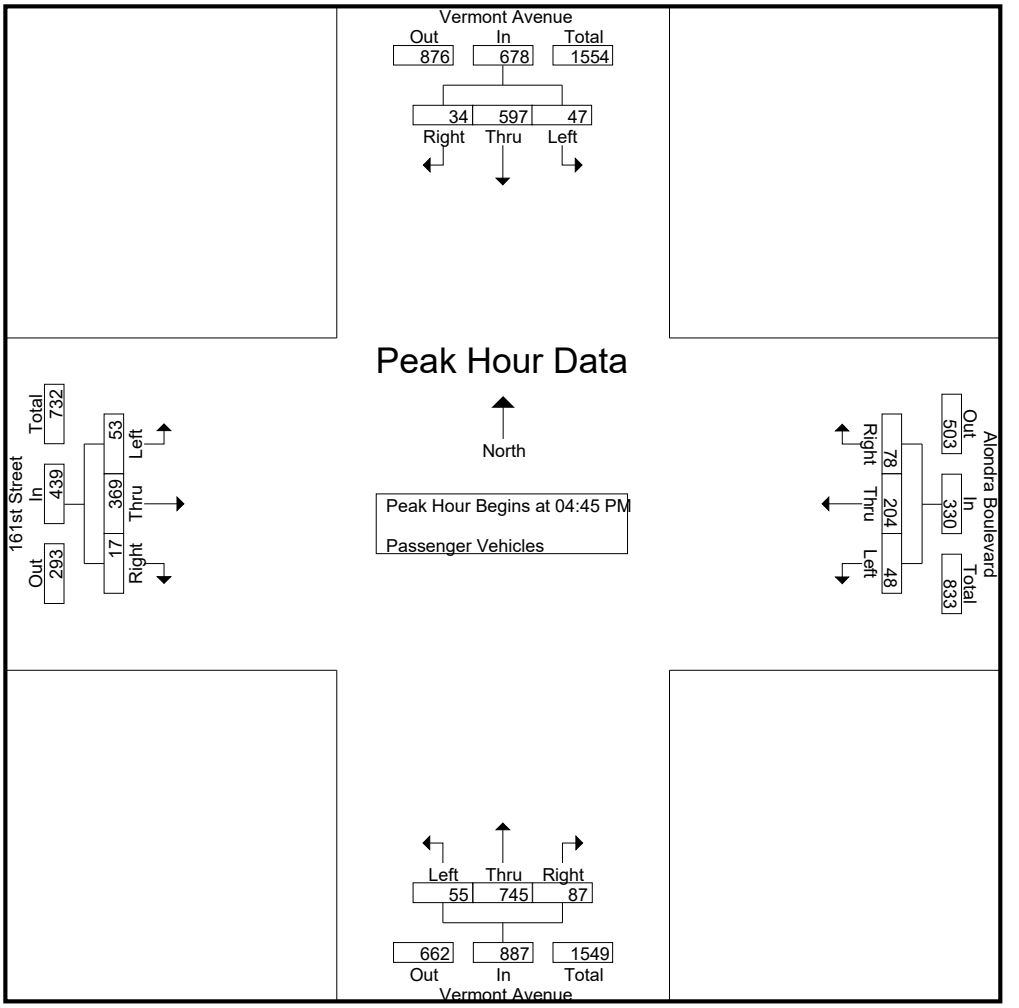
	Vermont Avenue Southbound				Alondra Boulevard Westbound				Vermont Avenue Northbound				161st Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
03:00 PM	13	177	9	199	19	53	15	87	8	116	18	142	18	94	13	125	553
03:15 PM	12	178	7	197	12	37	17	66	9	141	18	168	7	65	9	81	512
03:30 PM	18	159	10	187	17	57	25	99	17	174	21	212	14	72	2	88	586
03:45 PM	10	170	4	184	15	49	19	83	20	174	29	223	18	73	10	101	591
Total	53	684	30	767	63	196	76	335	54	605	86	745	57	304	34	395	2242
04:00 PM	16	145	9	170	15	49	21	85	4	140	24	168	11	95	7	113	536
04:15 PM	17	174	6	197	14	44	22	80	12	160	27	199	15	89	3	107	583
04:30 PM	13	148	7	168	12	53	20	85	9	142	18	169	4	82	2	88	510
04:45 PM	10	157	6	173	9	46	9	64	15	187	19	221	12	83	4	99	557
Total	56	624	28	708	50	192	72	314	40	629	88	757	42	349	16	407	2186
05:00 PM	15	132	9	156	14	45	33	92	12	201	22	235	13	112	6	131	614
05:15 PM	7	151	9	167	15	51	17	83	13	174	21	208	14	81	1	96	554
05:30 PM	15	157	10	182	10	62	19	91	15	183	25	223	14	93	6	113	609
05:45 PM	10	149	7	166	12	71	16	99	12	160	19	191	20	88	3	111	567
Total	47	589	35	671	51	229	85	365	52	718	87	857	61	374	16	451	2344
Grand Total	156	1897	93	2146	164	617	233	1014	146	1952	261	2359	160	1027	66	1253	6772
Apprch %	7.3	88.4	4.3		16.2	60.8	23		6.2	82.7	11.1		12.8	82	5.3		
Total %	2.3	28	1.4	31.7	2.4	9.1	3.4	15	2.2	28.8	3.9	34.8	2.4	15.2	1	18.5	

	Vermont Avenue Southbound				Alondra Boulevard Westbound				Vermont Avenue Northbound				161st 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 04:45 PM to 05:30 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	10	**157**	6	173	9	46	9	64	**15**	187	19	221	12	83	4	99	557
05:00 PM	**15**	132	9	156	14	45	**33**	**92**	12	**201**	22	**235**	13	**112**	**6**	**131**	**614**
05:15 PM	7	151	9	167	**15**	51	17	83	13	174	21	208	**14**	81	1	96	554
05:30 PM	15	157	**10**	**182**	10	**62**	19	91	15	183	**25**	223	14	93	6	113	609
Total Volume	47	597	34	678	48	204	78	330	55	745	87	887	53	369	17	439	2334
% App. Total	6.9	88.1	5		14.5	61.8	23.6		6.2	84	9.8		12.1	84.1	3.9		
PHF	.783	.951	.850	.931	.800	.823	.591	.897	.917	.927	.870	.944	.946	.824	.708	.838	.950

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City of Gardena
N/S: Vermont Avenue
E/W: 161st Street/Alondra Boulevard
Weather: Clear

File Name : 07_GDA_Vermont_161st_Alondra PM
Site Code : 05719380
Start Date : 5/23/2019
Page No : 2



Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:45 PM				04:45 PM				04:45 PM				04:45 PM			
+0 mins.	10	**157**	6	173	9	46	9	64	**15**	187	19	221	12	83	4	99
+15 mins.	**15**	132	9	156	14	45	**33**	**92**	12	**201**	22	**235**	13	**112**	**6**	**131**
+30 mins.	7	151	9	167	**15**	51	17	83	13	174	21	208	**14**	81	1	96
+45 mins.	15	157	**10**	**182**	10	**62**	19	91	15	183	**25**	223	14	93	6	113
Total Volume	47	597	34	678	48	204	78	330	55	745	87	887	53	369	17	439
% App. Total	6.9	88.1	5		14.5	61.8	23.6		6.2	84	9.8		12.1	84.1	3.9	
PHF	.783	.951	.850	.931	.800	.823	.591	.897	.917	.927	.870	.944	.946	.824	.708	.838

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City of Gardena
N/S: Vermont Avenue
E/W: 161st Street/Alondra Boulevard
Weather: Clear

File Name : 07_GDA_Vermont_161st_Alondra PM
Site Code : 05719380
Start Date : 5/23/2019
Page No : 1

Groups Printed- Buses

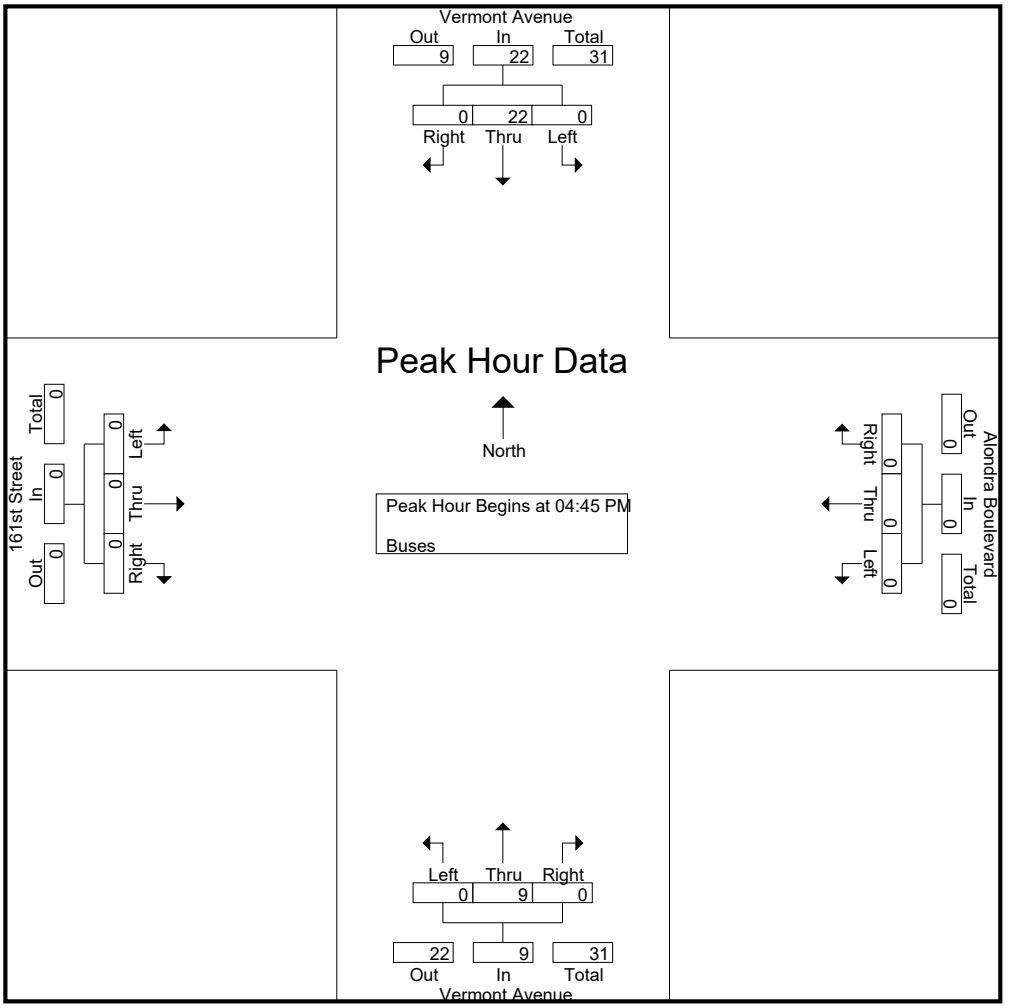
	Vermont Avenue Southbound				Alondra Boulevard Westbound				Vermont Avenue Northbound				161st Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
03:00 PM	1	5	0	6	0	0	0	0	0	3	0	3	0	0	0	0	9
03:15 PM	0	8	0	8	0	0	0	0	0	3	0	3	0	0	0	0	11
03:30 PM	0	3	0	3	0	0	0	0	0	6	0	6	0	0	0	0	9
03:45 PM	0	7	1	8	0	0	0	0	0	1	0	1	0	1	0	1	10
Total	1	23	1	25	0	0	0	0	0	13	0	13	0	1	0	1	39
04:00 PM	0	6	0	6	0	0	0	0	0	6	0	6	0	0	0	0	12
04:15 PM	0	8	1	9	0	0	0	0	0	3	0	3	0	0	1	1	13
04:30 PM	0	4	0	4	0	0	0	0	0	2	0	2	0	0	0	0	6
04:45 PM	0	8	0	8	0	0	0	0	0	2	0	2	0	0	0	0	10
Total	0	26	1	27	0	0	0	0	0	13	0	13	0	0	1	1	41
05:00 PM	0	5	0	5	0	0	0	0	0	2	0	2	0	0	0	0	7
05:15 PM	0	3	0	3	0	0	0	0	0	3	0	3	0	0	0	0	6
05:30 PM	0	6	0	6	0	0	0	0	0	2	0	2	0	0	0	0	8
05:45 PM	0	3	0	3	0	0	0	0	0	3	0	3	0	0	0	0	6
Total	0	17	0	17	0	0	0	0	0	10	0	10	0	0	0	0	27
Grand Total	1	66	2	69	0	0	0	0	0	36	0	36	0	1	1	2	107
Apprch %	1.4	95.7	2.9		0	0	0		0	100	0		0	50	50		
Total %	0.9	61.7	1.9	64.5	0	0	0	0	0	33.6	0	33.6	0	0.9	0.9	1.9	

	Vermont Avenue Southbound				Alondra Boulevard Westbound				Vermont Avenue Northbound				161st 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 04:45 PM to 05:30 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	0	**8**	0	**8**	0	0	0	0	0	2	0	2	0	0	0	0	**10**
05:00 PM	0	5	0	5	0	0	0	0	0	2	0	2	0	0	0	0	7
05:15 PM	0	3	0	3	0	0	0	0	0	**3**	0	**3**	0	0	0	0	6
05:30 PM	0	6	0	6	0	0	0	0	0	2	0	2	0	0	0	0	8
Total Volume	0	22	0	22	0	0	0	0	0	9	0	9	0	0	0	0	31
% App. Total	0	100	0		0	0	0		0	100	0		0	0	0		
PHF	.000	.688	.000	.688	.000	.000	.000	.000	.000	.750	.000	.750	.000	.000	.000	.000	.775

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City of Gardena
N/S: Vermont Avenue
E/W: 161st Street/Alondra Boulevard
Weather: Clear

File Name : 07_GDA_Vermont_161st_Alondra PM
Site Code : 05719380
Start Date : 5/23/2019
Page No : 2



Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:45 PM				04:45 PM				04:45 PM				04:45 PM			
+0 mins.	0	**8**	0	**8**	0	0	0	0	0	2	0	2	0	0	0	0
+15 mins.	0	5	0	5	0	0	0	0	0	2	0	2	0	0	0	0
+30 mins.	0	3	0	3	0	0	0	0	0	**3**	0	**3**	0	0	0	0
+45 mins.	0	6	0	6	0	0	0	0	0	2	0	2	0	0	0	0
Total Volume	0	22	0	22	0	0	0	0	0	9	0	9	0	0	0	0
% App. Total	0	100	0		0	0	0		0	100	0		0	0	0	
PHF	.000	.688	.000	.688	.000	.000	.000	.000	.000	.750	.000	.750	.000	.000	.000	.000

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City of Gardena
N/S: Vermont Avenue
E/W: 161st Street/Alondra Boulevard
Weather: Clear

File Name : 07_GDA_Vermont_161st_Alondra PM
Site Code : 05719380
Start Date : 5/23/2019
Page No : 1

Groups Printed- 2 Axle Vehicles

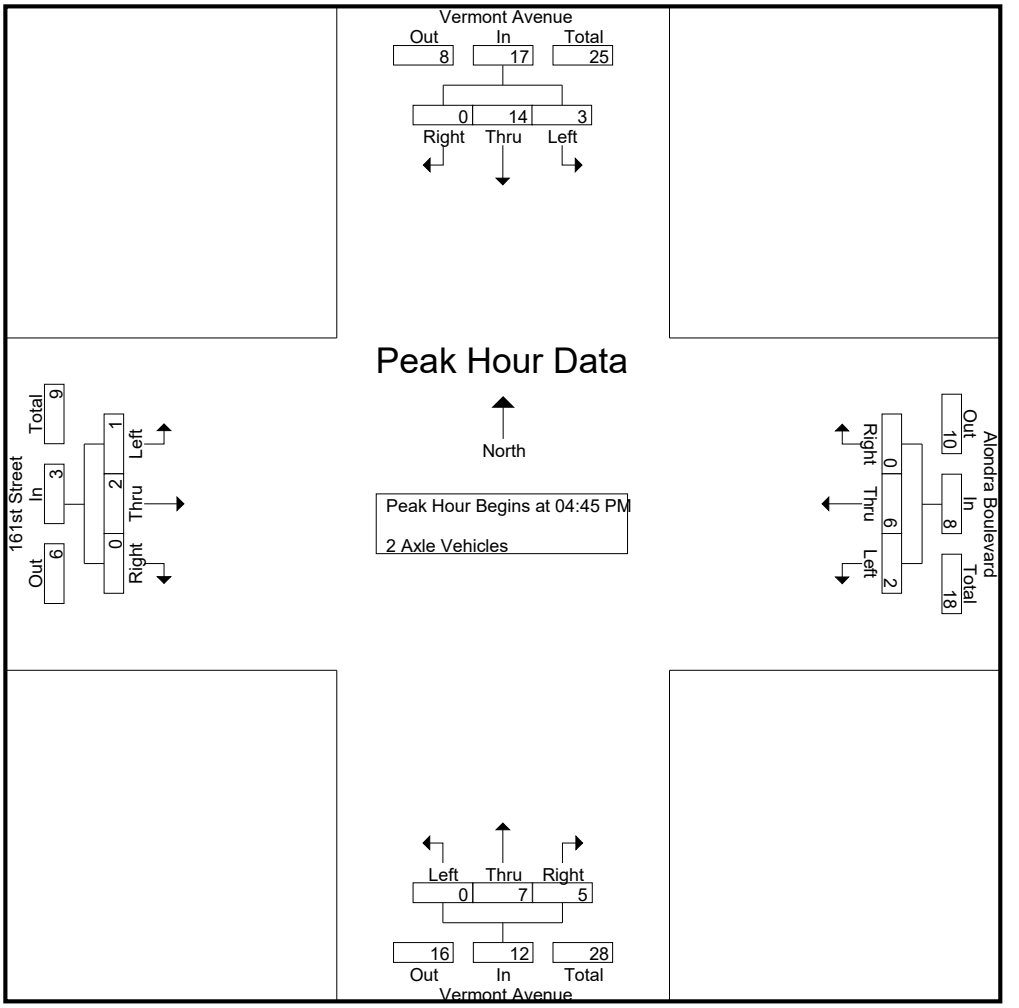
	Vermont Avenue Southbound				Alondra Boulevard Westbound				Vermont Avenue Northbound				161st Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
03:00 PM	1	0	0	1	0	0	1	1	0	3	0	3	0	3	0	3	8
03:15 PM	0	2	1	3	0	1	0	1	0	6	1	7	0	3	2	5	16
03:30 PM	0	3	0	3	1	0	0	1	0	4	3	7	0	1	0	1	12
03:45 PM	0	5	0	5	0	1	0	1	0	2	1	3	1	1	0	2	11
Total	1	10	1	12	1	2	1	4	0	15	5	20	1	8	2	11	47
04:00 PM	0	1	0	1	0	0	0	0	0	1	1	2	0	2	0	2	5
04:15 PM	0	3	0	3	0	1	0	1	0	4	1	5	0	1	0	1	10
04:30 PM	0	3	0	3	0	0	1	1	0	1	1	2	0	0	0	0	6
04:45 PM	2	3	0	5	0	0	0	0	0	4	0	4	0	0	0	0	9
Total	2	10	0	12	0	1	1	2	0	10	3	13	0	3	0	3	30
05:00 PM	1	4	0	5	0	2	0	2	0	2	0	2	1	0	0	1	10
05:15 PM	0	5	0	5	1	3	0	4	0	0	3	3	0	1	0	1	13
05:30 PM	0	2	0	2	1	1	0	2	0	1	2	3	0	1	0	1	8
05:45 PM	0	1	0	1	0	0	0	0	0	1	0	1	0	0	0	0	2
Total	1	12	0	13	2	6	0	8	0	4	5	9	1	2	0	3	33
Grand Total	4	32	1	37	3	9	2	14	0	29	13	42	2	13	2	17	110
Apprch %	10.8	86.5	2.7		21.4	64.3	14.3		0	69	31		11.8	76.5	11.8		
Total %	3.6	29.1	0.9	33.6	2.7	8.2	1.8	12.7	0	26.4	11.8	38.2	1.8	11.8	1.8	15.5	

	Vermont Avenue Southbound				Alondra Boulevard Westbound				Vermont Avenue Northbound				161st 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 04:45 PM to 05:30 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	**2**	3	0	**5**	0	0	0	0	0	**4**	0	**4**	0	0	0	0	9
05:00 PM	1	4	0	5	0	2	0	2	0	2	0	2	**1**	0	0	**1**	10
05:15 PM	0	**5**	0	5	**1**	**3**	0	**4**	0	0	**3**	3	0	**1**	0	1	**13**
05:30 PM	0	2	0	2	1	1	0	2	0	1	2	3	0	1	0	1	8
Total Volume	3	14	0	17	2	6	0	8	0	7	5	12	1	2	0	3	40
% App. Total	17.6	82.4	0		25	75	0		0	58.3	41.7		33.3	66.7	0		
PHF	.375	.700	.000	.850	.500	.500	.000	.500	.000	.438	.417	.750	.250	.500	.000	.750	.769

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City of Gardena
N/S: Vermont Avenue
E/W: 161st Street/Alondra Boulevard
Weather: Clear

File Name : 07_GDA_Vermont_161st_Alondra PM
Site Code : 05719380
Start Date : 5/23/2019
Page No : 2



Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:45 PM				04:45 PM				04:45 PM				04:45 PM			
+0 mins.	**2**	3	0	**5**	0	0	0	0	0	**4**	0	**4**	0	0	0	0
+15 mins.	1	4	0	5	0	2	0	2	0	2	0	2	**1**	0	0	**1**
+30 mins.	0	**5**	0	5	**1**	**3**	0	**4**	0	0	**3**	3	0	**1**	0	1
+45 mins.	0	2	0	2	1	1	0	2	0	1	2	3	0	1	0	1
Total Volume	3	14	0	17	2	6	0	8	0	7	5	12	1	2	0	3
% App. Total	17.6	82.4	0		25	75	0		0	58.3	41.7		33.3	66.7	0	
PHF	.375	.700	.000	.850	.500	.500	.000	.500	.000	.438	.417	.750	.250	.500	.000	.750

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City of Gardena
N/S: Vermont Avenue
E/W: 161st Street/Alondra Boulevard
Weather: Clear

File Name : 07_GDA_Vermont_161st_Alondra PM
Site Code : 05719380
Start Date : 5/23/2019
Page No : 1

Groups Printed- 3+ Axle Trucks

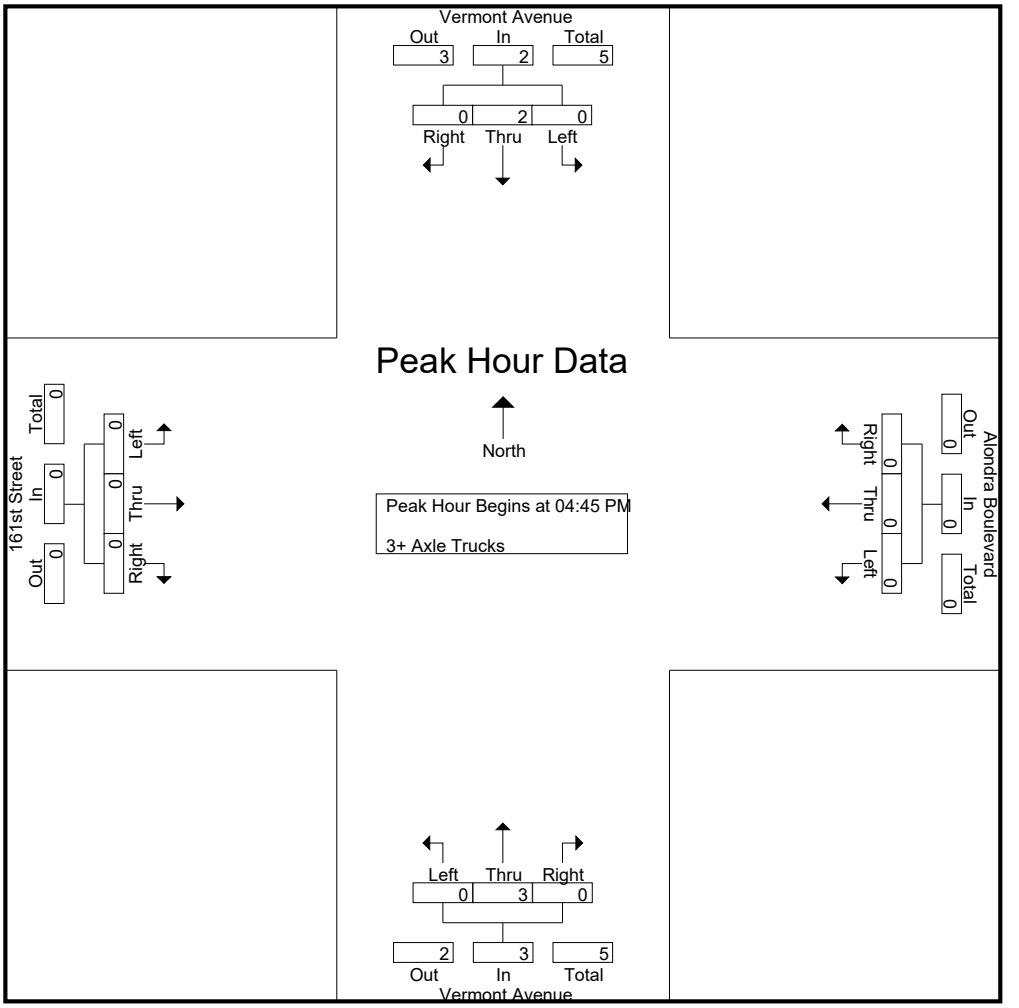
	Vermont Avenue Southbound				Alondra Boulevard Westbound				Vermont Avenue Northbound				161st Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
03:00 PM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
03:15 PM	0	0	0	0	0	0	1	1	0	1	0	1	0	0	0	0	2
03:30 PM	0	2	0	2	0	0	0	0	0	1	0	1	0	1	0	1	4
03:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	2	0	2	0	0	1	1	0	3	0	3	0	1	0	1	7
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:15 PM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	1	0	1	0	0	0	0	0	2	0	2	0	0	0	0	3
Total	0	1	0	1	0	0	0	0	0	3	0	3	0	0	0	0	4
05:00 PM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
05:15 PM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
Total	0	1	0	1	0	0	0	0	0	2	0	2	0	0	0	0	3
Grand Total	0	4	0	4	0	0	1	1	0	8	0	8	0	1	0	1	14
Apprch %	0	100	0		0	0	100		0	100	0		0	100	0		
Total %	0	28.6	0	28.6	0	0	7.1	7.1	0	57.1	0	57.1	0	7.1	0	7.1	

	Vermont Avenue Southbound				Alondra Boulevard Westbound				Vermont Avenue Northbound				161st 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 04:45 PM to 05:30 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	0	**1**	0	**1**	0	0	0	0	0	**2**	0	**2**	0	0	0	0	**3**
05:00 PM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
05:15 PM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	2	0	2	0	0	0	0	0	3	0	3	0	0	0	0	5
% App. Total	0	100	0		0	0	0		0	100	0		0	0	0		
PHF	.000	.500	.000	.500	.000	.000	.000	.000	.000	.375	.000	.375	.000	.000	.000	.000	.417

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City of Gardena
N/S: Vermont Avenue
E/W: 161st Street/Alondra Boulevard
Weather: Clear

File Name : 07_GDA_Vermont_161st_Alondra PM
Site Code : 05719380
Start Date : 5/23/2019
Page No : 2



Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:45 PM				04:45 PM				04:45 PM				04:45 PM			
+0 mins.	0	**1**	0	**1**	0	0	0	0	0	**2**	0	**2**	0	0	0	0
+15 mins.	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0
+30 mins.	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0
+45 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	2	0	2	0	0	0	0	0	3	0	3	0	0	0	0
% App. Total	0	100	0		0	0	0		0	100	0		0	0	0	
PHF	.000	.500	.000	.500	.000	.000	.000	.000	.000	.375	.000	.375	.000	.000	.000	.000

Location: Gardena
N/S: Vermont Avenue
E/W: 161st Street/Alondra Boulevard

Date: 5/23/2019
Day: Thursday

PEDESTRIANS

	North Leg Vermont Avenue	East Leg Alondra Boulevard	South Leg Vermont Avenue	West Leg 161st Street	
	Pedestrians	Pedestrians	Pedestrians	Pedestrians	
7:00 AM	2	3	2	0	7
7:15 AM	0	2	1	2	5
7:30 AM	3	3	3	0	9
7:45 AM	0	0	2	0	2
8:00 AM	1	0	1	0	2
8:15 AM	0	0	0	2	2
8:30 AM	1	2	3	4	10
8:45 AM	3	0	1	5	9
9:00 AM	0	0	0	1	1
9:15 AM	2	1	1	1	5
9:30 AM	0	3	1	1	5
9:45 AM	0	2	1	1	4
TOTAL VOLUMES:	12	16	16	17	61

	North Leg Vermont Avenue	East Leg Alondra Boulevard	South Leg Vermont Avenue	West Leg 161st Street	
	Pedestrians	Pedestrians	Pedestrians	Pedestrians	
3:00 PM	2	3	7	0	12
3:15 PM	2	2	1	1	6
3:30 PM	0	11	3	0	14
3:45 PM	2	4	5	2	13
4:00 PM	2	9	2	1	14
4:15 PM	2	1	2	1	6
4:30 PM	0	4	2	2	8
4:45 PM	0	1	0	1	2
5:00 PM	1	2	0	1	4
5:15 PM	0	0	2	2	4
5:30 PM	1	1	2	1	5
5:45 PM	0	3	1	0	4
TOTAL VOLUMES:	12	41	27	12	92

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Location: Gardena
N/S: Vermont Avenue
E/W: 161st Street/Alondra Boulevard

Date: 5/23/2019
Day: Thursday

BICYCLES

	Southbound Vermont Avenue			Westbound Alondra Boulevard			Northbound Vermont Avenue			Eastbound 161st Street			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	1	0	0	0	0	0	0	0	1	1	0	3
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	1	0	0	0	0	1
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	1	0	0	0	0	0	0	0	0	0	0	1
9:00 AM	0	2	0	0	0	0	0	0	0	0	0	0	2
9:15 AM	0	1	0	0	0	0	0	0	0	0	0	0	1
9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
9:45 AM	0	0	0	0	1	0	0	0	0	1	0	0	2
TOTAL VOLUMES:	0	5	0	0	1	0	0	1	0	2	1	0	10

	Southbound Vermont Avenue			Westbound Alondra Boulevard			Northbound Vermont Avenue			Eastbound 161st Street			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
3:00 PM	0	0	0	0	0	0	0	2	0	0	0	0	2
3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:00 PM	0	0	0	0	0	0	0	1	0	0	0	0	1
4:15 PM	0	0	0	0	0	0	0	1	0	0	0	0	1
4:30 PM	0	0	0	1	0	0	0	1	0	0	0	0	2
4:45 PM	1	0	0	0	0	0	0	1	0	0	1	0	3
5:00 PM	0	1	0	0	0	0	0	0	0	0	0	0	1
5:15 PM	0	1	0	0	0	0	0	0	0	0	0	0	1
5:30 PM	0	0	0	1	1	0	0	0	0	0	0	0	2
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES:	1	2	0	2	1	0	0	6	0	0	1	0	13

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City of Gardena
N/S: South Orchard Avenue
E/W: Redondo Beach Boulevard
Weather: Clear

File Name : 08_GDA_S Orchard_Redondo Beach AM
Site Code : 05719380
Start Date : 5/23/2019
Page No : 1

Groups Printed- Passenger Vehicles - Buses - 2 Axle Vehicles - 3+ Axle Trucks

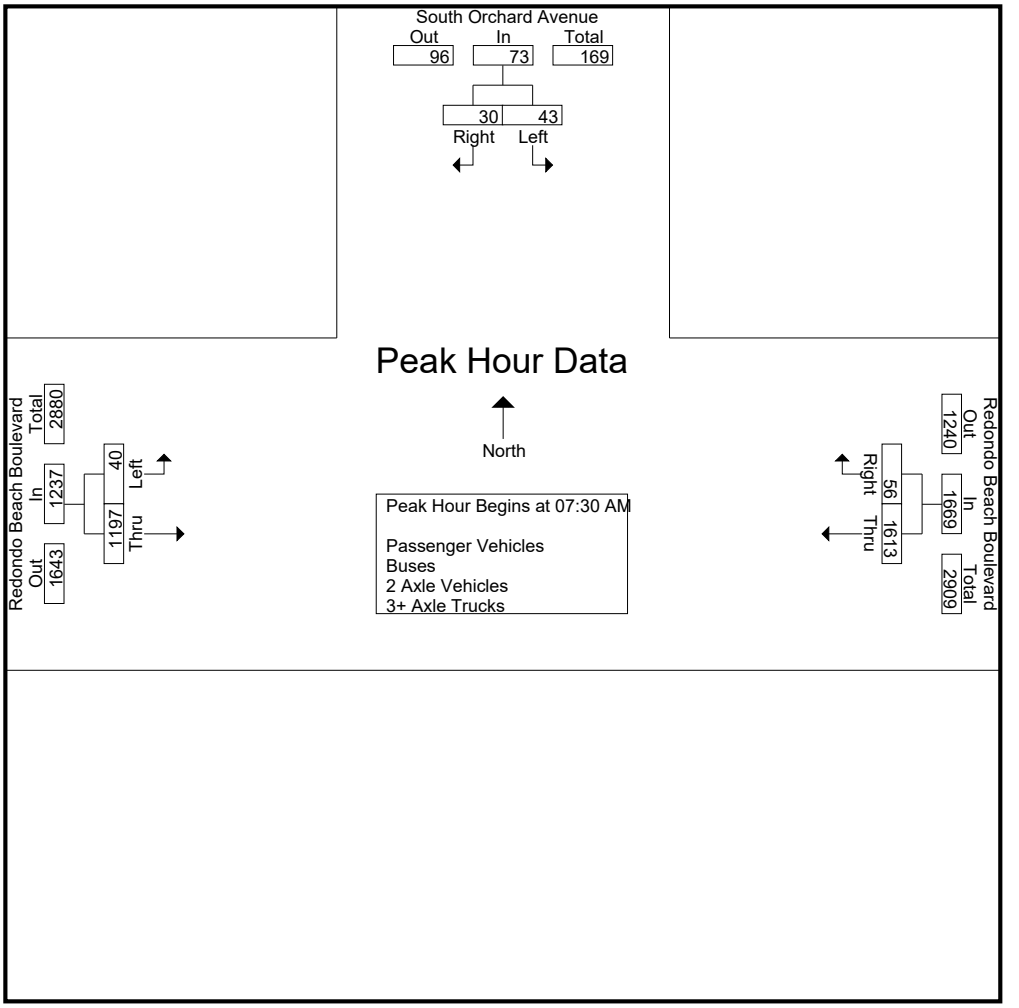
	South Orchard Avenue Southbound			Redondo Beach Boulevard Westbound			Redondo Beach Boulevard Eastbound			
Start Time	Left	Right	App. Total	Thru	Right	App. Total	Left	Thru	App. Total	Int. Total
07:00 AM	8	10	18	315	12	327	4	260	264	609
07:15 AM	9	8	17	375	9	384	7	246	253	654
07:30 AM	11	6	17	406	8	414	7	318	325	756
07:45 AM	12	11	23	444	17	461	11	317	328	812
Total	40	35	75	1540	46	1586	29	1141	1170	2831
08:00 AM	9	10	19	386	18	404	15	304	319	742
08:15 AM	11	3	14	377	13	390	7	258	265	669
08:30 AM	10	6	16	385	20	405	13	191	204	625
08:45 AM	12	5	17	326	8	334	10	235	245	596
Total	42	24	66	1474	59	1533	45	988	1033	2632
09:00 AM	11	7	18	310	12	322	21	243	264	604
09:15 AM	21	6	27	312	15	327	15	203	218	572
09:30 AM	31	17	48	302	14	316	19	216	235	599
09:45 AM	33	21	54	287	20	307	20	215	235	596
Total	96	51	147	1211	61	1272	75	877	952	2371
Grand Total	178	110	288	4225	166	4391	149	3006	3155	7834
Apprch %	61.8	38.2		96.2	3.8		4.7	95.3		
Total %	2.3	1.4	3.7	53.9	2.1	56.1	1.9	38.4	40.3	
Passenger Vehicles	112	87	199	4102	89	4191	135	2928	3063	7453
% Passenger Vehicles	62.9	79.1	69.1	97.1	53.6	95.4	90.6	97.4	97.1	95.1
Buses	1	1	2	14	1	15	1	18	19	36
% Buses	0.6	0.9	0.7	0.3	0.6	0.3	0.7	0.6	0.6	0.5
2 Axle Vehicles	14	8	22	80	15	95	9	41	50	167
% 2 Axle Vehicles	7.9	7.3	7.6	1.9	9	2.2	6	1.4	1.6	2.1
3+ Axle Trucks	51	14	65	29	61	90	4	19	23	178
% 3+ Axle Trucks	28.7	12.7	22.6	0.7	36.7	2	2.7	0.6	0.7	2.3

	South Orchard Avenue Southbound			Redondo Beach Boulevard Westbound			Redondo Beach Boulevard Eastbound			
Start Time	Left	Right	App. Total	Thru	Right	App. Total	Left	Thru	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 09:45 AM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 07:30 AM										
07:30 AM	11	6	17	406	8	414	7	**318**	325	756
07:45 AM	**12**	**11**	**23**	**444**	17	**461**	11	317	**328**	**812**
08:00 AM	9	10	19	386	**18**	404	**15**	304	319	742
08:15 AM	11	3	14	377	13	390	7	258	265	669
Total Volume	43	30	73	1613	56	1669	40	1197	1237	2979
% App. Total	58.9	41.1		96.6	3.4		3.2	96.8		
PHF	.896	.682	.793	.908	.778	.905	.667	.941	.943	.917

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City of Gardena
N/S: South Orchard Avenue
E/W: Redondo Beach Boulevard
Weather: Clear

File Name : 08_GDA_S Orchard_Redondo Beach AM
Site Code : 05719380
Start Date : 5/23/2019



Peak Hour Analysis From 07:00 AM to 09:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	09:00 AM			07:30 AM			07:30 AM		
+0 mins.	11	7	18	406	8	414	7	**318**	325
+15 mins.	21	6	27	**444**	17	**461**	11	317	**328**
+30 mins.	31	17	48	386	**18**	404	**15**	304	319
+45 mins.	**33**	**21**	**54**	377	13	390	7	258	265
Total Volume	96	51	147	1613	56	1669	40	1197	1237
% App. Total	65.3	34.7		96.6	3.4		3.2	96.8	
PHF	.727	.607	.681	.908	.778	.905	.667	.941	.943

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City of Gardena
N/S: South Orchard Avenue
E/W: Redondo Beach Boulevard
Weather: Clear

File Name : 08_GDA_S Orchard_Redondo Beach AM
Site Code : 05719380
Start Date : 5/23/2019
Page No : 1

Groups Printed- Passenger Vehicles

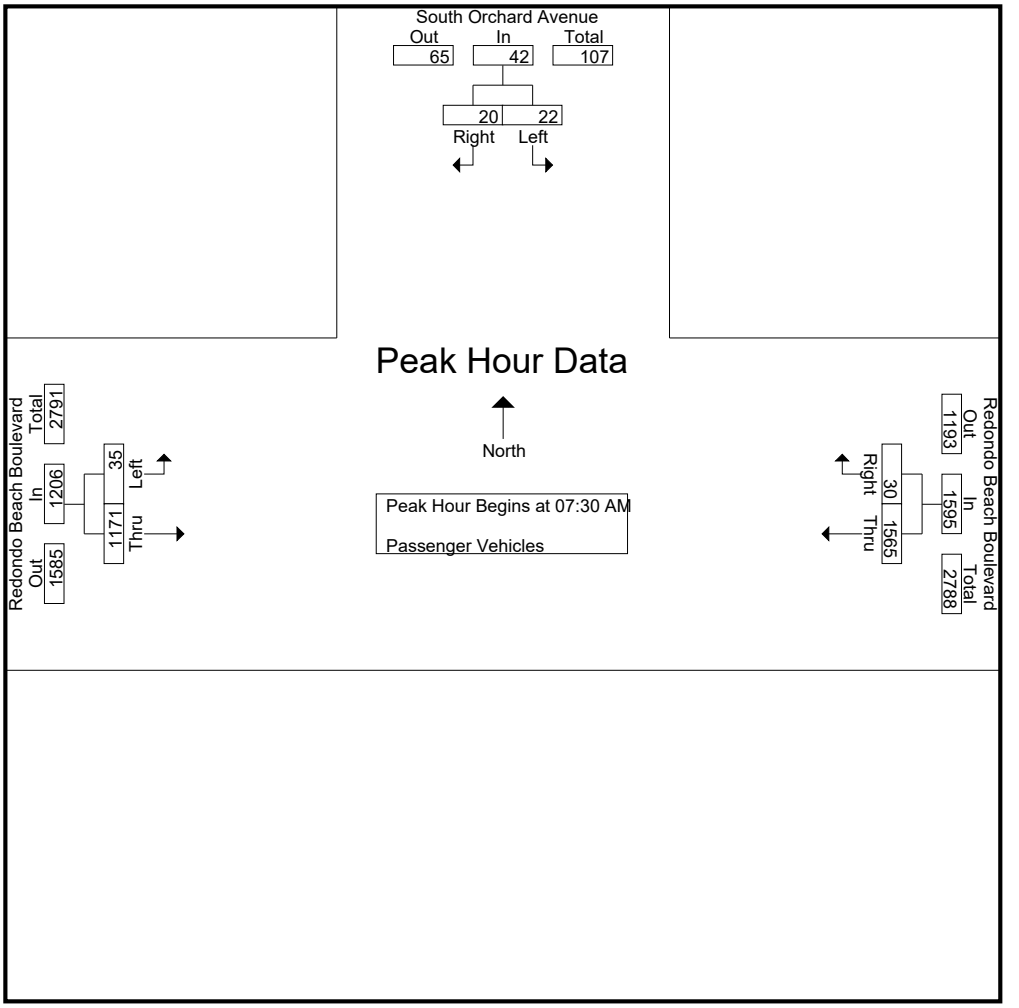
	South Orchard Avenue Southbound			Redondo Beach Boulevard Westbound			Redondo Beach Boulevard Eastbound			
Start Time	Left	Right	App. Total	Thru	Right	App. Total	Left	Thru	App. Total	Int. Total
07:00 AM	7	6	13	304	5	309	3	254	257	579
07:15 AM	5	7	12	367	6	373	5	239	244	629
07:30 AM	5	4	9	396	5	401	5	310	315	725
07:45 AM	9	6	15	436	9	445	10	313	323	783
Total	26	23	49	1503	25	1528	23	1116	1139	2716
08:00 AM	2	7	9	371	12	383	14	295	309	701
08:15 AM	6	3	9	362	4	366	6	253	259	634
08:30 AM	6	3	9	374	12	386	13	186	199	594
08:45 AM	5	5	10	315	5	320	9	225	234	564
Total	19	18	37	1422	33	1455	42	959	1001	2493
09:00 AM	7	6	13	304	6	310	20	238	258	581
09:15 AM	12	4	16	297	5	302	14	197	211	529
09:30 AM	22	17	39	294	10	304	18	207	225	568
09:45 AM	26	19	45	282	10	292	18	211	229	566
Total	67	46	113	1177	31	1208	70	853	923	2244
Grand Total	112	87	199	4102	89	4191	135	2928	3063	7453
Apprch %	56.3	43.7		97.9	2.1		4.4	95.6		
Total %	1.5	1.2	2.7	55	1.2	56.2	1.8	39.3	41.1	

	South Orchard Avenue Southbound			Redondo Beach Boulevard Westbound			Redondo Beach Boulevard Eastbound			
Start Time	Left	Right	App. Total	Thru	Right	App. Total	Left	Thru	App. Total	Int. Total
Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 07:30 AM										
07:30 AM	5	4	9	396	5	401	5	310	315	725
07:45 AM	**9**	6	**15**	**436**	9	**445**	10	**313**	**323**	**783**
08:00 AM	2	**7**	9	371	**12**	383	**14**	295	309	701
08:15 AM	6	3	9	362	4	366	6	253	259	634
Total Volume	22	20	42	1565	30	1595	35	1171	1206	2843
% App. Total	52.4	47.6		98.1	1.9		2.9	97.1		
PHF	.611	.714	.700	.897	.625	.896	.625	.935	.933	.908

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City of Gardena
N/S: South Orchard Avenue
E/W: Redondo Beach Boulevard
Weather: Clear

File Name : 08_GDA_S Orchard_Redondo Beach AM
Site Code : 05719380
Start Date : 5/23/2019



Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:30 AM			07:30 AM			07:30 AM		
+0 mins.	5	4	9	396	5	401	5	310	315
+15 mins.	**9**	6	**15**	**436**	9	**445**	10	**313**	**323**
+30 mins.	2	**7**	9	371	**12**	383	**14**	295	309
+45 mins.	6	3	9	362	4	366	6	253	259
Total Volume	22	20	42	1565	30	1595	35	1171	1206
% App. Total	52.4	47.6		98.1	1.9		2.9	97.1	
PHF	.611	.714	.700	.897	.625	.896	.625	.935	.933

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City of Gardena
N/S: South Orchard Avenue
E/W: Redondo Beach Boulevard
Weather: Clear

File Name : 08_GDA_S Orchard_Redondo Beach AM
Site Code : 05719380
Start Date : 5/23/2019
Page No : 1

Groups Printed- Buses

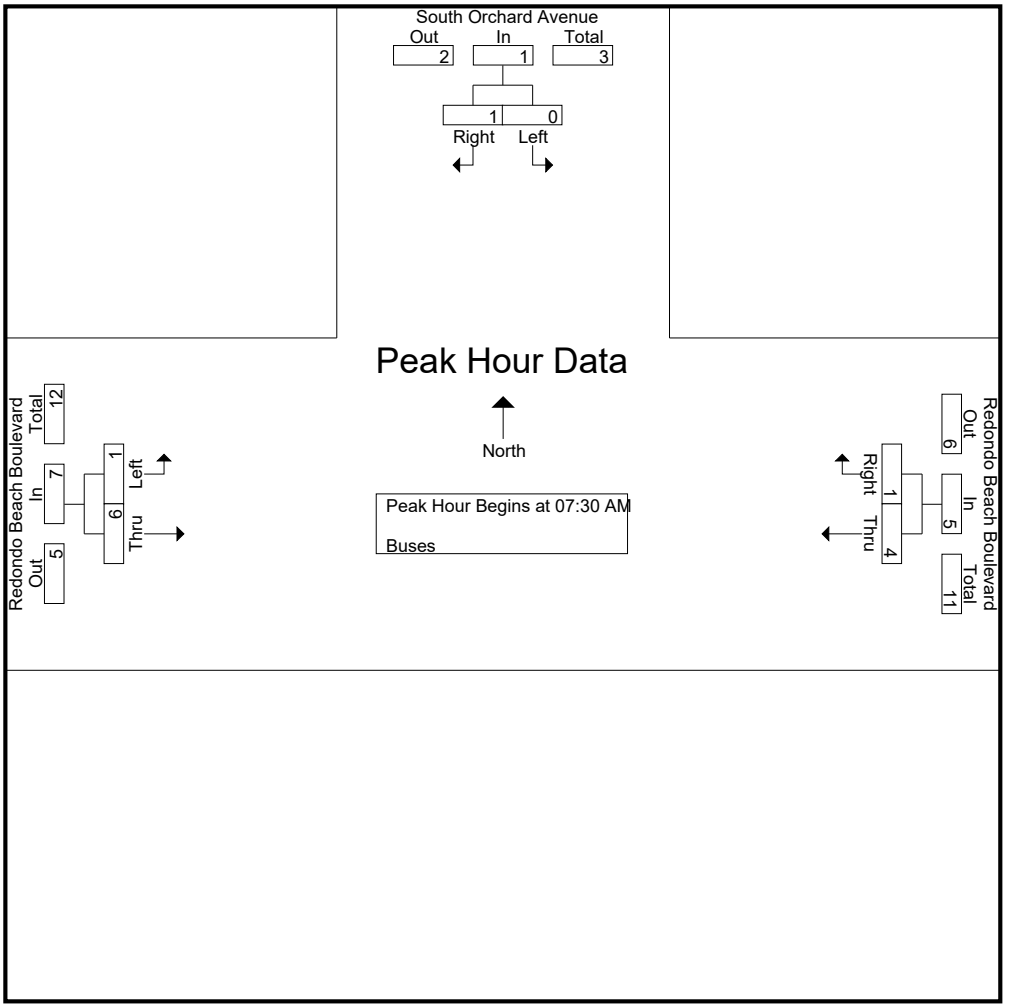
	South Orchard Avenue Southbound			Redondo Beach Boulevard Westbound			Redondo Beach Boulevard Eastbound			
Start Time	Left	Right	App. Total	Thru	Right	App. Total	Left	Thru	App. Total	Int. Total
07:00 AM	0	0	0	1	0	1	0	1	1	2
07:15 AM	0	0	0	3	0	3	0	2	2	5
07:30 AM	0	0	0	0	0	0	0	3	3	3
07:45 AM	0	1	1	1	0	1	1	2	3	5
Total	0	1	1	5	0	5	1	8	9	15
08:00 AM	0	0	0	1	0	1	0	0	0	1
08:15 AM	0	0	0	2	1	3	0	1	1	4
08:30 AM	0	0	0	1	0	1	0	3	3	4
08:45 AM	0	0	0	2	0	2	0	1	1	3
Total	0	0	0	6	1	7	0	5	5	12
09:00 AM	0	0	0	0	0	0	0	2	2	2
09:15 AM	1	0	1	3	0	3	0	3	3	7
09:30 AM	0	0	0	0	0	0	0	0	0	0
09:45 AM	0	0	0	0	0	0	0	0	0	0
Total	1	0	1	3	0	3	0	5	5	9
Grand Total	1	1	2	14	1	15	1	18	19	36
Apprch %	50	50		93.3	6.7		5.3	94.7		
Total %	2.8	2.8	5.6	38.9	2.8	41.7	2.8	50	52.8	

	South Orchard Avenue Southbound			Redondo Beach Boulevard Westbound			Redondo Beach Boulevard Eastbound			
Start Time	Left	Right	App. Total	Thru	Right	App. Total	Left	Thru	App. Total	Int. Total
Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 07:30 AM										
07:30 AM	0	0	0	0	0	0	0	**3**	**3**	3
07:45 AM	0	**1**	**1**	1	0	1	**1**	2	3	**5**
08:00 AM	0	0	0	1	0	1	0	0	0	1
08:15 AM	0	0	0	**2**	**1**	**3**	0	1	1	4
Total Volume	0	1	1	4	1	5	1	6	7	13
% App. Total	0	100		80	20		14.3	85.7		
PHF	.000	.250	.250	.500	.250	.417	.250	.500	.583	.650

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City of Gardena
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E/W: Redondo Beach Boulevard
Weather: Clear

File Name : 08_GDA_S Orchard_Redondo Beach AM
Site Code : 05719380
Start Date : 5/23/2019



Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:30 AM			07:30 AM			07:30 AM		
+0 mins.	0	0	0	0	0	0	0	**3**	**3**
+15 mins.	0	**1**	**1**	1	0	1	**1**	2	3
+30 mins.	0	0	0	1	0	1	0	0	0
+45 mins.	0	0	0	**2**	**1**	**3**	0	1	1
Total Volume	0	1	1	4	1	5	1	6	7
% App. Total	0	100		80	20		14.3	85.7	
PHF	.000	.250	.250	.500	.250	.417	.250	.500	.583

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City of Gardena
N/S: South Orchard Avenue
E/W: Redondo Beach Boulevard
Weather: Clear

File Name : 08_GDA_S Orchard_Redondo Beach AM
Site Code : 05719380
Start Date : 5/23/2019
Page No : 1

Groups Printed- 2 Axle Vehicles

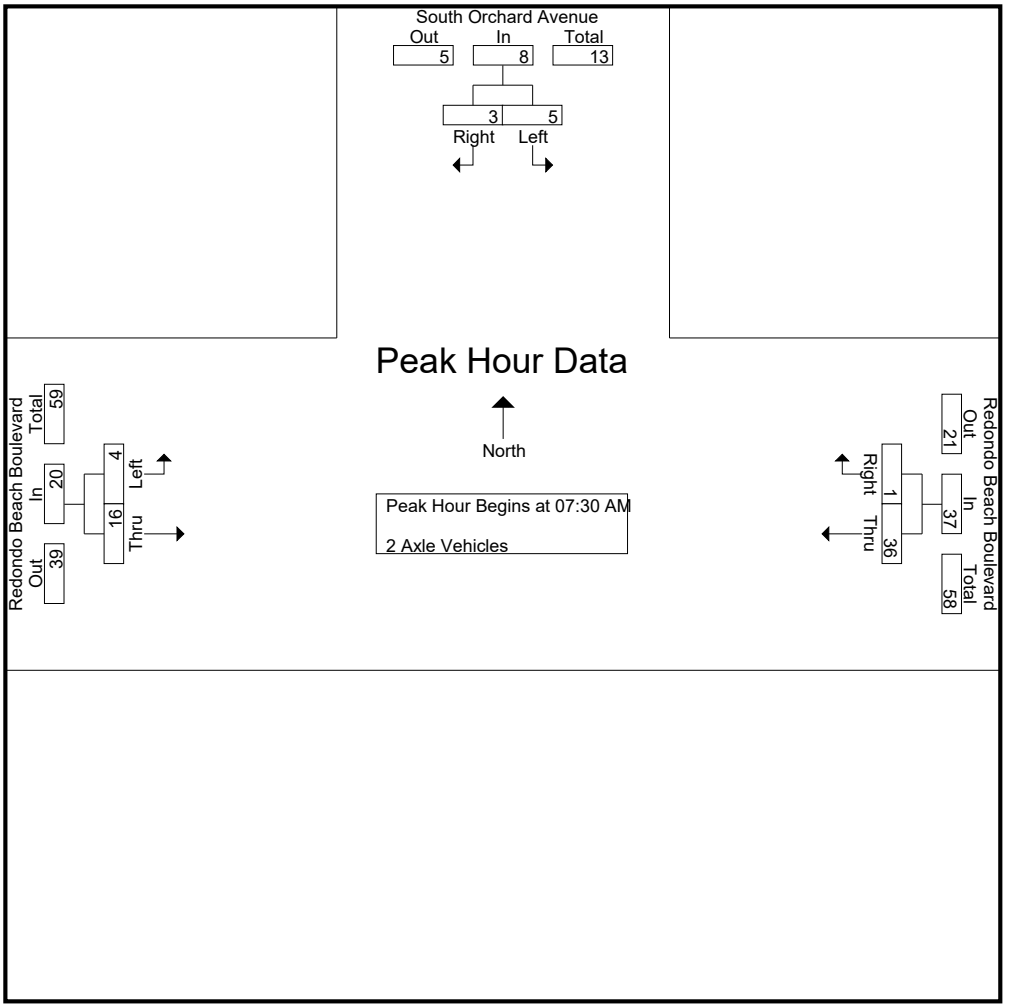
	South Orchard Avenue Southbound			Redondo Beach Boulevard Westbound			Redondo Beach Boulevard Eastbound			
Start Time	Left	Right	App. Total	Thru	Right	App. Total	Left	Thru	App. Total	Int. Total
07:00 AM	0	3	3	7	2	9	1	3	4	16
07:15 AM	0	1	1	3	2	5	1	3	4	10
07:30 AM	2	1	3	8	0	8	2	3	5	16
07:45 AM	1	2	3	6	0	6	0	1	1	10
Total	3	7	10	24	4	28	4	10	14	52
08:00 AM	1	0	1	12	0	12	1	9	10	23
08:15 AM	1	0	1	10	1	11	1	3	4	16
08:30 AM	1	1	2	7	2	9	0	1	1	12
08:45 AM	0	0	0	7	1	8	0	7	7	15
Total	3	1	4	36	4	40	2	20	22	66
09:00 AM	1	0	1	4	1	5	0	2	2	8
09:15 AM	3	0	3	9	4	13	1	0	1	17
09:30 AM	2	0	2	5	0	5	0	6	6	13
09:45 AM	2	0	2	2	2	4	2	3	5	11
Total	8	0	8	20	7	27	3	11	14	49
Grand Total	14	8	22	80	15	95	9	41	50	167
Apprch %	63.6	36.4		84.2	15.8		18	82		
Total %	8.4	4.8	13.2	47.9	9	56.9	5.4	24.6	29.9	

	South Orchard Avenue Southbound			Redondo Beach Boulevard Westbound			Redondo Beach Boulevard Eastbound			
Start Time	Left	Right	App. Total	Thru	Right	App. Total	Left	Thru	App. Total	Int. Total
Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 07:30 AM										
07:30 AM	**2**	1	**3**	8	0	8	**2**	3	5	16
07:45 AM	1	**2**	3	6	0	6	0	1	1	10
08:00 AM	1	0	1	**12**	0	**12**	1	**9**	**10**	**23**
08:15 AM	1	0	1	10	**1**	11	1	3	4	16
Total Volume	5	3	8	36	1	37	4	16	20	65
% App. Total	62.5	37.5		97.3	2.7		20	80		
PHF	.625	.375	.667	.750	.250	.771	.500	.444	.500	.707

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City of Gardena
N/S: South Orchard Avenue
E/W: Redondo Beach Boulevard
Weather: Clear

File Name : 08_GDA_S Orchard_Redondo Beach AM
Site Code : 05719380
Start Date : 5/23/2019



Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:30 AM			07:30 AM			07:30 AM		
+0 mins.	**2**	1	**3**	8	0	8	**2**	3	5
+15 mins.	1	**2**	3	6	0	6	0	1	1
+30 mins.	1	0	1	**12**	0	**12**	1	**9**	**10**
+45 mins.	1	0	1	10	**1**	11	1	3	4
Total Volume	5	3	8	36	1	37	4	16	20
% App. Total	62.5	37.5		97.3	2.7		20	80	
PHF	.625	.375	.667	.750	.250	.771	.500	.444	.500

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City of Gardena
N/S: South Orchard Avenue
E/W: Redondo Beach Boulevard
Weather: Clear

File Name : 08_GDA_S Orchard_Redondo Beach AM
Site Code : 05719380
Start Date : 5/23/2019
Page No : 1

Groups Printed- 3+ Axle Trucks

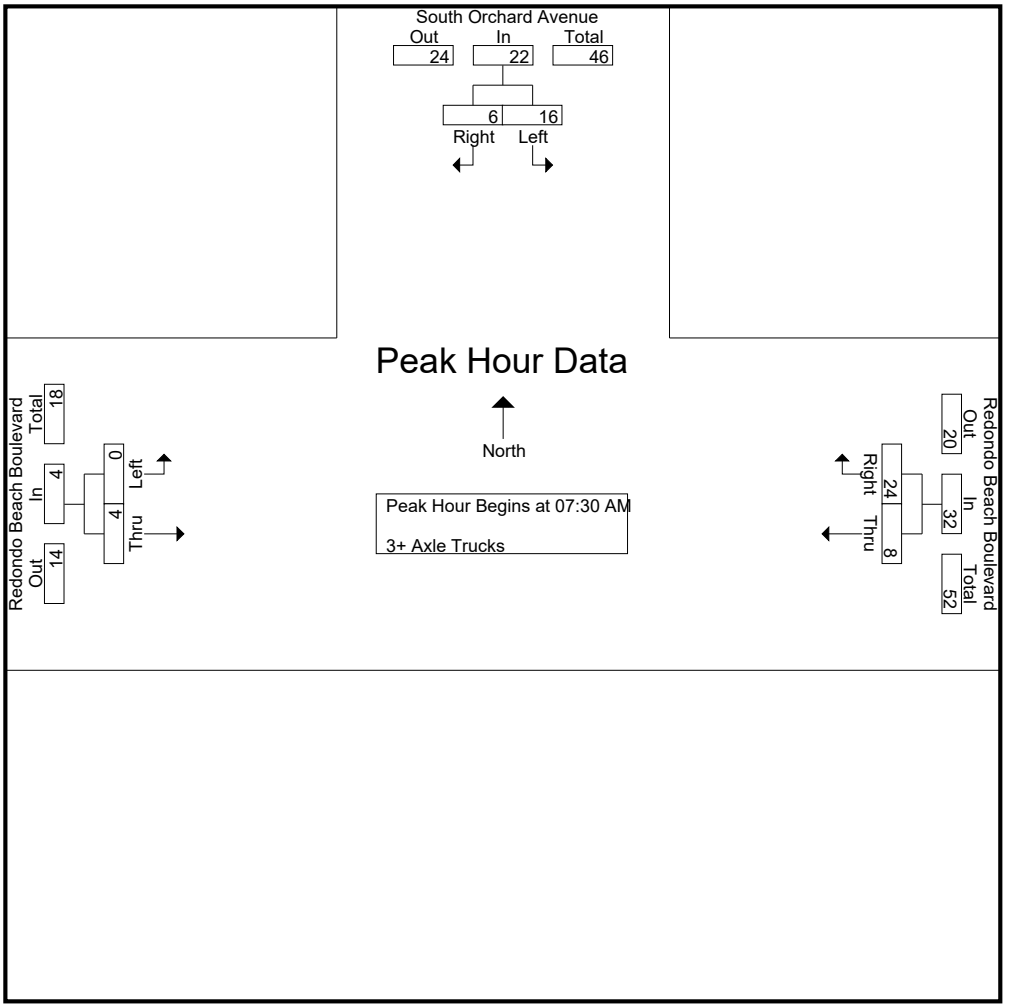
	South Orchard Avenue Southbound			Redondo Beach Boulevard Westbound			Redondo Beach Boulevard Eastbound			
Start Time	Left	Right	App. Total	Thru	Right	App. Total	Left	Thru	App. Total	Int. Total
07:00 AM	1	1	2	3	5	8	0	2	2	12
07:15 AM	4	0	4	2	1	3	1	2	3	10
07:30 AM	4	1	5	2	3	5	0	2	2	12
07:45 AM	2	2	4	1	8	9	0	1	1	14
Total	11	4	15	8	17	25	1	7	8	48
08:00 AM	6	3	9	2	6	8	0	0	0	17
08:15 AM	4	0	4	3	7	10	0	1	1	15
08:30 AM	3	2	5	3	6	9	0	1	1	15
08:45 AM	7	0	7	2	2	4	1	2	3	14
Total	20	5	25	10	21	31	1	4	5	61
09:00 AM	3	1	4	2	5	7	1	1	2	13
09:15 AM	5	2	7	3	6	9	0	3	3	19
09:30 AM	7	0	7	3	4	7	1	3	4	18
09:45 AM	5	2	7	3	8	11	0	1	1	19
Total	20	5	25	11	23	34	2	8	10	69
Grand Total	51	14	65	29	61	90	4	19	23	178
Apprch %	78.5	21.5		32.2	67.8		17.4	82.6		
Total %	28.7	7.9	36.5	16.3	34.3	50.6	2.2	10.7	12.9	

	South Orchard Avenue Southbound			Redondo Beach Boulevard Westbound			Redondo Beach Boulevard Eastbound			
Start Time	Left	Right	App. Total	Thru	Right	App. Total	Left	Thru	App. Total	Int. Total
Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 07:30 AM										
07:30 AM	4	1	5	2	3	5	0	**2**	**2**	12
07:45 AM	2	2	4	1	**8**	9	0	1	1	14
08:00 AM	**6**	**3**	**9**	2	6	8	0	0	0	**17**
08:15 AM	4	0	4	**3**	7	**10**	0	1	1	15
Total Volume	16	6	22	8	24	32	0	4	4	58
% App. Total	72.7	27.3		25	75		0	100		
PHF	.667	.500	.611	.667	.750	.800	.000	.500	.500	.853

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City of Gardena
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Weather: Clear

File Name : 08_GDA_S Orchard_Redondo Beach AM
Site Code : 05719380
Start Date : 5/23/2019



Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:30 AM			07:30 AM			07:30 AM		
+0 mins.	4	1	5	2	3	5	0	**2**	**2**
+15 mins.	2	2	4	1	**8**	9	0	1	1
+30 mins.	**6**	**3**	**9**	2	6	8	0	0	0
+45 mins.	4	0	4	**3**	7	**10**	0	1	1
Total Volume	16	6	22	8	24	32	0	4	4
% App. Total	72.7	27.3		25	75		0	100	
PHF	.667	.500	.611	.667	.750	.800	.000	.500	.500

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City of Gardena
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Weather: Clear

File Name : 08_GDA_S Orchard_Redondo Beach PM
Site Code : 05719380
Start Date : 5/23/2019
Page No : 1

Groups Printed- Passenger Vehicles - Buses - 2 Axle Vehicles - 3+ Axle Trucks

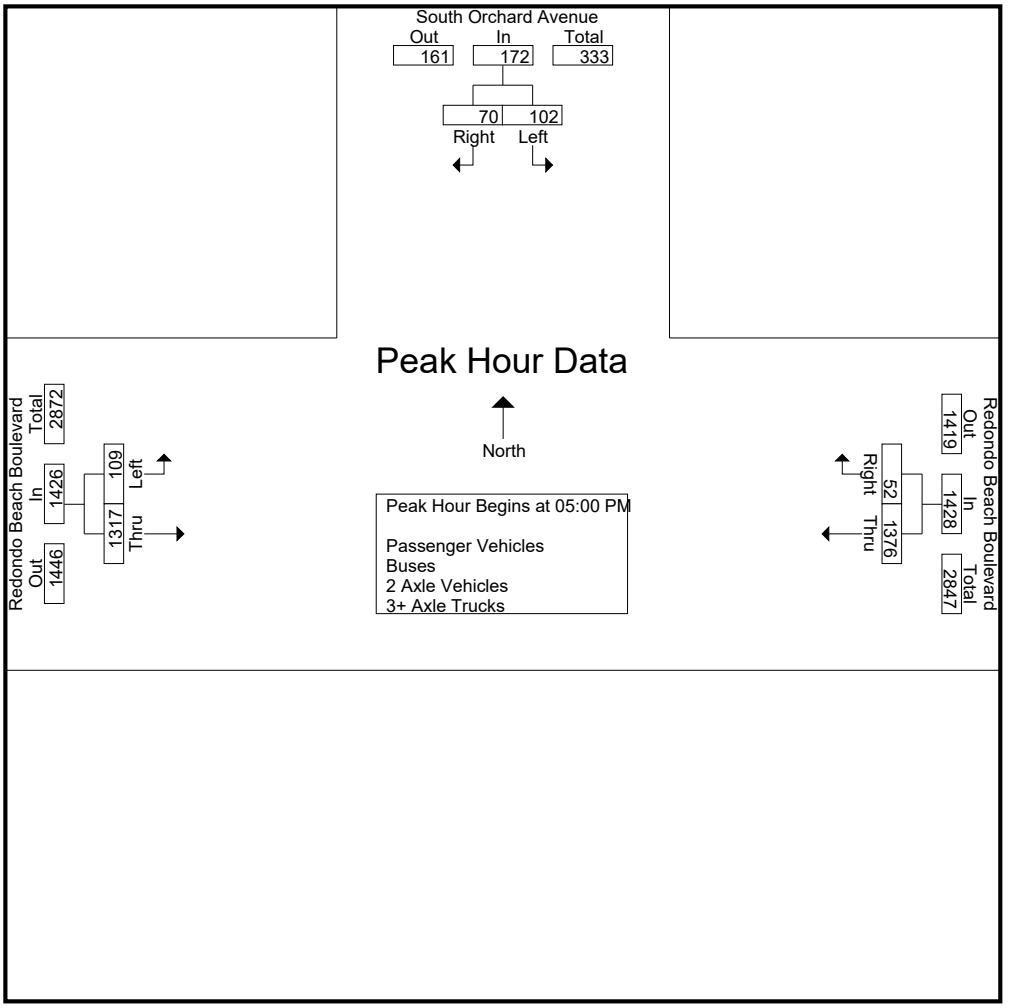
	South Orchard Avenue Southbound			Redondo Beach Boulevard Westbound			Redondo Beach Boulevard Eastbound			
Start Time	Left	Right	App. Total	Thru	Right	App. Total	Left	Thru	App. Total	Int. Total
03:00 PM	32	24	56	320	9	329	10	317	327	712
03:15 PM	33	18	51	300	8	308	23	314	337	696
03:30 PM	22	9	31	309	9	318	20	307	327	676
03:45 PM	29	14	43	308	14	322	29	325	354	719
Total	116	65	181	1237	40	1277	82	1263	1345	2803
04:00 PM	26	18	44	280	17	297	19	331	350	691
04:15 PM	26	17	43	303	11	314	29	339	368	725
04:30 PM	28	9	37	341	12	353	19	337	356	746
04:45 PM	37	26	63	306	14	320	24	315	339	722
Total	117	70	187	1230	54	1284	91	1322	1413	2884
05:00 PM	22	21	43	343	7	350	29	325	354	747
05:15 PM	28	12	40	294	15	309	26	358	384	733
05:30 PM	30	20	50	379	19	398	26	320	346	794
05:45 PM	22	17	39	360	11	371	28	314	342	752
Total	102	70	172	1376	52	1428	109	1317	1426	3026
Grand Total	335	205	540	3843	146	3989	282	3902	4184	8713
Apprch %	62	38		96.3	3.7		6.7	93.3		
Total %	3.8	2.4	6.2	44.1	1.7	45.8	3.2	44.8	48	
Passenger Vehicles	296	186	482	3800	121	3921	269	3803	4072	8475
% Passenger Vehicles	88.4	90.7	89.3	98.9	82.9	98.3	95.4	97.5	97.3	97.3
Buses	0	0	0	8	0	8	0	14	14	22
% Buses	0	0	0	0.2	0	0.2	0	0.4	0.3	0.3
2 Axle Vehicles	16	16	32	27	14	41	10	61	71	144
% 2 Axle Vehicles	4.8	7.8	5.9	0.7	9.6	1	3.5	1.6	1.7	1.7
3+ Axle Trucks	23	3	26	8	11	19	3	24	27	72
% 3+ Axle Trucks	6.9	1.5	4.8	0.2	7.5	0.5	1.1	0.6	0.6	0.8

	South Orchard Avenue Southbound			Redondo Beach Boulevard Westbound			Redondo Beach Boulevard Eastbound			
Start Time	Left	Right	App. Total	Thru	Right	App. Total	Left	Thru	App. Total	Int. Total
Peak Hour Analysis From 03:00 PM to 05:45 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 05:00 PM										
05:00 PM	22	**21**	43	343	7	350	**29**	325	354	747
05:15 PM	28	12	40	294	15	309	26	**358**	**384**	733
05:30 PM	**30**	20	**50**	**379**	**19**	**398**	26	320	346	**794**
05:45 PM	22	17	39	360	11	371	28	314	342	752
Total Volume	102	70	172	1376	52	1428	109	1317	1426	3026
% App. Total	59.3	40.7		96.4	3.6		7.6	92.4		
PHF	.850	.833	.860	.908	.684	.897	.940	.920	.928	.953

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City of Gardena
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Site Code : 05719380
Start Date : 5/23/2019



Peak Hour Analysis From 03:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:45 PM			05:00 PM			04:30 PM		
+0 mins.	**37**	**26**	**63**	343	7	350	19	337	356
+15 mins.	22	21	43	294	15	309	24	315	339
+30 mins.	28	12	40	**379**	**19**	**398**	**29**	325	354
+45 mins.	30	20	50	360	11	371	26	**358**	**384**
Total Volume	117	79	196	1376	52	1428	98	1335	1433
% App. Total	59.7	40.3		96.4	3.6		6.8	93.2	
PHF	.791	.760	.778	.908	.684	.897	.845	.932	.933

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City of Gardena
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File Name : 08_GDA_S Orchard_Redondo Beach PM
Site Code : 05719380
Start Date : 5/23/2019
Page No : 1

Groups Printed- Passenger Vehicles

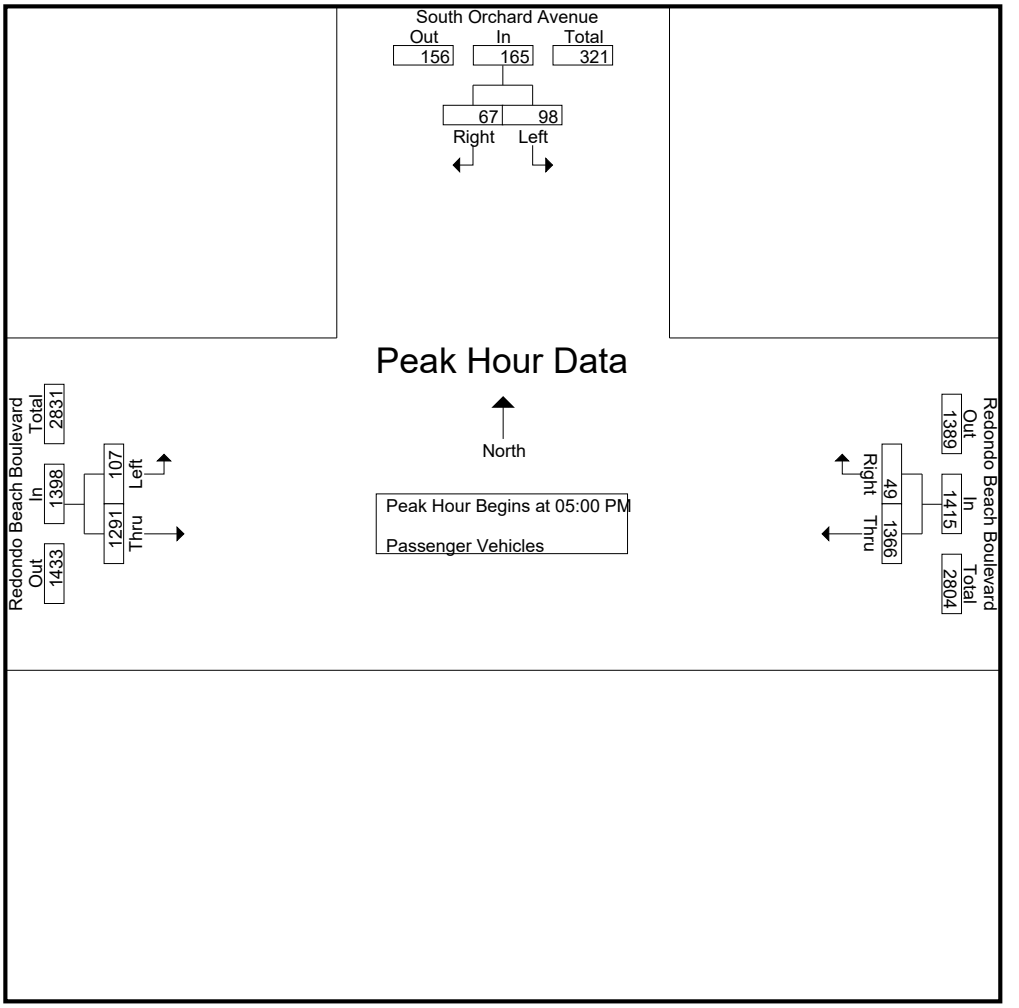
	South Orchard Avenue Southbound			Redondo Beach Boulevard Westbound			Redondo Beach Boulevard Eastbound			
Start Time	Left	Right	App. Total	Thru	Right	App. Total	Left	Thru	App. Total	Int. Total
03:00 PM	27	21	48	318	4	322	9	309	318	688
03:15 PM	28	16	44	294	3	297	20	304	324	665
03:30 PM	14	7	21	303	7	310	18	296	314	645
03:45 PM	25	11	36	302	9	311	27	315	342	689
Total	94	55	149	1217	23	1240	74	1224	1298	2687
04:00 PM	22	15	37	275	13	288	19	323	342	667
04:15 PM	21	15	36	301	10	311	28	331	359	706
04:30 PM	26	9	35	337	12	349	18	328	346	730
04:45 PM	35	25	60	304	14	318	23	306	329	707
Total	104	64	168	1217	49	1266	88	1288	1376	2810
05:00 PM	21	19	40	340	7	347	28	318	346	733
05:15 PM	26	12	38	292	14	306	26	354	380	724
05:30 PM	30	20	50	378	18	396	26	314	340	786
05:45 PM	21	16	37	356	10	366	27	305	332	735
Total	98	67	165	1366	49	1415	107	1291	1398	2978
Grand Total	296	186	482	3800	121	3921	269	3803	4072	8475
Apprch %	61.4	38.6		96.9	3.1		6.6	93.4		
Total %	3.5	2.2	5.7	44.8	1.4	46.3	3.2	44.9	48	

	South Orchard Avenue Southbound			Redondo Beach Boulevard Westbound			Redondo Beach Boulevard Eastbound			
Start Time	Left	Right	App. Total	Thru	Right	App. Total	Left	Thru	App. Total	Int. Total
Peak Hour Analysis From 05:00 PM to 05:45 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 05:00 PM										
05:00 PM	21	19	40	340	7	347	**28**	318	346	733
05:15 PM	26	12	38	292	14	306	26	**354**	**380**	724
05:30 PM	**30**	**20**	**50**	**378**	**18**	**396**	26	314	340	**786**
05:45 PM	21	16	37	356	10	366	27	305	332	735
Total Volume	98	67	165	1366	49	1415	107	1291	1398	2978
% App. Total	59.4	40.6		96.5	3.5		7.7	92.3		
PHF	.817	.838	.825	.903	.681	.893	.955	.912	.920	.947

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City of Gardena
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Weather: Clear

File Name : 08_GDA_S Orchard_Redondo Beach PM
Site Code : 05719380
Start Date : 5/23/2019



Peak Hour Analysis From 05:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	05:00 PM			05:00 PM			05:00 PM		
+0 mins.	21	19	40	340	7	347	**28**	318	346
+15 mins.	26	12	38	292	14	306	26	**354**	**380**
+30 mins.	**30**	**20**	**50**	**378**	**18**	**396**	26	314	340
+45 mins.	21	16	37	356	10	366	27	305	332
Total Volume	98	67	165	1366	49	1415	107	1291	1398
% App. Total	59.4	40.6		96.5	3.5		7.7	92.3	
PHF	.817	.838	.825	.903	.681	.893	.955	.912	.920

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City of Gardena
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File Name : 08_GDA_S Orchard_Redondo Beach PM
Site Code : 05719380
Start Date : 5/23/2019
Page No : 1

Groups Printed- Buses

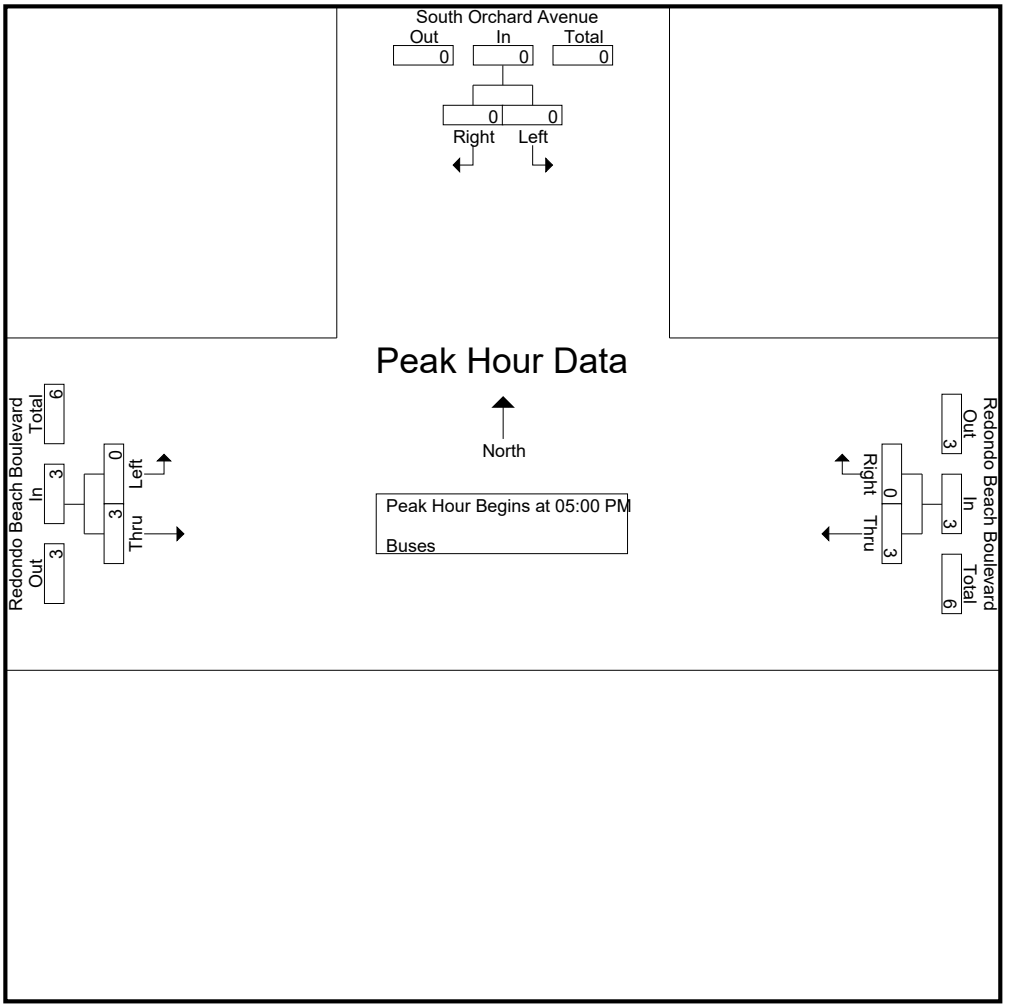
	South Orchard Avenue Southbound			Redondo Beach Boulevard Westbound			Redondo Beach Boulevard Eastbound			
Start Time	Left	Right	App. Total	Thru	Right	App. Total	Left	Thru	App. Total	Int. Total
03:00 PM	0	0	0	0	0	0	0	0	0	0
03:15 PM	0	0	0	2	0	2	0	2	2	4
03:30 PM	0	0	0	1	0	1	0	4	4	5
03:45 PM	0	0	0	1	0	1	0	1	1	2
Total	0	0	0	4	0	4	0	7	7	11
04:00 PM	0	0	0	0	0	0	0	0	0	0
04:15 PM	0	0	0	0	0	0	0	0	0	0
04:30 PM	0	0	0	1	0	1	0	3	3	4
04:45 PM	0	0	0	0	0	0	0	1	1	1
Total	0	0	0	1	0	1	0	4	4	5
05:00 PM	0	0	0	1	0	1	0	1	1	2
05:15 PM	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	0	0	1	0	1	0	0	0	1
05:45 PM	0	0	0	1	0	1	0	2	2	3
Total	0	0	0	3	0	3	0	3	3	6
Grand Total	0	0	0	8	0	8	0	14	14	22
Apprch %	0	0		100	0		0	100		
Total %	0	0	0	36.4	0	36.4	0	63.6	63.6	

	South Orchard Avenue Southbound			Redondo Beach Boulevard Westbound			Redondo Beach Boulevard Eastbound			
Start Time	Left	Right	App. Total	Thru	Right	App. Total	Left	Thru	App. Total	Int. Total
Peak Hour Analysis From 05:00 PM to 05:45 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 05:00 PM										
05:00 PM	0	0	0	**1**	0	**1**	0	1	1	2
05:15 PM	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	0	0	1	0	1	0	0	0	1
05:45 PM	0	0	0	1	0	1	0	**2**	**2**	**3**
Total Volume	0	0	0	3	0	3	0	3	3	6
% App. Total	0	0		100	0		0	100		
PHF	.000	.000	.000	.750	.000	.750	.000	.375	.375	.500

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Weather: Clear

File Name : 08_GDA_S Orchard_Redondo Beach PM
Site Code : 05719380
Start Date : 5/23/2019



Peak Hour Analysis From 05:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	05:00 PM			05:00 PM			05:00 PM		
+0 mins.	0	0	0	**1**	0	**1**	0	1	1
+15 mins.	0	0	0	0	0	0	0	0	0
+30 mins.	0	0	0	1	0	1	0	0	0
+45 mins.	0	0	0	1	0	1	0	**2**	**2**
Total Volume	0	0	0	3	0	3	0	3	3
% App. Total	0	0		100	0		0	100	
PHF	.000	.000	.000	.750	.000	.750	.000	.375	.375

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City of Gardena
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File Name : 08_GDA_S Orchard_Redondo Beach PM
Site Code : 05719380
Start Date : 5/23/2019
Page No : 1

Groups Printed- 2 Axle Vehicles

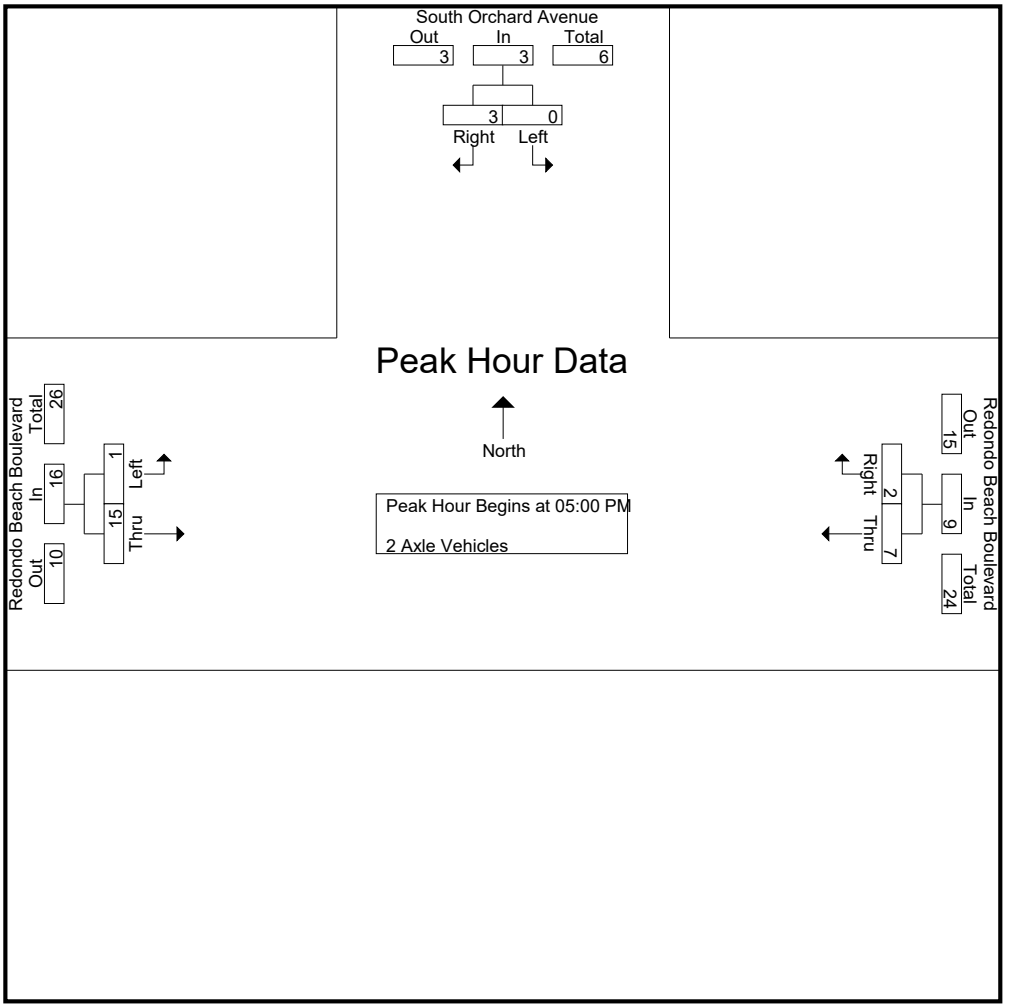
	South Orchard Avenue Southbound			Redondo Beach Boulevard Westbound			Redondo Beach Boulevard Eastbound			
Start Time	Left	Right	App. Total	Thru	Right	App. Total	Left	Thru	App. Total	Int. Total
03:00 PM	2	3	5	2	4	6	1	7	8	19
03:15 PM	3	2	5	3	3	6	3	2	5	16
03:30 PM	5	2	7	2	0	2	1	6	7	16
03:45 PM	2	2	4	3	4	7	2	8	10	21
Total	12	9	21	10	11	21	7	23	30	72
04:00 PM	1	2	3	4	1	5	0	6	6	14
04:15 PM	2	2	4	2	0	2	0	5	5	11
04:30 PM	1	0	1	2	0	2	1	6	7	10
04:45 PM	0	0	0	2	0	2	1	6	7	9
Total	4	4	8	10	1	11	2	23	25	44
05:00 PM	0	2	2	2	0	2	0	4	4	8
05:15 PM	0	0	0	2	1	3	0	2	2	5
05:30 PM	0	0	0	0	1	1	0	5	5	6
05:45 PM	0	1	1	3	0	3	1	4	5	9
Total	0	3	3	7	2	9	1	15	16	28
Grand Total	16	16	32	27	14	41	10	61	71	144
Apprch %	50	50		65.9	34.1		14.1	85.9		
Total %	11.1	11.1	22.2	18.8	9.7	28.5	6.9	42.4	49.3	

	South Orchard Avenue Southbound			Redondo Beach Boulevard Westbound			Redondo Beach Boulevard Eastbound			
Start Time	Left	Right	App. Total	Thru	Right	App. Total	Left	Thru	App. Total	Int. Total
Peak Hour Analysis From 05:00 PM to 05:45 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 05:00 PM										
05:00 PM	0	**2**	**2**	2	0	2	0	4	4	8
05:15 PM	0	0	0	2	**1**	**3**	0	2	2	5
05:30 PM	0	0	0	0	1	1	0	**5**	**5**	6
05:45 PM	0	1	1	**3**	0	3	**1**	4	5	**9**
Total Volume	0	3	3	7	2	9	1	15	16	28
% App. Total	0	100		77.8	22.2		6.2	93.8		
PHF	.000	.375	.375	.583	.500	.750	.250	.750	.800	.778

Counts Unlimited
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City of Gardena
N/S: South Orchard Avenue
E/W: Redondo Beach Boulevard
Weather: Clear

File Name : 08_GDA_S Orchard_Redondo Beach PM
Site Code : 05719380
Start Date : 5/23/2019



Peak Hour Analysis From 05:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	05:00 PM			05:00 PM			05:00 PM		
+0 mins.	0	**2**	**2**	2	0	2	0	4	4
+15 mins.	0	0	0	2	**1**	**3**	0	2	2
+30 mins.	0	0	0	0	1	1	0	**5**	**5**
+45 mins.	0	1	1	**3**	0	3	**1**	4	5
Total Volume	0	3	3	7	2	9	1	15	16
% App. Total	0	100		77.8	22.2		6.2	93.8	
PHF	.000	.375	.375	.583	.500	.750	.250	.750	.800

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City of Gardena
N/S: South Orchard Avenue
E/W: Redondo Beach Boulevard
Weather: Clear

File Name : 08_GDA_S Orchard_Redondo Beach PM
Site Code : 05719380
Start Date : 5/23/2019
Page No : 1

Groups Printed- 3+ Axle Trucks

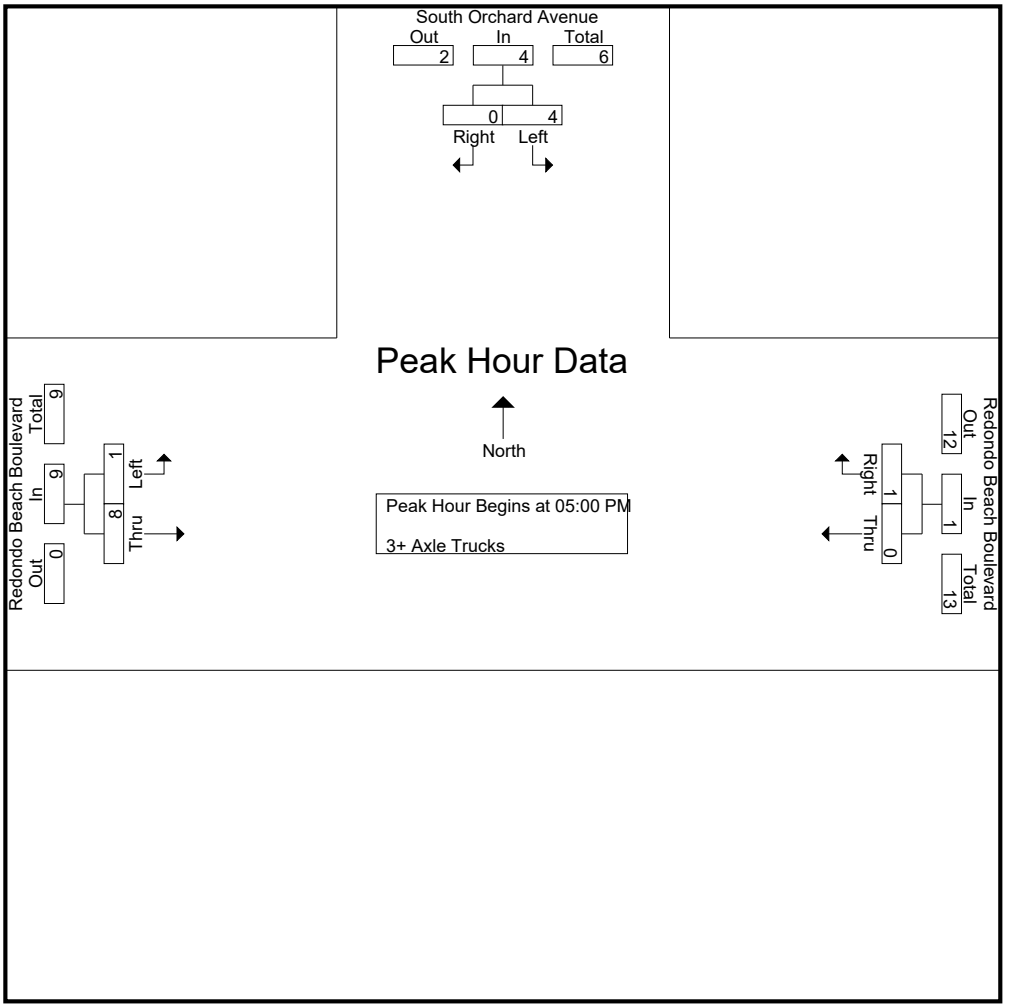
	South Orchard Avenue Southbound			Redondo Beach Boulevard Westbound			Redondo Beach Boulevard Eastbound			
Start Time	Left	Right	App. Total	Thru	Right	App. Total	Left	Thru	App. Total	Int. Total
03:00 PM	3	0	3	0	1	1	0	1	1	5
03:15 PM	2	0	2	1	2	3	0	6	6	11
03:30 PM	3	0	3	3	2	5	1	1	2	10
03:45 PM	2	1	3	2	1	3	0	1	1	7
Total	10	1	11	6	6	12	1	9	10	33
04:00 PM	3	1	4	1	3	4	0	2	2	10
04:15 PM	3	0	3	0	1	1	1	3	4	8
04:30 PM	1	0	1	1	0	1	0	0	0	2
04:45 PM	2	1	3	0	0	0	0	2	2	5
Total	9	2	11	2	4	6	1	7	8	25
05:00 PM	1	0	1	0	0	0	1	2	3	4
05:15 PM	2	0	2	0	0	0	0	2	2	4
05:30 PM	0	0	0	0	0	0	0	1	1	1
05:45 PM	1	0	1	0	1	1	0	3	3	5
Total	4	0	4	0	1	1	1	8	9	14
Grand Total	23	3	26	8	11	19	3	24	27	72
Apprch %	88.5	11.5		42.1	57.9		11.1	88.9		
Total %	31.9	4.2	36.1	11.1	15.3	26.4	4.2	33.3	37.5	

	South Orchard Avenue Southbound			Redondo Beach Boulevard Westbound			Redondo Beach Boulevard Eastbound			
Start Time	Left	Right	App. Total	Thru	Right	App. Total	Left	Thru	App. Total	Int. Total
Peak Hour Analysis From 05:00 PM to 05:45 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 05:00 PM										
05:00 PM	1	0	1	0	0	0	**1**	2	**3**	4
05:15 PM	**2**	0	**2**	0	0	0	0	2	2	4
05:30 PM	0	0	0	0	0	0	0	1	1	1
05:45 PM	1	0	1	0	**1**	**1**	0	**3**	3	**5**
Total Volume	4	0	4	0	1	1	1	8	9	14
% App. Total	100	0		0	100		11.1	88.9		
PHF	.500	.000	.500	.000	.250	.250	.250	.667	.750	.700

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City of Gardena
N/S: South Orchard Avenue
E/W: Redondo Beach Boulevard
Weather: Clear

File Name : 08_GDA_S Orchard_Redondo Beach PM
Site Code : 05719380
Start Date : 5/23/2019



Peak Hour Analysis From 05:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	05:00 PM			05:00 PM			05:00 PM		
+0 mins.	1	0	1	0	0	0	**1**	2	**3**
+15 mins.	**2**	0	**2**	0	0	0	0	2	2
+30 mins.	0	0	0	0	0	0	0	1	1
+45 mins.	1	0	1	0	**1**	**1**	0	**3**	3
Total Volume	4	0	4	0	1	1	1	8	9
% App. Total	100	0		0	100		11.1	88.9	
PHF	.500	.000	.500	.000	.250	.250	.250	.667	.750

Location: Gardena
N/S: South Orchard Avenue
E/W: Redondo Beach Blvd

Date: 5/23/2019
Day: Thursday

PEDESTRIANS

	North Leg South Orchard Avenue	East Leg Redondo Beach Blvd	South Leg Dead End	West Leg Redondo Beach Blvd	
	Pedestrians	Pedestrians	Pedestrians	Pedestrians	
7:00 AM	0	1	0	0	1
7:15 AM	2	1	0	0	3
7:30 AM	3	0	0	0	3
7:45 AM	2	2	0	2	6
8:00 AM	2	0	0	0	2
8:15 AM	2	0	0	1	3
8:30 AM	2	4	0	1	7
8:45 AM	2	1	0	0	3
9:00 AM	1	0	0	0	1
9:15 AM	0	1	0	0	1
9:30 AM	6	2	0	1	9
9:45 AM	2	3	0	2	7
TOTAL VOLUMES:	24	15	0	7	46

	North Leg South Orchard Avenue	East Leg Redondo Beach Blvd	South Leg Dead End	West Leg Redondo Beach Blvd	
	Pedestrians	Pedestrians	Pedestrians	Pedestrians	
3:00 PM	4	1	0	2	7
3:15 PM	0	1	0	1	2
3:30 PM	2	3	0	0	5
3:45 PM	1	0	0	0	1
4:00 PM	4	1	0	2	7
4:15 PM	2	0	0	0	2
4:30 PM	2	1	0	2	5
4:45 PM	1	0	0	1	2
5:00 PM	1	1	0	0	2
5:15 PM	0	2	0	0	2
5:30 PM	1	0	0	1	2
5:45 PM	1	0	0	0	1
TOTAL VOLUMES:	19	10	0	9	38

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Location: Gardena
N/S: South Orchard Avenue
E/W: Redondo Beach Blvd



Date: 5/23/2019
Day: Thursday

BICYCLES

	Southbound South Orchard Avenue			Westbound Redondo Beach Blvd			Northbound Dead End			Eastbound Redondo Beach Blvd			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	2	0	2
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0	0	0	1	0	1
8:15 AM	0	0	0	0	0	0	0	0	0	0	1	0	1
8:30 AM	0	0	0	0	1	0	0	0	0	0	1	0	2
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
9:30 AM	0	0	0	0	0	0	0	0	0	0	1	0	1
9:45 AM	0	0	0	0	0	0	0	0	0	0	1	0	1
TOTAL VOLUMES:	0	0	0	0	1	0	0	0	0	0	7	0	8

	Southbound South Orchard Avenue			Westbound Redondo Beach Blvd			Northbound Dead End			Eastbound Redondo Beach Blvd			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
3:00 PM	1	0	0	0	1	0	0	0	0	0	2	0	4
3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
3:30 PM	0	0	0	0	1	0	0	0	0	0	0	0	1
3:45 PM	0	0	0	0	0	0	0	0	0	0	1	0	1
4:00 PM	0	0	1	0	0	0	0	0	0	0	0	0	1
4:15 PM	1	0	0	0	0	0	0	0	0	0	0	0	1
4:30 PM	0	0	0	0	1	0	0	0	0	0	1	0	2
4:45 PM	0	0	0	0	0	0	0	0	0	0	2	0	2
5:00 PM	0	0	0	0	1	0	0	0	0	0	0	0	1
5:15 PM	0	0	0	0	1	0	0	0	0	0	0	0	1
5:30 PM	0	0	0	0	2	0	0	0	0	0	0	0	2
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES:	2	0	1	0	7	0	0	0	0	0	6	0	16

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City of Los Angeles
N/S: I-110 Southbound Ramps
E/W: Redondo Beach Boulevard
Weather: Clear

File Name : 09_LAC_110S_Redondo Beach AM
Site Code : 05719380
Start Date : 5/23/2019
Page No : 1

Groups Printed- Passenger Vehicles - Buses - 2 Axle Vehicles - 3+ Axle Trucks

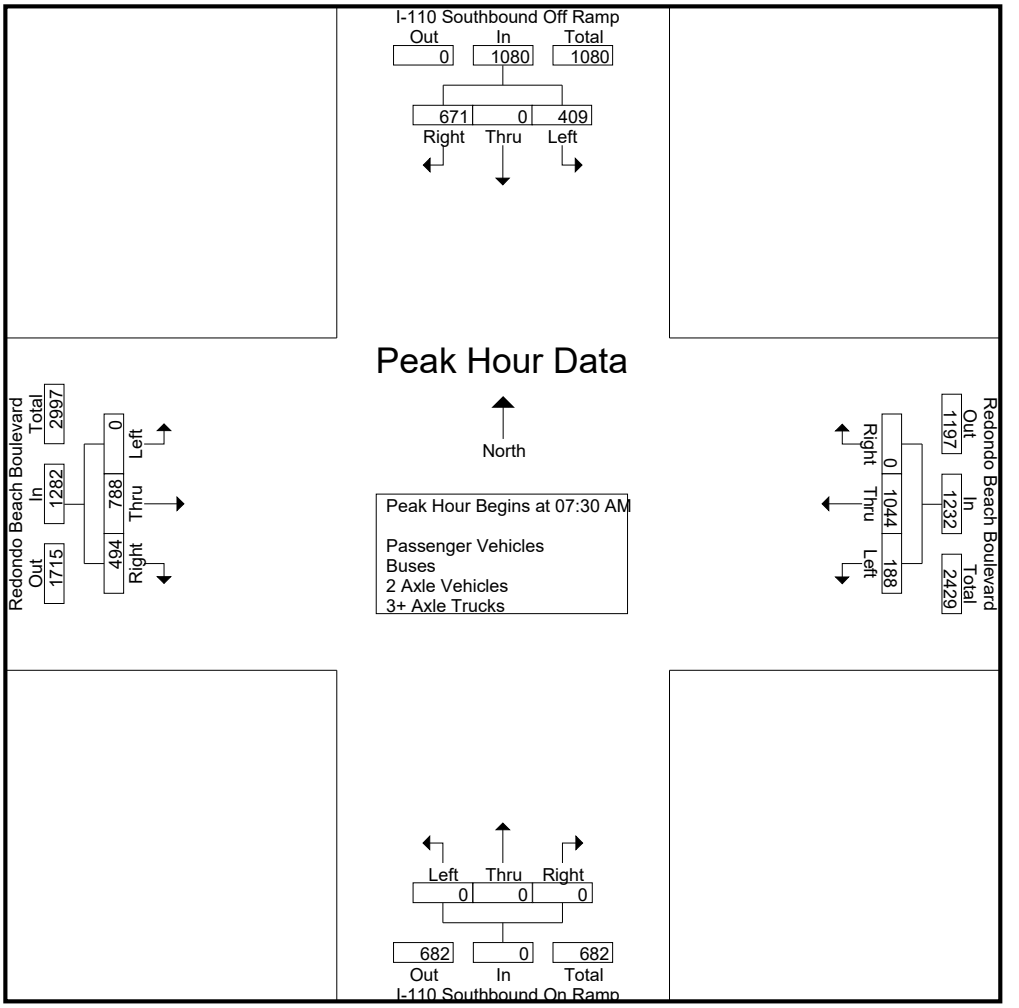
	I-110 Southbound Off Ramp Southbound				Redondo Beach Boulevard Westbound				I-110 Southbound On Ramp Northbound				Redondo Beach Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	105	0	145	250	62	193	0	255	0	0	0	0	0	149	115	264	769
07:15 AM	90	0	132	222	48	265	0	313	0	0	0	0	0	147	130	277	812
07:30 AM	90	0	159	249	59	242	0	301	0	0	0	0	0	185	141	326	876
07:45 AM	105	0	173	278	41	308	0	349	0	0	0	0	0	226	131	357	984
Total	390	0	609	999	210	1008	0	1218	0	0	0	0	0	707	517	1224	3441
08:00 AM	89	0	158	247	37	255	0	292	0	0	0	0	0	187	118	305	844
08:15 AM	125	0	181	306	51	239	0	290	0	0	0	0	0	190	104	294	890
08:30 AM	110	0	196	306	47	216	0	263	0	0	0	0	0	132	81	213	782
08:45 AM	91	0	147	238	20	201	0	221	0	0	0	0	0	165	90	255	714
Total	415	0	682	1097	155	911	0	1066	0	0	0	0	0	674	393	1067	3230
09:00 AM	78	0	141	219	44	205	0	249	0	0	0	0	0	147	93	240	708
09:15 AM	95	2	169	266	35	182	0	217	0	0	0	0	0	169	79	248	731
09:30 AM	81	0	143	224	58	198	0	256	0	0	0	0	0	159	78	237	717
09:45 AM	89	0	156	245	31	206	0	237	0	0	0	0	0	187	92	279	761
Total	343	2	609	954	168	791	0	959	0	0	0	0	0	662	342	1004	2917
Grand Total	1148	2	1900	3050	533	2710	0	3243	0	0	0	0	0	2043	1252	3295	9588
Apprch %	37.6	0.1	62.3		16.4	83.6	0		0	0	0		0	62	38		
Total %	12	0	19.8	31.8	5.6	28.3	0	33.8	0	0	0	0	0	21.3	13.1	34.4	
Passenger Vehicles	1023	2	1807	2832	407	2577	0	2984	0	0	0	0	0	1935	1206	3141	8957
% Passenger Vehicles	89.1	100	95.1	92.9	76.4	95.1	0	92	0	0	0	0	0	94.7	96.3	95.3	93.4
Buses	24	0	8	32	2	8	0	10	0	0	0	0	0	14	4	18	60
% Buses	2.1	0	0.4	1	0.4	0.3	0	0.3	0	0	0	0	0	0.7	0.3	0.5	0.6
2 Axle Vehicles	61	0	46	107	40	68	0	108	0	0	0	0	0	46	20	66	281
% 2 Axle Vehicles	5.3	0	2.4	3.5	7.5	2.5	0	3.3	0	0	0	0	0	2.3	1.6	2	2.9
3+ Axle Trucks	40	0	39	79	84	57	0	141	0	0	0	0	0	48	22	70	290
% 3+ Axle Trucks	3.5	0	2.1	2.6	15.8	2.1	0	4.3	0	0	0	0	0	2.3	1.8	2.1	3

	I-110 Southbound Off Ramp Southbound				Redondo Beach Boulevard Westbound				I-110 Southbound On Ramp Northbound				Redondo Beach Boulevard 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 09:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	90	0	159	249	**59**	242	0	301	0	0	0	0	0	185	**141**	326	876
07:45 AM	105	0	173	278	41	**308**	0	**349**	0	0	0	0	0	**226**	131	**357**	**984**
08:00 AM	89	0	158	247	37	255	0	292	0	0	0	0	0	187	118	305	844
08:15 AM	**125**	0	**181**	**306**	51	239	0	290	0	0	0	0	0	190	104	294	890
Total Volume	409	0	671	1080	188	1044	0	1232	0	0	0	0	0	788	494	1282	3594
% App. Total	37.9	0	62.1		15.3	84.7	0		0	0	0		0	61.5	38.5		
PHF	.818	.000	.927	.882	.797	.847	.000	.883	.000	.000	.000	.000	.000	.872	.876	.898	.913

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City of Los Angeles
N/S: I-110 Southbound Ramps
E/W: Redondo Beach Boulevard
Weather: Clear

File Name : 09_LAC_110S_Redondo Beach AM
Site Code : 05719380
Start Date : 5/23/2019
Page No : 2



Peak Hour Analysis From 07:00 AM to 09:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:45 AM				07:15 AM				07:00 AM				07:30 AM			
+0 mins.	105	0	173	278	48	265	0	313	0	0	0	0	0	185	**141**	326
+15 mins.	89	0	158	247	**59**	242	0	301	0	0	0	0	0	**226**	131	**357**
+30 mins.	**125**	0	181	**306**	41	**308**	0	**349**	0	0	0	0	0	187	118	305
+45 mins.	110	0	**196**	306	37	255	0	292	0	0	0	0	0	190	104	294
Total Volume	429	0	708	1137	185	1070	0	1255	0	0	0	0	0	788	494	1282
% App. Total	37.7	0	62.3		14.7	85.3	0		0	0	0		0	61.5	38.5	
PHF	.858	.000	.903	.929	.784	.869	.000	.899	.000	.000	.000	.000	.000	.872	.876	.898

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City of Los Angeles
N/S: I-110 Southbound Ramps
E/W: Redondo Beach Boulevard
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File Name : 09_LAC_110S_Redondo Beach AM
Site Code : 05719380
Start Date : 5/23/2019
Page No : 1

Groups Printed- Passenger Vehicles

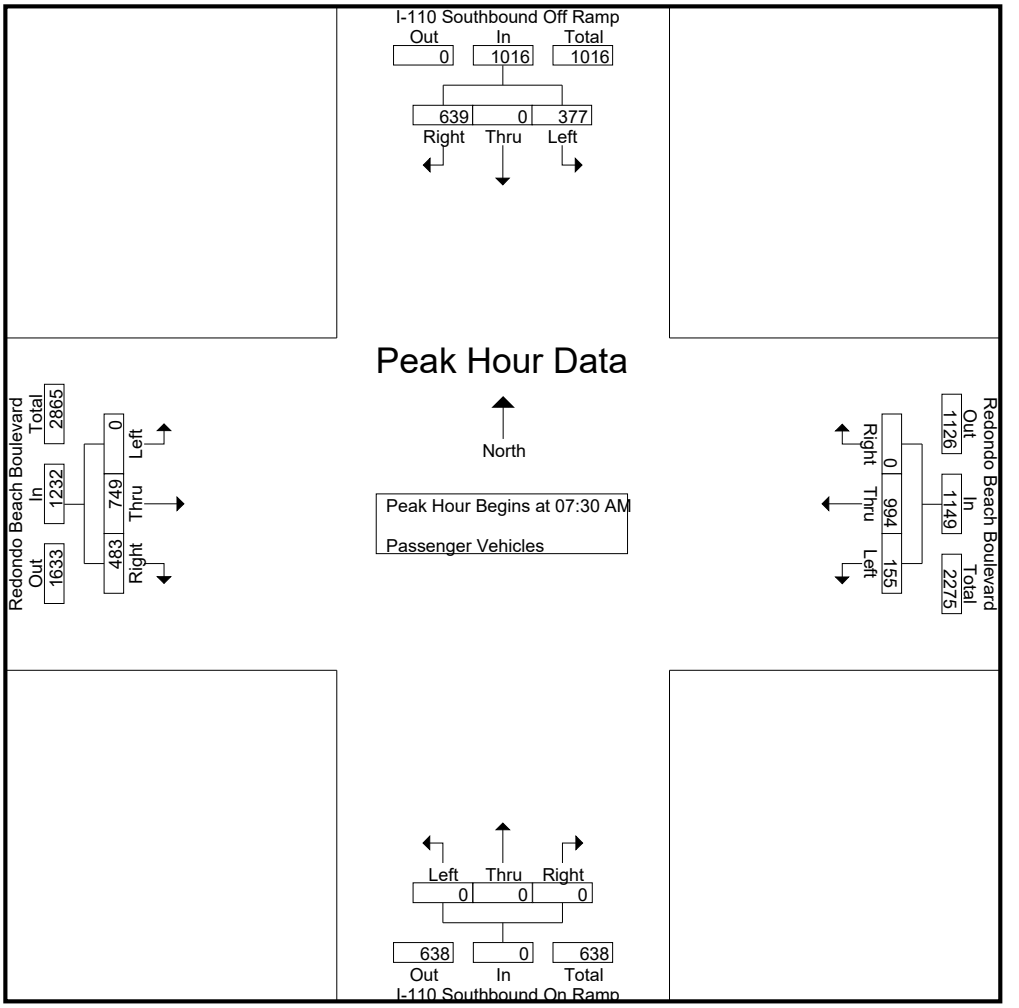
	I-110 Southbound Off Ramp Southbound				Redondo Beach Boulevard Westbound				I-110 Southbound On Ramp Northbound				Redondo Beach Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	98	0	134	232	51	184	0	235	0	0	0	0	0	145	113	258	725
07:15 AM	83	0	127	210	40	258	0	298	0	0	0	0	0	140	124	264	772
07:30 AM	84	0	152	236	53	235	0	288	0	0	0	0	0	171	139	310	834
07:45 AM	98	0	167	265	33	294	0	327	0	0	0	0	0	219	130	349	941
Total	363	0	580	943	177	971	0	1148	0	0	0	0	0	675	506	1181	3272
08:00 AM	83	0	147	230	31	242	0	273	0	0	0	0	0	176	113	289	792
08:15 AM	112	0	173	285	38	223	0	261	0	0	0	0	0	183	101	284	830
08:30 AM	92	0	185	277	33	203	0	236	0	0	0	0	0	122	81	203	716
08:45 AM	82	0	140	222	14	191	0	205	0	0	0	0	0	154	81	235	662
Total	369	0	645	1014	116	859	0	975	0	0	0	0	0	635	376	1011	3000
09:00 AM	66	0	135	201	34	194	0	228	0	0	0	0	0	138	92	230	659
09:15 AM	82	2	156	240	20	170	0	190	0	0	0	0	0	158	75	233	663
09:30 AM	70	0	139	209	38	190	0	228	0	0	0	0	0	148	72	220	657
09:45 AM	73	0	152	225	22	193	0	215	0	0	0	0	0	181	85	266	706
Total	291	2	582	875	114	747	0	861	0	0	0	0	0	625	324	949	2685
Grand Total	1023	2	1807	2832	407	2577	0	2984	0	0	0	0	0	1935	1206	3141	8957
Apprch %	36.1	0.1	63.8		13.6	86.4	0		0	0	0		0	61.6	38.4		
Total %	11.4	0	20.2	31.6	4.5	28.8	0	33.3	0	0	0	0	0	21.6	13.5	35.1	

	I-110 Southbound Off Ramp Southbound				Redondo Beach Boulevard Westbound				I-110 Southbound On Ramp Northbound				Redondo Beach Boulevard 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 07:30 AM to 08:15 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	84	0	152	236	**53**	235	0	288	0	0	0	0	0	171	**139**	310	834
07:45 AM	98	0	167	265	33	**294**	0	**327**	0	0	0	0	0	**219**	130	**349**	**941**
08:00 AM	83	0	147	230	31	242	0	273	0	0	0	0	0	176	113	289	792
08:15 AM	**112**	0	**173**	**285**	38	223	0	261	0	0	0	0	0	183	101	284	830
Total Volume	377	0	639	1016	155	994	0	1149	0	0	0	0	0	749	483	1232	3397
% App. Total	37.1	0	62.9		13.5	86.5	0		0	0	0		0	60.8	39.2		
PHF	.842	.000	.923	.891	.731	.845	.000	.878	.000	.000	.000	.000	.000	.855	.869	.883	.902

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City of Los Angeles
N/S: I-110 Southbound Ramps
E/W: Redondo Beach Boulevard
Weather: Clear

File Name : 09_LAC_110S_Redondo Beach AM
Site Code : 05719380
Start Date : 5/23/2019
Page No : 2



Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:30 AM				07:30 AM				07:30 AM				07:30 AM			
+0 mins.	84	0	152	236	**53**	235	0	288	0	0	0	0	0	171	**139**	310
+15 mins.	98	0	167	265	33	**294**	0	**327**	0	0	0	0	0	**219**	130	**349**
+30 mins.	83	0	147	230	31	242	0	273	0	0	0	0	0	176	113	289
+45 mins.	**112**	0	**173**	**285**	38	223	0	261	0	0	0	0	0	183	101	284
Total Volume	377	0	639	1016	155	994	0	1149	0	0	0	0	0	749	483	1232
% App. Total	37.1	0	62.9		13.5	86.5	0		0	0	0		0	60.8	39.2	
PHF	.842	.000	.923	.891	.731	.845	.000	.878	.000	.000	.000	.000	.000	.855	.869	.883

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City of Los Angeles
N/S: I-110 Southbound Ramps
E/W: Redondo Beach Boulevard
Weather: Clear

File Name : 09_LAC_110S_Redondo Beach AM
Site Code : 05719380
Start Date : 5/23/2019
Page No : 1

Groups Printed- Buses

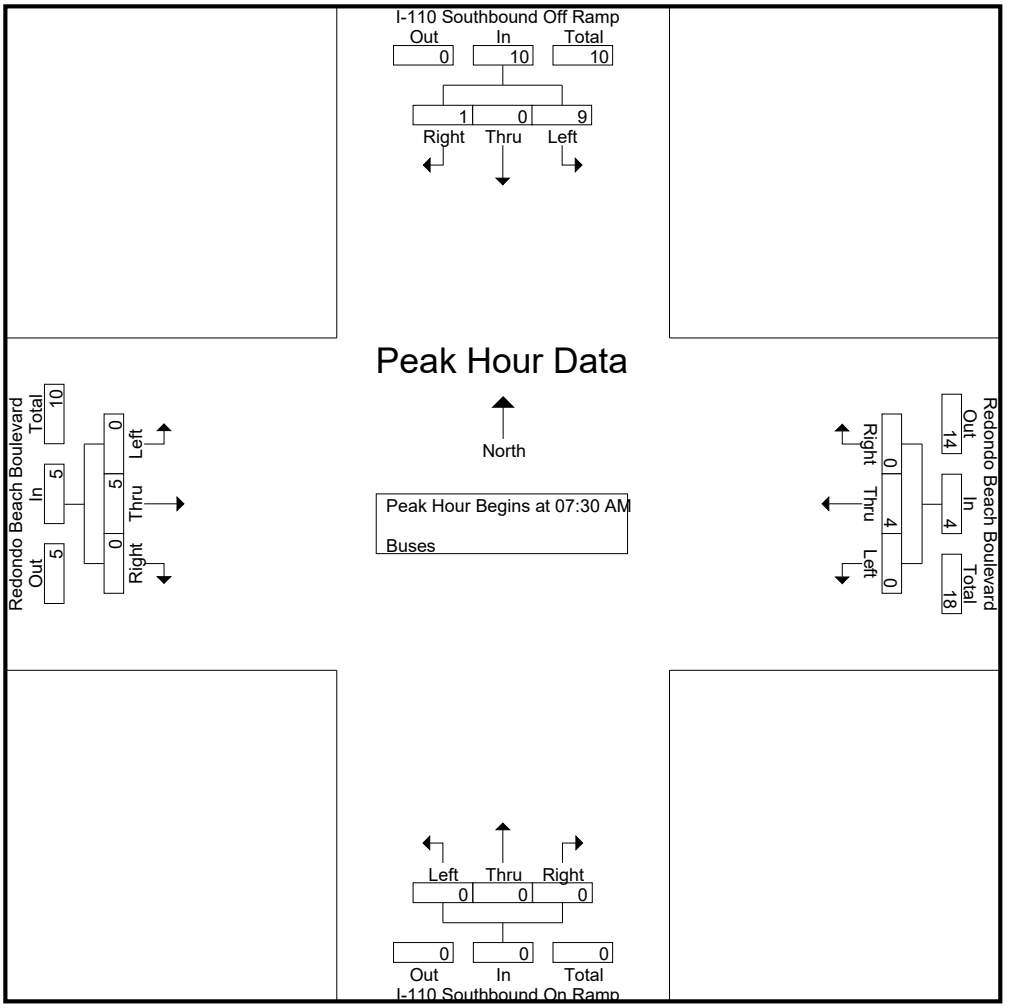
	I-110 Southbound Off Ramp Southbound				Redondo Beach Boulevard Westbound				I-110 Southbound On Ramp Northbound				Redondo Beach Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	0	0	0	0	2	1	0	3	0	0	0	0	0	0	1	1	4
07:15 AM	0	0	2	2	0	1	0	1	0	0	0	0	0	0	2	2	5
07:30 AM	0	0	1	1	0	0	0	0	0	0	0	0	0	3	0	3	4
07:45 AM	1	0	0	1	0	1	0	1	0	0	0	0	0	1	0	1	3
Total	1	0	3	4	2	3	0	5	0	0	0	0	0	4	3	7	16
08:00 AM	2	0	0	2	0	1	0	1	0	0	0	0	0	0	0	0	3
08:15 AM	6	0	0	6	0	2	0	2	0	0	0	0	0	1	0	1	9
08:30 AM	4	0	2	6	0	0	0	0	0	0	0	0	0	3	0	3	9
08:45 AM	3	0	0	3	0	1	0	1	0	0	0	0	0	1	0	1	5
Total	15	0	2	17	0	4	0	4	0	0	0	0	0	5	0	5	26
09:00 AM	4	0	1	5	0	1	0	1	0	0	0	0	0	2	0	2	8
09:15 AM	2	0	2	4	0	0	0	0	0	0	0	0	0	3	1	4	8
09:30 AM	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
09:45 AM	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
Total	8	0	3	11	0	1	0	1	0	0	0	0	0	5	1	6	18
Grand Total	24	0	8	32	2	8	0	10	0	0	0	0	0	14	4	18	60
Apprch %	75	0	25		20	80	0		0	0	0		0	77.8	22.2		
Total %	40	0	13.3	53.3	3.3	13.3	0	16.7	0	0	0	0	0	23.3	6.7	30	

	I-110 Southbound Off Ramp Southbound				Redondo Beach Boulevard Westbound				I-110 Southbound On Ramp Northbound				Redondo Beach Boulevard 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 07:30 AM to 08:15 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	0	0	**1**	1	0	0	0	0	0	0	0	0	0	**3**	0	**3**	4
07:45 AM	1	0	0	1	0	1	0	1	0	0	0	0	0	1	0	1	3
08:00 AM	2	0	0	2	0	1	0	1	0	0	0	0	0	0	0	0	3
08:15 AM	**6**	0	0	**6**	0	**2**	0	**2**	0	0	0	0	0	1	0	1	**9**
Total Volume	9	0	1	10	0	4	0	4	0	0	0	0	0	5	0	5	19
% App. Total	90	0	10		0	100	0		0	0	0		0	100	0		
PHF	.375	.000	.250	.417	.000	.500	.000	.500	.000	.000	.000	.000	.000	.417	.000	.417	.528

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City of Los Angeles
N/S: I-110 Southbound Ramps
E/W: Redondo Beach Boulevard
Weather: Clear

File Name : 09_LAC_110S_Redondo Beach AM
Site Code : 05719380
Start Date : 5/23/2019
Page No : 2



Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:30 AM				07:30 AM				07:30 AM				07:30 AM			
+0 mins.	0	0	**1**	1	0	0	0	0	0	0	0	0	0	**3**	0	**3**
+15 mins.	1	0	0	1	0	1	0	1	0	0	0	0	0	1	0	1
+30 mins.	2	0	0	2	0	1	0	1	0	0	0	0	0	0	0	0
+45 mins.	**6**	0	0	**6**	0	**2**	0	**2**	0	0	0	0	0	1	0	1
Total Volume	9	0	1	10	0	4	0	4	0	0	0	0	0	5	0	5
% App. Total	90	0	10		0	100	0		0	0	0		0	100	0	
PHF	.375	.000	.250	.417	.000	.500	.000	.500	.000	.000	.000	.000	.000	.417	.000	.417

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City of Los Angeles
N/S: I-110 Southbound Ramps
E/W: Redondo Beach Boulevard
Weather: Clear

File Name : 09_LAC_110S_Redondo Beach AM
Site Code : 05719380
Start Date : 5/23/2019
Page No : 1

Groups Printed- 2 Axle Vehicles

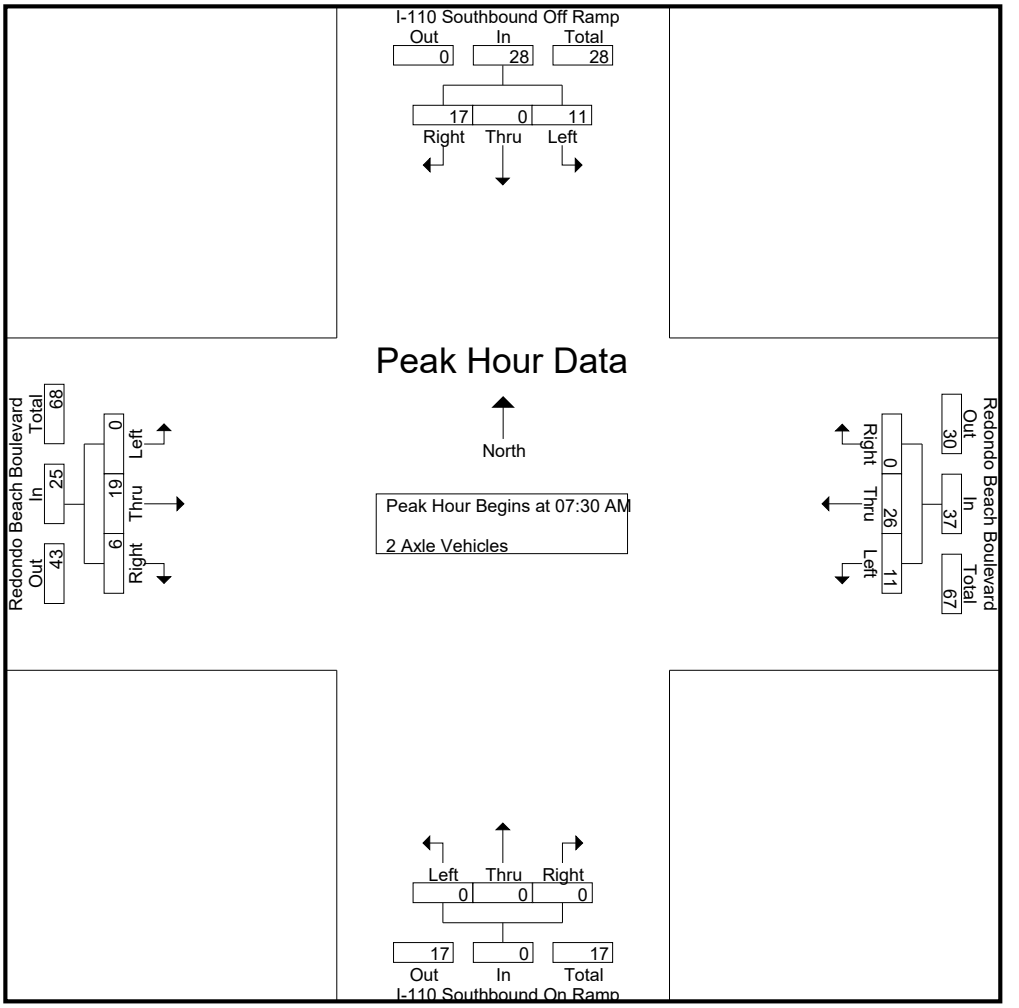
	I-110 Southbound Off Ramp Southbound				Redondo Beach Boulevard Westbound				I-110 Southbound On Ramp Northbound				Redondo Beach Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	4	0	4	8	2	6	0	8	0	0	0	0	0	2	0	2	18
07:15 AM	5	0	3	8	3	3	0	6	0	0	0	0	0	2	3	5	19
07:30 AM	3	0	3	6	2	4	0	6	0	0	0	0	0	5	2	7	19
07:45 AM	2	0	3	5	5	6	0	11	0	0	0	0	0	4	0	4	20
Total	14	0	13	27	12	19	0	31	0	0	0	0	0	13	5	18	76
08:00 AM	2	0	6	8	0	8	0	8	0	0	0	0	0	7	3	10	26
08:15 AM	4	0	5	9	4	8	0	12	0	0	0	0	0	3	1	4	25
08:30 AM	9	0	6	15	3	7	0	10	0	0	0	0	0	3	0	3	28
08:45 AM	6	0	6	12	2	5	0	7	0	0	0	0	0	7	3	10	29
Total	21	0	23	44	9	28	0	37	0	0	0	0	0	20	7	27	108
09:00 AM	6	0	3	9	5	6	0	11	0	0	0	0	0	4	0	4	24
09:15 AM	4	0	4	8	4	8	0	12	0	0	0	0	0	3	1	4	24
09:30 AM	8	0	2	10	6	3	0	9	0	0	0	0	0	4	4	8	27
09:45 AM	8	0	1	9	4	4	0	8	0	0	0	0	0	2	3	5	22
Total	26	0	10	36	19	21	0	40	0	0	0	0	0	13	8	21	97
Grand Total	61	0	46	107	40	68	0	108	0	0	0	0	0	46	20	66	281
Apprch %	57	0	43		37	63	0		0	0	0		0	69.7	30.3		
Total %	21.7	0	16.4	38.1	14.2	24.2	0	38.4	0	0	0	0	0	16.4	7.1	23.5	

	I-110 Southbound Off Ramp Southbound				Redondo Beach Boulevard Westbound				I-110 Southbound On Ramp Northbound				Redondo Beach Boulevard 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 07:30 AM to 08:15 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	3	0	3	6	2	4	0	6	0	0	0	0	0	5	2	7	19
07:45 AM	2	0	3	5	**5**	6	0	11	0	0	0	0	0	4	0	4	20
08:00 AM	2	0	**6**	8	0	**8**	0	8	0	0	0	0	0	**7**	**3**	**10**	**26**
08:15 AM	**4**	0	5	**9**	4	8	0	**12**	0	0	0	0	0	3	1	4	25
Total Volume	11	0	17	28	11	26	0	37	0	0	0	0	0	19	6	25	90
% App. Total	39.3	0	60.7		29.7	70.3	0		0	0	0		0	76	24		
PHF	.688	.000	.708	.778	.550	.813	.000	.771	.000	.000	.000	.000	.000	.679	.500	.625	.865

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City of Los Angeles
N/S: I-110 Southbound Ramps
E/W: Redondo Beach Boulevard
Weather: Clear

File Name : 09_LAC_110S_Redondo Beach AM
Site Code : 05719380
Start Date : 5/23/2019
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Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:30 AM				07:30 AM				07:30 AM				07:30 AM			
+0 mins.	3	0	3	6	2	4	0	6	0	0	0	0	0	5	2	7
+15 mins.	2	0	3	5	**5**	6	0	11	0	0	0	0	0	4	0	4
+30 mins.	2	0	**6**	8	0	**8**	0	8	0	0	0	0	0	**7**	**3**	**10**
+45 mins.	**4**	0	5	**9**	4	8	0	**12**	0	0	0	0	0	3	1	4
Total Volume	11	0	17	28	11	26	0	37	0	0	0	0	0	19	6	25
% App. Total	39.3	0	60.7		29.7	70.3	0		0	0	0		0	76	24	
PHF	.688	.000	.708	.778	.550	.813	.000	.771	.000	.000	.000	.000	.000	.679	.500	.625

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City of Los Angeles
N/S: I-110 Southbound Ramps
E/W: Redondo Beach Boulevard
Weather: Clear

File Name : 09_LAC_110S_Redondo Beach AM
Site Code : 05719380
Start Date : 5/23/2019
Page No : 1

Groups Printed- 3+ Axle Trucks

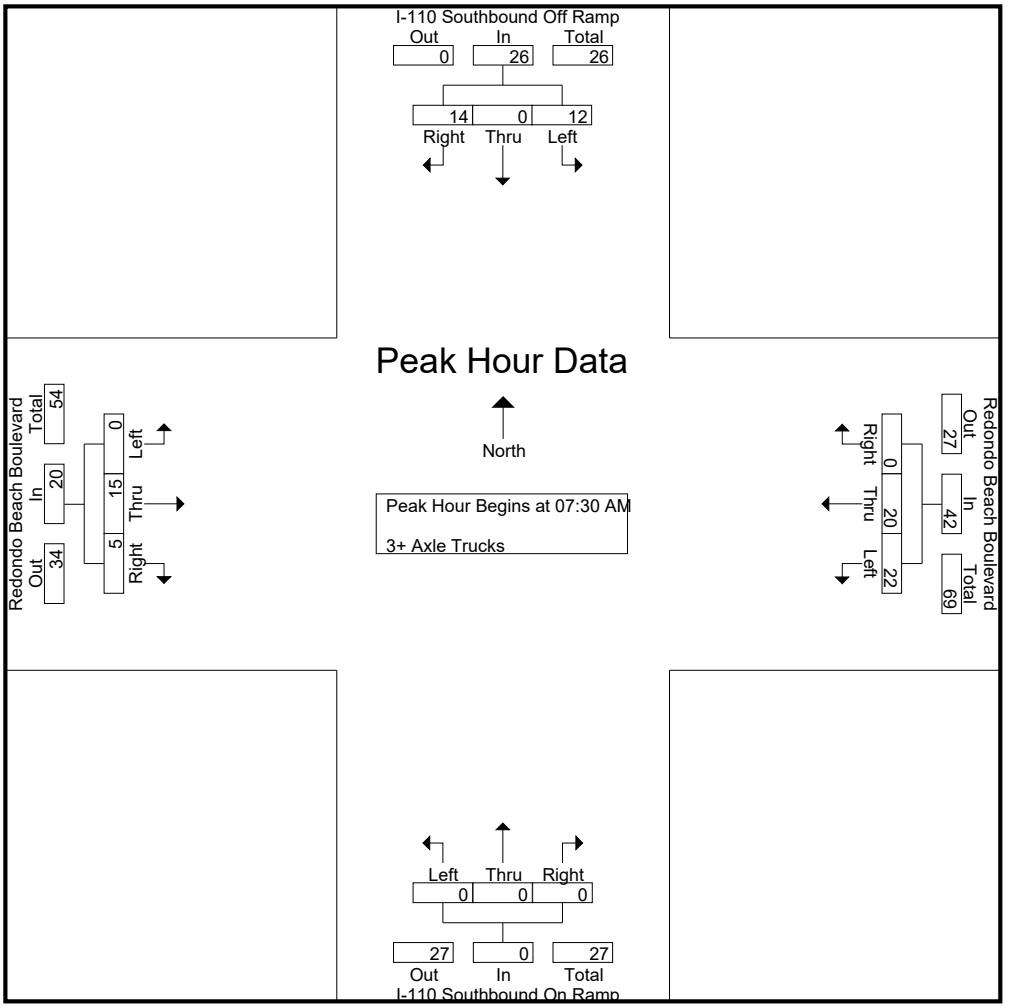
	I-110 Southbound Off Ramp Southbound				Redondo Beach Boulevard Westbound				I-110 Southbound On Ramp Northbound				Redondo Beach Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	3	0	7	10	7	2	0	9	0	0	0	0	0	2	1	3	22
07:15 AM	2	0	0	2	5	3	0	8	0	0	0	0	0	5	1	6	16
07:30 AM	3	0	3	6	4	3	0	7	0	0	0	0	0	6	0	6	19
07:45 AM	4	0	3	7	3	7	0	10	0	0	0	0	0	2	1	3	20
Total	12	0	13	25	19	15	0	34	0	0	0	0	0	15	3	18	77
08:00 AM	2	0	5	7	6	4	0	10	0	0	0	0	0	4	2	6	23
08:15 AM	3	0	3	6	9	6	0	15	0	0	0	0	0	3	2	5	26
08:30 AM	5	0	3	8	11	6	0	17	0	0	0	0	0	4	0	4	29
08:45 AM	0	0	1	1	4	4	0	8	0	0	0	0	0	3	6	9	18
Total	10	0	12	22	30	20	0	50	0	0	0	0	0	14	10	24	96
09:00 AM	2	0	2	4	5	4	0	9	0	0	0	0	0	3	1	4	17
09:15 AM	7	0	7	14	11	4	0	15	0	0	0	0	0	5	2	7	36
09:30 AM	2	0	2	4	14	5	0	19	0	0	0	0	0	7	2	9	32
09:45 AM	7	0	3	10	5	9	0	14	0	0	0	0	0	4	4	8	32
Total	18	0	14	32	35	22	0	57	0	0	0	0	0	19	9	28	117
Grand Total	40	0	39	79	84	57	0	141	0	0	0	0	0	48	22	70	290
Apprch %	50.6	0	49.4		59.6	40.4	0		0	0	0		0	68.6	31.4		
Total %	13.8	0	13.4	27.2	29	19.7	0	48.6	0	0	0	0	0	16.6	7.6	24.1	

	I-110 Southbound Off Ramp Southbound				Redondo Beach Boulevard Westbound				I-110 Southbound On Ramp Northbound				Redondo Beach Boulevard 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 07:30 AM to 08:15 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	3	0	3	6	4	3	0	7	0	0	0	0	0	**6**	0	**6**	19
07:45 AM	**4**	0	3	**7**	3	**7**	0	10	0	0	0	0	0	2	1	3	20
08:00 AM	2	0	**5**	7	6	4	0	10	0	0	0	0	0	4	**2**	6	23
08:15 AM	3	0	3	6	**9**	6	0	**15**	0	0	0	0	0	3	2	5	**26**
Total Volume	12	0	14	26	22	20	0	42	0	0	0	0	0	15	5	20	88
% App. Total	46.2	0	53.8		52.4	47.6	0		0	0	0		0	75	25		
PHF	.750	.000	.700	.929	.611	.714	.000	.700	.000	.000	.000	.000	.000	.625	.625	.833	.846

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City of Los Angeles
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E/W: Redondo Beach Boulevard
Weather: Clear

File Name : 09_LAC_110S_Redondo Beach AM
Site Code : 05719380
Start Date : 5/23/2019
Page No : 2



Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:30 AM				07:30 AM				07:30 AM				07:30 AM			
+0 mins.	3	0	3	6	4	3	0	7	0	0	0	0	0	**6**	0	**6**
+15 mins.	**4**	0	3	**7**	3	**7**	0	10	0	0	0	0	0	2	1	3
+30 mins.	2	0	**5**	7	6	4	0	10	0	0	0	0	0	4	**2**	6
+45 mins.	3	0	3	6	**9**	6	0	**15**	0	0	0	0	0	3	2	5
Total Volume	12	0	14	26	22	20	0	42	0	0	0	0	0	15	5	20
% App. Total	46.2	0	53.8		52.4	47.6	0		0	0	0		0	75	25	
PHF	.750	.000	.700	.929	.611	.714	.000	.700	.000	.000	.000	.000	.000	.625	.625	.833

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City of Los Angeles
N/S: I-110 Southbound Ramps
E/W: Redondo Beach Boulevard
Weather: Clear

File Name : 09_LAC_110S_Redondo Beach PM
Site Code : 05719380
Start Date : 5/23/2019
Page No : 1

Groups Printed- Passenger Vehicles - Buses - 2 Axle Vehicles - 3+ Axle Trucks

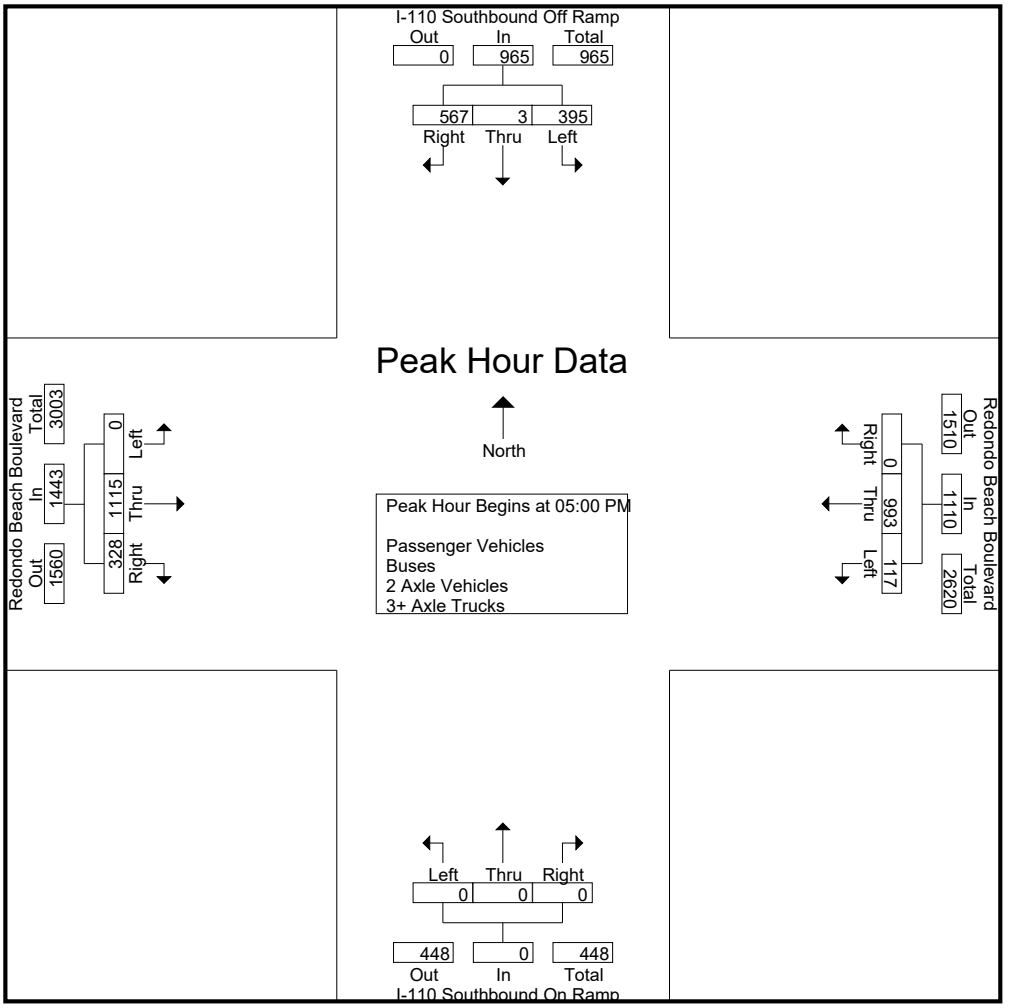
	I-110 Southbound Off Ramp Southbound				Redondo Beach Boulevard Westbound				I-110 Southbound On Ramp Northbound				Redondo Beach Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
03:00 PM	96	0	89	185	26	196	0	222	0	0	0	0	0	244	88	332	739
03:15 PM	86	0	125	211	33	204	0	237	0	0	0	0	0	256	106	362	810
03:30 PM	94	0	112	206	38	212	0	250	0	0	0	0	0	209	101	310	766
03:45 PM	103	0	151	254	38	194	0	232	0	0	0	0	0	269	104	373	859
Total	379	0	477	856	135	806	0	941	0	0	0	0	0	978	399	1377	3174
04:00 PM	119	0	122	241	41	191	0	232	0	0	0	0	0	248	98	346	819
04:15 PM	92	0	122	214	27	224	0	251	0	0	0	0	0	300	81	381	846
04:30 PM	98	0	132	230	42	236	0	278	0	0	0	0	0	246	91	337	845
04:45 PM	100	0	125	225	28	216	0	244	0	0	0	0	0	302	89	391	860
Total	409	0	501	910	138	867	0	1005	0	0	0	0	0	1096	359	1455	3370
05:00 PM	104	0	126	230	43	248	0	291	0	0	0	0	0	250	80	330	851
05:15 PM	116	2	107	225	28	244	0	272	0	0	0	0	0	319	91	410	907
05:30 PM	90	0	183	273	27	227	0	254	0	0	0	0	0	269	72	341	868
05:45 PM	85	1	151	237	19	274	0	293	0	0	0	0	0	277	85	362	892
Total	395	3	567	965	117	993	0	1110	0	0	0	0	0	1115	328	1443	3518
Grand Total	1183	3	1545	2731	390	2666	0	3056	0	0	0	0	0	3189	1086	4275	10062
Apprch %	43.3	0.1	56.6		12.8	87.2	0		0	0	0		0	74.6	25.4		
Total %	11.8	0	15.4	27.1	3.9	26.5	0	30.4	0	0	0	0	0	31.7	10.8	42.5	
Passenger Vehicles	1045	3	1517	2565	361	2622	0	2983	0	0	0	0	0	3071	1058	4129	9677
% Passenger Vehicles	88.3	100	98.2	93.9	92.6	98.3	0	97.6	0	0	0	0	0	96.3	97.4	96.6	96.2
Buses	46	0	5	51	2	3	0	5	0	0	0	0	0	13	1	14	70
% Buses	3.9	0	0.3	1.9	0.5	0.1	0	0.2	0	0	0	0	0	0.4	0.1	0.3	0.7
2 Axle Vehicles	59	0	16	75	5	29	0	34	0	0	0	0	0	64	18	82	191
% 2 Axle Vehicles	5	0	1	2.7	1.3	1.1	0	1.1	0	0	0	0	0	2	1.7	1.9	1.9
3+ Axle Trucks	33	0	7	40	22	12	0	34	0	0	0	0	0	41	9	50	124
% 3+ Axle Trucks	2.8	0	0.5	1.5	5.6	0.5	0	1.1	0	0	0	0	0	1.3	0.8	1.2	1.2

	I-110 Southbound Off Ramp Southbound				Redondo Beach Boulevard Westbound				I-110 Southbound On Ramp Northbound				Redondo Beach Boulevard 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 03:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 05:00 PM																	
05:00 PM	104	0	126	230	**43**	248	0	291	0	0	0	0	0	250	80	330	851
05:15 PM	**116**	**2**	107	225	28	244	0	272	0	0	0	0	0	**319**	**91**	**410**	**907**
05:30 PM	90	0	**183**	**273**	27	227	0	254	0	0	0	0	0	269	72	341	868
05:45 PM	85	1	151	237	19	**274**	0	**293**	0	0	0	0	0	277	85	362	892
Total Volume	395	3	567	965	117	993	0	1110	0	0	0	0	0	1115	328	1443	3518
% App. Total	40.9	0.3	58.8		10.5	89.5	0		0	0	0		0	77.3	22.7		
PHF	.851	.375	.775	.884	.680	.906	.000	.947	.000	.000	.000	.000	.000	.874	.901	.880	.970

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City of Los Angeles
N/S: I-110 Southbound Ramps
E/W: Redondo Beach Boulevard
Weather: Clear

File Name : 09_LAC_110S_Redondo Beach PM
Site Code : 05719380
Start Date : 5/23/2019
Page No : 2



Peak Hour Analysis From 03:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	05:00 PM				05:00 PM				03:00 PM				04:45 PM			
+0 mins.	104	0	126	230	**43**	248	0	291	0	0	0	0	0	302	89	391
+15 mins.	**116**	**2**	107	225	28	244	0	272	0	0	0	0	0	250	80	330
+30 mins.	90	0	**183**	**273**	27	227	0	254	0	0	0	0	0	**319**	**91**	**410**
+45 mins.	85	1	151	237	19	**274**	0	**293**	0	0	0	0	0	269	72	341
Total Volume	395	3	567	965	117	993	0	1110	0	0	0	0	0	1140	332	1472
% App. Total	40.9	0.3	58.8		10.5	89.5	0		0	0	0		0	77.4	22.6	
PHF	.851	.375	.775	.884	.680	.906	.000	.947	.000	.000	.000	.000	.000	.893	.912	.898

Counts Unlimited
PO Box 1178
Corona, CA 92878
(951) 268-6268

City of Los Angeles
N/S: I-110 Southbound Ramps
E/W: Redondo Beach Boulevard
Weather: Clear

File Name : 09_LAC_110S_Redondo Beach PM
Site Code : 05719380
Start Date : 5/23/2019
Page No : 1

Groups Printed- Passenger Vehicles

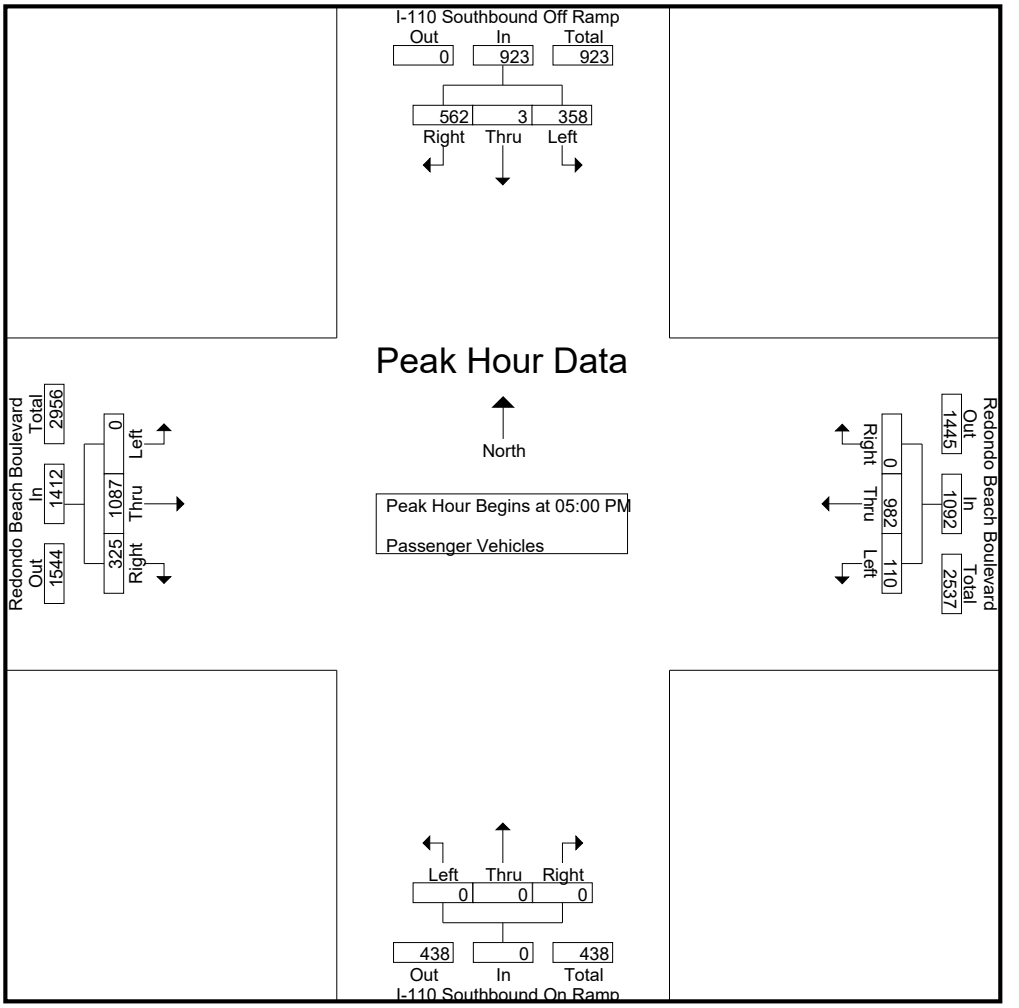
	I-110 Southbound Off Ramp Southbound				Redondo Beach Boulevard Westbound				I-110 Southbound On Ramp Northbound				Redondo Beach Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
03:00 PM	88	0	88	176	23	195	0	218	0	0	0	0	0	233	85	318	712
03:15 PM	75	0	118	193	31	197	0	228	0	0	0	0	0	243	103	346	767
03:30 PM	83	0	111	194	31	206	0	237	0	0	0	0	0	194	96	290	721
03:45 PM	91	0	144	235	35	189	0	224	0	0	0	0	0	260	98	358	817
Total	337	0	461	798	120	787	0	907	0	0	0	0	0	930	382	1312	3017
04:00 PM	99	0	117	216	39	186	0	225	0	0	0	0	0	238	94	332	773
04:15 PM	82	0	122	204	26	220	0	246	0	0	0	0	0	290	79	369	819
04:30 PM	83	0	130	213	40	233	0	273	0	0	0	0	0	235	90	325	811
04:45 PM	86	0	125	211	26	214	0	240	0	0	0	0	0	291	88	379	830
Total	350	0	494	844	131	853	0	984	0	0	0	0	0	1054	351	1405	3233
05:00 PM	88	0	126	214	40	245	0	285	0	0	0	0	0	244	79	323	822
05:15 PM	108	2	105	215	27	242	0	269	0	0	0	0	0	311	91	402	886
05:30 PM	82	0	183	265	24	225	0	249	0	0	0	0	0	263	72	335	849
05:45 PM	80	1	148	229	19	270	0	289	0	0	0	0	0	269	83	352	870
Total	358	3	562	923	110	982	0	1092	0	0	0	0	0	1087	325	1412	3427
Grand Total	1045	3	1517	2565	361	2622	0	2983	0	0	0	0	0	3071	1058	4129	9677
Apprch %	40.7	0.1	59.1		12.1	87.9	0		0	0	0		0	74.4	25.6		
Total %	10.8	0	15.7	26.5	3.7	27.1	0	30.8	0	0	0	0	0	31.7	10.9	42.7	

	I-110 Southbound Off Ramp Southbound				Redondo Beach Boulevard Westbound				I-110 Southbound On Ramp Northbound				Redondo Beach Boulevard 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 05:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 05:00 PM																	
05:00 PM	88	0	126	214	**40**	245	0	285	0	0	0	0	0	244	79	323	822
05:15 PM	**108**	**2**	105	215	27	242	0	269	0	0	0	0	0	**311**	**91**	**402**	**886**
05:30 PM	82	0	**183**	**265**	24	225	0	249	0	0	0	0	0	263	72	335	849
05:45 PM	80	1	148	229	19	**270**	0	**289**	0	0	0	0	0	269	83	352	870
Total Volume	358	3	562	923	110	982	0	1092	0	0	0	0	0	1087	325	1412	3427
% App. Total	38.8	0.3	60.9		10.1	89.9	0		0	0	0		0	77	23		
PHF	.829	.375	.768	.871	.688	.909	.000	.945	.000	.000	.000	.000	.000	.874	.893	.878	.967

Counts Unlimited
PO Box 1178
Corona, CA 92878
(951) 268-6268

City of Los Angeles
N/S: I-110 Southbound Ramps
E/W: Redondo Beach Boulevard
Weather: Clear

File Name : 09_LAC_110S_Redondo Beach PM
Site Code : 05719380
Start Date : 5/23/2019
Page No : 2



Peak Hour Analysis From 05:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	05:00 PM				05:00 PM				05:00 PM				05:00 PM			
+0 mins.	88	0	126	214	**40**	245	0	285	0	0	0	0	0	244	79	323
+15 mins.	**108**	**2**	105	215	27	242	0	269	0	0	0	0	0	**311**	**91**	**402**
+30 mins.	82	0	**183**	**265**	24	225	0	249	0	0	0	0	0	263	72	335
+45 mins.	80	1	148	229	19	**270**	0	**289**	0	0	0	0	0	269	83	352
Total Volume	358	3	562	923	110	982	0	1092	0	0	0	0	0	1087	325	1412
% App. Total	38.8	0.3	60.9		10.1	89.9	0		0	0	0		0	77	23	
PHF	.829	.375	.768	.871	.688	.909	.000	.945	.000	.000	.000	.000	.000	.874	.893	.878

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City of Los Angeles
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File Name : 09_LAC_110S_Redondo Beach PM
Site Code : 05719380
Start Date : 5/23/2019
Page No : 1

Groups Printed- Buses

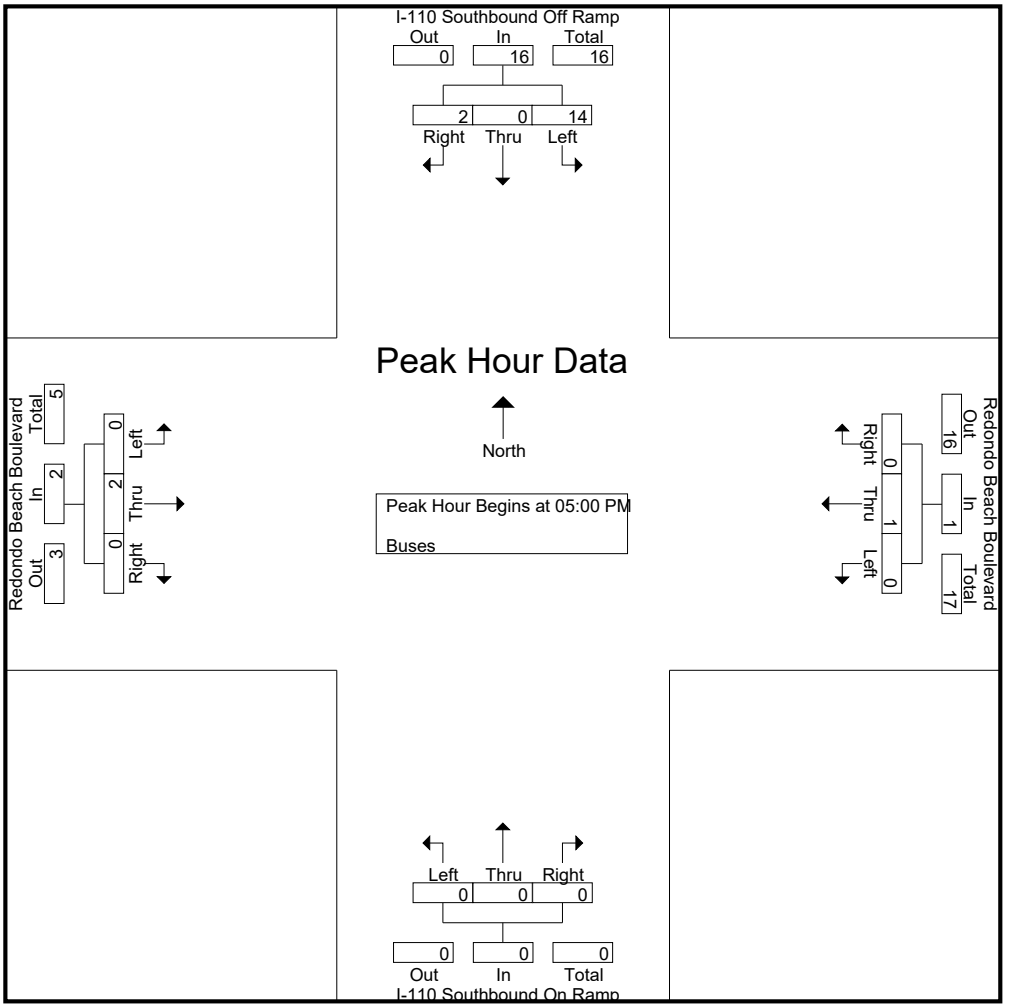
	I-110 Southbound Off Ramp Southbound				Redondo Beach Boulevard Westbound				I-110 Southbound On Ramp Northbound				Redondo Beach Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
03:00 PM	1	0	0	1	1	0	0	1	0	0	0	0	0	0	0	0	2
03:15 PM	4	0	1	5	0	1	0	1	0	0	0	0	0	2	0	2	8
03:30 PM	2	0	0	2	0	1	0	1	0	0	0	0	0	4	0	4	7
03:45 PM	0	0	1	1	0	0	0	0	0	0	0	0	0	0	1	1	2
Total	7	0	2	9	1	2	0	3	0	0	0	0	0	6	1	7	19
04:00 PM	7	0	0	7	1	0	0	1	0	0	0	0	0	0	0	0	8
04:15 PM	5	0	0	5	0	0	0	0	0	0	0	0	0	0	0	0	5
04:30 PM	8	0	1	9	0	0	0	0	0	0	0	0	0	3	0	3	12
04:45 PM	5	0	0	5	0	0	0	0	0	0	0	0	0	2	0	2	7
Total	25	0	1	26	1	0	0	1	0	0	0	0	0	5	0	5	32
05:00 PM	9	0	0	9	0	1	0	1	0	0	0	0	0	0	0	0	10
05:15 PM	3	0	1	4	0	0	0	0	0	0	0	0	0	0	0	0	4
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:45 PM	2	0	1	3	0	0	0	0	0	0	0	0	0	2	0	2	5
Total	14	0	2	16	0	1	0	1	0	0	0	0	0	2	0	2	19
Grand Total	46	0	5	51	2	3	0	5	0	0	0	0	0	13	1	14	70
Apprch %	90.2	0	9.8		40	60	0		0	0	0		0	92.9	7.1		
Total %	65.7	0	7.1	72.9	2.9	4.3	0	7.1	0	0	0	0	0	18.6	1.4	20	

	I-110 Southbound Off Ramp Southbound				Redondo Beach Boulevard Westbound				I-110 Southbound On Ramp Northbound				Redondo Beach Boulevard 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 05:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 05:00 PM																	
05:00 PM	**9**	0	0	**9**	0	**1**	0	**1**	0	0	0	0	0	0	0	0	**10**
05:15 PM	3	0	**1**	4	0	0	0	0	0	0	0	0	0	0	0	0	4
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:45 PM	2	0	1	3	0	0	0	0	0	0	0	0	0	**2**	0	**2**	5
Total Volume	14	0	2	16	0	1	0	1	0	0	0	0	0	2	0	2	19
% App. Total	87.5	0	12.5		0	100	0		0	0	0		0	100	0		
PHF	.389	.000	.500	.444	.000	.250	.000	.250	.000	.000	.000	.000	.000	.250	.000	.250	.475

Counts Unlimited
PO Box 1178
Corona, CA 92878
(951) 268-6268

City of Los Angeles
N/S: I-110 Southbound Ramps
E/W: Redondo Beach Boulevard
Weather: Clear

File Name : 09_LAC_110S_Redondo Beach PM
Site Code : 05719380
Start Date : 5/23/2019
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Peak Hour Analysis From 05:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	05:00 PM				05:00 PM				05:00 PM				05:00 PM			
+0 mins.	**9**	0	0	**9**	0	**1**	0	**1**	0	0	0	0	0	0	0	0
+15 mins.	3	0	**1**	4	0	0	0	0	0	0	0	0	0	0	0	0
+30 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+45 mins.	2	0	1	3	0	0	0	0	0	0	0	0	0	**2**	0	**2**
Total Volume	14	0	2	16	0	1	0	1	0	0	0	0	0	2	0	2
% App. Total	87.5	0	12.5		0	100	0		0	0	0		0	100	0	
PHF	.389	.000	.500	.444	.000	.250	.000	.250	.000	.000	.000	.000	.000	.250	.000	.250

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City of Los Angeles
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Weather: Clear

File Name : 09_LAC_110S_Redondo Beach PM
Site Code : 05719380
Start Date : 5/23/2019
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Groups Printed- 2 Axle Vehicles

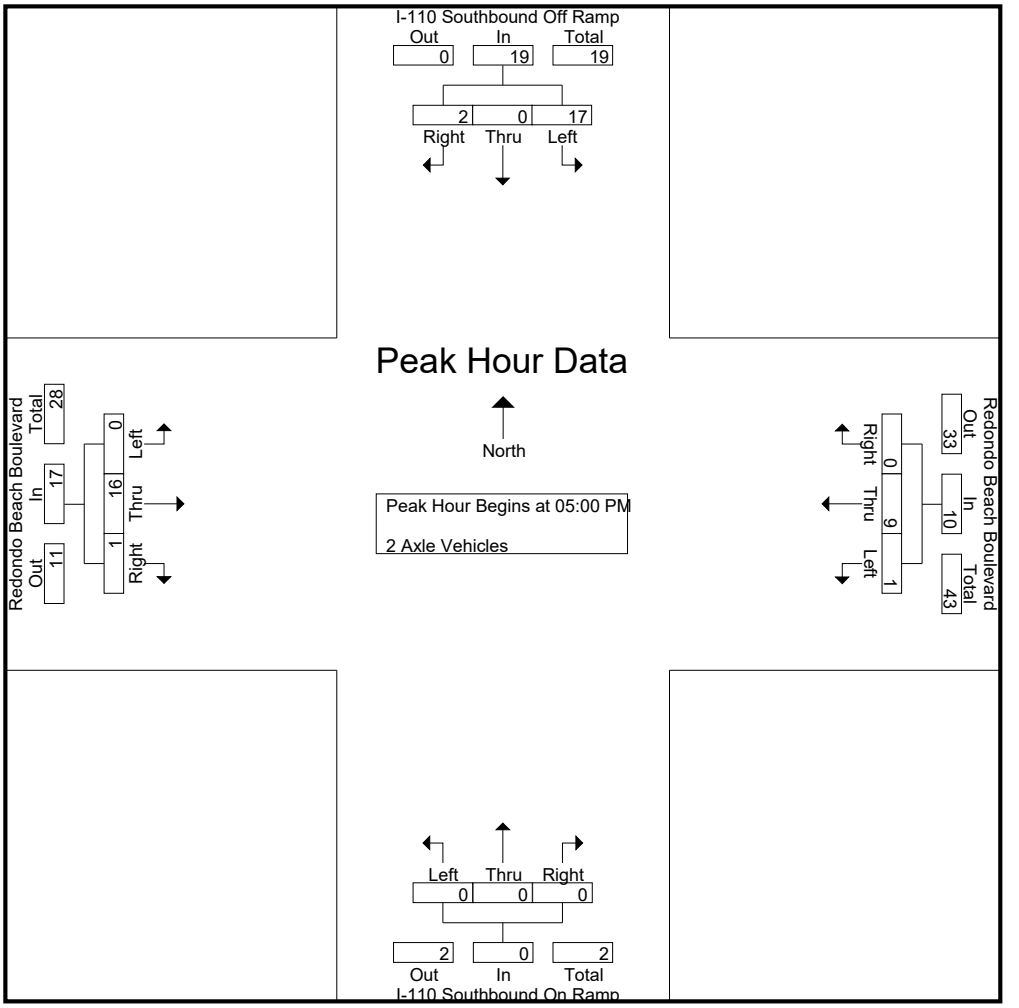
	I-110 Southbound Off Ramp Southbound				Redondo Beach Boulevard Westbound				I-110 Southbound On Ramp Northbound				Redondo Beach Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
03:00 PM	4	0	1	5	0	1	0	1	0	0	0	0	0	7	3	10	16
03:15 PM	4	0	6	10	0	3	0	3	0	0	0	0	0	3	3	6	19
03:30 PM	4	0	0	4	2	1	0	3	0	0	0	0	0	6	5	11	18
03:45 PM	9	0	5	14	0	3	0	3	0	0	0	0	0	6	4	10	27
Total	21	0	12	33	2	8	0	10	0	0	0	0	0	22	15	37	80
04:00 PM	8	0	2	10	0	3	0	3	0	0	0	0	0	7	1	8	21
04:15 PM	2	0	0	2	1	4	0	5	0	0	0	0	0	6	0	6	13
04:30 PM	5	0	0	5	1	3	0	4	0	0	0	0	0	7	1	8	17
04:45 PM	6	0	0	6	0	2	0	2	0	0	0	0	0	6	0	6	14
Total	21	0	2	23	2	12	0	14	0	0	0	0	0	26	2	28	65
05:00 PM	4	0	0	4	0	2	0	2	0	0	0	0	0	3	1	4	10
05:15 PM	4	0	1	5	0	2	0	2	0	0	0	0	0	4	0	4	11
05:30 PM	6	0	0	6	1	2	0	3	0	0	0	0	0	5	0	5	14
05:45 PM	3	0	1	4	0	3	0	3	0	0	0	0	0	4	0	4	11
Total	17	0	2	19	1	9	0	10	0	0	0	0	0	16	1	17	46
Grand Total	59	0	16	75	5	29	0	34	0	0	0	0	0	64	18	82	191
Apprch %	78.7	0	21.3		14.7	85.3	0		0	0	0		0	78	22		
Total %	30.9	0	8.4	39.3	2.6	15.2	0	17.8	0	0	0	0	0	33.5	9.4	42.9	

	I-110 Southbound Off Ramp Southbound				Redondo Beach Boulevard Westbound				I-110 Southbound On Ramp Northbound				Redondo Beach Boulevard 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 05:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 05:00 PM																	
05:00 PM	4	0	0	4	0	2	0	2	0	0	0	0	0	3	**1**	4	10
05:15 PM	4	0	**1**	5	0	2	0	2	0	0	0	0	0	4	0	4	11
05:30 PM	**6**	0	0	**6**	**1**	2	0	**3**	0	0	0	0	0	**5**	0	**5**	**14**
05:45 PM	3	0	1	4	0	**3**	0	3	0	0	0	0	0	4	0	4	11
Total Volume	17	0	2	19	1	9	0	10	0	0	0	0	0	16	1	17	46
% App. Total	89.5	0	10.5		10	90	0		0	0	0		0	94.1	5.9		
PHF	.708	.000	.500	.792	.250	.750	.000	.833	.000	.000	.000	.000	.000	.800	.250	.850	.821

Counts Unlimited
PO Box 1178
Corona, CA 92878
(951) 268-6268

City of Los Angeles
N/S: I-110 Southbound Ramps
E/W: Redondo Beach Boulevard
Weather: Clear

File Name : 09_LAC_110S_Redondo Beach PM
Site Code : 05719380
Start Date : 5/23/2019
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Peak Hour Analysis From 05:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	05:00 PM				05:00 PM				05:00 PM				05:00 PM			
+0 mins.	4	0	0	4	0	2	0	2	0	0	0	0	0	3	**1**	4
+15 mins.	4	0	**1**	5	0	2	0	2	0	0	0	0	0	4	0	4
+30 mins.	**6**	0	0	**6**	**1**	2	0	**3**	0	0	0	0	0	**5**	0	**5**
+45 mins.	3	0	1	4	0	**3**	0	3	0	0	0	0	0	4	0	4
Total Volume	17	0	2	19	1	9	0	10	0	0	0	0	0	16	1	17
% App. Total	89.5	0	10.5		10	90	0		0	0	0		0	94.1	5.9	
PHF	.708	.000	.500	.792	.250	.750	.000	.833	.000	.000	.000	.000	.000	.800	.250	.850

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City of Los Angeles
N/S: I-110 Southbound Ramps
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File Name : 09_LAC_110S_Redondo Beach PM
Site Code : 05719380
Start Date : 5/23/2019
Page No : 1

Groups Printed- 3+ Axle Trucks

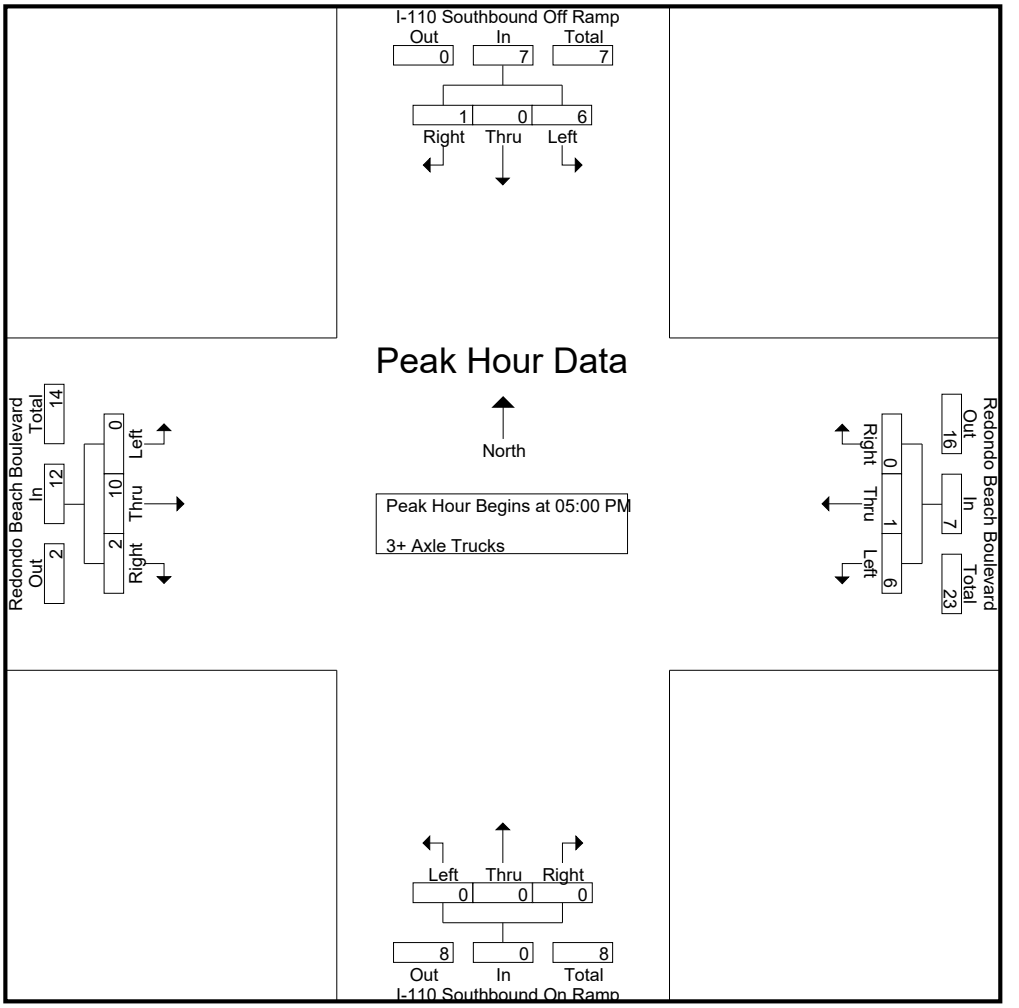
	I-110 Southbound Off Ramp Southbound				Redondo Beach Boulevard Westbound				I-110 Southbound On Ramp Northbound				Redondo Beach Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
03:00 PM	3	0	0	3	2	0	0	2	0	0	0	0	0	4	0	4	9
03:15 PM	3	0	0	3	2	3	0	5	0	0	0	0	0	8	0	8	16
03:30 PM	5	0	1	6	5	4	0	9	0	0	0	0	0	5	0	5	20
03:45 PM	3	0	1	4	3	2	0	5	0	0	0	0	0	3	1	4	13
Total	14	0	2	16	12	9	0	21	0	0	0	0	0	20	1	21	58
04:00 PM	5	0	3	8	1	2	0	3	0	0	0	0	0	3	3	6	17
04:15 PM	3	0	0	3	0	0	0	0	0	0	0	0	0	4	2	6	9
04:30 PM	2	0	1	3	1	0	0	1	0	0	0	0	0	1	0	1	5
04:45 PM	3	0	0	3	2	0	0	2	0	0	0	0	0	3	1	4	9
Total	13	0	4	17	4	2	0	6	0	0	0	0	0	11	6	17	40
05:00 PM	3	0	0	3	3	0	0	3	0	0	0	0	0	3	0	3	9
05:15 PM	1	0	0	1	1	0	0	1	0	0	0	0	0	4	0	4	6
05:30 PM	2	0	0	2	2	0	0	2	0	0	0	0	0	1	0	1	5
05:45 PM	0	0	1	1	0	1	0	1	0	0	0	0	0	2	2	4	6
Total	6	0	1	7	6	1	0	7	0	0	0	0	0	10	2	12	26
Grand Total	33	0	7	40	22	12	0	34	0	0	0	0	0	41	9	50	124
Apprch %	82.5	0	17.5		64.7	35.3	0		0	0	0		0	82	18		
Total %	26.6	0	5.6	32.3	17.7	9.7	0	27.4	0	0	0	0	0	33.1	7.3	40.3	

	I-110 Southbound Off Ramp Southbound				Redondo Beach Boulevard Westbound				I-110 Southbound On Ramp Northbound				Redondo Beach Boulevard 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 05:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 05:00 PM																	
05:00 PM	**3**	0	0	**3**	**3**	0	0	**3**	0	0	0	0	0	3	0	3	**9**
05:15 PM	1	0	0	1	1	0	0	1	0	0	0	0	0	**4**	0	**4**	6
05:30 PM	2	0	0	2	2	0	0	2	0	0	0	0	0	1	0	1	5
05:45 PM	0	0	**1**	1	0	**1**	0	1	0	0	0	0	0	2	**2**	4	6
Total Volume	6	0	1	7	6	1	0	7	0	0	0	0	0	10	2	12	26
% App. Total	85.7	0	14.3		85.7	14.3	0		0	0	0		0	83.3	16.7		
PHF	.500	.000	.250	.583	.500	.250	.000	.583	.000	.000	.000	.000	.000	.625	.250	.750	.722

Counts Unlimited
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City of Los Angeles
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Start Date : 5/23/2019
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Peak Hour Analysis From 05:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	05:00 PM				05:00 PM				05:00 PM				05:00 PM			
+0 mins.	**3**	0	0	**3**	**3**	0	0	**3**	0	0	0	0	0	3	0	3
+15 mins.	1	0	0	1	1	0	0	1	0	0	0	0	0	**4**	0	**4**
+30 mins.	2	0	0	2	2	0	0	2	0	0	0	0	0	1	0	1
+45 mins.	0	0	**1**	1	0	**1**	0	1	0	0	0	0	0	2	**2**	4
Total Volume	6	0	1	7	6	1	0	7	0	0	0	0	0	10	2	12
% App. Total	85.7	0	14.3		85.7	14.3	0		0	0	0		0	83.3	16.7	
PHF	.500	.000	.250	.583	.500	.250	.000	.583	.000	.000	.000	.000	.000	.625	.250	.750

Location: Los Angeles
N/S: I-110 Southbound Ramps
E/W: Redondo Beach Blvd

Date: 5/23/2019
Day: Thursday

PEDESTRIANS

	North Leg I-110 Southbound Ramps	East Leg Redondo Beach Blvd	South Leg I-110 Southbound Ramps	West Leg Redondo Beach Blvd	
	Pedestrians	Pedestrians	Pedestrians	Pedestrians	
7:00 AM	3	0	0	0	3
7:15 AM	0	0	1	0	1
7:30 AM	6	0	1	0	7
7:45 AM	0	0	4	1	5
8:00 AM	0	0	0	0	0
8:15 AM	0	0	0	0	0
8:30 AM	0	0	0	0	0
8:45 AM	2	0	1	0	3
9:00 AM	0	0	0	0	0
9:15 AM	2	0	0	0	2
9:30 AM	4	0	0	1	5
9:45 AM	2	0	0	0	2
TOTAL VOLUMES:	19	0	7	2	28

	North Leg I-110 Southbound Ramps	East Leg Redondo Beach Blvd	South Leg I-110 Southbound Ramps	West Leg Redondo Beach Blvd	
	Pedestrians	Pedestrians	Pedestrians	Pedestrians	
3:00 PM	1	0	0	0	1
3:15 PM	0	0	0	0	0
3:30 PM	3	0	1	0	4
3:45 PM	0	0	0	0	0
4:00 PM	2	0	0	1	3
4:15 PM	1	0	1	0	2
4:30 PM	0	0	1	0	1
4:45 PM	0	0	0	0	0
5:00 PM	1	0	1	1	3
5:15 PM	0	0	0	0	0
5:30 PM	1	0	1	0	2
5:45 PM	0	0	0	0	0
TOTAL VOLUMES:	9	0	5	2	16

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951-268-6268

Location: Los Angeles
N/S: I-110 Southbound Ramps
E/W: Redondo Beach Blvd



Date: 5/23/2019
Day: Thursday

BICYCLES

	Southbound I-110 Southbound Ramps			Westbound Redondo Beach Blvd			Northbound I-110 Southbound Ramps			Eastbound Redondo Beach Blvd			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	3	0	3
7:45 AM	0	0	0	0	0	0	0	0	0	0	1	0	1
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	1	0	0	0	0	0	2	0	3
8:30 AM	0	0	0	0	1	0	0	0	0	0	1	0	2
8:45 AM	0	0	0	0	2	0	0	0	0	0	0	0	2
9:00 AM	0	0	0	0	2	0	0	0	0	0	0	0	2
9:15 AM	0	0	0	0	0	0	0	0	0	0	1	0	1
9:30 AM	0	0	0	0	0	0	0	0	0	0	1	0	1
9:45 AM	0	0	0	0	0	0	0	0	0	0	1	0	1
TOTAL VOLUMES:	0	0	0	0	6	0	0	0	0	0	10	0	16

	Southbound I-110 Southbound Ramps			Westbound Redondo Beach Blvd			Northbound I-110 Southbound Ramps			Eastbound Redondo Beach Blvd			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
3:00 PM	0	0	0	0	1	0	0	0	0	0	3	0	4
3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
3:30 PM	0	0	0	0	3	0	0	0	0	0	0	0	3
3:45 PM	0	0	0	0	0	0	0	0	0	0	1	0	1
4:00 PM	0	0	0	0	1	0	0	0	0	0	0	0	1
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	1	0	0	0	0	0	1	0	2
4:45 PM	0	0	0	0	0	0	0	0	0	0	2	0	2
5:00 PM	0	0	0	0	2	0	0	0	0	0	2	0	4
5:15 PM	0	0	0	0	2	0	0	0	0	0	0	0	2
5:30 PM	0	0	0	0	3	0	0	0	0	0	0	0	3
5:45 PM	0	0	0	0	1	0	0	0	0	0	0	0	1
TOTAL VOLUMES:	0	0	0	0	14	0	0	0	0	0	9	0	23

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City of Los Angeles
N/S: I-110 Northbound Ramps
E/W: Redondo Beach Boulevard
Weather: Clear

File Name : 10_LAC_110N_Redondo Beach AM
Site Code : 05719380
Start Date : 5/23/2019
Page No : 1

Groups Printed- Passenger Vehicles - Buses - 2 Axle Vehicles - 3+ Axle Trucks

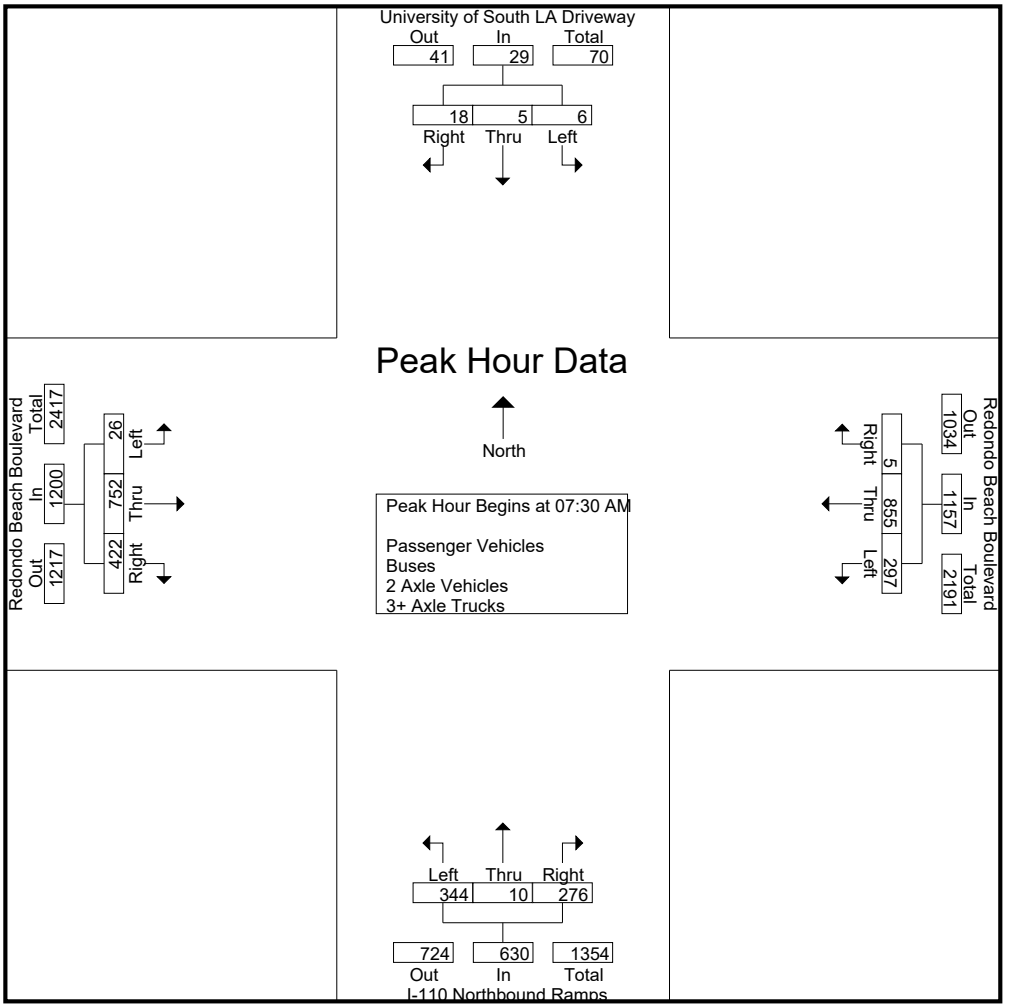
	University of South LA Driveway Southbound				Redondo Beach Boulevard Westbound				I-110 Northbound Ramps Northbound				Redondo Beach Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	1	0	3	4	66	190	0	256	64	2	64	130	1	137	114	252	642
07:15 AM	3	1	0	4	60	203	2	265	101	0	92	193	3	148	86	237	699
07:30 AM	0	2	3	5	106	218	2	326	76	1	72	149	4	159	104	267	747
07:45 AM	5	0	4	9	74	226	2	302	118	5	69	192	7	216	118	341	844
Total	9	3	10	22	306	837	6	1149	359	8	297	664	15	660	422	1097	2932
08:00 AM	0	2	6	8	54	204	1	259	81	4	62	147	10	174	110	294	708
08:15 AM	1	1	5	7	63	207	0	270	69	0	73	142	5	203	90	298	717
08:30 AM	4	1	2	7	68	160	3	231	93	4	65	162	1	164	71	236	636
08:45 AM	1	2	3	6	59	142	0	201	80	3	91	174	8	160	88	256	637
Total	6	6	16	28	244	713	4	961	323	11	291	625	24	701	359	1084	2698
09:00 AM	0	0	4	4	62	165	1	228	67	4	65	136	8	141	75	224	592
09:15 AM	2	1	4	7	52	145	0	197	71	1	70	142	3	163	82	248	594
09:30 AM	0	0	2	2	65	145	0	210	95	3	52	150	4	152	90	246	608
09:45 AM	0	1	5	6	57	134	2	193	90	0	42	132	4	178	82	264	595
Total	2	2	15	19	236	589	3	828	323	8	229	560	19	634	329	982	2389
Grand Total	17	11	41	69	786	2139	13	2938	1005	27	817	1849	58	1995	1110	3163	8019
Apprch %	24.6	15.9	59.4		26.8	72.8	0.4		54.4	1.5	44.2		1.8	63.1	35.1		
Total %	0.2	0.1	0.5	0.9	9.8	26.7	0.2	36.6	12.5	0.3	10.2	23.1	0.7	24.9	13.8	39.4	
Passenger Vehicles	17	11	40	68	645	1928	13	2586	964	27	704	1695	57	1814	1060	2931	7280
% Passenger Vehicles	100	100	97.6	98.6	82.1	90.1	100	88	95.9	100	86.2	91.7	98.3	90.9	95.5	92.7	90.8
Buses	0	0	0	0	1	6	0	7	1	0	10	11	0	32	1	33	51
% Buses	0	0	0	0	0.1	0.3	0	0.2	0.1	0	1.2	0.6	0	1.6	0.1	1	0.6
2 Axle Vehicles	0	0	1	1	83	89	0	172	16	0	38	54	1	97	19	117	344
% 2 Axle Vehicles	0	0	2.4	1.4	10.6	4.2	0	5.9	1.6	0	4.7	2.9	1.7	4.9	1.7	3.7	4.3
3+ Axle Trucks	0	0	0	0	57	116	0	173	24	0	65	89	0	52	30	82	344
% 3+ Axle Trucks	0	0	0	0	7.3	5.4	0	5.9	2.4	0	8	4.8	0	2.6	2.7	2.6	4.3

	University of South LA Driveway Southbound				Redondo Beach Boulevard Westbound				I-110 Northbound Ramps Northbound				Redondo Beach Boulevard 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 09:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	0	**2**	3	5	**106**	218	**2**	**326**	76	1	72	149	4	159	104	267	747
07:45 AM	**5**	0	4	**9**	74	**226**	2	302	**118**	**5**	69	**192**	7	**216**	**118**	**341**	**844**
08:00 AM	0	2	**6**	8	54	204	1	259	81	4	62	147	**10**	174	110	294	708
08:15 AM	1	1	5	7	63	207	0	270	69	0	**73**	142	5	203	90	298	717
Total Volume	6	5	18	29	297	855	5	1157	344	10	276	630	26	752	422	1200	3016
% App. Total	20.7	17.2	62.1		25.7	73.9	0.4		54.6	1.6	43.8		2.2	62.7	35.2		
PHF	.300	.625	.750	.806	.700	.946	.625	.887	.729	.500	.945	.820	.650	.870	.894	.880	.893

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City of Los Angeles
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File Name : 10_LAC_110N_Redondo Beach AM
Site Code : 05719380
Start Date : 5/23/2019
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Peak Hour Analysis From 07:00 AM to 09:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:45 AM				07:30 AM				07:15 AM				07:30 AM			
+0 mins.	**5**	0	4	**9**	**106**	218	**2**	**326**	101	0	**92**	**193**	4	159	104	267
+15 mins.	0	**2**	**6**	8	74	**226**	2	302	76	1	72	149	7	**216**	**118**	**341**
+30 mins.	1	1	5	7	54	204	1	259	**118**	**5**	69	192	**10**	174	110	294
+45 mins.	4	1	2	7	63	207	0	270	81	4	62	147	5	203	90	298
Total Volume	10	4	17	31	297	855	5	1157	376	10	295	681	26	752	422	1200
% App. Total	32.3	12.9	54.8		25.7	73.9	0.4		55.2	1.5	43.3		2.2	62.7	35.2	
PHF	.500	.500	.708	.861	.700	.946	.625	.887	.797	.500	.802	.882	.650	.870	.894	.880

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City of Los Angeles
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File Name : 10_LAC_110N_Redondo Beach AM
Site Code : 05719380
Start Date : 5/23/2019
Page No : 1

Groups Printed- Passenger Vehicles

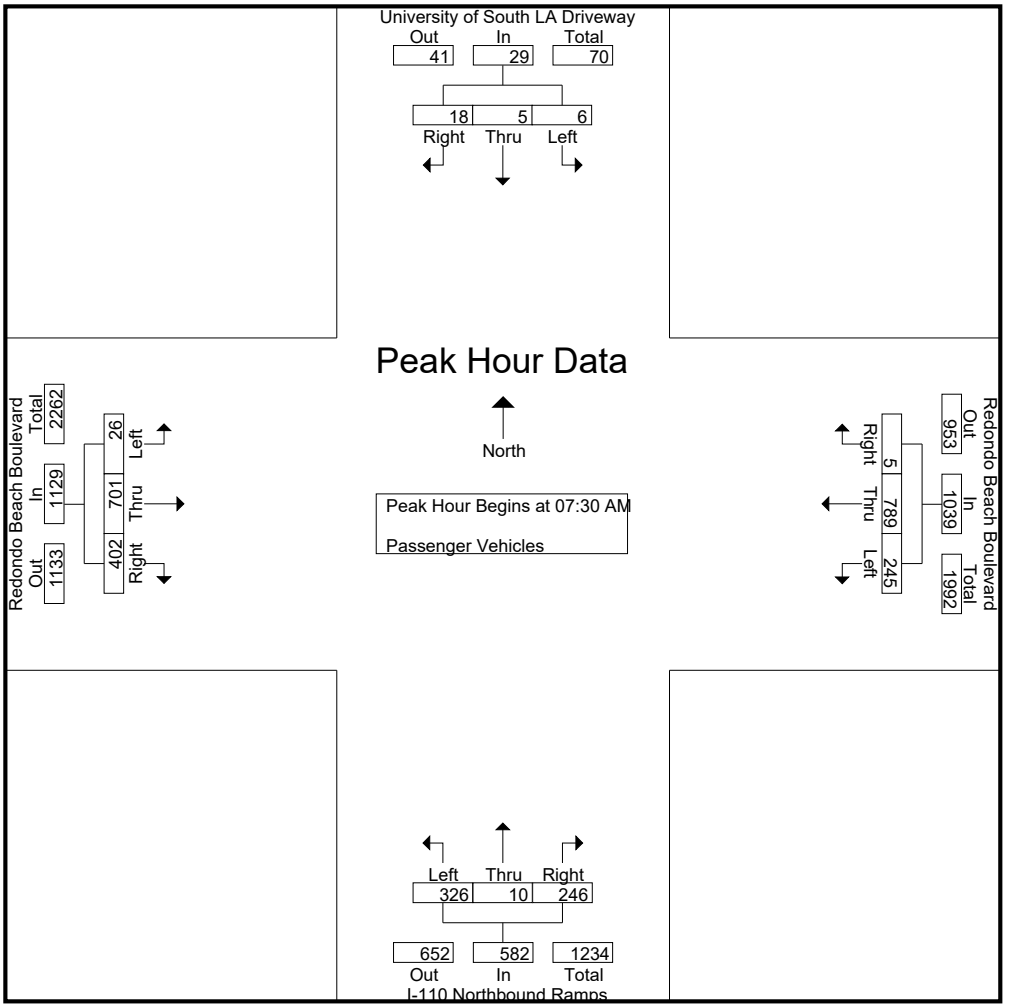
	University of South LA Driveway Southbound				Redondo Beach Boulevard Westbound				I-110 Northbound Ramps Northbound				Redondo Beach Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	1	0	3	4	57	174	0	231	60	2	58	120	1	127	113	241	596
07:15 AM	3	1	0	4	49	188	2	239	100	0	90	190	3	139	82	224	657
07:30 AM	0	2	3	5	88	208	2	298	73	1	65	139	4	149	97	250	692
07:45 AM	5	0	4	9	62	212	2	276	110	5	63	178	7	203	115	325	788
Total	9	3	10	22	256	782	6	1044	343	8	276	627	15	618	407	1040	2733
08:00 AM	0	2	6	8	46	185	1	232	79	4	58	141	10	163	102	275	656
08:15 AM	1	1	5	7	49	184	0	233	64	0	60	124	5	186	88	279	643
08:30 AM	4	1	2	7	51	136	3	190	91	4	59	154	1	139	67	207	558
08:45 AM	1	2	3	6	53	129	0	182	77	3	73	153	8	148	81	237	578
Total	6	6	16	28	199	634	4	837	311	11	250	572	24	636	338	998	2435
09:00 AM	0	0	4	4	48	149	1	198	65	4	53	122	8	124	71	203	527
09:15 AM	2	1	4	7	40	120	0	160	68	1	55	124	3	143	79	225	516
09:30 AM	0	0	2	2	53	123	0	176	92	3	39	134	4	134	84	222	534
09:45 AM	0	1	4	5	49	120	2	171	85	0	31	116	3	159	81	243	535
Total	2	2	14	18	190	512	3	705	310	8	178	496	18	560	315	893	2112
Grand Total	17	11	40	68	645	1928	13	2586	964	27	704	1695	57	1814	1060	2931	7280
Apprch %	25	16.2	58.8		24.9	74.6	0.5		56.9	1.6	41.5		1.9	61.9	36.2		
Total %	0.2	0.2	0.5	0.9	8.9	26.5	0.2	35.5	13.2	0.4	9.7	23.3	0.8	24.9	14.6	40.3	

	University of South LA Driveway Southbound				Redondo Beach Boulevard Westbound				I-110 Northbound Ramps Northbound				Redondo Beach Boulevard 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 07:30 AM to 08:15 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	0	**2**	3	5	**88**	208	**2**	**298**	73	1	**65**	139	4	149	97	250	692
07:45 AM	**5**	0	4	**9**	62	**212**	2	276	**110**	**5**	63	**178**	7	**203**	**115**	**325**	**788**
08:00 AM	0	2	**6**	8	46	185	1	232	79	4	58	141	**10**	163	102	275	656
08:15 AM	1	1	5	7	49	184	0	233	64	0	60	124	5	186	88	279	643
Total Volume	6	5	18	29	245	789	5	1039	326	10	246	582	26	701	402	1129	2779
% App. Total	20.7	17.2	62.1		23.6	75.9	0.5		56	1.7	42.3		2.3	62.1	35.6		
PHF	.300	.625	.750	.806	.696	.930	.625	.872	.741	.500	.946	.817	.650	.863	.874	.868	.882

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City of Los Angeles
N/S: I-110 Northbound Ramps
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File Name : 10_LAC_110N_Redondo Beach AM
Site Code : 05719380
Start Date : 5/23/2019
Page No : 2



Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:30 AM				07:30 AM				07:30 AM				07:30 AM			
+0 mins.	0	**2**	3	5	**88**	208	**2**	**298**	73	1	**65**	139	4	149	97	250
+15 mins.	**5**	0	4	**9**	62	**212**	2	276	**110**	**5**	63	**178**	7	**203**	**115**	**325**
+30 mins.	0	2	**6**	8	46	185	1	232	79	4	58	141	**10**	163	102	275
+45 mins.	1	1	5	7	49	184	0	233	64	0	60	124	5	186	88	279
Total Volume	6	5	18	29	245	789	5	1039	326	10	246	582	26	701	402	1129
% App. Total	20.7	17.2	62.1		23.6	75.9	0.5		56	1.7	42.3		2.3	62.1	35.6	
PHF	.300	.625	.750	.806	.696	.930	.625	.872	.741	.500	.946	.817	.650	.863	.874	.868

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City of Los Angeles
N/S: I-110 Northbound Ramps
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Weather: Clear

File Name : 10_LAC_110N_Redondo Beach AM
Site Code : 05719380
Start Date : 5/23/2019
Page No : 1

Groups Printed- Buses

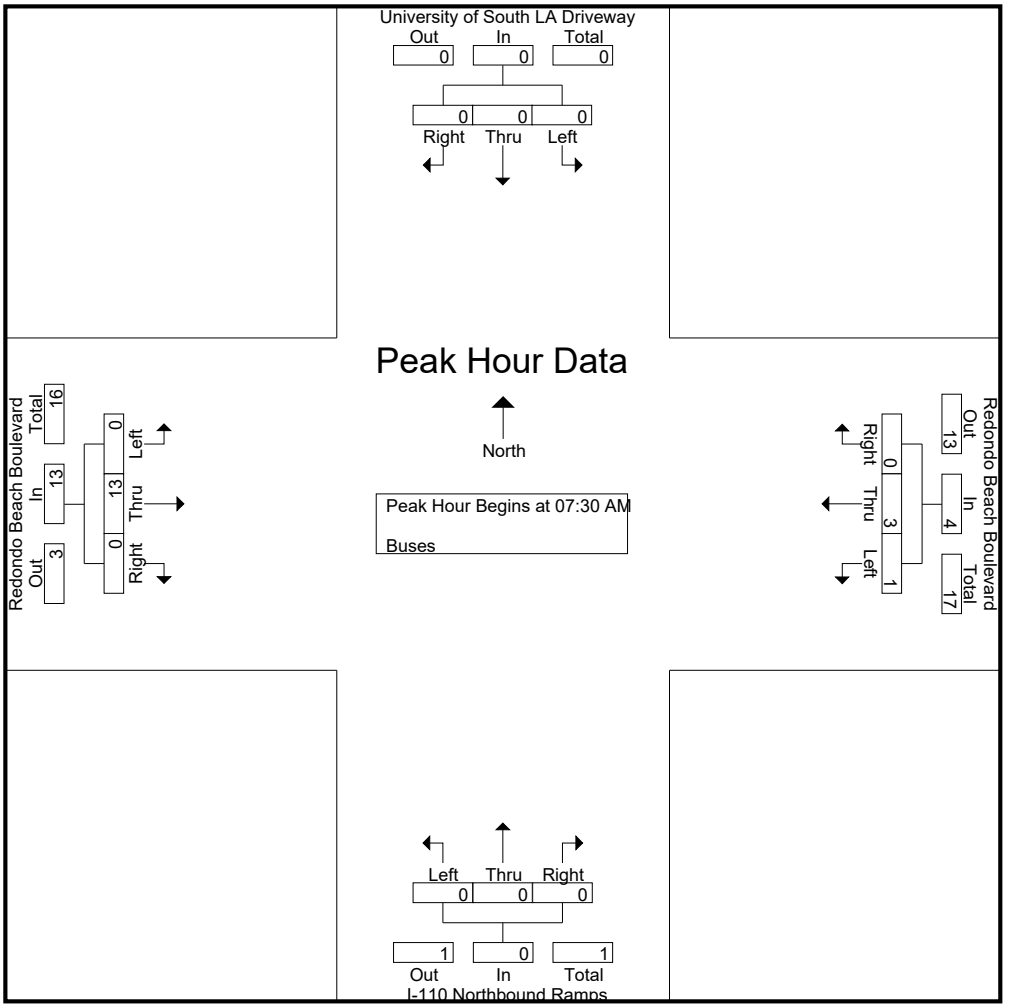
	University of South LA Driveway Southbound				Redondo Beach Boulevard Westbound				I-110 Northbound Ramps Northbound				Redondo Beach Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	0	0	0	0	0	3	0	3	0	0	0	0	0	0	0	0	3
07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	3	3
07:45 AM	0	0	0	0	0	1	0	1	0	0	0	0	0	1	0	1	2
Total	0	0	0	0	0	4	0	4	0	0	0	0	0	4	0	4	8
08:00 AM	0	0	0	0	0	2	0	2	0	0	0	0	0	3	0	3	5
08:15 AM	0	0	0	0	1	0	0	1	0	0	0	0	0	6	0	6	7
08:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	5	0	5	5
08:45 AM	0	0	0	0	0	0	0	0	0	0	7	7	0	3	1	4	11
Total	0	0	0	0	1	2	0	3	0	0	7	7	0	17	1	18	28
09:00 AM	0	0	0	0	0	0	0	0	1	0	1	2	0	5	0	5	7
09:15 AM	0	0	0	0	0	0	0	0	0	0	2	2	0	4	0	4	6
09:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
09:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
Total	0	0	0	0	0	0	0	0	1	0	3	4	0	11	0	11	15
Grand Total	0	0	0	0	1	6	0	7	1	0	10	11	0	32	1	33	51
Apprch %	0	0	0		14.3	85.7	0		9.1	0	90.9		0	97	3		
Total %	0	0	0	0	2	11.8	0	13.7	2	0	19.6	21.6	0	62.7	2	64.7	

	University of South LA Driveway Southbound				Redondo Beach Boulevard Westbound				I-110 Northbound Ramps Northbound				Redondo Beach Boulevard 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 07:30 AM to 08:15 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	3	3
07:45 AM	0	0	0	0	0	1	0	1	0	0	0	0	0	1	0	1	2
08:00 AM	0	0	0	0	0	**2**	0	**2**	0	0	0	0	0	3	0	3	5
08:15 AM	0	0	0	0	**1**	0	0	1	0	0	0	0	0	**6**	0	**6**	**7**
Total Volume	0	0	0	0	1	3	0	4	0	0	0	0	0	13	0	13	17
% App. Total	0	0	0		25	75	0		0	0	0		0	100	0		
PHF	.000	.000	.000	.000	.250	.375	.000	.500	.000	.000	.000	.000	.000	.542	.000	.542	.607

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City of Los Angeles
N/S: I-110 Northbound Ramps
E/W: Redondo Beach Boulevard
Weather: Clear

File Name : 10_LAC_110N_Redondo Beach AM
Site Code : 05719380
Start Date : 5/23/2019
Page No : 2



Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:30 AM				07:30 AM				07:30 AM				07:30 AM			
+0 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	3
+15 mins.	0	0	0	0	0	1	0	1	0	0	0	0	0	1	0	1
+30 mins.	0	0	0	0	0	**2**	0	**2**	0	0	0	0	0	3	0	3
+45 mins.	0	0	0	0	**1**	0	0	1	0	0	0	0	0	**6**	0	**6**
Total Volume	0	0	0	0	1	3	0	4	0	0	0	0	0	13	0	13
% App. Total	0	0	0		25	75	0		0	0	0		0	100	0	
PHF	.000	.000	.000	.000	.250	.375	.000	.500	.000	.000	.000	.000	.000	.542	.000	.542

Counts Unlimited
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City of Los Angeles
N/S: I-110 Northbound Ramps
E/W: Redondo Beach Boulevard
Weather: Clear

File Name : 10_LAC_110N_Redondo Beach AM
Site Code : 05719380
Start Date : 5/23/2019
Page No : 1

Groups Printed- 2 Axle Vehicles

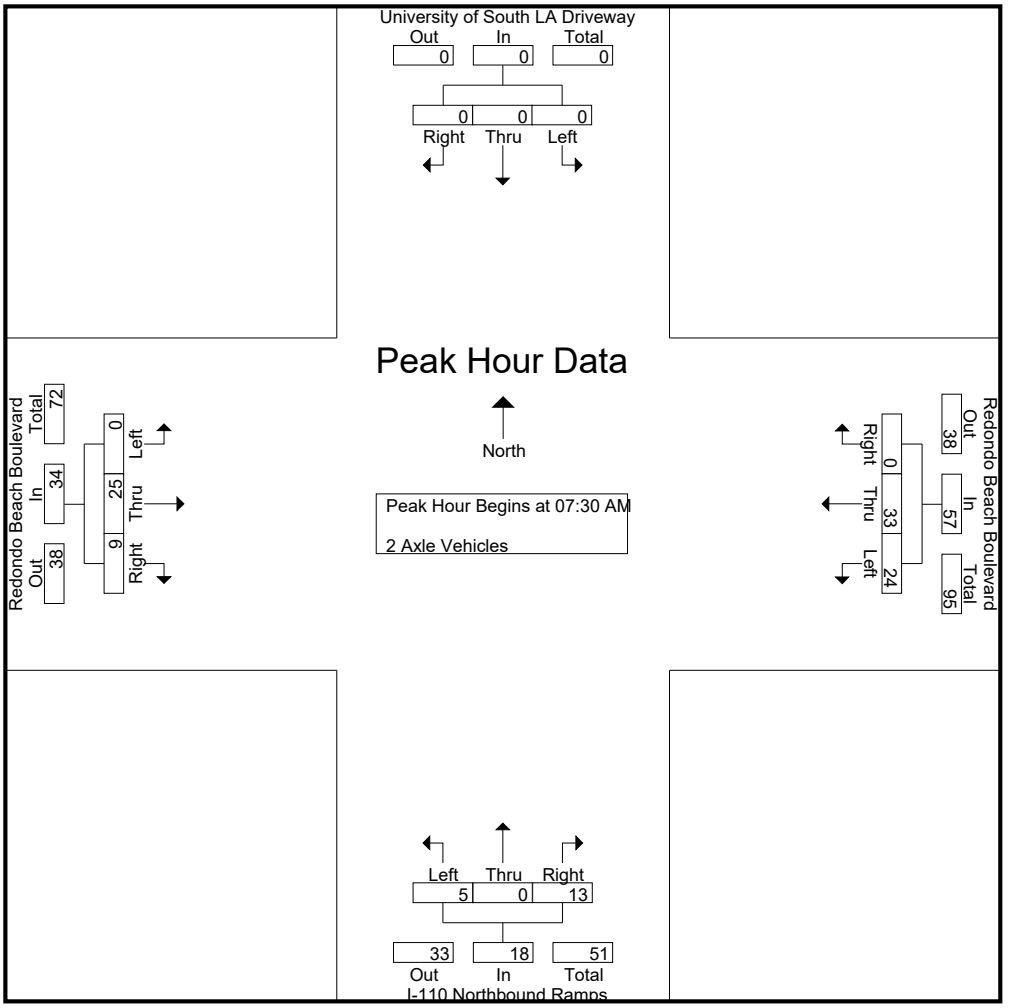
	University of South LA Driveway Southbound				Redondo Beach Boulevard Westbound				I-110 Northbound Ramps Northbound				Redondo Beach Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	0	0	0	0	7	4	0	11	3	0	5	8	0	6	0	6	25
07:15 AM	0	0	0	0	9	6	0	15	1	0	1	2	0	7	0	7	24
07:30 AM	0	0	0	0	7	5	0	12	2	0	4	6	0	4	2	6	24
07:45 AM	0	0	0	0	8	7	0	15	3	0	4	7	0	7	2	9	31
Total	0	0	0	0	31	22	0	53	9	0	14	23	0	24	4	28	104
08:00 AM	0	0	0	0	4	8	0	12	0	0	1	1	0	6	3	9	22
08:15 AM	0	0	0	0	5	13	0	18	0	0	4	4	0	8	2	10	32
08:30 AM	0	0	0	0	12	9	0	21	1	0	2	3	0	12	1	13	37
08:45 AM	0	0	0	0	3	5	0	8	2	0	3	5	0	8	4	12	25
Total	0	0	0	0	24	35	0	59	3	0	10	13	0	34	10	44	116
09:00 AM	0	0	0	0	12	9	0	21	0	0	2	2	0	9	2	11	34
09:15 AM	0	0	0	0	5	10	0	15	3	0	7	10	0	7	0	7	32
09:30 AM	0	0	0	0	7	8	0	15	0	0	4	4	0	13	3	16	35
09:45 AM	0	0	1	1	4	5	0	9	1	0	1	2	1	10	0	11	23
Total	0	0	1	1	28	32	0	60	4	0	14	18	1	39	5	45	124
Grand Total	0	0	1	1	83	89	0	172	16	0	38	54	1	97	19	117	344
Apprch %	0	0	100		48.3	51.7	0		29.6	0	70.4		0.9	82.9	16.2		
Total %	0	0	0.3	0.3	24.1	25.9	0	50	4.7	0	11	15.7	0.3	28.2	5.5	34	

	University of South LA Driveway Southbound				Redondo Beach Boulevard Westbound				I-110 Northbound Ramps Northbound				Redondo Beach Boulevard 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 07:30 AM to 08:15 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	0	0	0	0	7	5	0	12	2	0	**4**	6	0	4	2	6	24
07:45 AM	0	0	0	0	**8**	7	0	15	**3**	0	4	**7**	0	7	2	9	31
08:00 AM	0	0	0	0	4	8	0	12	0	0	1	1	0	6	**3**	9	22
08:15 AM	0	0	0	0	5	**13**	0	**18**	0	0	4	4	0	**8**	2	**10**	**32**
Total Volume	0	0	0	0	24	33	0	57	5	0	13	18	0	25	9	34	109
% App. Total	0	0	0		42.1	57.9	0		27.8	0	72.2		0	73.5	26.5		
PHF	.000	.000	.000	.000	.750	.635	.000	.792	.417	.000	.813	.643	.000	.781	.750	.850	.852

Counts Unlimited
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City of Los Angeles
N/S: I-110 Northbound Ramps
E/W: Redondo Beach Boulevard
Weather: Clear

File Name : 10_LAC_110N_Redondo Beach AM
Site Code : 05719380
Start Date : 5/23/2019
Page No : 2



Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:30 AM				07:30 AM				07:30 AM				07:30 AM			
+0 mins.	0	0	0	0	7	5	0	12	2	0	**4**	6	0	4	2	6
+15 mins.	0	0	0	0	**8**	7	0	15	**3**	0	4	**7**	0	7	2	9
+30 mins.	0	0	0	0	4	8	0	12	0	0	1	1	0	6	**3**	9
+45 mins.	0	0	0	0	5	**13**	0	**18**	0	0	4	4	0	**8**	2	**10**
Total Volume	0	0	0	0	24	33	0	57	5	0	13	18	0	25	9	34
% App. Total	0	0	0		42.1	57.9	0		27.8	0	72.2		0	73.5	26.5	
PHF	.000	.000	.000	.000	.750	.635	.000	.792	.417	.000	.813	.643	.000	.781	.750	.850

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City of Los Angeles
N/S: I-110 Northbound Ramps
E/W: Redondo Beach Boulevard
Weather: Clear

File Name : 10_LAC_110N_Redondo Beach AM
Site Code : 05719380
Start Date : 5/23/2019
Page No : 1

Groups Printed- 3+ Axle Trucks

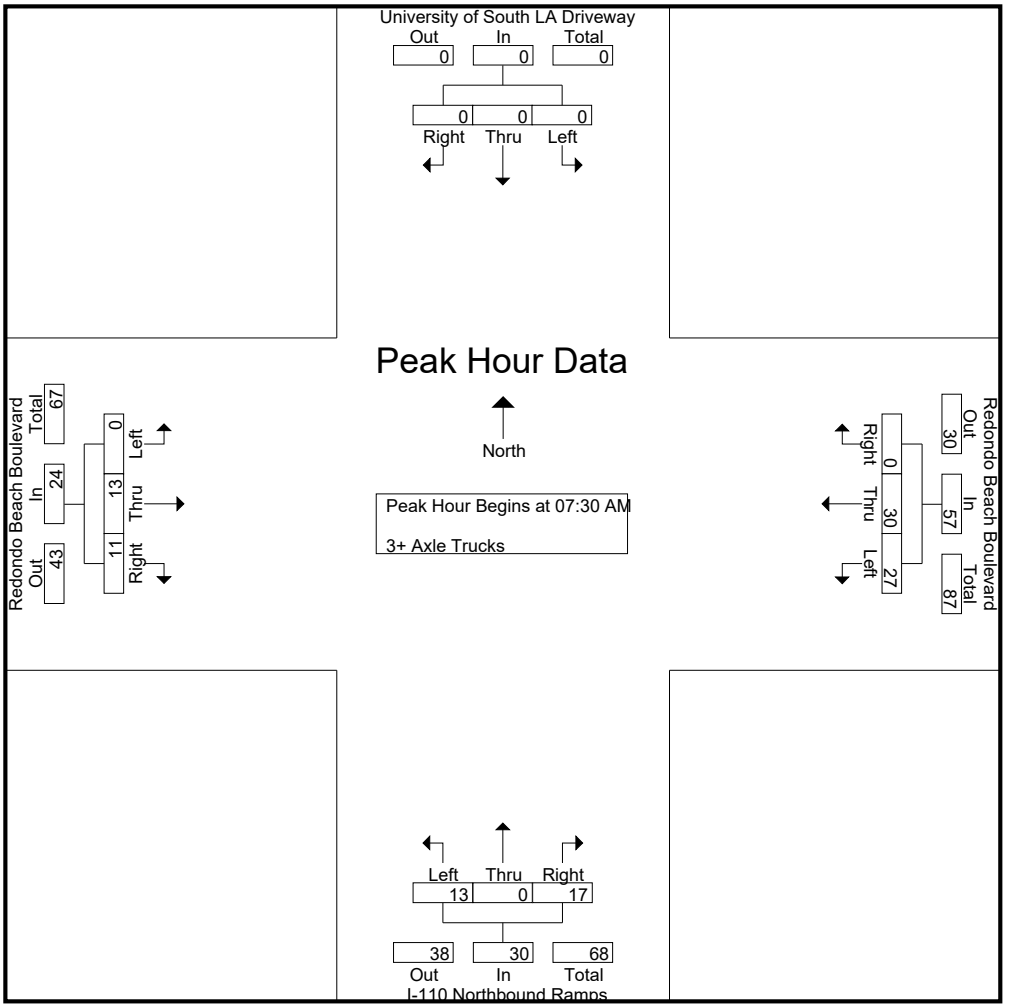
	University of South LA Driveway Southbound				Redondo Beach Boulevard Westbound				I-110 Northbound Ramps Northbound				Redondo Beach Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	0	0	0	0	2	9	0	11	1	0	1	2	0	4	1	5	18
07:15 AM	0	0	0	0	2	9	0	11	0	0	1	1	0	2	4	6	18
07:30 AM	0	0	0	0	11	5	0	16	1	0	3	4	0	3	5	8	28
07:45 AM	0	0	0	0	4	6	0	10	5	0	2	7	0	5	1	6	23
Total	0	0	0	0	19	29	0	48	7	0	7	14	0	14	11	25	87
08:00 AM	0	0	0	0	4	9	0	13	2	0	3	5	0	2	5	7	25
08:15 AM	0	0	0	0	8	10	0	18	5	0	9	14	0	3	0	3	35
08:30 AM	0	0	0	0	5	15	0	20	1	0	4	5	0	8	3	11	36
08:45 AM	0	0	0	0	3	8	0	11	1	0	8	9	0	1	2	3	23
Total	0	0	0	0	20	42	0	62	9	0	24	33	0	14	10	24	119
09:00 AM	0	0	0	0	2	7	0	9	1	0	9	10	0	3	2	5	24
09:15 AM	0	0	0	0	7	15	0	22	0	0	6	6	0	9	3	12	40
09:30 AM	0	0	0	0	5	14	0	19	3	0	9	12	0	4	3	7	38
09:45 AM	0	0	0	0	4	9	0	13	4	0	10	14	0	8	1	9	36
Total	0	0	0	0	18	45	0	63	8	0	34	42	0	24	9	33	138
Grand Total	0	0	0	0	57	116	0	173	24	0	65	89	0	52	30	82	344
Apprch %	0	0	0		32.9	67.1	0		27	0	73		0	63.4	36.6		
Total %	0	0	0	0	16.6	33.7	0	50.3	7	0	18.9	25.9	0	15.1	8.7	23.8	

	University of South LA Driveway Southbound				Redondo Beach Boulevard Westbound				I-110 Northbound Ramps Northbound				Redondo Beach Boulevard 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 07:30 AM to 08:15 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	0	0	0	0	**11**	5	0	16	1	0	3	4	0	3	**5**	**8**	28
07:45 AM	0	0	0	0	4	6	0	10	**5**	0	2	7	0	**5**	1	6	23
08:00 AM	0	0	0	0	4	9	0	13	2	0	3	5	0	2	5	7	25
08:15 AM	0	0	0	0	8	**10**	0	**18**	5	0	**9**	**14**	0	3	0	3	**35**
Total Volume	0	0	0	0	27	30	0	57	13	0	17	30	0	13	11	24	111
% App. Total	0	0	0		47.4	52.6	0		43.3	0	56.7		0	54.2	45.8		
PHF	.000	.000	.000	.000	.614	.750	.000	.792	.650	.000	.472	.536	.000	.650	.550	.750	.793

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City of Los Angeles
N/S: I-110 Northbound Ramps
E/W: Redondo Beach Boulevard
Weather: Clear

File Name : 10_LAC_110N_Redondo Beach AM
Site Code : 05719380
Start Date : 5/23/2019



Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:30 AM				07:30 AM				07:30 AM				07:30 AM			
+0 mins.	0	0	0	0	**11**	5	0	16	1	0	3	4	0	3	**5**	**8**
+15 mins.	0	0	0	0	4	6	0	10	**5**	0	2	7	0	**5**	1	6
+30 mins.	0	0	0	0	4	9	0	13	2	0	3	5	0	2	5	7
+45 mins.	0	0	0	0	8	**10**	0	**18**	5	0	**9**	**14**	0	3	0	3
Total Volume	0	0	0	0	27	30	0	57	13	0	17	30	0	13	11	24
% App. Total	0	0	0		47.4	52.6	0		43.3	0	56.7		0	54.2	45.8	
PHF	.000	.000	.000	.000	.614	.750	.000	.792	.650	.000	.472	.536	.000	.650	.550	.750

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City of Los Angeles
N/S: I-110 Northbound Ramps
E/W: Redondo Beach Boulevard
Weather: Clear

File Name : 10_LAC_110N_Redondo Beach PM
Site Code : 05719380
Start Date : 5/23/2019
Page No : 1

Groups Printed- Passenger Vehicles - Buses - 2 Axle Vehicles - 3+ Axle Trucks

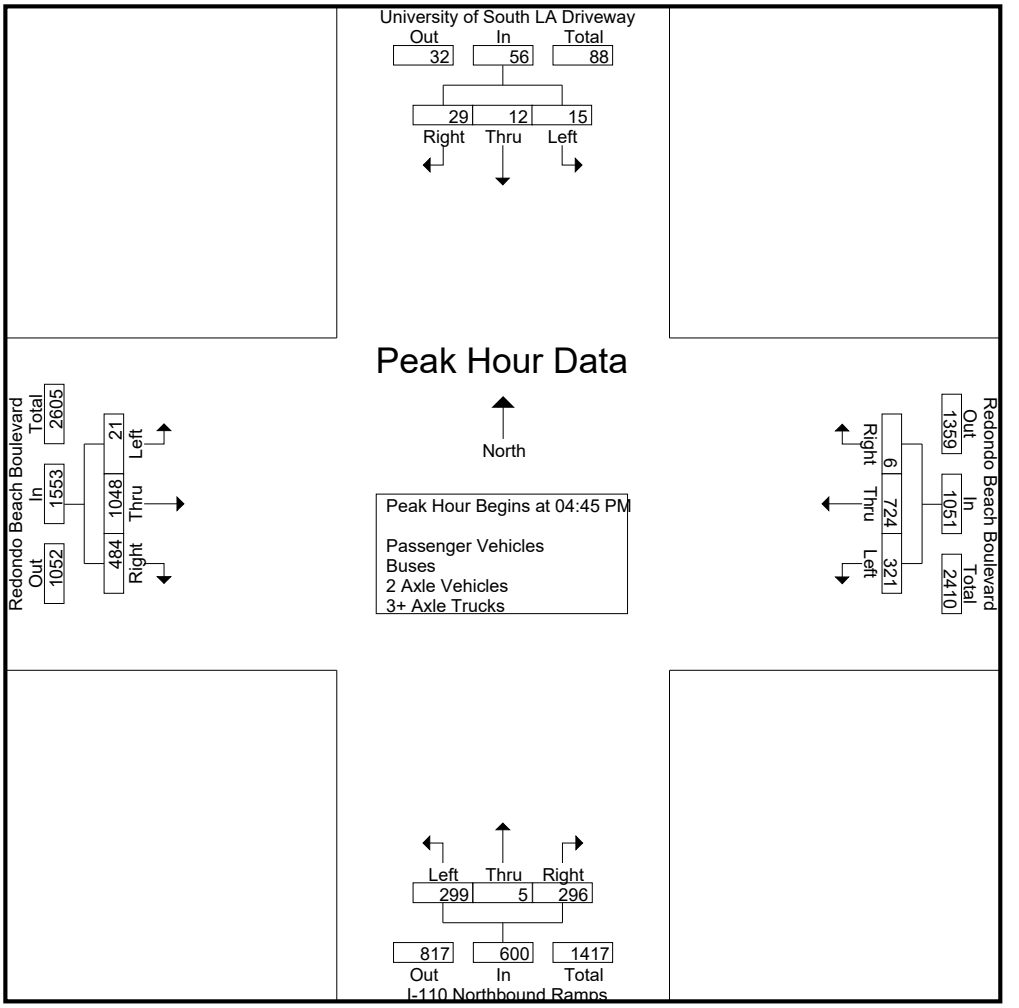
	University of South LA Driveway Southbound				Redondo Beach Boulevard Westbound				I-110 Northbound Ramps Northbound				Redondo Beach Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
03:00 PM	2	3	6	11	82	148	2	232	82	0	57	139	1	234	121	356	738
03:15 PM	2	2	2	6	79	136	0	215	87	0	75	162	2	229	108	339	722
03:30 PM	4	0	2	6	103	173	0	276	77	0	53	130	3	188	104	295	707
03:45 PM	3	3	1	7	59	145	1	205	76	0	81	157	2	254	104	360	729
Total	11	8	11	30	323	602	3	928	322	0	266	588	8	905	437	1350	2896
04:00 PM	1	5	2	8	89	149	0	238	74	0	75	149	1	252	128	381	776
04:15 PM	3	0	6	9	67	168	0	235	68	0	77	145	4	260	122	386	775
04:30 PM	3	3	3	9	103	200	0	303	72	1	76	149	3	228	104	335	796
04:45 PM	4	3	7	14	68	164	1	233	76	2	76	154	2	287	115	404	805
Total	11	11	18	40	327	681	1	1009	290	3	304	597	10	1027	469	1506	3152
05:00 PM	3	0	6	9	101	196	0	297	73	1	78	152	10	230	106	346	804
05:15 PM	4	4	8	16	64	179	2	245	78	1	72	151	6	286	139	431	843
05:30 PM	4	5	8	17	88	185	3	276	72	1	70	143	3	245	124	372	808
05:45 PM	1	2	4	7	60	160	0	220	122	0	67	189	1	236	116	353	769
Total	12	11	26	49	313	720	5	1038	345	3	287	635	20	997	485	1502	3224
Grand Total	34	30	55	119	963	2003	9	2975	957	6	857	1820	38	2929	1391	4358	9272
Apprch %	28.6	25.2	46.2		32.4	67.3	0.3		52.6	0.3	47.1		0.9	67.2	31.9		
Total %	0.4	0.3	0.6	1.3	10.4	21.6	0.1	32.1	10.3	0.1	9.2	19.6	0.4	31.6	15	47	
Passenger Vehicles	34	30	55	119	909	1943	9	2861	936	6	734	1676	38	2718	1338	4094	8750
% Passenger Vehicles	100	100	100	100	94.4	97	100	96.2	97.8	100	85.6	92.1	100	92.8	96.2	93.9	94.4
Buses	0	0	0	0	1	2	0	3	1	0	17	18	0	51	5	56	77
% Buses	0	0	0	0	0.1	0.1	0	0.1	0.1	0	2	1	0	1.7	0.4	1.3	0.8
2 Axle Vehicles	0	0	0	0	30	31	0	61	12	0	30	42	0	111	28	139	242
% 2 Axle Vehicles	0	0	0	0	3.1	1.5	0	2.1	1.3	0	3.5	2.3	0	3.8	2	3.2	2.6
3+ Axle Trucks	0	0	0	0	23	27	0	50	8	0	76	84	0	49	20	69	203
% 3+ Axle Trucks	0	0	0	0	2.4	1.3	0	1.7	0.8	0	8.9	4.6	0	1.7	1.4	1.6	2.2

	University of South LA Driveway Southbound				Redondo Beach Boulevard Westbound				I-110 Northbound Ramps Northbound				Redondo Beach Boulevard 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 03:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	**4**	3	7	14	68	164	1	233	76	**2**	76	**154**	2	**287**	115	404	805
05:00 PM	3	0	6	9	**101**	**196**	0	**297**	73	1	**78**	152	**10**	230	106	346	804
05:15 PM	4	4	**8**	16	64	179	2	245	**78**	1	72	151	6	286	**139**	**431**	**843**
05:30 PM	4	**5**	8	**17**	88	185	**3**	276	72	1	70	143	3	245	124	372	808
Total Volume	15	12	29	56	321	724	6	1051	299	5	296	600	21	1048	484	1553	3260
% App. Total	26.8	21.4	51.8		30.5	68.9	0.6		49.8	0.8	49.3		1.4	67.5	31.2		
PHF	.938	.600	.906	.824	.795	.923	.500	.885	.958	.625	.949	.974	.525	.913	.871	.901	.967

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City of Los Angeles
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File Name : 10_LAC_110N_Redondo Beach PM
Site Code : 05719380
Start Date : 5/23/2019
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Peak Hour Analysis From 03:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:45 PM				04:30 PM				05:00 PM				04:45 PM			
+0 mins.	**4**	3	7	14	**103**	**200**	0	**303**	73	**1**	**78**	152	2	**287**	115	404
+15 mins.	3	0	6	9	68	164	1	233	78	1	72	151	**10**	230	106	346
+30 mins.	4	4	**8**	16	101	196	0	297	72	1	70	143	6	286	**139**	**431**
+45 mins.	4	**5**	8	**17**	64	179	**2**	245	**122**	0	67	**189**	3	245	124	372
Total Volume	15	12	29	56	336	739	3	1078	345	3	287	635	21	1048	484	1553
% App. Total	26.8	21.4	51.8		31.2	68.6	0.3		54.3	0.5	45.2		1.4	67.5	31.2	
PHF	.938	.600	.906	.824	.816	.924	.375	.889	.707	.750	.920	.840	.525	.913	.871	.901

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Page No : 1

Groups Printed- Passenger Vehicles

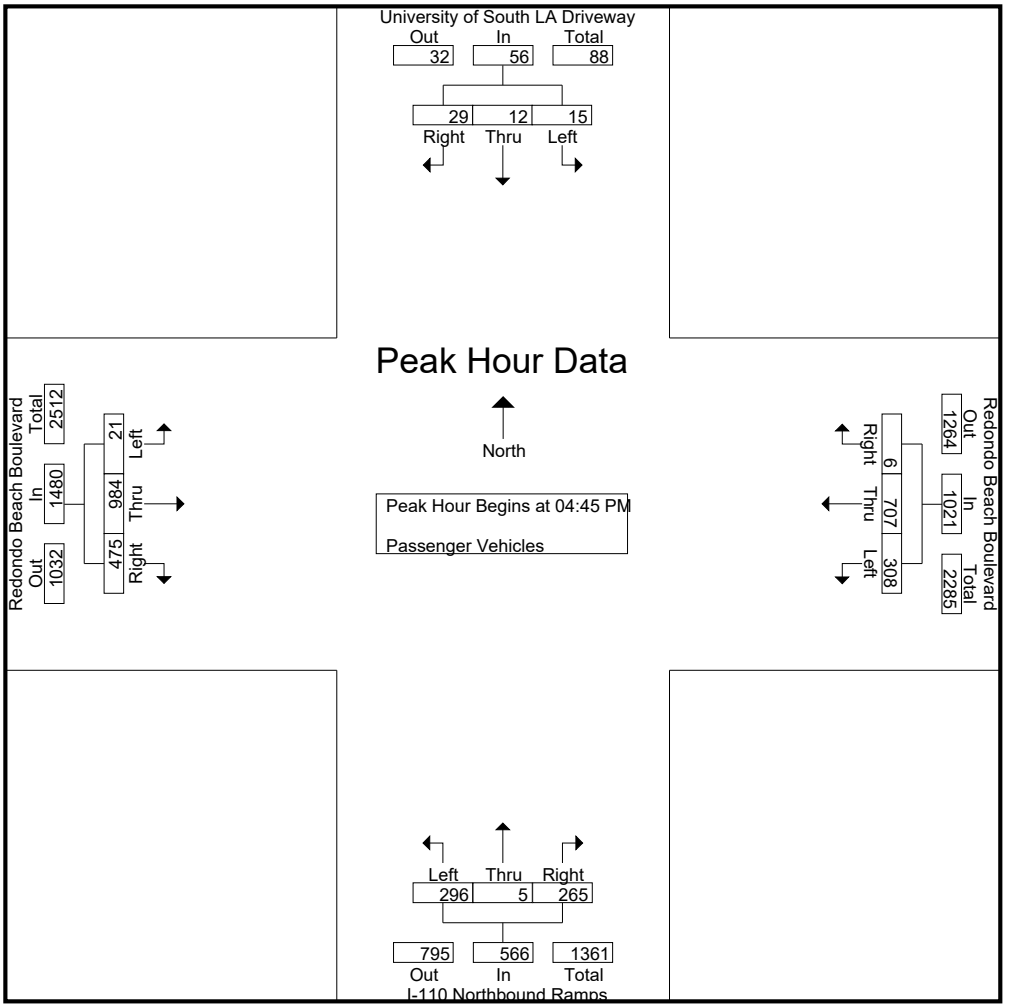
	University of South LA Driveway Southbound				Redondo Beach Boulevard Westbound				I-110 Northbound Ramps Northbound				Redondo Beach Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
03:00 PM	2	3	6	11	76	141	2	219	81	0	49	130	1	218	112	331	691
03:15 PM	2	2	2	6	73	132	0	205	82	0	59	141	2	210	101	313	665
03:30 PM	4	0	2	6	98	159	0	257	76	0	37	113	3	173	93	269	645
03:45 PM	3	3	1	7	56	142	1	199	73	0	71	144	2	234	101	337	687
Total	11	8	11	30	303	574	3	880	312	0	216	528	8	835	407	1250	2688
04:00 PM	1	5	2	8	82	144	0	226	70	0	61	131	1	227	123	351	716
04:15 PM	3	0	6	9	60	163	0	223	68	0	66	134	4	244	119	367	733
04:30 PM	3	3	3	9	97	198	0	295	71	1	63	135	3	206	98	307	746
04:45 PM	4	3	7	14	65	160	1	226	75	2	65	142	2	268	110	380	762
Total	11	11	18	40	304	665	1	970	284	3	255	542	10	945	450	1405	2957
05:00 PM	3	0	6	9	96	193	0	289	72	1	69	142	10	210	105	325	765
05:15 PM	4	4	8	16	62	173	2	237	78	1	67	146	6	271	138	415	814
05:30 PM	4	5	8	17	85	181	3	269	71	1	64	136	3	235	122	360	782
05:45 PM	1	2	4	7	59	157	0	216	119	0	63	182	1	222	116	339	744
Total	12	11	26	49	302	704	5	1011	340	3	263	606	20	938	481	1439	3105
Grand Total	34	30	55	119	909	1943	9	2861	936	6	734	1676	38	2718	1338	4094	8750
Apprch %	28.6	25.2	46.2		31.8	67.9	0.3		55.8	0.4	43.8		0.9	66.4	32.7		
Total %	0.4	0.3	0.6	1.4	10.4	22.2	0.1	32.7	10.7	0.1	8.4	19.2	0.4	31.1	15.3	46.8	

	University of South LA Driveway Southbound				Redondo Beach Boulevard Westbound				I-110 Northbound Ramps Northbound				Redondo Beach Boulevard 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 04:45 PM to 05:30 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	**4**	3	7	14	65	160	1	226	75	**2**	65	142	2	268	110	380	762
05:00 PM	3	0	6	9	**96**	**193**	0	**289**	72	1	**69**	142	**10**	210	105	325	765
05:15 PM	4	4	**8**	16	62	173	2	237	**78**	1	67	**146**	6	**271**	**138**	**415**	**814**
05:30 PM	4	**5**	8	**17**	85	181	**3**	269	71	1	64	136	3	235	122	360	782
Total Volume	15	12	29	56	308	707	6	1021	296	5	265	566	21	984	475	1480	3123
% App. Total	26.8	21.4	51.8		30.2	69.2	0.6		52.3	0.9	46.8		1.4	66.5	32.1		
PHF	.938	.600	.906	.824	.802	.916	.500	.883	.949	.625	.960	.969	.525	.908	.861	.892	.959

Counts Unlimited
PO Box 1178
Corona, CA 92878
(951) 268-6268

City of Los Angeles
N/S: I-110 Northbound Ramps
E/W: Redondo Beach Boulevard
Weather: Clear

File Name : 10_LAC_110N_Redondo Beach PM
Site Code : 05719380
Start Date : 5/23/2019
Page No : 2



Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:45 PM				04:45 PM				04:45 PM				04:45 PM			
+0 mins.	**4**	3	7	14	65	160	1	226	75	**2**	65	142	2	268	110	380
+15 mins.	3	0	6	9	**96**	**193**	0	**289**	72	1	**69**	142	**10**	210	105	325
+30 mins.	4	4	**8**	16	62	173	2	237	**78**	1	67	**146**	6	**271**	**138**	**415**
+45 mins.	4	**5**	8	**17**	85	181	**3**	269	71	1	64	136	3	235	122	360
Total Volume	15	12	29	56	308	707	6	1021	296	5	265	566	21	984	475	1480
% App. Total	26.8	21.4	51.8		30.2	69.2	0.6		52.3	0.9	46.8		1.4	66.5	32.1	
PHF	.938	.600	.906	.824	.802	.916	.500	.883	.949	.625	.960	.969	.525	.908	.861	.892

Counts Unlimited
PO Box 1178
Corona, CA 92878
(951) 268-6268

City of Los Angeles
N/S: I-110 Northbound Ramps
E/W: Redondo Beach Boulevard
Weather: Clear

File Name : 10_LAC_110N_Redondo Beach PM
Site Code : 05719380
Start Date : 5/23/2019
Page No : 1

Groups Printed- Buses

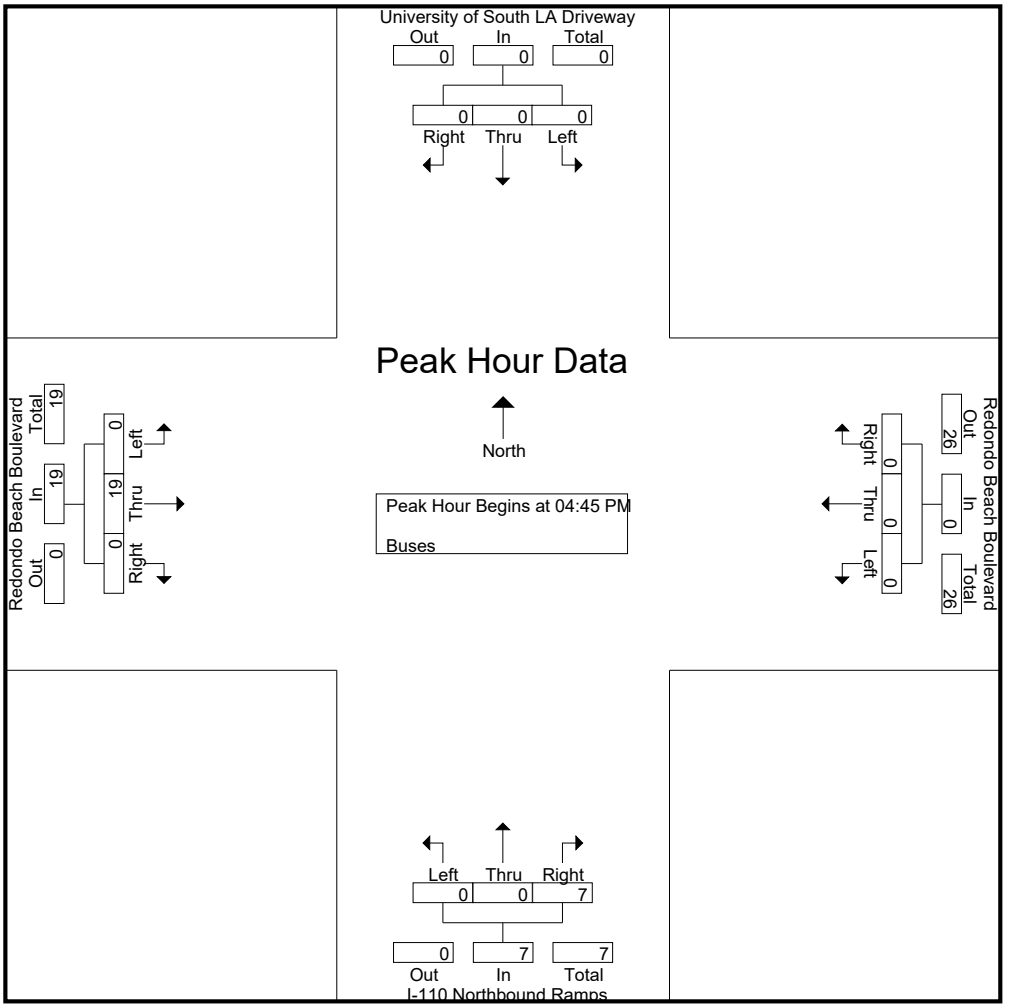
	University of South LA Driveway Southbound				Redondo Beach Boulevard Westbound				I-110 Northbound Ramps Northbound				Redondo Beach Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
03:00 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	2	0	2	3
03:15 PM	0	0	0	0	0	0	0	0	1	0	2	3	0	5	1	6	9
03:30 PM	0	0	0	0	0	1	0	1	0	0	3	3	0	1	2	3	7
03:45 PM	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	1
Total	0	0	0	0	0	2	0	2	1	0	6	7	0	8	3	11	20
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	7	0	7	7
04:15 PM	0	0	0	0	1	0	0	1	0	0	1	1	0	5	0	5	7
04:30 PM	0	0	0	0	0	0	0	0	0	0	2	2	0	9	2	11	13
04:45 PM	0	0	0	0	0	0	0	0	0	0	2	2	0	6	0	6	8
Total	0	0	0	0	1	0	0	1	0	0	5	5	0	27	2	29	35
05:00 PM	0	0	0	0	0	0	0	0	0	0	3	3	0	10	0	10	13
05:15 PM	0	0	0	0	0	0	0	0	0	0	1	1	0	3	0	3	4
05:30 PM	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	1
05:45 PM	0	0	0	0	0	0	0	0	0	0	1	1	0	3	0	3	4
Total	0	0	0	0	0	0	0	0	0	0	6	6	0	16	0	16	22
Grand Total	0	0	0	0	1	2	0	3	1	0	17	18	0	51	5	56	77
Apprch %	0	0	0		33.3	66.7	0		5.6	0	94.4		0	91.1	8.9		
Total %	0	0	0	0	1.3	2.6	0	3.9	1.3	0	22.1	23.4	0	66.2	6.5	72.7	

	University of South LA Driveway Southbound				Redondo Beach Boulevard Westbound				I-110 Northbound Ramps Northbound				Redondo Beach Boulevard 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 04:45 PM to 05:30 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	0	0	0	0	0	0	0	0	0	0	2	2	0	6	0	6	8
05:00 PM	0	0	0	0	0	0	0	0	0	0	**3**	**3**	0	**10**	0	**10**	**13**
05:15 PM	0	0	0	0	0	0	0	0	0	0	1	1	0	3	0	3	4
05:30 PM	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	1
Total Volume	0	0	0	0	0	0	0	0	0	0	7	7	0	19	0	19	26
% App. Total	0	0	0		0	0	0		0	0	100		0	100	0		
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.583	.583	.000	.475	.000	.475	.500

Counts Unlimited
PO Box 1178
Corona, CA 92878
(951) 268-6268

City of Los Angeles
N/S: I-110 Northbound Ramps
E/W: Redondo Beach Boulevard
Weather: Clear

File Name : 10_LAC_110N_Redondo Beach PM
Site Code : 05719380
Start Date : 5/23/2019
Page No : 2



Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:45 PM				04:45 PM				04:45 PM				04:45 PM			
+0 mins.	0	0	0	0	0	0	0	0	0	0	2	2	0	6	0	6
+15 mins.	0	0	0	0	0	0	0	0	0	0	**3**	**3**	0	**10**	0	**10**
+30 mins.	0	0	0	0	0	0	0	0	0	0	1	1	0	3	0	3
+45 mins.	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	7	7	0	19	0	19
% App. Total	0	0	0		0	0	0		0	0	100		0	100	0	
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.583	.583	.000	.475	.000	.475

Counts Unlimited
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Corona, CA 92878
(951) 268-6268

City of Los Angeles
N/S: I-110 Northbound Ramps
E/W: Redondo Beach Boulevard
Weather: Clear

File Name : 10_LAC_110N_Redondo Beach PM
Site Code : 05719380
Start Date : 5/23/2019
Page No : 1

Groups Printed- 2 Axle Vehicles

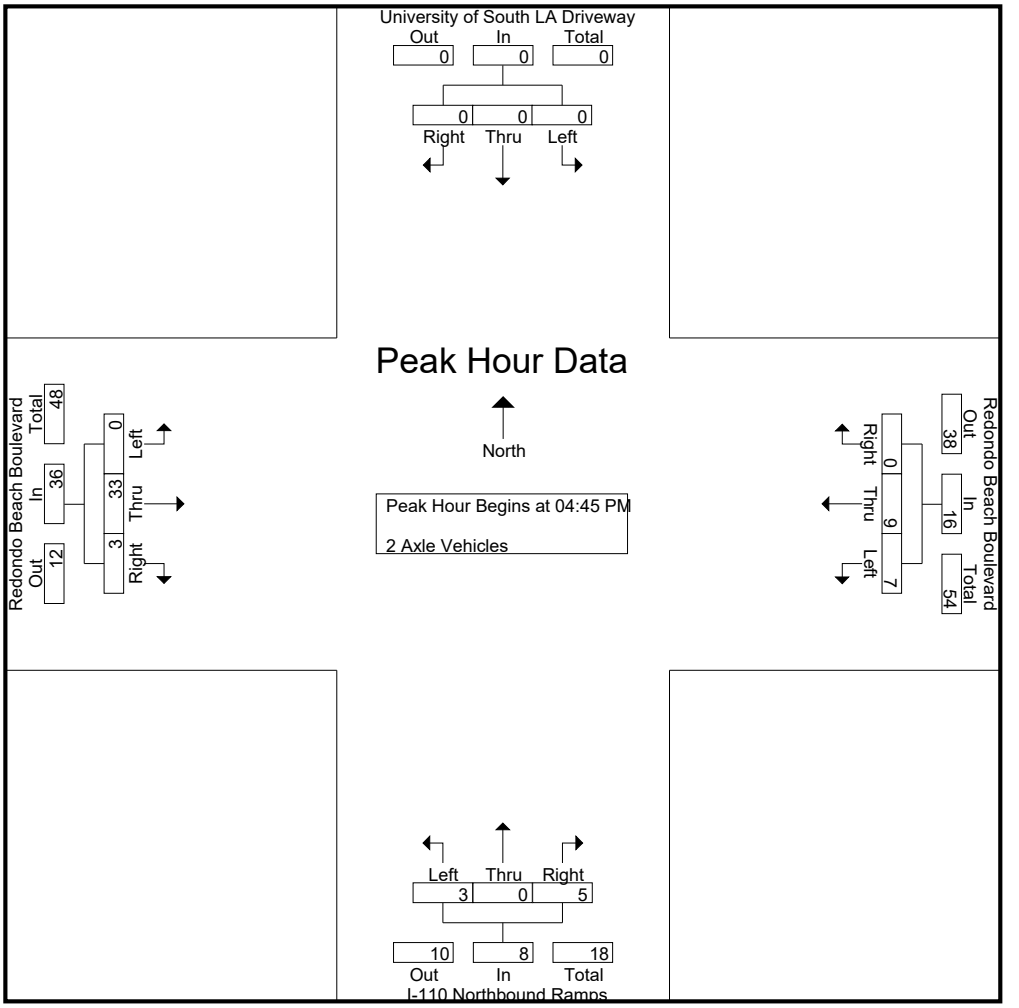
	University of South LA Driveway Southbound				Redondo Beach Boulevard Westbound				I-110 Northbound Ramps Northbound				Redondo Beach Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
03:00 PM	0	0	0	0	3	3	0	6	1	0	3	4	0	9	7	16	26
03:15 PM	0	0	0	0	4	1	0	5	2	0	4	6	0	6	2	8	19
03:30 PM	0	0	0	0	3	3	0	6	0	0	4	4	0	10	6	16	26
03:45 PM	0	0	0	0	2	2	0	4	1	0	1	2	0	15	2	17	23
Total	0	0	0	0	12	9	0	21	4	0	12	16	0	40	17	57	94
04:00 PM	0	0	0	0	4	4	0	8	2	0	5	7	0	12	3	15	30
04:15 PM	0	0	0	0	2	5	0	7	0	0	5	5	0	6	3	9	21
04:30 PM	0	0	0	0	4	1	0	5	1	0	2	3	0	11	2	13	21
04:45 PM	0	0	0	0	2	2	0	4	1	0	2	3	0	10	3	13	20
Total	0	0	0	0	12	12	0	24	4	0	14	18	0	39	11	50	92
05:00 PM	0	0	0	0	3	0	0	3	1	0	1	2	0	6	0	6	11
05:15 PM	0	0	0	0	0	5	0	5	0	0	1	1	0	8	0	8	14
05:30 PM	0	0	0	0	2	2	0	4	1	0	1	2	0	9	0	9	15
05:45 PM	0	0	0	0	1	3	0	4	2	0	1	3	0	9	0	9	16
Total	0	0	0	0	6	10	0	16	4	0	4	8	0	32	0	32	56
Grand Total	0	0	0	0	30	31	0	61	12	0	30	42	0	111	28	139	242
Apprch %	0	0	0		49.2	50.8	0		28.6	0	71.4		0	79.9	20.1		
Total %	0	0	0	0	12.4	12.8	0	25.2	5	0	12.4	17.4	0	45.9	11.6	57.4	

	University of South LA Driveway Southbound				Redondo Beach Boulevard Westbound				I-110 Northbound Ramps Northbound				Redondo Beach Boulevard 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 04:45 PM to 05:30 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	0	0	0	0	2	2	0	4	**1**	0	**2**	**3**	0	**10**	**3**	**13**	**20**
05:00 PM	0	0	0	0	**3**	0	0	3	1	0	1	2	0	6	0	6	11
05:15 PM	0	0	0	0	0	**5**	0	**5**	0	0	1	1	0	8	0	8	14
05:30 PM	0	0	0	0	2	2	0	4	1	0	1	2	0	9	0	9	15
Total Volume	0	0	0	0	7	9	0	16	3	0	5	8	0	33	3	36	60
% App. Total	0	0	0		43.8	56.2	0		37.5	0	62.5		0	91.7	8.3		
PHF	.000	.000	.000	.000	.583	.450	.000	.800	.750	.000	.625	.667	.000	.825	.250	.692	.750

Counts Unlimited
PO Box 1178
Corona, CA 92878
(951) 268-6268

City of Los Angeles
N/S: I-110 Northbound Ramps
E/W: Redondo Beach Boulevard
Weather: Clear

File Name : 10_LAC_110N_Redondo Beach PM
Site Code : 05719380
Start Date : 5/23/2019
Page No : 2



Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:45 PM				04:45 PM				04:45 PM				04:45 PM			
+0 mins.	0	0	0	0	2	2	0	4	**1**	0	**2**	**3**	0	**10**	**3**	**13**
+15 mins.	0	0	0	0	**3**	0	0	3	1	0	1	2	0	6	0	6
+30 mins.	0	0	0	0	0	**5**	0	**5**	0	0	1	1	0	8	0	8
+45 mins.	0	0	0	0	2	2	0	4	1	0	1	2	0	9	0	9
Total Volume	0	0	0	0	7	9	0	16	3	0	5	8	0	33	3	36
% App. Total	0	0	0		43.8	56.2	0		37.5	0	62.5		0	91.7	8.3	
PHF	.000	.000	.000	.000	.583	.450	.000	.800	.750	.000	.625	.667	.000	.825	.250	.692

Counts Unlimited
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(951) 268-6268

City of Los Angeles
N/S: I-110 Northbound Ramps
E/W: Redondo Beach Boulevard
Weather: Clear

File Name : 10_LAC_110N_Redondo Beach PM
Site Code : 05719380
Start Date : 5/23/2019
Page No : 1

Groups Printed- 3+ Axle Trucks

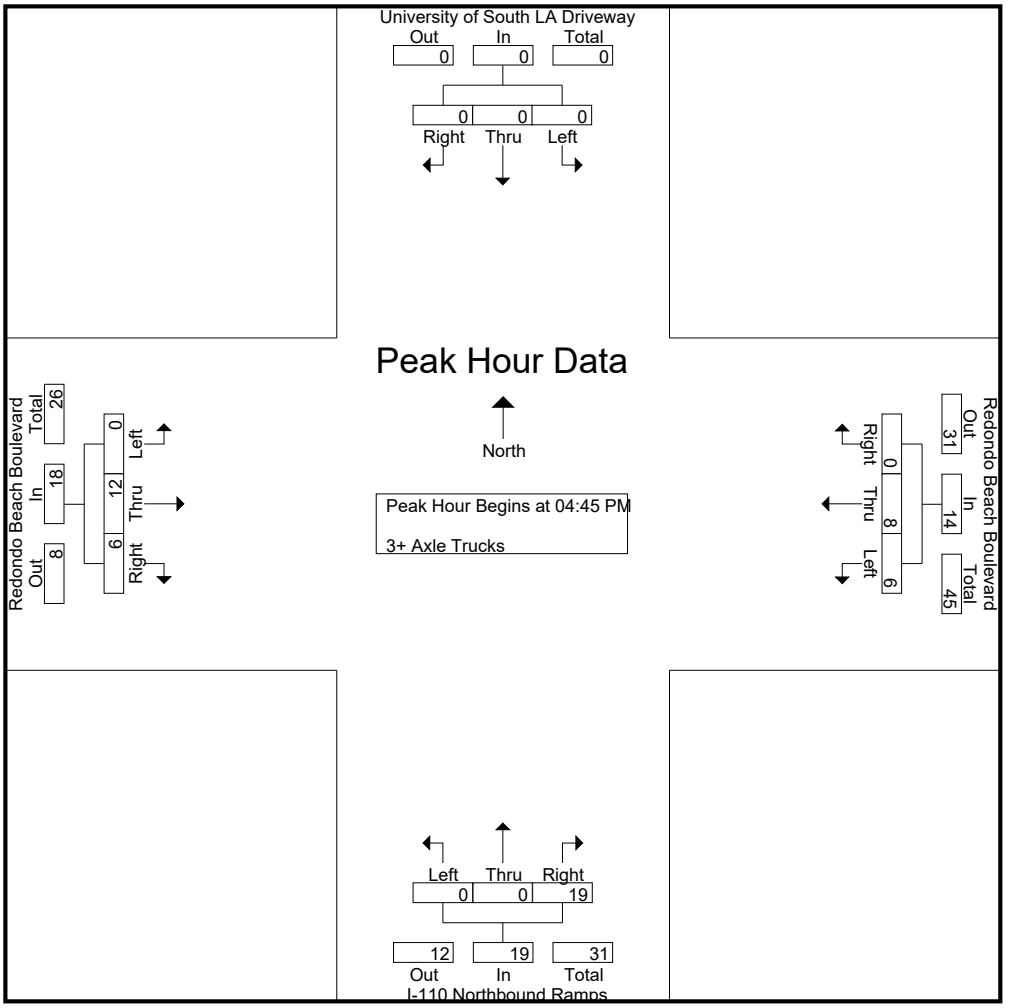
	University of South LA Driveway Southbound				Redondo Beach Boulevard Westbound				I-110 Northbound Ramps Northbound				Redondo Beach Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
03:00 PM	0	0	0	0	3	3	0	6	0	0	5	5	0	5	2	7	18
03:15 PM	0	0	0	0	2	3	0	5	2	0	10	12	0	8	4	12	29
03:30 PM	0	0	0	0	2	10	0	12	1	0	9	10	0	4	3	7	29
03:45 PM	0	0	0	0	1	1	0	2	2	0	8	10	0	5	1	6	18
Total	0	0	0	0	8	17	0	25	5	0	32	37	0	22	10	32	94
04:00 PM	0	0	0	0	3	1	0	4	2	0	9	11	0	6	2	8	23
04:15 PM	0	0	0	0	4	0	0	4	0	0	5	5	0	5	0	5	14
04:30 PM	0	0	0	0	2	1	0	3	0	0	9	9	0	2	2	4	16
04:45 PM	0	0	0	0	1	2	0	3	0	0	7	7	0	3	2	5	15
Total	0	0	0	0	10	4	0	14	2	0	30	32	0	16	6	22	68
05:00 PM	0	0	0	0	2	3	0	5	0	0	5	5	0	4	1	5	15
05:15 PM	0	0	0	0	2	1	0	3	0	0	3	3	0	4	1	5	11
05:30 PM	0	0	0	0	1	2	0	3	0	0	4	4	0	1	2	3	10
05:45 PM	0	0	0	0	0	0	0	0	1	0	2	3	0	2	0	2	5
Total	0	0	0	0	5	6	0	11	1	0	14	15	0	11	4	15	41
Grand Total	0	0	0	0	23	27	0	50	8	0	76	84	0	49	20	69	203
Apprch %	0	0	0		46	54	0		9.5	0	90.5		0	71	29		
Total %	0	0	0	0	11.3	13.3	0	24.6	3.9	0	37.4	41.4	0	24.1	9.9	34	

	University of South LA Driveway Southbound				Redondo Beach Boulevard Westbound				I-110 Northbound Ramps Northbound				Redondo Beach Boulevard 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 04:45 PM to 05:30 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	0	0	0	0	1	2	0	3	0	0	**7**	**7**	0	3	**2**	**5**	**15**
05:00 PM	0	0	0	0	**2**	**3**	0	**5**	0	0	5	5	0	**4**	1	5	15
05:15 PM	0	0	0	0	2	1	0	3	0	0	3	3	0	4	1	5	11
05:30 PM	0	0	0	0	1	2	0	3	0	0	4	4	0	1	2	3	10
Total Volume	0	0	0	0	6	8	0	14	0	0	19	19	0	12	6	18	51
% App. Total	0	0	0		42.9	57.1	0		0	0	100		0	66.7	33.3		
PHF	.000	.000	.000	.000	.750	.667	.000	.700	.000	.000	.679	.679	.000	.750	.750	.900	.850

Counts Unlimited
PO Box 1178
Corona, CA 92878
(951) 268-6268

City of Los Angeles
N/S: I-110 Northbound Ramps
E/W: Redondo Beach Boulevard
Weather: Clear

File Name : 10_LAC_110N_Redondo Beach PM
Site Code : 05719380
Start Date : 5/23/2019
Page No : 2



Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:45 PM				04:45 PM				04:45 PM				04:45 PM			
+0 mins.	0	0	0	0	1	2	0	3	0	0	**7**	**7**	0	3	**2**	**5**
+15 mins.	0	0	0	0	**2**	**3**	0	**5**	0	0	5	5	0	**4**	1	5
+30 mins.	0	0	0	0	2	1	0	3	0	0	3	3	0	4	1	5
+45 mins.	0	0	0	0	1	2	0	3	0	0	4	4	0	1	2	3
Total Volume	0	0	0	0	6	8	0	14	0	0	19	19	0	12	6	18
% App. Total	0	0	0		42.9	57.1	0		0	0	100		0	66.7	33.3	
PHF	.000	.000	.000	.000	.750	.667	.000	.700	.000	.000	.679	.679	.000	.750	.750	.900

Location: Los Angeles
N/S: I-110 Northbound Ramps
E/W: Redondo Beach Blvd

Date: 5/23/2019
Day: Thursday

PEDESTRIANS

	North Leg University of South LA DW	East Leg Redondo Beach Blvd	South Leg I-110 Northbound Ramps	West Leg Redondo Beach Blvd	
	Pedestrians	Pedestrians	Pedestrians	Pedestrians	
7:00 AM	0	0	0	0	0
7:15 AM	0	0	0	0	0
7:30 AM	0	0	0	0	0
7:45 AM	0	0	0	0	0
8:00 AM	0	0	0	0	0
8:15 AM	0	0	0	0	0
8:30 AM	0	0	0	0	0
8:45 AM	0	0	0	0	0
9:00 AM	0	0	0	0	0
9:15 AM	0	0	0	0	0
9:30 AM	0	0	0	0	0
9:45 AM	0	0	0	0	0
TOTAL VOLUMES:	0	0	0	0	0

	North Leg University of South LA DW	East Leg Redondo Beach Blvd	South Leg I-110 Northbound Ramps	West Leg Redondo Beach Blvd	
	Pedestrians	Pedestrians	Pedestrians	Pedestrians	
3:00 PM	0	0	0	0	0
3:15 PM	0	0	0	0	0
3:30 PM	0	0	0	0	0
3:45 PM	0	0	0	0	0
4:00 PM	0	0	0	0	0
4:15 PM	0	0	0	0	0
4:30 PM	0	0	0	0	0
4:45 PM	0	0	0	0	0
5:00 PM	0	0	0	0	0
5:15 PM	0	0	0	0	0
5:30 PM	0	0	0	0	0
5:45 PM	0	0	0	0	0
TOTAL VOLUMES:	0	0	0	0	0

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
951-268-6268

Location: Los Angeles
N/S: I-110 Northbound Ramps
E/W: Redondo Beach Blvd

Date: 5/23/2019
Day: Thursday

BICYCLES

	Southbound University of South LA DW			Westbound Redondo Beach Blvd			Northbound I-110 Northbound Ramps			Eastbound Redondo Beach Blvd			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	2	0	2
7:45 AM	0	0	0	0	0	0	0	0	0	0	1	0	1
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	1	0	0	0	0	0	1	0	2
8:30 AM	0	0	0	0	1	0	0	0	0	0	1	0	2
8:45 AM	0	0	0	0	1	0	0	0	0	0	0	0	1
9:00 AM	0	0	0	0	1	0	0	0	0	0	0	0	1
9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
9:30 AM	0	0	0	0	0	0	0	0	0	0	1	0	1
9:45 AM	0	0	0	0	1	0	0	0	0	0	2	0	3
TOTAL VOLUMES:	0	0	0	0	5	0	0	0	0	0	8	0	13

	Southbound University of South LA DW			Westbound Redondo Beach Blvd			Northbound I-110 Northbound Ramps			Eastbound Redondo Beach Blvd			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
3:00 PM	0	0	0	0	1	0	0	0	0	0	3	0	4
3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
3:45 PM	0	0	0	0	0	0	0	0	0	0	1	0	1
4:00 PM	0	0	0	0	1	0	0	0	0	0	0	0	1
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	1	0	0	0	0	0	0	0	1
5:15 PM	0	0	0	0	3	0	0	0	0	0	0	0	3
5:30 PM	0	0	0	0	1	0	0	0	0	0	1	0	2
5:45 PM	0	0	0	0	1	0	0	0	0	0	0	0	1
TOTAL VOLUMES:	0	0	0	0	8	0	0	0	0	0	5	0	13

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City of Los Angeles
N/S: Figueroa Street
E/W: Redondo Beach Boulevard
Weather: Clear

File Name : 11_LAC_Figueroa_Redondo Beach AM
Site Code : 05719380
Start Date : 5/23/2019
Page No : 1

Groups Printed- Passenger Vehicles - Buses - 2 Axle Vehicles - 3+ Axle Trucks

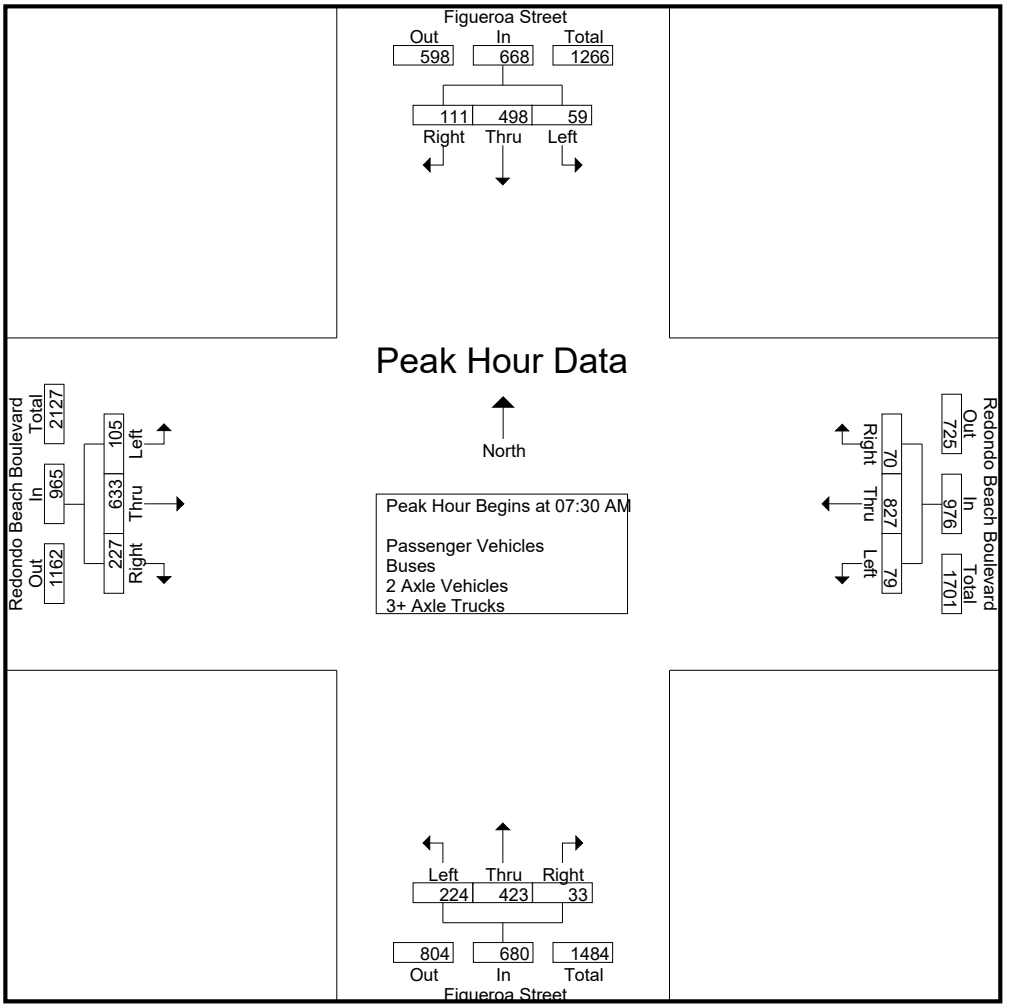
	Figueroa Street Southbound				Redondo Beach Boulevard Westbound				Figueroa Street Northbound				Redondo Beach Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	12	68	27	107	15	191	13	219	42	75	8	125	47	106	47	200	651
07:15 AM	22	109	22	153	19	192	14	225	52	74	9	135	49	126	38	213	726
07:30 AM	10	115	28	153	29	239	16	284	68	102	7	177	33	152	45	230	844
07:45 AM	16	182	31	229	31	207	19	257	55	127	3	185	27	154	66	247	918
Total	60	474	108	642	94	829	62	985	217	378	27	622	156	538	196	890	3139
08:00 AM	19	97	25	141	9	188	20	217	54	95	9	158	23	148	65	236	752
08:15 AM	14	104	27	145	10	193	15	218	47	99	14	160	22	179	51	252	775
08:30 AM	16	66	21	103	22	160	14	196	41	71	9	121	27	144	46	217	637
08:45 AM	15	63	20	98	6	134	9	149	42	75	12	129	27	153	56	236	612
Total	64	330	93	487	47	675	58	780	184	340	44	568	99	624	218	941	2776
09:00 AM	11	46	21	78	8	170	13	191	43	69	11	123	30	153	33	216	608
09:15 AM	13	62	21	96	4	139	14	157	35	88	11	134	25	145	37	207	594
09:30 AM	15	59	29	103	9	154	12	175	32	59	8	99	19	130	47	196	573
09:45 AM	14	49	16	79	7	137	5	149	37	55	12	104	16	145	38	199	531
Total	53	216	87	356	28	600	44	672	147	271	42	460	90	573	155	818	2306
Grand Total	177	1020	288	1485	169	2104	164	2437	548	989	113	1650	345	1735	569	2649	8221
Apprch %	11.9	68.7	19.4		6.9	86.3	6.7		33.2	59.9	6.8		13	65.5	21.5		
Total %	2.2	12.4	3.5	18.1	2.1	25.6	2	29.6	6.7	12	1.4	20.1	4.2	21.1	6.9	32.2	
Passenger Vehicles	147	929	250	1326	161	1884	139	2184	457	884	96	1437	315	1560	492	2367	7314
% Passenger Vehicles	83.1	91.1	86.8	89.3	95.3	89.5	84.8	89.6	83.4	89.4	85	87.1	91.3	89.9	86.5	89.4	89
Buses	2	15	0	17	0	9	0	9	4	12	5	21	4	26	18	48	95
% Buses	1.1	1.5	0	1.1	0	0.4	0	0.4	0.7	1.2	4.4	1.3	1.2	1.5	3.2	1.8	1.2
2 Axle Vehicles	15	56	26	97	3	99	17	119	38	66	5	109	9	73	33	115	440
% 2 Axle Vehicles	8.5	5.5	9	6.5	1.8	4.7	10.4	4.9	6.9	6.7	4.4	6.6	2.6	4.2	5.8	4.3	5.4
3+ Axle Trucks	13	20	12	45	5	112	8	125	49	27	7	83	17	76	26	119	372
% 3+ Axle Trucks	7.3	2	4.2	3	3	5.3	4.9	5.1	8.9	2.7	6.2	5	4.9	4.4	4.6	4.5	4.5

	Figueroa Street Southbound				Redondo Beach Boulevard Westbound				Figueroa Street Northbound				Redondo Beach Boulevard 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 09:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	10	115	28	153	29	**239**	16	**284**	**68**	102	7	177	**33**	152	45	230	844
07:45 AM	16	**182**	**31**	**229**	**31**	207	19	257	55	**127**	3	**185**	27	154	**66**	247	**918**
08:00 AM	**19**	97	25	141	9	188	**20**	217	54	95	9	158	23	148	65	236	752
08:15 AM	14	104	27	145	10	193	15	218	47	99	**14**	160	22	**179**	51	**252**	775
Total Volume	59	498	111	668	79	827	70	976	224	423	33	680	105	633	227	965	3289
% App. Total	8.8	74.6	16.6		8.1	84.7	7.2		32.9	62.2	4.9		10.9	65.6	23.5		
PHF	.776	.684	.895	.729	.637	.865	.875	.859	.824	.833	.589	.919	.795	.884	.860	.957	.896

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Site Code : 05719380
Start Date : 5/23/2019
Page No : 2



Peak Hour Analysis From 07:00 AM to 09:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:15 AM				07:00 AM				07:30 AM				07:30 AM			
+0 mins.	**22**	109	22	153	15	191	13	219	**68**	102	7	177	**33**	152	45	230
+15 mins.	10	115	28	153	19	192	14	225	55	**127**	3	**185**	27	154	**66**	247
+30 mins.	16	**182**	**31**	**229**	29	**239**	16	**284**	54	95	9	158	23	148	65	236
+45 mins.	19	97	25	141	**31**	207	**19**	257	47	99	**14**	160	22	**179**	51	**252**
Total Volume	67	503	106	676	94	829	62	985	224	423	33	680	105	633	227	965
% App. Total	9.9	74.4	15.7		9.5	84.2	6.3		32.9	62.2	4.9		10.9	65.6	23.5	
PHF	.761	.691	.855	.738	.758	.867	.816	.867	.824	.833	.589	.919	.795	.884	.860	.957

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File Name : 11_LAC_Figueroa_Redondo Beach AM
Site Code : 05719380
Start Date : 5/23/2019
Page No : 1

Groups Printed- Passenger Vehicles

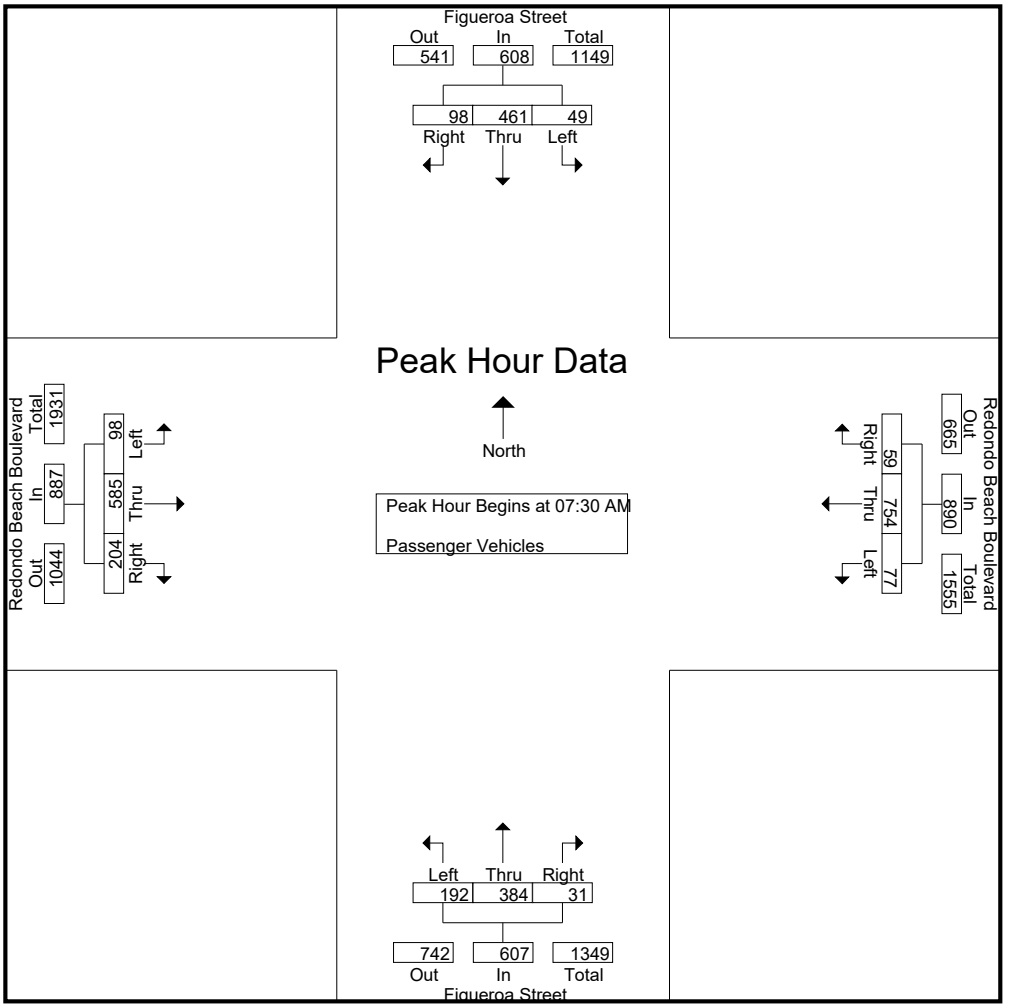
	Figueroa Street Southbound				Redondo Beach Boulevard Westbound				Figueroa Street Northbound				Redondo Beach Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	12	65	26	103	14	180	11	205	31	67	7	105	44	98	45	187	600
07:15 AM	19	103	20	142	18	177	11	206	43	71	7	121	47	121	36	204	673
07:30 AM	9	104	27	140	28	222	13	263	60	94	7	161	30	141	42	213	777
07:45 AM	12	175	28	215	30	192	17	239	47	117	3	167	24	147	60	231	852
Total	52	447	101	600	90	771	52	913	181	349	24	554	145	507	183	835	2902
08:00 AM	18	91	21	130	9	172	17	198	48	81	8	137	23	140	59	222	687
08:15 AM	10	91	22	123	10	168	12	190	37	92	13	142	21	157	43	221	676
08:30 AM	15	63	17	95	20	134	12	166	29	63	8	100	24	126	37	187	548
08:45 AM	12	54	18	84	6	124	8	138	37	66	11	114	23	128	53	204	540
Total	55	299	78	432	45	598	49	692	151	302	40	493	91	551	192	834	2451
09:00 AM	9	38	16	63	7	149	12	168	39	63	7	109	25	137	24	186	526
09:15 AM	11	53	17	81	4	116	11	131	29	74	8	111	23	123	30	176	499
09:30 AM	13	53	23	89	8	129	10	147	26	50	7	83	18	113	34	165	484
09:45 AM	7	39	15	61	7	121	5	133	31	46	10	87	13	129	29	171	452
Total	40	183	71	294	26	515	38	579	125	233	32	390	79	502	117	698	1961
Grand Total	147	929	250	1326	161	1884	139	2184	457	884	96	1437	315	1560	492	2367	7314
Apprch %	11.1	70.1	18.9		7.4	86.3	6.4		31.8	61.5	6.7		13.3	65.9	20.8		
Total %	2	12.7	3.4	18.1	2.2	25.8	1.9	29.9	6.2	12.1	1.3	19.6	4.3	21.3	6.7	32.4	

	Figueroa Street Southbound				Redondo Beach Boulevard Westbound				Figueroa Street Northbound				Redondo Beach Boulevard 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 07:30 AM to 08:15 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	9	104	27	140	28	**222**	13	**263**	**60**	94	7	161	**30**	141	42	213	777
07:45 AM	12	**175**	**28**	**215**	**30**	192	**17**	239	47	**117**	3	**167**	24	147	**60**	**231**	**852**
08:00 AM	**18**	91	21	130	9	172	17	198	48	81	8	137	23	140	59	222	687
08:15 AM	10	91	22	123	10	168	12	190	37	92	**13**	142	21	**157**	43	221	676
Total Volume	49	461	98	608	77	754	59	890	192	384	31	607	98	585	204	887	2992
% App. Total	8.1	75.8	16.1		8.7	84.7	6.6		31.6	63.3	5.1		11	66	23		
PHF	.681	.659	.875	.707	.642	.849	.868	.846	.800	.821	.596	.909	.817	.932	.850	.960	.878

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Site Code : 05719380
Start Date : 5/23/2019



Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:30 AM				07:30 AM				07:30 AM				07:30 AM			
+0 mins.	9	104	27	140	28	**222**	13	**263**	**60**	94	7	161	**30**	141	42	213
+15 mins.	12	**175**	**28**	**215**	**30**	192	**17**	239	47	**117**	3	**167**	24	147	**60**	**231**
+30 mins.	**18**	91	21	130	9	172	17	198	48	81	8	137	23	140	59	222
+45 mins.	10	91	22	123	10	168	12	190	37	92	**13**	142	21	**157**	43	221
Total Volume	49	461	98	608	77	754	59	890	192	384	31	607	98	585	204	887
% App. Total	8.1	75.8	16.1		8.7	84.7	6.6		31.6	63.3	5.1		11	66	23	
PHF	.681	.659	.875	.707	.642	.849	.868	.846	.800	.821	.596	.909	.817	.932	.850	.960

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Weather: Clear

File Name : 11_LAC_Figueroa_Redondo Beach AM
Site Code : 05719380
Start Date : 5/23/2019
Page No : 1

Groups Printed- Buses

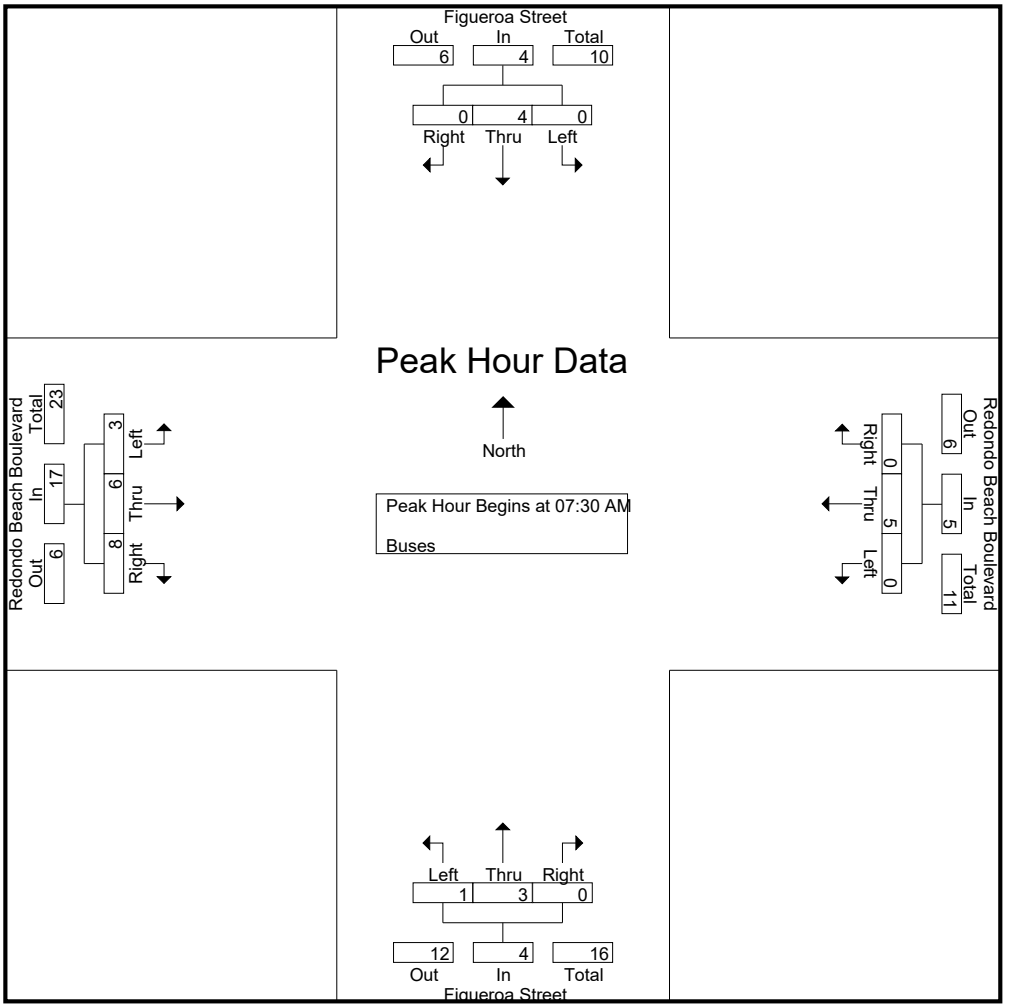
	Figueroa Street Southbound				Redondo Beach Boulevard Westbound				Figueroa Street Northbound				Redondo Beach Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	0	1	0	1	0	2	0	2	1	1	0	2	0	0	0	0	5
07:15 AM	0	1	0	1	0	1	0	1	1	0	0	1	0	0	0	0	3
07:30 AM	0	1	0	1	0	1	0	1	0	2	0	2	1	3	0	4	8
07:45 AM	0	1	0	1	0	1	0	1	0	0	0	0	1	0	2	3	5
Total	0	4	0	4	0	5	0	5	2	3	0	5	2	3	2	7	21
08:00 AM	0	1	0	1	0	1	0	1	1	1	0	2	0	1	1	2	6
08:15 AM	0	1	0	1	0	2	0	2	0	0	0	0	1	2	5	8	11
08:30 AM	0	3	0	3	0	1	0	1	1	1	0	2	0	4	2	6	12
08:45 AM	0	4	0	4	0	0	0	0	0	0	1	1	0	9	2	11	16
Total	0	9	0	9	0	4	0	4	2	2	1	5	1	16	10	27	45
09:00 AM	1	1	0	2	0	0	0	0	0	2	1	3	1	2	4	7	12
09:15 AM	1	0	0	1	0	0	0	0	0	2	2	4	0	4	1	5	10
09:30 AM	0	1	0	1	0	0	0	0	0	2	0	2	0	1	1	2	5
09:45 AM	0	0	0	0	0	0	0	0	0	1	1	2	0	0	0	0	2
Total	2	2	0	4	0	0	0	0	0	7	4	11	1	7	6	14	29
Grand Total	2	15	0	17	0	9	0	9	4	12	5	21	4	26	18	48	95
Apprch %	11.8	88.2	0		0	100	0		19	57.1	23.8		8.3	54.2	37.5		
Total %	2.1	15.8	0	17.9	0	9.5	0	9.5	4.2	12.6	5.3	22.1	4.2	27.4	18.9	50.5	

	Figueroa Street Southbound				Redondo Beach Boulevard Westbound				Figueroa Street Northbound				Redondo Beach Boulevard 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 07:30 AM to 08:15 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	0	**1**	0	**1**	0	1	0	1	0	**2**	0	**2**	**1**	**3**	0	4	8
07:45 AM	0	1	0	1	0	1	0	1	0	0	0	0	1	0	2	3	5
08:00 AM	0	1	0	1	0	1	0	1	**1**	1	0	2	0	1	1	2	6
08:15 AM	0	1	0	1	0	**2**	0	**2**	0	0	0	0	1	2	**5**	**8**	**11**
Total Volume	0	4	0	4	0	5	0	5	1	3	0	4	3	6	8	17	30
% App. Total	0	100	0		0	100	0		25	75	0		17.6	35.3	47.1		
PHF	.000	1.00	.000	1.00	.000	.625	.000	.625	.250	.375	.000	.500	.750	.500	.400	.531	.682

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Site Code : 05719380
Start Date : 5/23/2019



Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:30 AM				07:30 AM				07:30 AM				07:30 AM			
+0 mins.	0	**1**	0	**1**	0	1	0	1	0	**2**	0	**2**	**1**	**3**	0	4
+15 mins.	0	1	0	1	0	1	0	1	0	0	0	0	1	0	2	3
+30 mins.	0	1	0	1	0	1	0	1	**1**	1	0	2	0	1	1	2
+45 mins.	0	1	0	1	0	**2**	0	**2**	0	0	0	0	1	2	**5**	**8**
Total Volume	0	4	0	4	0	5	0	5	1	3	0	4	3	6	8	17
% App. Total	0	100	0		0	100	0		25	75	0		17.6	35.3	47.1	
PHF	.000	1.000	.000	1.000	.000	.625	.000	.625	.250	.375	.000	.500	.750	.500	.400	.531

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File Name : 11_LAC_Figueroa_Redondo Beach AM
Site Code : 05719380
Start Date : 5/23/2019
Page No : 1

Groups Printed- 2 Axle Vehicles

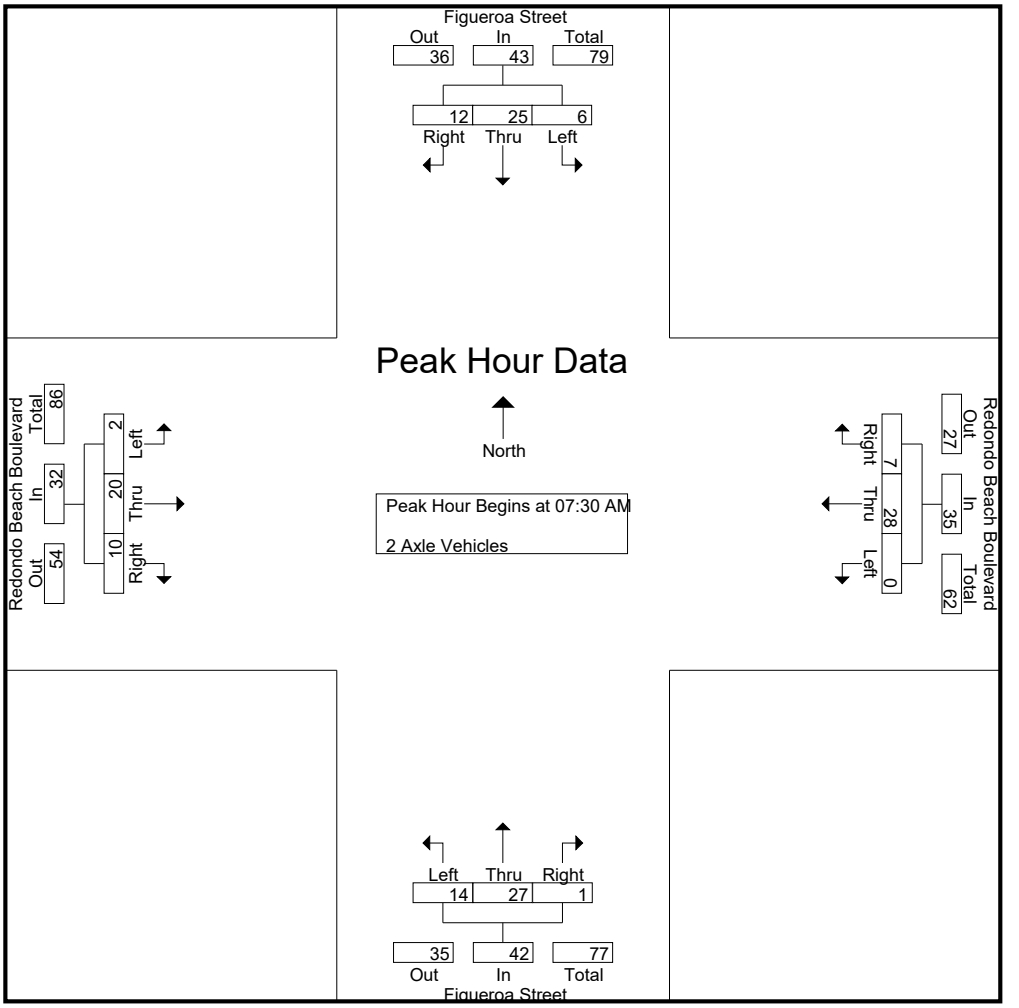
	Figueroa Street Southbound				Redondo Beach Boulevard Westbound				Figueroa Street Northbound				Redondo Beach Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	0	0	0	0	1	4	1	6	6	5	0	11	2	5	0	7	24
07:15 AM	1	5	1	7	0	7	3	10	3	1	1	5	0	4	2	6	28
07:30 AM	1	8	1	10	0	7	1	8	3	4	0	7	1	5	2	8	33
07:45 AM	3	4	3	10	0	5	1	6	6	9	0	15	1	4	3	8	39
Total	5	17	5	27	1	23	6	30	18	19	1	38	4	18	7	29	124
08:00 AM	0	4	3	7	0	6	2	8	3	9	1	13	0	3	3	6	34
08:15 AM	2	9	5	16	0	10	3	13	2	5	0	7	0	8	2	10	46
08:30 AM	1	0	3	4	2	10	2	14	5	2	1	8	0	8	4	12	38
08:45 AM	1	4	1	6	0	4	1	5	1	8	0	9	1	10	0	11	31
Total	4	17	12	33	2	30	8	40	11	24	2	37	1	29	9	39	149
09:00 AM	0	4	4	8	0	13	1	14	4	4	1	9	1	7	3	11	42
09:15 AM	0	6	1	7	0	11	1	12	3	10	0	13	1	7	3	11	43
09:30 AM	2	4	4	10	0	13	1	14	1	5	0	6	1	8	6	15	45
09:45 AM	4	8	0	12	0	9	0	9	1	4	1	6	1	4	5	10	37
Total	6	22	9	37	0	46	3	49	9	23	2	34	4	26	17	47	167
Grand Total	15	56	26	97	3	99	17	119	38	66	5	109	9	73	33	115	440
Apprch %	15.5	57.7	26.8		2.5	83.2	14.3		34.9	60.6	4.6		7.8	63.5	28.7		
Total %	3.4	12.7	5.9	22	0.7	22.5	3.9	27	8.6	15	1.1	24.8	2	16.6	7.5	26.1	

	Figueroa Street Southbound				Redondo Beach Boulevard Westbound				Figueroa Street Northbound				Redondo Beach Boulevard 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 07:30 AM to 08:15 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	1	8	1	10	0	7	1	8	3	4	0	7	**1**	5	2	8	33
07:45 AM	**3**	4	3	10	0	5	1	6	**6**	**9**	0	**15**	1	4	**3**	8	39
08:00 AM	0	4	3	7	0	6	2	8	3	9	**1**	13	0	3	3	6	34
08:15 AM	2	**9**	**5**	**16**	0	**10**	**3**	**13**	2	5	0	7	0	**8**	2	**10**	**46**
Total Volume	6	25	12	43	0	28	7	35	14	27	1	42	2	20	10	32	152
% App. Total	14	58.1	27.9		0	80	20		33.3	64.3	2.4		6.2	62.5	31.2		
PHF	.500	.694	.600	.672	.000	.700	.583	.673	.583	.750	.250	.700	.500	.625	.833	.800	.826

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City of Los Angeles
N/S: Figueroa Street
E/W: Redondo Beach Boulevard
Weather: Clear

File Name : 11_LAC_Figueroa_Redondo Beach AM
Site Code : 05719380
Start Date : 5/23/2019



Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:30 AM				07:30 AM				07:30 AM				07:30 AM			
+0 mins.	1	8	1	10	0	7	1	8	3	4	0	7	**1**	5	2	8
+15 mins.	**3**	4	3	10	0	5	1	6	**6**	**9**	0	**15**	1	4	**3**	8
+30 mins.	0	4	3	7	0	6	2	8	3	9	**1**	13	0	3	3	6
+45 mins.	2	**9**	**5**	**16**	0	**10**	**3**	**13**	2	5	0	7	0	**8**	2	**10**
Total Volume	6	25	12	43	0	28	7	35	14	27	1	42	2	20	10	32
% App. Total	14	58.1	27.9		0	80	20		33.3	64.3	2.4		6.2	62.5	31.2	
PHF	.500	.694	.600	.672	.000	.700	.583	.673	.583	.750	.250	.700	.500	.625	.833	.800

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City of Los Angeles
N/S: Figueroa Street
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Weather: Clear

File Name : 11_LAC_Figueroa_Redondo Beach AM
Site Code : 05719380
Start Date : 5/23/2019
Page No : 1

Groups Printed- 3+ Axle Trucks

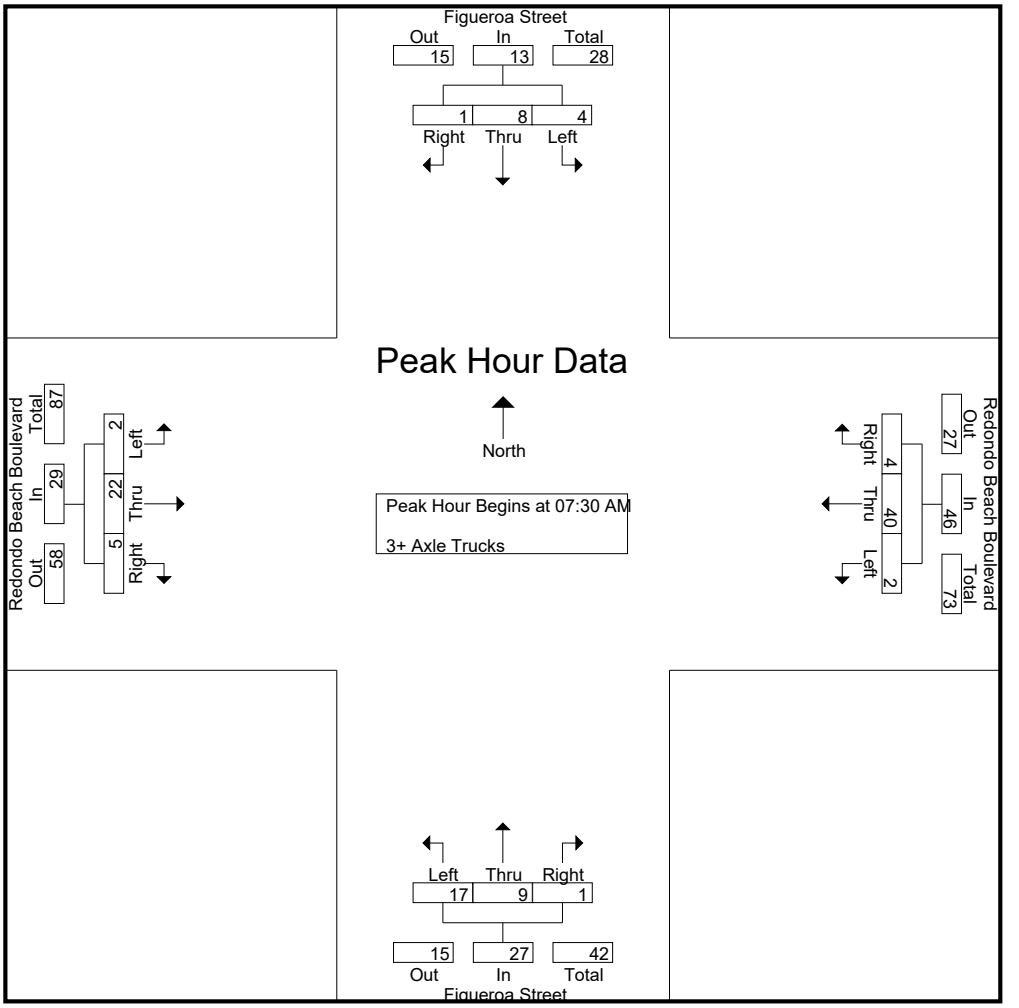
	Figueroa Street Southbound				Redondo Beach Boulevard Westbound				Figueroa Street Northbound				Redondo Beach Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	0	2	1	3	0	5	1	6	4	2	1	7	1	3	2	6	22
07:15 AM	2	0	1	3	1	7	0	8	5	2	1	8	2	1	0	3	22
07:30 AM	0	2	0	2	1	9	2	12	5	2	0	7	1	3	1	5	26
07:45 AM	1	2	0	3	1	9	1	11	2	1	0	3	1	3	1	5	22
Total	3	6	2	11	3	30	4	37	16	7	2	25	5	10	4	19	92
08:00 AM	1	1	1	3	0	9	1	10	2	4	0	6	0	4	2	6	25
08:15 AM	2	3	0	5	0	13	0	13	8	2	1	11	0	12	1	13	42
08:30 AM	0	0	1	1	0	15	0	15	6	5	0	11	3	6	3	12	39
08:45 AM	2	1	1	4	0	6	0	6	4	1	0	5	3	6	1	10	25
Total	5	5	3	13	0	43	1	44	20	12	1	33	6	28	7	41	131
09:00 AM	1	3	1	5	1	8	0	9	0	0	2	2	3	7	2	12	28
09:15 AM	1	3	3	7	0	12	2	14	3	2	1	6	1	11	3	15	42
09:30 AM	0	1	2	3	1	12	1	14	5	2	1	8	0	8	6	14	39
09:45 AM	3	2	1	6	0	7	0	7	5	4	0	9	2	12	4	18	40
Total	5	9	7	21	2	39	3	44	13	8	4	25	6	38	15	59	149
Grand Total	13	20	12	45	5	112	8	125	49	27	7	83	17	76	26	119	372
Apprch %	28.9	44.4	26.7		4	89.6	6.4		59	32.5	8.4		14.3	63.9	21.8		
Total %	3.5	5.4	3.2	12.1	1.3	30.1	2.2	33.6	13.2	7.3	1.9	22.3	4.6	20.4	7	32	

	Figueroa Street Southbound				Redondo Beach Boulevard Westbound				Figueroa Street Northbound				Redondo Beach Boulevard 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 07:30 AM to 08:15 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	0	2	0	2	**1**	9	**2**	12	5	2	0	7	**1**	3	1	5	26
07:45 AM	1	2	0	3	1	9	1	11	2	1	0	3	1	3	1	5	22
08:00 AM	1	1	**1**	3	0	9	1	10	2	**4**	0	6	0	4	**2**	6	25
08:15 AM	**2**	**3**	0	**5**	0	**13**	0	**13**	**8**	2	**1**	**11**	0	**12**	1	**13**	**42**
Total Volume	4	8	1	13	2	40	4	46	17	9	1	27	2	22	5	29	115
% App. Total	30.8	61.5	7.7		4.3	87	8.7		63	33.3	3.7		6.9	75.9	17.2		
PHF	.500	.667	.250	.650	.500	.769	.500	.885	.531	.563	.250	.614	.500	.458	.625	.558	.685

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Weather: Clear

File Name : 11_LAC_Figueroa_Redondo Beach AM
Site Code : 05719380
Start Date : 5/23/2019



Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:30 AM				07:30 AM				07:30 AM				07:30 AM			
+0 mins.	0	2	0	2	**1**	9	**2**	12	5	2	0	7	**1**	3	1	5
+15 mins.	1	2	0	3	1	9	1	11	2	1	0	3	1	3	1	5
+30 mins.	1	1	**1**	3	0	9	1	10	2	**4**	0	6	0	4	**2**	6
+45 mins.	**2**	**3**	0	**5**	0	**13**	0	**13**	**8**	2	**1**	**11**	0	**12**	1	**13**
Total Volume	4	8	1	13	2	40	4	46	17	9	1	27	2	22	5	29
% App. Total	30.8	61.5	7.7		4.3	87	8.7		63	33.3	3.7		6.9	75.9	17.2	
PHF	.500	.667	.250	.650	.500	.769	.500	.885	.531	.563	.250	.614	.500	.458	.625	.558

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Site Code : 05719380
Start Date : 5/23/2019
Page No : 1

Groups Printed- Passenger Vehicles - Buses - 2 Axle Vehicles - 3+ Axle Trucks

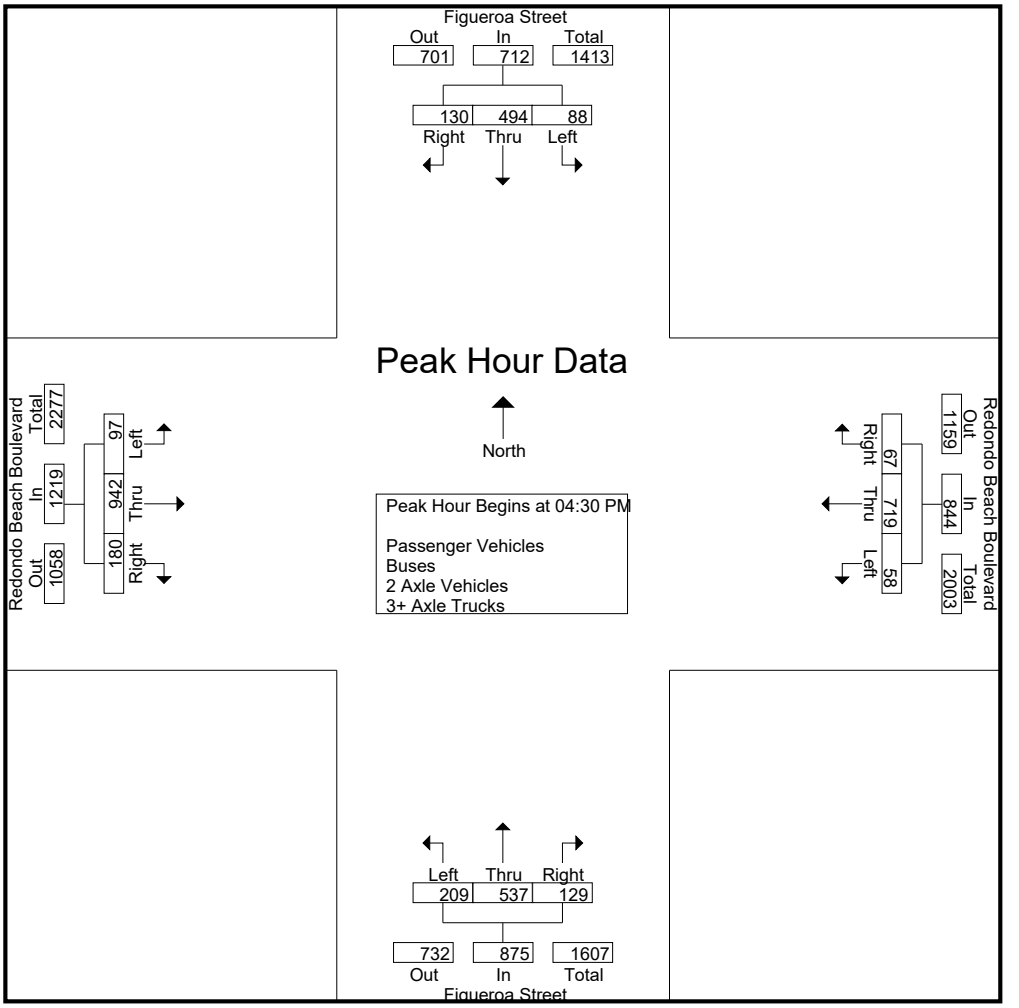
	Figueroa Street Southbound				Redondo Beach Boulevard Westbound				Figueroa Street Northbound				Redondo Beach Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
03:00 PM	11	91	29	131	4	161	18	183	52	97	12	161	26	204	55	285	760
03:15 PM	16	91	19	126	12	145	10	167	41	85	18	144	23	204	50	277	714
03:30 PM	17	101	27	145	6	192	14	212	61	101	26	188	26	183	42	251	796
03:45 PM	24	117	30	171	7	138	17	162	40	116	23	179	31	228	50	309	821
Total	68	400	105	573	29	636	59	724	194	399	79	672	106	819	197	1122	3091
04:00 PM	24	117	28	169	10	159	23	192	57	119	20	196	25	248	48	321	878
04:15 PM	13	102	16	131	13	166	23	202	41	112	17	170	40	230	50	320	823
04:30 PM	21	113	44	178	12	194	22	228	60	157	37	254	25	210	42	277	937
04:45 PM	22	126	25	173	12	147	6	165	44	128	28	200	22	258	53	333	871
Total	80	458	113	651	47	666	74	787	202	516	102	820	112	946	193	1251	3509
05:00 PM	25	124	36	185	15	197	20	232	57	135	33	225	22	230	41	293	935
05:15 PM	20	131	25	176	19	181	19	219	48	117	31	196	28	244	44	316	907
05:30 PM	14	95	21	130	11	196	18	225	46	88	24	158	31	251	43	325	838
05:45 PM	21	129	26	176	8	138	17	163	44	91	17	152	31	201	32	264	755
Total	80	479	108	667	53	712	74	839	195	431	105	731	112	926	160	1198	3435
Grand Total	228	1337	326	1891	129	2014	207	2350	591	1346	286	2223	330	2691	550	3571	10035
Apprch %	12.1	70.7	17.2		5.5	85.7	8.8		26.6	60.5	12.9		9.2	75.4	15.4		
Total %	2.3	13.3	3.2	18.8	1.3	20.1	2.1	23.4	5.9	13.4	2.9	22.2	3.3	26.8	5.5	35.6	
Passenger Vehicles	198	1217	312	1727	119	1948	190	2257	568	1270	273	2111	310	2497	447	3254	9349
% Passenger Vehicles	86.8	91	95.7	91.3	92.2	96.7	91.8	96	96.1	94.4	95.5	95	93.9	92.8	81.3	91.1	93.2
Buses	5	26	2	33	1	3	2	6	1	8	2	11	4	28	41	73	123
% Buses	2.2	1.9	0.6	1.7	0.8	0.1	1	0.3	0.2	0.6	0.7	0.5	1.2	1	7.5	2	1.2
2 Axle Vehicles	14	52	8	74	5	29	10	44	13	35	5	53	4	78	33	115	286
% 2 Axle Vehicles	6.1	3.9	2.5	3.9	3.9	1.4	4.8	1.9	2.2	2.6	1.7	2.4	1.2	2.9	6	3.2	2.9
3+ Axle Trucks	11	42	4	57	4	34	5	43	9	33	6	48	12	88	29	129	277
% 3+ Axle Trucks	4.8	3.1	1.2	3	3.1	1.7	2.4	1.8	1.5	2.5	2.1	2.2	3.6	3.3	5.3	3.6	2.8

	Figueroa Street Southbound				Redondo Beach Boulevard Westbound				Figueroa Street Northbound				Redondo Beach Boulevard 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 03:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:30 PM																	
04:30 PM	21	113	**44**	178	12	194	**22**	228	**60**	**157**	**37**	**254**	25	210	42	277	**937**
04:45 PM	22	126	25	173	12	147	6	165	44	128	28	200	22	**258**	**53**	**333**	871
05:00 PM	**25**	124	36	**185**	15	**197**	20	**232**	57	135	33	225	22	230	41	293	935
05:15 PM	20	**131**	25	176	**19**	181	19	219	48	117	31	196	**28**	244	44	316	907
Total Volume	88	494	130	712	58	719	67	844	209	537	129	875	97	942	180	1219	3650
% App. Total	12.4	69.4	18.3		6.9	85.2	7.9		23.9	61.4	14.7		8	77.3	14.8		
PHF	.880	.943	.739	.962	.763	.912	.761	.909	.871	.855	.872	.861	.866	.913	.849	.915	.974

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City of Los Angeles
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Weather: Clear

File Name : 11_LAC_Figueroa_Redondo Beach PM
Site Code : 05719380
Start Date : 5/23/2019
Page No : 2



Peak Hour Analysis From 03:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:30 PM				04:30 PM				04:30 PM				04:45 PM			
+0 mins.	21	113	**44**	178	12	194	**22**	228	**60**	**157**	**37**	**254**	22	**258**	**53**	**333**
+15 mins.	22	126	25	173	12	147	6	165	44	128	28	200	22	230	41	293
+30 mins.	**25**	124	36	**185**	15	**197**	20	**232**	57	135	33	225	28	244	44	316
+45 mins.	20	**131**	25	176	**19**	181	19	219	48	117	31	196	**31**	251	43	325
Total Volume	88	494	130	712	58	719	67	844	209	537	129	875	103	983	181	1267
% App. Total	12.4	69.4	18.3		6.9	85.2	7.9		23.9	61.4	14.7		8.1	77.6	14.3	
PHF	.880	.943	.739	.962	.763	.912	.761	.909	.871	.855	.872	.861	.831	.953	.854	.951

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File Name : 11_LAC_Figueroa_Redondo Beach PM
Site Code : 05719380
Start Date : 5/23/2019
Page No : 1

Groups Printed- Passenger Vehicles

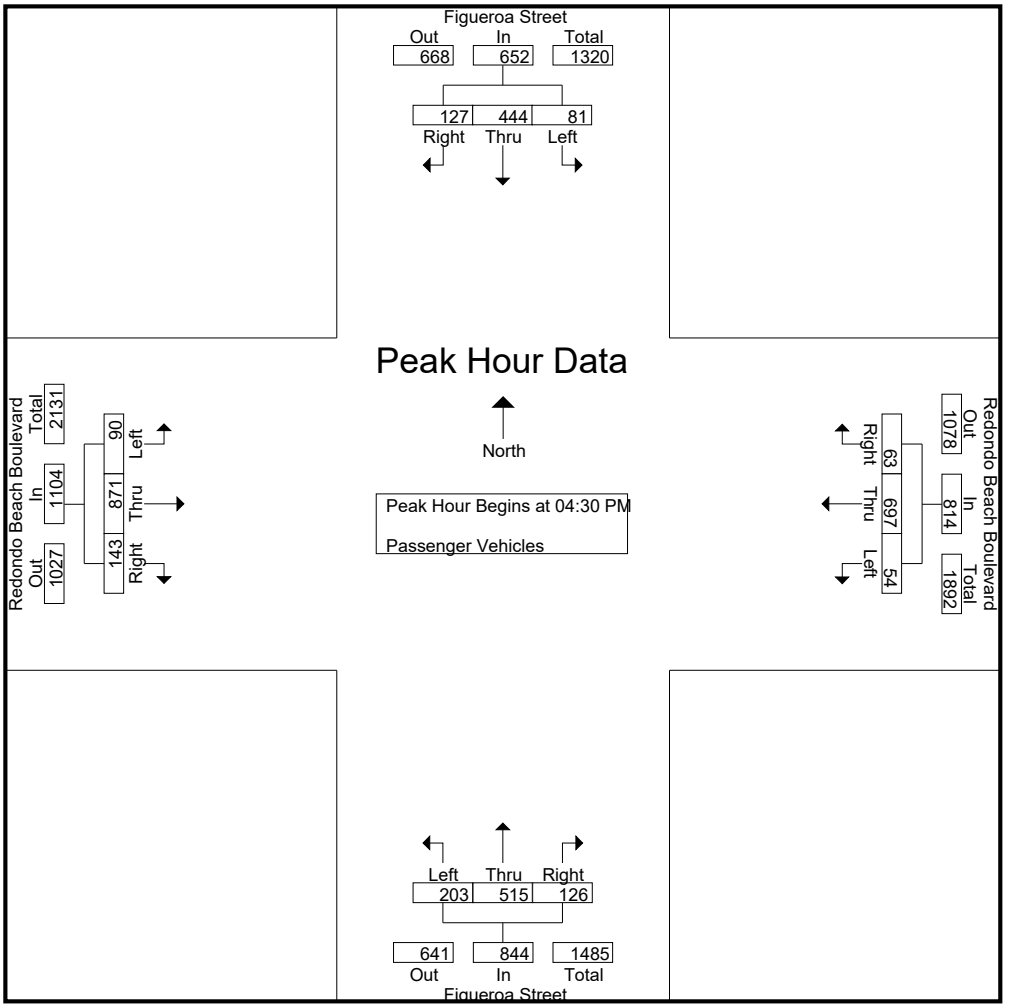
	Figueroa Street Southbound				Redondo Beach Boulevard Westbound				Figueroa Street Northbound				Redondo Beach Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
03:00 PM	10	86	27	123	4	151	16	171	52	87	9	148	24	190	50	264	706
03:15 PM	10	82	17	109	10	140	6	156	37	77	16	130	22	188	33	243	638
03:30 PM	16	91	22	129	6	183	12	201	58	96	25	179	24	167	32	223	732
03:45 PM	21	111	30	162	5	136	15	156	38	109	23	170	28	211	45	284	772
Total	57	370	96	523	25	610	49	684	185	369	73	627	98	756	160	1014	2848
04:00 PM	19	107	27	153	9	153	23	185	54	110	20	184	24	222	37	283	805
04:15 PM	12	93	16	121	13	160	20	193	37	103	15	155	39	215	41	295	764
04:30 PM	19	103	43	165	11	189	20	220	58	145	36	239	23	190	31	244	868
04:45 PM	21	110	25	156	11	143	6	160	41	122	26	189	21	241	40	302	807
Total	71	413	111	595	44	645	69	758	190	480	97	767	107	868	149	1124	3244
05:00 PM	22	112	35	169	14	192	20	226	56	131	33	220	18	209	35	262	877
05:15 PM	19	119	24	162	18	173	17	208	48	117	31	196	28	231	37	296	862
05:30 PM	11	83	20	114	11	191	18	220	46	85	23	154	29	243	39	311	799
05:45 PM	18	120	26	164	7	137	17	161	43	88	16	147	30	190	27	247	719
Total	70	434	105	609	50	693	72	815	193	421	103	717	105	873	138	1116	3257
Grand Total	198	1217	312	1727	119	1948	190	2257	568	1270	273	2111	310	2497	447	3254	9349
Apprch %	11.5	70.5	18.1		5.3	86.3	8.4		26.9	60.2	12.9		9.5	76.7	13.7		
Total %	2.1	13	3.3	18.5	1.3	20.8	2	24.1	6.1	13.6	2.9	22.6	3.3	26.7	4.8	34.8	

	Figueroa Street Southbound				Redondo Beach Boulevard Westbound				Figueroa Street Northbound				Redondo Beach Boulevard 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 04:30 PM to 05:15 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:30 PM																	
04:30 PM	19	103	**43**	165	11	189	**20**	220	**58**	**145**	**36**	**239**	23	190	31	244	868
04:45 PM	21	110	25	156	11	143	6	160	41	122	26	189	21	**241**	**40**	**302**	807
05:00 PM	**22**	112	35	**169**	14	**192**	20	**226**	56	131	33	220	18	209	35	262	**877**
05:15 PM	19	**119**	24	162	**18**	173	17	208	48	117	31	196	**28**	231	37	296	862
Total Volume	81	444	127	652	54	697	63	814	203	515	126	844	90	871	143	1104	3414
% App. Total	12.4	68.1	19.5		6.6	85.6	7.7		24.1	61	14.9		8.2	78.9	13		
PHF	.920	.933	.738	.964	.750	.908	.788	.900	.875	.888	.875	.883	.804	.904	.894	.914	.973

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City of Los Angeles
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File Name : 11_LAC_Figueroa_Redondo Beach PM
Site Code : 05719380
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Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:30 PM				04:30 PM				04:30 PM				04:30 PM			
+0 mins.	19	103	**43**	165	11	189	**20**	220	**58**	**145**	**36**	**239**	23	190	31	244
+15 mins.	21	110	25	156	11	143	6	160	41	122	26	189	21	**241**	**40**	**302**
+30 mins.	**22**	112	35	**169**	14	**192**	20	**226**	56	131	33	220	18	209	35	262
+45 mins.	19	**119**	24	162	**18**	173	17	208	48	117	31	196	**28**	231	37	296
Total Volume	81	444	127	652	54	697	63	814	203	515	126	844	90	871	143	1104
% App. Total	12.4	68.1	19.5		6.6	85.6	7.7		24.1	61	14.9		8.2	78.9	13	
PHF	.920	.933	.738	.964	.750	.908	.788	.900	.875	.888	.875	.883	.804	.904	.894	.914

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File Name : 11_LAC_Figueroa_Redondo Beach PM
Site Code : 05719380
Start Date : 5/23/2019
Page No : 1

Groups Printed- Buses

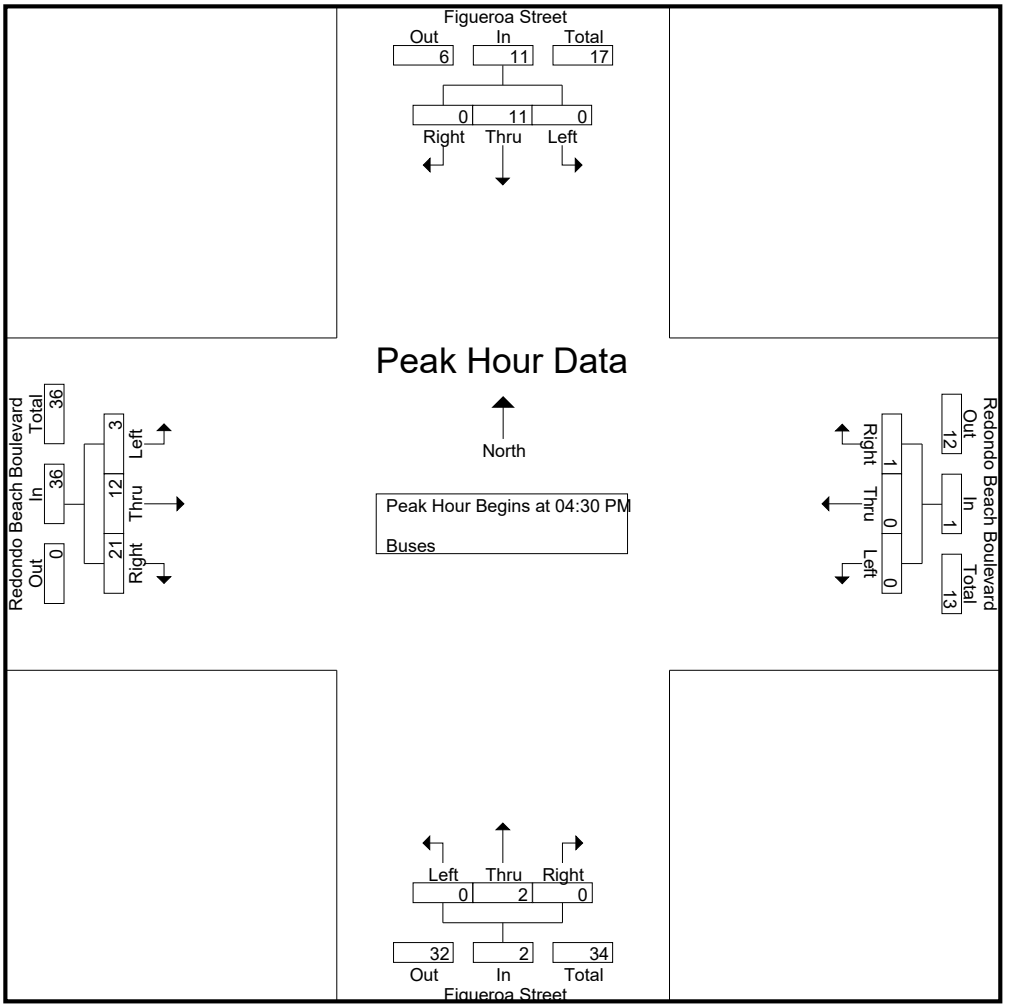
	Figueroa Street Southbound				Redondo Beach Boulevard Westbound				Figueroa Street Northbound				Redondo Beach Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
03:00 PM	0	0	1	1	0	0	0	0	0	0	1	1	0	0	2	2	4
03:15 PM	1	1	0	2	0	0	0	0	0	1	0	1	0	2	5	7	10
03:30 PM	0	3	1	4	0	1	0	1	0	0	1	1	0	7	1	8	14
03:45 PM	0	1	0	1	0	0	0	0	0	1	0	1	0	1	0	1	3
Total	1	5	2	8	0	1	0	1	0	2	2	4	0	10	8	18	31
04:00 PM	1	5	0	6	0	2	0	2	0	2	0	2	0	1	6	7	17
04:15 PM	0	1	0	1	0	0	1	1	1	1	0	2	0	2	4	6	10
04:30 PM	0	1	0	1	0	0	0	0	0	1	0	1	1	3	7	11	13
04:45 PM	0	5	0	5	0	0	0	0	0	1	0	1	1	1	6	8	14
Total	1	12	0	13	0	2	1	3	1	5	0	6	2	7	23	32	54
05:00 PM	0	1	0	1	0	0	0	0	0	0	0	0	1	6	5	12	13
05:15 PM	0	4	0	4	0	0	1	1	0	0	0	0	0	2	3	5	10
05:30 PM	1	2	0	3	0	0	0	0	0	1	0	1	0	1	1	2	6
05:45 PM	2	2	0	4	1	0	0	1	0	0	0	0	1	2	1	4	9
Total	3	9	0	12	1	0	1	2	0	1	0	1	2	11	10	23	38
Grand Total	5	26	2	33	1	3	2	6	1	8	2	11	4	28	41	73	123
Apprch %	15.2	78.8	6.1		16.7	50	33.3		9.1	72.7	18.2		5.5	38.4	56.2		
Total %	4.1	21.1	1.6	26.8	0.8	2.4	1.6	4.9	0.8	6.5	1.6	8.9	3.3	22.8	33.3	59.3	

	Figueroa Street Southbound				Redondo Beach Boulevard Westbound				Figueroa Street Northbound				Redondo Beach Boulevard 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 04:30 PM to 05:15 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:30 PM																	
04:30 PM	0	1	0	1	0	0	0	0	0	**1**	0	**1**	**1**	3	**7**	11	13
04:45 PM	0	**5**	0	**5**	0	0	0	0	0	1	0	1	1	1	6	8	**14**
05:00 PM	0	1	0	1	0	0	0	0	0	0	0	0	1	**6**	5	**12**	13
05:15 PM	0	4	0	4	0	0	**1**	**1**	0	0	0	0	0	2	3	5	10
Total Volume	0	11	0	11	0	0	1	1	0	2	0	2	3	12	21	36	50
% App. Total	0	100	0		0	0	100		0	100	0		8.3	33.3	58.3		
PHF	.000	.550	.000	.550	.000	.000	.250	.250	.000	.500	.000	.500	.750	.500	.750	.750	.893

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City of Los Angeles
N/S: Figueroa Street
E/W: Redondo Beach Boulevard
Weather: Clear

File Name : 11_LAC_Figueroa_Redondo Beach PM
Site Code : 05719380
Start Date : 5/23/2019



Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:30 PM				04:30 PM				04:30 PM				04:30 PM			
+0 mins.	0	1	0	1	0	0	0	0	0	**1**	0	**1**	**1**	3	**7**	11
+15 mins.	0	**5**	0	**5**	0	0	0	0	0	1	0	1	1	1	6	8
+30 mins.	0	1	0	1	0	0	0	0	0	0	0	0	1	**6**	5	**12**
+45 mins.	0	4	0	4	0	0	**1**	**1**	0	0	0	0	0	2	3	5
Total Volume	0	11	0	11	0	0	1	1	0	2	0	2	3	12	21	36
% App. Total	0	100	0		0	0	100		0	100	0		8.3	33.3	58.3	
PHF	.000	.550	.000	.550	.000	.000	.250	.250	.000	.500	.000	.500	.750	.500	.750	.750

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City of Los Angeles
N/S: Figueroa Street
E/W: Redondo Beach Boulevard
Weather: Clear

File Name : 11_LAC_Figueroa_Redondo Beach PM
Site Code : 05719380
Start Date : 5/23/2019
Page No : 1

Groups Printed- 2 Axle Vehicles

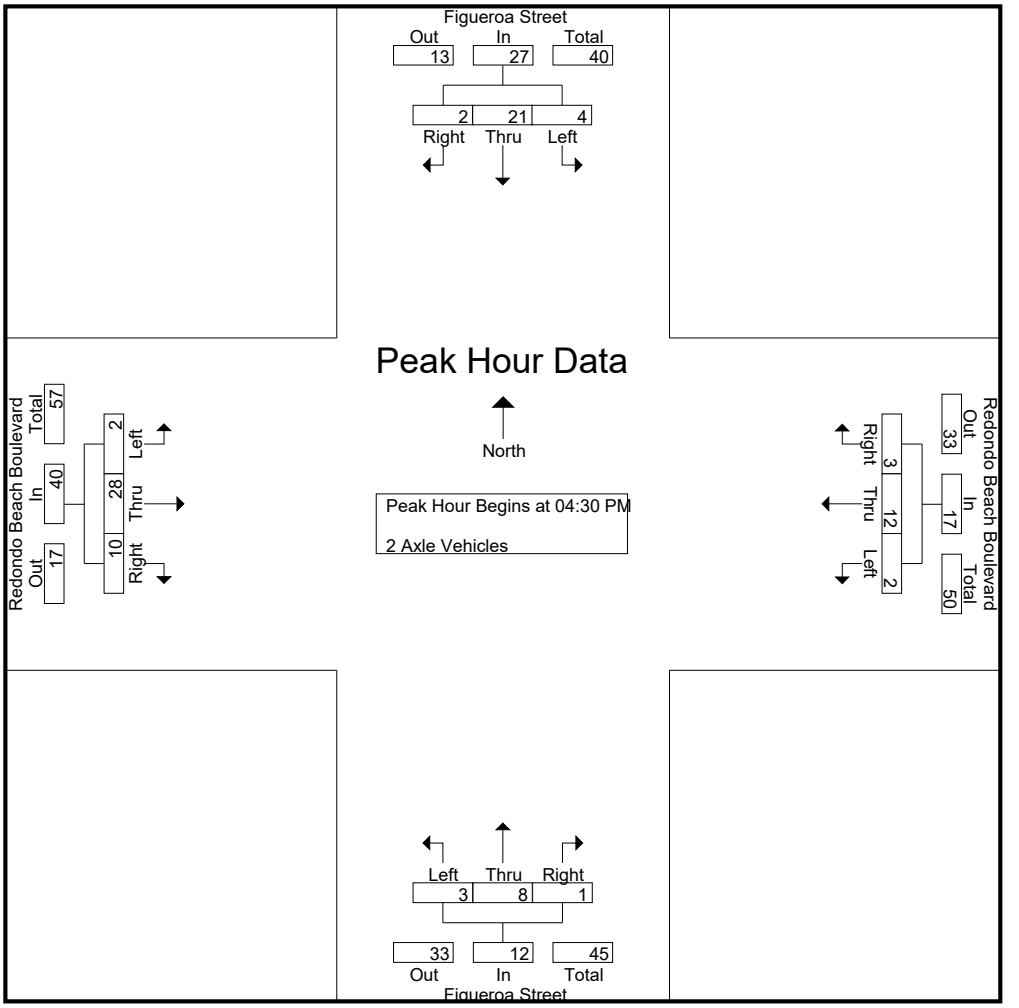
	Figueroa Street Southbound				Redondo Beach Boulevard Westbound				Figueroa Street Northbound				Redondo Beach Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
03:00 PM	1	2	1	4	0	5	2	7	0	7	1	8	1	5	2	8	27
03:15 PM	1	7	1	9	1	1	2	4	3	5	2	10	1	4	4	9	32
03:30 PM	1	3	2	6	0	2	2	4	1	3	0	4	0	4	4	8	22
03:45 PM	2	4	0	6	1	0	1	2	2	2	0	4	0	8	4	12	24
Total	5	16	4	25	2	8	7	17	6	17	3	26	2	21	14	37	105
04:00 PM	2	1	1	4	1	2	0	3	1	3	0	4	0	12	3	15	26
04:15 PM	1	7	0	8	0	4	0	4	2	3	0	5	0	6	2	8	25
04:30 PM	1	4	1	6	0	3	2	5	1	4	1	6	0	8	2	10	27
04:45 PM	1	7	0	8	1	2	0	3	1	2	0	3	0	7	5	12	26
Total	5	19	2	26	2	11	2	15	5	12	1	18	0	33	12	45	104
05:00 PM	1	5	0	6	1	2	0	3	1	2	0	3	2	7	1	10	22
05:15 PM	1	5	1	7	0	5	1	6	0	0	0	0	0	6	2	8	21
05:30 PM	1	4	1	6	0	2	0	2	0	1	1	2	0	4	2	6	16
05:45 PM	1	3	0	4	0	1	0	1	1	3	0	4	0	7	2	9	18
Total	4	17	2	23	1	10	1	12	2	6	1	9	2	24	7	33	77
Grand Total	14	52	8	74	5	29	10	44	13	35	5	53	4	78	33	115	286
Apprch %	18.9	70.3	10.8		11.4	65.9	22.7		24.5	66	9.4		3.5	67.8	28.7		
Total %	4.9	18.2	2.8	25.9	1.7	10.1	3.5	15.4	4.5	12.2	1.7	18.5	1.4	27.3	11.5	40.2	

	Figueroa Street Southbound				Redondo Beach Boulevard Westbound				Figueroa Street Northbound				Redondo Beach Boulevard 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 04:30 PM to 05:15 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:30 PM																	
04:30 PM	**1**	4	**1**	6	0	3	**2**	5	**1**	**4**	**1**	**6**	0	**8**	2	10	**27**
04:45 PM	1	**7**	0	**8**	**1**	2	0	3	1	2	0	3	0	7	**5**	**12**	26
05:00 PM	1	5	0	6	1	2	0	3	1	2	0	3	**2**	7	1	10	22
05:15 PM	1	5	1	7	0	**5**	1	**6**	0	0	0	0	0	6	2	8	21
Total Volume	4	21	2	27	2	12	3	17	3	8	1	12	2	28	10	40	96
% App. Total	14.8	77.8	7.4		11.8	70.6	17.6		25	66.7	8.3		5	70	25		
PHF	1.00	.750	.500	.844	.500	.600	.375	.708	.750	.500	.250	.500	.250	.875	.500	.833	.889

Counts Unlimited
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City of Los Angeles
N/S: Figueroa Street
E/W: Redondo Beach Boulevard
Weather: Clear

File Name : 11_LAC_Figueroa_Redondo Beach PM
Site Code : 05719380
Start Date : 5/23/2019



Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:30 PM				04:30 PM				04:30 PM				04:30 PM			
+0 mins.	**1**	4	**1**	6	0	3	**2**	5	**1**	**4**	**1**	**6**	0	**8**	2	10
+15 mins.	1	**7**	0	**8**	**1**	2	0	3	1	2	0	3	0	7	**5**	**12**
+30 mins.	1	5	0	6	1	2	0	3	1	2	0	3	**2**	7	1	10
+45 mins.	1	5	1	7	0	**5**	1	**6**	0	0	0	0	0	6	2	8
Total Volume	4	21	2	27	2	12	3	17	3	8	1	12	2	28	10	40
% App. Total	14.8	77.8	7.4		11.8	70.6	17.6		25	66.7	8.3		5	70	25	
PHF	1.000	.750	.500	.844	.500	.600	.375	.708	.750	.500	.250	.500	.250	.875	.500	.833

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City of Los Angeles
N/S: Figueroa Street
E/W: Redondo Beach Boulevard
Weather: Clear

File Name : 11_LAC_Figueroa_Redondo Beach PM
Site Code : 05719380
Start Date : 5/23/2019
Page No : 1

Groups Printed- 3+ Axle Trucks

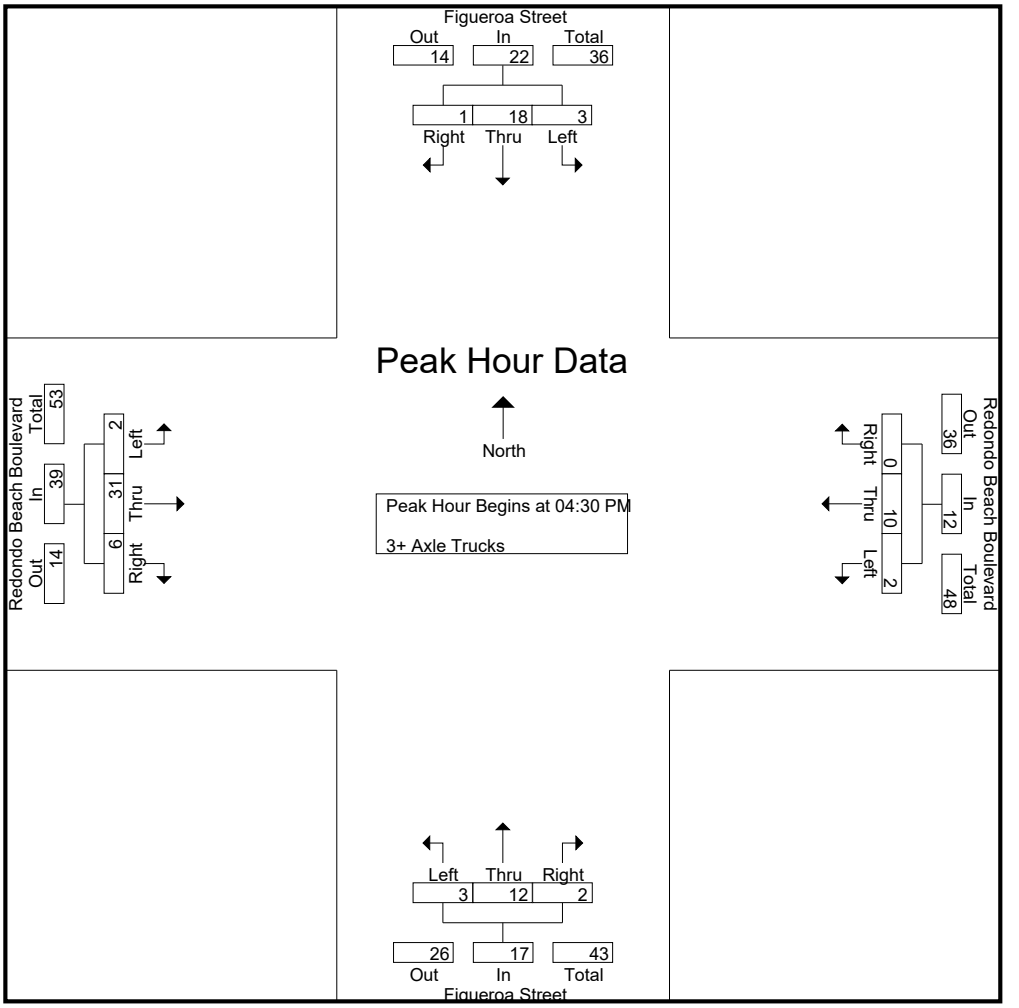
	Figueroa Street Southbound				Redondo Beach Boulevard Westbound				Figueroa Street Northbound				Redondo Beach Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
03:00 PM	0	3	0	3	0	5	0	5	0	3	1	4	1	9	1	11	23
03:15 PM	4	1	1	6	1	4	2	7	1	2	0	3	0	10	8	18	34
03:30 PM	0	4	2	6	0	6	0	6	2	2	0	4	2	5	5	12	28
03:45 PM	1	1	0	2	1	2	1	4	0	4	0	4	3	8	1	12	22
Total	5	9	3	17	2	17	3	22	3	11	1	15	6	32	15	53	107
04:00 PM	2	4	0	6	0	2	0	2	2	4	0	6	1	13	2	16	30
04:15 PM	0	1	0	1	0	2	2	4	1	5	2	8	1	7	3	11	24
04:30 PM	1	5	0	6	1	2	0	3	1	7	0	8	1	9	2	12	29
04:45 PM	0	4	0	4	0	2	0	2	2	3	2	7	0	9	2	11	24
Total	3	14	0	17	1	8	2	11	6	19	4	29	3	38	9	50	107
05:00 PM	2	6	1	9	0	3	0	3	0	2	0	2	1	8	0	9	23
05:15 PM	0	3	0	3	1	3	0	4	0	0	0	0	0	5	2	7	14
05:30 PM	1	6	0	7	0	3	0	3	0	1	0	1	2	3	1	6	17
05:45 PM	0	4	0	4	0	0	0	0	0	0	1	1	0	2	2	4	9
Total	3	19	1	23	1	9	0	10	0	3	1	4	3	18	5	26	63
Grand Total	11	42	4	57	4	34	5	43	9	33	6	48	12	88	29	129	277
Apprch %	19.3	73.7	7		9.3	79.1	11.6		18.8	68.8	12.5		9.3	68.2	22.5		
Total %	4	15.2	1.4	20.6	1.4	12.3	1.8	15.5	3.2	11.9	2.2	17.3	4.3	31.8	10.5	46.6	

	Figueroa Street Southbound				Redondo Beach Boulevard Westbound				Figueroa Street Northbound				Redondo Beach Boulevard 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 04:30 PM to 05:15 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:30 PM																	
04:30 PM	1	5	0	6	**1**	2	0	3	1	**7**	0	**8**	**1**	**9**	**2**	**12**	**29**
04:45 PM	0	4	0	4	0	2	0	2	**2**	3	**2**	7	0	9	2	11	24
05:00 PM	**2**	**6**	**1**	**9**	0	**3**	0	3	0	2	0	2	1	8	0	9	23
05:15 PM	0	3	0	3	1	3	0	**4**	0	0	0	0	0	5	2	7	14
Total Volume	3	18	1	22	2	10	0	12	3	12	2	17	2	31	6	39	90
% App. Total	13.6	81.8	4.5		16.7	83.3	0		17.6	70.6	11.8		5.1	79.5	15.4		
PHF	.375	.750	.250	.611	.500	.833	.000	.750	.375	.429	.250	.531	.500	.861	.750	.813	.776

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City of Los Angeles
N/S: Figueroa Street
E/W: Redondo Beach Boulevard
Weather: Clear

File Name : 11_LAC_Figueroa_Redondo Beach PM
Site Code : 05719380
Start Date : 5/23/2019



Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:30 PM				04:30 PM				04:30 PM				04:30 PM			
+0 mins.	1	5	0	6	**1**	2	0	3	1	**7**	0	**8**	**1**	**9**	**2**	**12**
+15 mins.	0	4	0	4	0	2	0	2	**2**	3	**2**	7	0	9	2	11
+30 mins.	**2**	**6**	**1**	**9**	0	**3**	0	3	0	2	0	2	1	8	0	9
+45 mins.	0	3	0	3	1	3	0	**4**	0	0	0	0	0	5	2	7
Total Volume	3	18	1	22	2	10	0	12	3	12	2	17	2	31	6	39
% App. Total	13.6	81.8	4.5		16.7	83.3	0		17.6	70.6	11.8		5.1	79.5	15.4	
PHF	.375	.750	.250	.611	.500	.833	.000	.750	.375	.429	.250	.531	.500	.861	.750	.813

Location: Los Angeles
N/S: Figueroa Street
E/W: Redondo Beach Blvd

Date: 5/23/2019
Day: Thursday

PEDESTRIANS

	North Leg Figueroa Street Pedestrians	East Leg Redondo Beach Blvd Pedestrians	South Leg Figueroa Street Pedestrians	West Leg Redondo Beach Blvd Pedestrians	
7:00 AM	1	1	1	0	3
7:15 AM	0	0	3	3	6
7:30 AM	2	0	2	0	4
7:45 AM	0	0	0	2	2
8:00 AM	0	0	0	3	3
8:15 AM	0	0	0	2	2
8:30 AM	2	0	1	0	3
8:45 AM	1	0	0	1	2
9:00 AM	0	0	2	2	4
9:15 AM	1	0	1	1	3
9:30 AM	2	0	1	1	4
9:45 AM	0	2	0	0	2
TOTAL VOLUMES:	9	3	11	15	38

	North Leg Figueroa Street Pedestrians	East Leg Redondo Beach Blvd Pedestrians	South Leg Figueroa Street Pedestrians	West Leg Redondo Beach Blvd Pedestrians	
3:00 PM	0	0	0	8	8
3:15 PM	3	2	1	5	11
3:30 PM	4	0	0	1	5
3:45 PM	2	1	1	1	5
4:00 PM	2	1	1	1	5
4:15 PM	1	2	1	1	5
4:30 PM	1	3	1	0	5
4:45 PM	0	0	0	0	0
5:00 PM	1	0	0	0	1
5:15 PM	0	0	0	1	1
5:30 PM	1	0	0	3	4
5:45 PM	1	0	0	0	1
TOTAL VOLUMES:	16	9	5	21	51

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Location: Los Angeles
N/S: Figueroa Street
E/W: Redondo Beach Blvd

Date: 5/23/2019
Day: Thursday

BICYCLES

	Southbound Figueroa Street			Westbound Redondo Beach Blvd			Northbound Figueroa Street			Eastbound Redondo Beach Blvd			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	1	0	0	0	0	0	0	0	0	1	0	2
7:45 AM	0	0	0	0	0	0	0	0	0	0	2	0	2
8:00 AM	0	0	1	0	0	0	0	0	0	0	0	0	1
8:15 AM	0	0	0	0	1	0	0	0	0	0	1	0	2
8:30 AM	0	0	0	0	1	0	0	1	0	0	1	0	3
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
9:00 AM	0	0	0	0	0	0	1	0	0	0	0	0	1
9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
9:30 AM	0	0	0	0	0	0	0	0	0	0	0	1	1
9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES:	0	1	1	0	2	0	1	1	0	0	5	1	12

	Southbound Figueroa Street			Westbound Redondo Beach Blvd			Northbound Figueroa Street			Eastbound Redondo Beach Blvd			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
3:00 PM	0	0	0	0	0	0	0	0	0	1	0	0	1
3:15 PM	0	0	0	0	0	0	0	0	0	0	1	0	1
3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
3:45 PM	0	0	0	0	0	0	0	1	0	0	1	0	2
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	2	0	0	0	0	2
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	1	0	0	0	0	0	0	0	1
5:30 PM	0	0	0	0	1	0	1	0	0	0	0	0	2
5:45 PM	0	0	0	0	0	0	0	2	0	0	0	0	2
TOTAL VOLUMES:	0	0	0	0	2	0	1	5	0	1	2	0	11

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APPENDIX C

CMA, HCM, AND ICU LEVELS OF SERVICE EXPLANATION

C-1. CITY OF LOS ANGELES CMA DATA WORKSHEETS - WEEKDAY AM AND PM PEAK HOURS

C-2. CITY OF LOS ANGELES VMT CALCULATOR WORKSHEETS AND USER AGREEMENT

C-3. CITY OF LOS ANGELES HCM DATA WORKSHEETS – WEEKDAY AM AND PM PEAK HOURS

C-4. CITY OF GARDENA ICU DATA WORKSHEETS - WEEKDAY AM AND PM PEAK HOURS

C-5. COUNTY OF LOS ANGELES ICU DATA WORKSHEETS - WEEKDAY AM AND PM PEAK HOURS

CRITICAL MOVEMENT ANALYSIS (CMA) DESCRIPTION

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

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

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

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

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

Critical Movement Analysis Characteristics

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

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

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

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

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

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

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

LEVEL OF SERVICE FOR UNSIGNALIZED INTERSECTIONS

In the *Highway Capacity Manual (HCM)*, published by the Transportation Research Board, 2000, level of service for unsignalized intersections is defined in terms of delay, which is a measure of driver discomfort, frustration, fuel consumption, and lost 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 incidents, control, traffic, or geometric delay. Only the portion of total delay attributed to the traffic control measures, either traffic signals or stop signs, 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 unsignalized intersections are stated in terms of the average control delay per vehicle. The level of service is determined by the computed or measured control delay and is defined for each minor movement. Average control delay for any particular minor movement is a function of the service time for the approach and the degree of utilization. (Level of service is not defined for the intersection as a whole for two-way stop controlled intersections.)

Level of Service Criteria for TWSC/AWSC Intersections

Level of Service	Average Control Delay (Sec/Veh)
A	≤ 10
B	> 10 and ≤ 15
C	> 15 and ≤ 25
D	> 25 and ≤ 35
E	> 35 and ≤ 50
F	> 50

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.

LOS B describes operations with control delay greater than 10 and up to 15 seconds per vehicle.

LOS C describes operations with control delay greater than 15 and up to 25 seconds per vehicle.

LOS D describes operations with control delay greater than 25 and up to 35 seconds per vehicle.

LOS E describes operations with control delay greater than 35 and up to 50 seconds per vehicle.

LOS F describes operations with control delay in excess of 50 seconds per vehicle. For two-way stop controlled intersections, LOS F exists when there are insufficient gaps of suitable size to allow side-street demand to safely cross through a major-street traffic stream. This level of service is generally evident from extremely long control delays experienced by side-street traffic and by queuing on the minor-street approaches.

INTERSECTION CAPACITY UTILIZATION (ICU) DESCRIPTION

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

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

The Intersection Capacity Utilization (ICU) method of intersection capacity analysis has been used in our studies. It directly relates traffic demand and available capacity for key intersection movements, regardless of present signal timing, The capacity per hour of green time for each approach is calculated based on the methods of the *Highway Capacity Manual*. The proportion of total signal time needed by each key movement is determined and compared to the total time available (100 percent of the hour). The result of summing the requirements of the conflicting key movements plus an allowance for clearance times is expressed as a decimal fraction. Conflicting key traffic movements are those opposing movements whose combined green time requirements are greatest.

The resulting ICU represents the proportion of the total hour required to accommodate intersection demand volumes if the key conflicting traffic movements are operating at capacity. Other movements may be operating near capacity, or may be operating at significantly better levels. The ICU may be translated to a Level of Service as tabulated below.

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

Intersection Capacity Utilization Characteristics

Level of Service	Load Factor	Equivalent ICU
A	0.0	0.00 - 0.60
B	0.0 - 0.1	0.61 - 0.70
C	0.1 - 0.3	0.71 - 0.80
D	0.3 - 0.7	0.81 - 0.90
E	0.7 - 1.0	0.91 - 1.00
F	Not Applicable	Not Applicable

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

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

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

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

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

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

Level of Service Worksheet
(Circular 212 Method)

I/S #:	North-South Street:	Normandie Avenue	Year of Count:	2019	Ambient Growth (%):	1.0	Conducted by:	LLG Engineers	Date:	11/18/2019
1	East-West Street:	Redondo Beach Boulevard	Projection Year:	2022	Peak Hour:	AM	Reviewed by:		Project:	Prologis Vermont Avenue and Rec

No. of Phases			4			4			4			4			4			4	
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?			0			0			0			0			0			0	
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB--	0	SB-- 0	NB--	0	SB-- 0	NB--	0	SB-- 0	NB--	0	SB-- 0	NB--	0	SB-- 0	NB--	0	SB-- 0	
	EB--	0	WB-- 0	EB--	0	WB-- 0	EB--	0	WB-- 0	EB--	0	WB-- 0	EB--	0	WB-- 0	EB--	0	WB-- 0	
ATSAC-1 or ATSAC+ATCS-2?			0			0			0			0			0			0	
Override Capacity			0			0			0			0			0			0	

MOVEMENT	EXISTING CONDITION			EXISTING PLUS PROJECT			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT				FUTURE W/ PROJECT W/ MITIGATION			
	Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND																		
Left	291	2	**160**	0	291	**160**	7	307	2	**169**	0	307	2	**169**	0	307	2	**169**
Left-Through		0							0				0				0	
Through	667	1	335	0	667	335	11	698	1	352	0	698	1	352	0	698	1	352
Through-Right		1							1				1				1	
Right	3	0	3	0	3	3	3	6	0	6	0	6	0	6	0	6	0	6
Left-Through-Right		0							0				0				0	
Left-Right		0							0				0				0	
SOUTHBOUND																		
Left	98	1	98	0	98	98	3	104	1	104	0	104	1	104	0	104	1	104
Left-Through		0							0				0				0	
Through	642	1	**393**	0	642	**393**	5	666	1	**410**	0	666	1	**410**	0	666	1	**410**
Through-Right		1							1				1				1	
Right	143	0	143	0	143	143	7	154	0	154	0	154	0	154	0	154	0	154
Left-Through-Right		0							0				0				0	
Left-Right		0							0				0				0	
EASTBOUND																		
Left	113	1	**113**	0	113	**113**	6	122	1	**122**	0	122	1	122	0	122	1	122
Left-Through		0							0				0				0	
Through	731	2	366	36	767	384	73	826	2	413	36	862	2	**431**	0	862	2	**431**
Through-Right		0							0				0				0	
Right	112	1	32	0	112	32	6	121	1	37	0	121	1	37	0	121	1	37
Left-Through-Right		0							0				0				0	
Left-Right		0							0				0				0	
WESTBOUND																		
Left	175	1	175	0	175	175	1	181	1	181	0	181	1	**181**	0	181	1	**181**
Left-Through		0							0				0				0	
Through	1212	2	**460**	5	1217	**462**	40	1289	2	**488**	5	1294	2	490	0	1294	2	490
Through-Right		1							1				1				1	
Right	169	0	169	0	169	169	1	175	0	175	0	175	0	175	0	175	0	175
Left-Through-Right		0							0				0				0	
Left-Right		0							0				0				0	
CRITICAL VOLUMES *North-South:*			553			553				579				579				579
CRITICAL VOLUMES *East-West:*			573			575				610				612				612
CRITICAL VOLUMES *SUM:*			1126			1128				1189				1191				1191
VOLUME/CAPACITY *(V/C)* RATIO:			0.819			0.820				0.865				0.866				0.866
V/C LESS ATSAC/ATCS ADJUSTMENT:			0.819			0.820				0.865				0.866				0.866
LEVEL OF SERVICE (LOS):			D			D				D				D				D

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project:	0.001	∆*v/c* after mitigation:	0.001
Significant impacted?	NO	Fully mitigated?	N/A

Level of Service Worksheet
(Circular 212 Method)

I/S #:	North-South Street:	Normandie Avenue	Year of Count:	2019	Ambient Growth (%):	1.0	Conducted by:	LLG Engineers	Date:	11/18/2019
1	East-West Street:	Redondo Beach Boulevard	Projection Year:	2022	Peak Hour:	PM	Reviewed by:		Project:	Prologis Vermont Avenue and Rec

No. of Phases			4			4			4			4			4			4	
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?			0			0			0			0			0			0	
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB--	0	SB-- 0	NB--	0	SB-- 0	NB--	0	SB-- 0	NB--	0	SB-- 0	NB--	0	SB-- 0	NB--	0	SB-- 0	
	EB--	0	WB-- 0	EB--	0	WB-- 0	EB--	0	WB-- 0	EB--	0	WB-- 0	EB--	0	WB-- 0	EB--	0	WB-- 0	
ATSAC-1 or ATSAC+ATCS-2?			0			0			0			0			0			0	
Override Capacity			0			0			0			0			0			0	

MOVEMENT	EXISTING CONDITION			EXISTING PLUS PROJECT			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT				FUTURE W/ PROJECT W/ MITIGATION			
	Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND																		
Left	323	2	**178**	0	323	**178**	6	339	2	**186**	0	339	2	**186**	0	339	2	**186**
Left-Through		0							0				0				0	
Through	671	1	346	0	671	346	9	700	1	362	0	700	1	362	0	700	1	362
Through-Right		1							1				1				1	
Right	21	0	21	0	21	21	1	23	0	23	0	23	0	23	0	23	0	23
Left-Through-Right		0							0				0				0	
Left-Right		0							0				0				0	
SOUTHBOUND																		
Left	162	1	162	0	162	162	1	168	1	168	0	168	1	168	0	168	1	168
Left-Through		0							0				0				0	
Through	595	1	**378**	0	595	**378**	13	626	1	**399**	0	626	1	**399**	0	626	1	**399**
Through-Right		1							1				1				1	
Right	160	0	160	0	160	160	6	171	0	171	0	171	0	171	0	171	0	171
Left-Through-Right		0							0				0				0	
Left-Right		0							0				0				0	
EASTBOUND																		
Left	160	1	160	0	160	160	7	172	1	172	0	172	1	172	0	172	1	172
Left-Through		0							0				0				0	
Through	1090	2	**545**	4	1094	**547**	41	1164	2	**582**	4	1168	2	**584**	0	1168	2	**584**
Through-Right		0							0				0				0	
Right	186	1	97	0	186	97	7	199	1	106	0	199	1	106	0	199	1	106
Left-Through-Right		0							0				0				0	
Left-Right		0							0				0				0	
WESTBOUND																		
Left	193	1	**193**	0	193	**193**	3	202	1	**202**	0	202	1	**202**	0	202	1	**202**
Left-Through		0							0				0				0	
Through	864	2	333	32	896	344	75	965	2	369	32	997	2	380	0	997	2	380
Through-Right		1							1				1				1	
Right	135	0	135	0	135	135	3	142	0	142	0	142	0	142	0	142	0	142
Left-Through-Right		0							0				0				0	
Left-Right		0							0				0				0	
CRITICAL VOLUMES *North-South:*			556			556				585				585				585
CRITICAL VOLUMES *East-West:*			738			740				784				786				786
CRITICAL VOLUMES *SUM:*			1294			1296				1369				1371				1371
VOLUME/CAPACITY (V/C) RATIO:			0.941			0.943				0.996				0.997				0.997
V/C LESS ATSAC/ATCS ADJUSTMENT:			0.941			0.943				0.996				0.997				0.997
LEVEL OF SERVICE (LOS):			E			E				E				E				E

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project:	0.001	∆*v/c* after mitigation:	0.001
Significant impacted?	NO	Fully mitigated?	N/A

Level of Service Worksheet
(Circular 212 Method)

I/S #:	North-South Street:	Budlong Avenue	Year of Count:	2019	Ambient Growth (%):	1.0	Conducted by:	LLG Engineers	Date:	11/18/2019
2	East-West Street:	Redondo Beach Boulevard	Projection Year:	2022	Peak Hour:	AM	Reviewed by:		Project:	Prologis Vermont Avenue and Rec

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

MOVEMENT	EXISTING CONDITION			EXISTING PLUS PROJECT			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT				FUTURE W/ PROJECT W/ MITIGATION			
	Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND																		
Left	18	1	**18**	0	18	**18**	3	22	1	**22**	0	22	1	**22**	0	22	1	**22**
Left-Through		0							0				0				0	
Through	74	0	122	0	74	122	0	76	0	129	0	76	0	129	0	76	0	129
Through-Right		1							1				1				1	
Right	48	0	0	0	48	0	4	53	0	0	0	53	0	0	0	53	0	0
Left-Through-Right		0							0				0				0	
Left-Right		0							0				0				0	
SOUTHBOUND																		
Left	102	1	102	0	102	102	0	105	1	105	0	105	1	105	0	105	1	105
Left-Through		0							0				0				0	
Through	100	0	**223**	0	100	**223**	0	103	0	**230**	0	103	0	**230**	0	103	0	**230**
Through-Right		1							1				1				1	
Right	123	0	0	0	123	0	0	127	0	0	0	127	0	0	0	127	0	0
Left-Through-Right		0							0				0				0	
Left-Right		0							0				0				0	
EASTBOUND																		
Left	94	1	**94**	0	94	**94**	0	97	1	**97**	0	97	1	**97**	0	97	1	**97**
Left-Through		0							0				0				0	
Through	873	2	296	36	909	308	68	967	2	331	36	1003	2	343	0	1003	2	343
Through-Right		1							1				1				1	
Right	15	0	15	0	15	15	10	25	0	25	0	25	0	25	0	25	0	25
Left-Through-Right		0							0				0				0	
Left-Right		0							0				0				0	
WESTBOUND																		
Left	55	1	55	0	55	55	15	72	1	72	0	72	1	72	0	72	1	72
Left-Through		0							0				0				0	
Through	1347	2	**467**	5	1352	**469**	39	1427	2	**495**	5	1432	2	**496**	0	1432	2	**496**
Through-Right		1							1				1				1	
Right	55	0	55	0	55	55	0	57	0	57	0	57	0	57	0	57	0	57
Left-Through-Right		0							0				0				0	
Left-Right		0							0				0				0	
CRITICAL VOLUMES	*North-South:*		241	*North-South:*		241	*North-South:*		252		*North-South:*		252		*North-South:*		252	
	East-West:		561	*East-West:*		563	*East-West:*		592		*East-West:*		593		*East-West:*		593	
	SUM:		802	*SUM:*		804	*SUM:*		844		*SUM:*		845		*SUM:*		845	
VOLUME/CAPACITY *(V/C)* RATIO:			0.535			0.536			0.563				0.563				0.563	
V/C LESS ATSAC/ATCS ADJUSTMENT:			0.535			0.536			0.563				0.563				0.563	
LEVEL OF SERVICE (LOS):			A			A			A				A				A	

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project:	0.000	∆*v/c* after mitigation:	0.000
Significant impacted?	NO	Fully mitigated?	N/A

Level of Service Worksheet
(Circular 212 Method)

I/S #:	North-South Street:	Budlong Avenue	Year of Count:	2019	Ambient Growth (%):	1.0	Conducted by:	LLG Engineers	Date:	11/18/2019
2	East-West Street:	Redondo Beach Boulevard	Projection Year:	2022	Peak Hour:	PM	Reviewed by:		Project:	Prologis Vermont Avenue and Rec

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

	MOVEMENT	Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	30	1	30	0	30	30	12	43	1	43	0	43	1	43	0	43	1	43
	Left-Through		0							0				0				0	
	Through	97	0	**205**	0	97	**205**	0	100	0	**228**	0	100	0	**228**	0	100	0	**228**
	Through-Right		1							1				1				1	
	Right	108	0	0	0	108	0	17	128	0	0	0	128	0	0	0	128	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	90	1	**90**	0	90	**90**	0	93	1	**93**	0	93	1	**93**	0	93	1	**93**
	Left-Through		0							0				0				0	
	Through	86	0	204	0	86	204	0	89	0	211	0	89	0	211	0	89	0	211
	Through-Right		1							1				1				1	
	Right	118	0	0	0	118	0	0	122	0	0	0	122	0	0	0	122	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	142	1	**142**	0	142	**142**	0	146	1	**146**	0	146	1	**146**	0	146	1	**146**
	Left-Through		0							0				0				0	
	Through	1158	2	398	4	1162	400	39	1232	2	425	4	1236	2	426	0	1236	2	426
	Through-Right		1							1				1				1	
	Right	37	0	37	0	37	37	4	42	0	42	0	42	0	42	0	42	0	42
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	75	1	75	0	75	75	7	84	1	84	0	84	1	84	0	84	1	84
	Left-Through		0							0				0				0	
	Through	967	2	**339**	32	999	**350**	69	1065	2	**373**	32	1097	2	**383**	0	1097	2	**383**
	Through-Right		1							1				1				1	
	Right	51	0	51	0	51	51	0	53	0	53	0	53	0	53	0	53	0	53
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
CRITICAL VOLUMES	*North-South:*			295			295				321				321				321
	East-West:			481			492				519				529				529
	SUM:			776			787				840				850				850
VOLUME/CAPACITY (V/C) RATIO:				0.517			0.525				0.560				0.567				0.567
V/C LESS ATSAC/ATCS ADJUSTMENT:				0.517			0.525				0.560				0.567				0.567
LEVEL OF SERVICE (LOS):				A			A				A				A				A

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

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

Level of Service Worksheet
(Circular 212 Method)

I/S #:	North-South Street:	Vermont Avenue	Year of Count:	2019	Ambient Growth (%):	1.0	Conducted by:	LLG Engineers	Date:	11/18/2019
3	East-West Street:	Rosecrans Avenue	Projection Year:	2022	Peak Hour:	AM	Reviewed by:		Project:	Prologis Vermont Avenue and Rec

	EXISTING CONDITION			EXISTING PLUS PROJECT			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT				FUTURE W/ PROJECT W/ MITIGATION			
No. of Phases			4			4			4				4			4			4
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?			0			0			0				0			0			0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0		NB-- 0	SB--	0		NB-- 0	SB--	0	
	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0		EB-- 0	WB--	0		EB-- 0	WB--	0	
ATSAC-1 or ATSAC+ATCS-2?			0			0			0				0				0	
Override Capacity			0			0			0				0				0	

	MOVEMENT	Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	160	1	**160**	0	160	**160**	1	166	1	**166**	0	166	1	**166**	0	166	1	**166**
	Left-Through		0							0				0				0	
	Through	536	3	179	3	539	180	33	585	3	195	3	588	3	196	0	588	3	196
	Through-Right		0							0				0				0	
	Right	147	1	63	2	149	65	1	152	1	64	2	154	1	66	0	154	1	66
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	217	1	217	0	217	217	7	231	1	231	0	231	1	231	0	231	1	231
	Left-Through		0							0				0				0	
	Through	621	2	**244**	23	644	**252**	60	700	2	**274**	23	723	2	**282**	0	723	2	**282**
	Through-Right		1							1				1				1	
	Right	112	0	112	0	112	112	8	123	0	123	0	123	0	123	0	123	0	123
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	94	1	**94**	0	94	**94**	7	104	1	**104**	0	104	1	**104**	0	104	1	**104**
	Left-Through		0							0				0				0	
	Through	1070	2	377	0	1070	377	9	1111	2	393	0	1111	2	393	0	1111	2	393
	Through-Right		1							1				1				1	
	Right	62	0	62	0	62	62	3	67	0	67	0	67	0	67	0	67	0	67
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	168	1	168	0	168	168	3	176	1	176	0	176	1	176	0	176	1	176
	Left-Through		0							0				0				0	
	Through	1330	2	**483**	0	1330	**483**	3	1373	2	**500**	0	1373	2	**500**	0	1373	2	**500**
	Through-Right		1							1				1				1	
	Right	118	0	118	0	118	118	4	126	0	126	0	126	0	126	0	126	0	126
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
CRITICAL VOLUMES		*North-South:*		404	*North-South:*		412	*North-South:*			440	*North-South:*			448	*North-South:*			448
		East-West:		577	*East-West:*		577	*East-West:*			604	*East-West:*			604	*East-West:*			604
		SUM:		981	*SUM:*		989	*SUM:*			1044	*SUM:*			1052	*SUM:*			1052
VOLUME/CAPACITY *(V/C)* RATIO:				0.713			0.719				0.759				0.765				0.765
V/C LESS ATSAC/ATCS ADJUSTMENT:				0.713			0.719				0.759				0.765				0.765
LEVEL OF SERVICE (LOS):				C			C				C				C				C

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project:	0.006	Δ*v/c* after mitigation:	0.006
Significant impacted?	NO	Fully mitigated?	N/A

Level of Service Worksheet
(Circular 212 Method)

I/S #:	North-South Street:	Vermont Avenue	Year of Count:	2019	Ambient Growth (%):	1.0	Conducted by:	LLG Engineers	Date:	11/18/2019
3	East-West Street:	Rosecrans Avenue	Projection Year:	2022	Peak Hour:	PM	Reviewed by:		Project:	Prologis Vermont Avenue and Rec

No. of Phases			4			4			4			4			4			4
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?			0			0			0			0			0			0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB--	0	SB-- 0	NB--	0	SB-- 0	NB--	0	SB-- 0	NB--	0	SB-- 0	NB--	0	SB-- 0	NB--	0	SB-- 0
	EB--	0	WB-- 0	EB--	0	WB-- 0	EB--	0	WB-- 0	EB--	0	WB-- 0	EB--	0	WB-- 0	EB--	0	WB-- 0
ATSAC-1 or ATSAC+ATCS-2?			0			0			0			0			0			0
Override Capacity			0			0			0			0			0			0

	MOVEMENT	EXISTING CONDITION			EXISTING PLUS PROJECT			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT				FUTURE W/ PROJECT W/ MITIGATION			
		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	116	1	116	0	116	116	4	124	1	124	0	124	1	124	0	124	1	124
	Left-Through		0							0				0				0	
	Through	670	3	**223**	20	690	**230**	68	758	3	**253**	20	778	3	**259**	0	778	3	**259**
	Through-Right		0							0				0				0	
	Right	210	1	129	15	225	144	3	219	1	135	15	234	1	150	0	234	1	150
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	234	1	**234**	0	234	**234**	5	246	1	**246**	0	246	1	**246**	0	246	1	**246**
	Left-Through		0							0				0				0	
	Through	623	2	240	3	626	241	37	679	2	263	3	682	2	264	0	682	2	264
	Through-Right		1							1				1				1	
	Right	98	0	98	0	98	98	9	110	0	110	0	110	0	110	0	110	0	110
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	144	1	144	0	144	144	10	158	1	158	0	158	1	158	0	158	1	158
	Left-Through		0							0				0				0	
	Through	1228	2	**427**	0	1228	**427**	7	1272	2	**443**	0	1272	2	**443**	0	1272	2	**443**
	Through-Right		1							1				1				1	
	Right	53	0	53	0	53	53	2	57	0	57	0	57	0	57	0	57	0	57
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	163	1	**163**	0	163	**163**	1	169	1	**169**	0	169	1	**169**	0	169	1	**169**
	Left-Through		0							0				0				0	
	Through	1008	2	391	0	1008	391	11	1050	2	410	0	1050	2	410	0	1050	2	410
	Through-Right		1							1				1				1	
	Right	166	0	166	0	166	166	8	179	0	179	0	179	0	179	0	179	0	179
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
CRITICAL VOLUMES		*North-South:*		457	*North-South:*		464	*North-South:*			499	*North-South:*			505	*North-South:*			505
		East-West:		590	*East-West:*		590	*East-West:*			612	*East-West:*			612	*East-West:*			612
		SUM:		1047	*SUM:*		1054	*SUM:*			1111	*SUM:*			1117	*SUM:*			1117
VOLUME/CAPACITY (V/C) RATIO:				0.761			0.767				0.808				0.812				0.812
V/C LESS ATSAC/ATCS ADJUSTMENT:				0.761			0.767				0.808				0.812				0.812
LEVEL OF SERVICE (LOS):				C			C				D				D				D

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

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

Level of Service Worksheet
(Circular 212 Method)

I/S #:	North-South Street:	Vermont Avenue	Year of Count:	2019	Ambient Growth (%):	1.0	Conducted by:	LLG Engineers	Date:	11/18/2019
4	East-West Street:	149th Steet	Projection Year:	2022	Peak Hour:	AM	Reviewed by:		Project:	Prologis Vermont Avenue and Rec

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

MOVEMENT		EXISTING CONDITION			EXISTING PLUS PROJECT			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT				FUTURE W/ PROJECT W/ MITIGATION			
		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	47	1	**47**	0	47	**47**	0	48	1	**48**	0	48	1	**48**	0	48	1	**48**
	Left-Through		0							0				0				0	
	Through	765	3	255	6	771	257	35	823	3	274	6	829	3	276	0	829	3	276
	Through-Right		0							0				0				0	
	Right	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through		0							0				0				0	
	Through	983	2	**364**	23	1006	**371**	65	1078	2	**396**	23	1101	2	**404**	0	1101	2	**404**
	Through-Right		1							1				1				1	
	Right	108	0	108	0	108	108	0	111	0	111	0	111	0	111	0	111	0	111
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	78	0	78	0	78	78	0	80	0	80	0	80	0	80	0	80	0	80
	Left-Through		0							0				0				0	
	Through	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Through-Right		0							0				0				0	
	Right	116	0	**194**	0	116	**194**	0	120	0	**200**	0	120	0	**200**	0	120	0	**200**
	Left-Through-Right		0							0				0				0	
	Left-Right		1							1				1				1	
WESTBOUND	Left	0	0	**0**	0	0	**0**	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**
	Left-Through		0							0				0				0	
	Through	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Through-Right		0							0				0				0	
	Right	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
CRITICAL VOLUMES		North-South:		411	North-South:		418	North-South:			444	North-South:			452	North-South:			452
		East-West:		194	East-West:		194	East-West:			200	East-West:			200	East-West:			200
		SUM:		605	SUM:		612	SUM:			644	SUM:			652	SUM:			652
VOLUME/CAPACITY (V/C) RATIO:				0.425			0.429				0.452				0.458				0.458
V/C LESS ATSAC/ATCS ADJUSTMENT:				0.425			0.429				0.452				0.458				0.458
LEVEL OF SERVICE (LOS):				**A**			**A**				**A**				**A**				**A**

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project:	0.006	∆*v/c* after mitigation:	0.006
Significant impacted?	NO	Fully mitigated?	N/A

Level of Service Worksheet
(Circular 212 Method)

I/S #:	North-South Street:	Vermont Avenue	Year of Count:	2019	Ambient Growth (%):	1.0	Conducted by:	LLG Engineers	Date:	11/18/2019
4	East-West Street:	149th Steet	Projection Year:	2022	Peak Hour:	PM	Reviewed by:		Project:	Prologis Vermont Avenue and Rec

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

MOVEMENT	EXISTING CONDITION			EXISTING PLUS PROJECT			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT				FUTURE W/ PROJECT W/ MITIGATION			
	Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND																		
Left	35	1	35	0	35	35	0	36	1	36	0	36	1	36	0	36	1	36
Left-Through		0							0				0				0	
Through	1068	3	**356**	35	1103	**368**	75	1175	3	**392**	35	1210	3	**403**	0	1210	3	**403**
Through-Right		0							0				0				0	
Right	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Left-Through-Right		0							0				0				0	
Left-Right		0							0				0				0	
SOUTHBOUND																		
Left	0	0	**0**	0	0	**0**	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**
Left-Through		0							0				0				0	
Through	805	2	287	3	808	288	40	869	2	309	3	872	2	310	0	872	2	310
Through-Right		1							1				1				1	
Right	55	0	55	0	55	55	0	57	0	57	0	57	0	57	0	57	0	57
Left-Through-Right		0							0				0				0	
Left-Right		0							0				0				0	
EASTBOUND																		
Left	78	0	78	0	78	78	0	80	0	80	0	80	0	80	0	80	0	80
Left-Through		0							0				0				0	
Through	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Through-Right		0							0				0				0	
Right	37	0	**115**	0	37	**115**	0	38	0	**118**	0	38	0	**118**	0	38	0	**118**
Left-Through-Right		0							0				0				0	
Left-Right		1							1				1				1	
WESTBOUND																		
Left	0	0	**0**	0	0	**0**	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**
Left-Through		0							0				0				0	
Through	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Through-Right		0							0				0				0	
Right	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Left-Through-Right		0							0				0				0	
Left-Right		0							0				0				0	
CRITICAL VOLUMES	*North-South:*		356	*North-South:*		368	*North-South:*			392	*North-South:*			403	*North-South:*			403
	East-West:		115	*East-West:*		115	*East-West:*			118	*East-West:*			118	*East-West:*			118
	SUM:		471	*SUM:*		483	*SUM:*			510	*SUM:*			521	*SUM:*			521
VOLUME/CAPACITY (V/C) RATIO:			0.331			0.339				0.358				0.366				0.366
V/C LESS ATSAC/ATCS ADJUSTMENT:			0.331			0.339				0.358				0.366				0.366
LEVEL OF SERVICE (LOS):			A			A				A				A				A

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project:	0.008	∆*v/c* after mitigation:	0.008
Significant impacted?	NO	Fully mitigated?	N/A

Level of Service Worksheet
(Circular 212 Method)

I/S #:	North-South Street:	Vermont Avenue	Year of Count:	2019	Ambient Growth (%):	1.0	Conducted by:	LLG Engineers	Date:	11/18/2019
5	East-West Street:	Marine Avenue	Projection Year:	2022	Peak Hour:	AM	Reviewed by:		Project:	Prologis Vermont Avenue and Rec

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

MOVEMENT		EXISTING CONDITION			EXISTING PLUS PROJECT			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT				FUTURE W/ PROJECT W/ MITIGATION			
		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	241	1	**241**	0	241	**241**	0	248	1	**248**	0	248	1	**248**	0	248	1	**248**
	Left-Through		0							0				0				0	
	Through	696	2	348	6	702	351	33	750	2	375	6	756	2	378	0	756	2	378
	Through-Right		0							0				0				0	
	Right	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through		0							0				0				0	
	Through	812	2	**363**	23	835	**371**	65	902	2	**396**	23	925	2	**404**	0	925	2	**404**
	Through-Right		1							1				1				1	
	Right	278	0	278	0	278	278	0	286	0	286	0	286	0	286	0	286	0	286
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	146	1	146	0	146	146	2	152	1	152	0	152	1	152	0	152	1	152
	Left-Through		0							0				0				0	
	Through	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Through-Right		0							0				0				0	
	Right	322	1	**202**	0	322	**202**	0	332	1	**208**	0	332	1	**208**	0	332	1	**208**
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	0	0	**0**	0	0	**0**	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**
	Left-Through		0							0				0				0	
	Through	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Through-Right		0							0				0				0	
	Right	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
CRITICAL VOLUMES		*North-South:*		604	*North-South:*		612	*North-South:*			644	*North-South:*			652	*North-South:*			652
		East-West:		202	*East-West:*		202	*East-West:*			208	*East-West:*			208	*East-West:*			208
		SUM:		806	*SUM:*		814	*SUM:*			852	*SUM:*			860	*SUM:*			860
VOLUME/CAPACITY *(V/C)* RATIO:				0.566			0.571				0.598				0.604				0.604
V/C LESS ATSAC/ATCS ADJUSTMENT:				0.566			0.571				0.598				0.604				0.604
LEVEL OF SERVICE (LOS):				A			A				A				B				B

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project:	0.006	∆*v/c* after mitigation:	0.006
Significant impacted?	NO	Fully mitigated?	N/A

Level of Service Worksheet
(Circular 212 Method)

I/S #:	North-South Street:	Vermont Avenue	Year of Count:	2019	Ambient Growth (%):	1.0	Conducted by:	LLG Engineers	Date:	11/18/2019
5	East-West Street:	Marine Avenue	Projection Year:	2022	Peak Hour:	PM	Reviewed by:		Project:	Prologis Vermont Avenue and Rec

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

MOVEMENT	EXISTING CONDITION			EXISTING PLUS PROJECT			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT				FUTURE W/ PROJECT W/ MITIGATION			
	Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND																		
Left	218	1	**218**	0	218	**218**	0	225	1	**225**	0	225	1	**225**	0	225	1	**225**
Left-Through		0							0				0				0	
Through	785	2	393	35	820	410	73	882	2	441	35	917	2	459	0	917	2	459
Through-Right		0							0				0				0	
Right	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Left-Through-Right		0							0				0				0	
Left-Right		0							0				0				0	
SOUTHBOUND																		
Left	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Left-Through		0							0				0				0	
Through	704	2	**278**	3	707	**279**	37	762	2	**300**	3	765	2	**301**	0	765	2	**301**
Through-Right		1							1				1				1	
Right	131	0	131	0	131	131	3	138	0	138	0	138	0	138	0	138	0	138
Left-Through-Right		0							0				0				0	
Left-Right		0							0				0				0	
EASTBOUND																		
Left	308	1	**308**	0	308	**308**	2	319	1	**319**	0	319	1	**319**	0	319	1	**319**
Left-Through		0							0				0				0	
Through	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Through-Right		0							0				0				0	
Right	258	1	149	0	258	149	0	266	1	154	0	266	1	154	0	266	1	154
Left-Through-Right		0							0				0				0	
Left-Right		0							0				0				0	
WESTBOUND																		
Left	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Left-Through		0							0				0				0	
Through	0	0	**0**	0	0	**0**	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**
Through-Right		0							0				0				0	
Right	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Left-Through-Right		0							0				0				0	
Left-Right		0							0				0				0	
CRITICAL VOLUMES	*North-South:*		496	*North-South:*		497	*North-South:*			525	*North-South:*			526	*North-South:*			526
	East-West:		308	*East-West:*		308	*East-West:*			319	*East-West:*			319	*East-West:*			319
	SUM:		804	*SUM:*		805	*SUM:*			844	*SUM:*			845	*SUM:*			845
VOLUME/CAPACITY (V/C) RATIO:			0.564			0.565				0.592				0.593				0.593
V/C LESS ATSAC/ATCS ADJUSTMENT:			0.564			0.565				0.592				0.593				0.593
LEVEL OF SERVICE (LOS):			A			A				A				A				A

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project:	0.001	∆*v/c* after mitigation:	0.001
Significant impacted?	NO	Fully mitigated?	N/A

Level of Service Worksheet
(Circular 212 Method)

I/S #:	North-South Street:	Vermont Avenue	Year of Count:	2019	Ambient Growth (%):	1.0	Conducted by:	LLG Engineers	Date:	11/18/2019
6	East-West Street:	Redondo Beach Boulevard	Projection Year:	2022	Peak Hour:	AM	Reviewed by:		Project:	Prologis Vermont Avenue and Rec

No. of Phases			4			4			4			4			4			4	
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?			0			0			0			0			0			0	
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB--	0	SB-- 0	NB--	0	SB-- 0	NB--	0	SB-- 0	NB--	0	SB-- 0	NB--	0	SB-- 0	NB--	0	SB-- 0	
	EB--	0	WB-- 0	EB--	0	WB-- 0	EB--	0	WB-- 0	EB--	0	WB-- 0	EB--	0	WB-- 0	EB--	0	WB-- 0	
ATSAC-1 or ATSAC+ATCS-2?			0			0			0			0			0			0	
Override Capacity			0			0			0			0			0			0	

MOVEMENT	EXISTING CONDITION			EXISTING PLUS PROJECT			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT				FUTURE W/ PROJECT W/ MITIGATION			
	Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND																		
Left	199	1	199	0	199	199	3	208	1	208	0	208	1	208	0	208	1	208
Left-Through		0							0				0				0	
Through	552	2	**276**	23	575	**288**	19	588	2	**294**	23	611	2	**306**	0	611	2	**243**
Through-Right		0							0				0				1	
Right	104	1	31	0	104	30	11	118	1	41	0	118	1	40	0	118	0	118
Left-Through-Right		0							0				0				0	
Left-Right		0							0				0				0	
SOUTHBOUND																		
Left	331	2	**182**	23	354	**195**	6	347	2	**191**	23	370	2	**204**	0	370	2	**204**
Left-Through		0							0				0				0	
Through	602	3	201	0	602	201	45	665	3	222	0	665	3	222	0	665	3	222
Through-Right		0							0				0				0	
Right	147	1	76	0	147	65	13	164	1	87	0	164	1	76	0	164	1	76
Left-Through-Right		0							0				0				0	
Left-Right		0							0				0				0	
EASTBOUND																		
Left	142	1	**142**	23	165	**165**	8	154	1	**154**	23	177	1	**177**	0	177	1	**177**
Left-Through		0							0				0				0	
Through	803	2	402	13	816	408	62	889	2	445	13	902	2	451	0	902	2	451
Through-Right		0							0				0				0	
Right	123	1	24	0	123	24	2	129	1	25	0	129	1	25	0	129	1	25
Left-Through-Right		0							0				0				0	
Left-Right		0							0				0				0	
WESTBOUND																		
Left	146	1	146	3	149	149	4	154	1	154	3	157	1	157	0	157	1	157
Left-Through		0							0				0				0	
Through	1278	2	**502**	5	1283	**503**	37	1354	2	**531**	5	1359	2	**533**	0	1359	2	**533**
Through-Right		1							1				1				1	
Right	227	0	227	0	227	227	6	240	0	240	0	240	0	240	0	240	0	240
Left-Through-Right		0							0				0				0	
Left-Right		0							0				0				0	
CRITICAL VOLUMES *North-South:*			458			483				485				510				447
CRITICAL VOLUMES *East-West:*			644			668				685				710				710
CRITICAL VOLUMES *SUM:*			1102			1151				1170				1220				1157
VOLUME/CAPACITY *(V/C)* RATIO:			0.801			0.837				0.851				0.887				0.841
V/C LESS ATSAC/ATCS ADJUSTMENT:			0.801			0.837				0.851				0.887				0.841
LEVEL OF SERVICE (LOS):			D			D				D				D				D

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project:	0.036	∆*v/c* after mitigation:	-0.010
Significant impacted?	YES	Fully mitigated?	YES

Level of Service Worksheet
(Circular 212 Method)

I/S #:	North-South Street:	Vermont Avenue	Year of Count:	2019	Ambient Growth (%):	1.0	Conducted by:	LLG Engineers	Date:	11/18/2019
6	East-West Street:	Redondo Beach Boulevard	Projection Year:	2022	Peak Hour:	PM	Reviewed by:		Project:	Prologis Vermont Avenue and Rec

No. of Phases			4			4			4			4			4			4	
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?			0			0			0			0			0			0	
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB--	0	SB-- 0	NB--	0	SB-- 0	NB--	0	SB-- 0	NB--	0	SB-- 0	NB--	0	SB-- 0	NB--	0	SB-- 0	
	EB--	0	WB-- 0	EB--	0	WB-- 0	EB--	0	WB-- 0	EB--	0	WB-- 0	EB--	0	WB-- 0	EB--	0	WB-- 0	
ATSAC-1 or ATSAC+ATCS-2?			0			0			0			0			0			0	
Override Capacity			0			0			0			0			0			0	

MOVEMENT	EXISTING CONDITION			EXISTING PLUS PROJECT			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT				FUTURE W/ PROJECT W/ MITIGATION			
	Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND																		
Left	185	1	185	0	185	185	2	193	1	193	0	193	1	193	0	193	1	193
Left-Through		0							0				0				0	
Through	584	2	**292**	3	587	**294**	53	655	2	**328**	3	658	2	**329**	0	658	2	**265**
Through-Right		0							0				0				1	
Right	124	1	40	0	124	30	8	136	1	43	0	136	1	33	0	136	0	136
Left-Through-Right		0							0				0				0	
Left-Right		0							0				0				0	
SOUTHBOUND																		
Left	318	2	**175**	3	321	**177**	5	333	2	**183**	3	336	2	**185**	0	336	2	**185**
Left-Through		0							0				0				0	
Through	473	3	158	0	473	158	23	510	3	170	0	510	3	170	0	510	3	170
Through-Right		0							0				0				0	
Right	126	1	26	0	126	25	9	139	1	29	0	139	1	27	0	139	1	27
Left-Through-Right		0							0				0				0	
Left-Right		0							0				0				0	
EASTBOUND																		
Left	200	1	200	3	203	203	15	221	1	221	3	224	1	224	0	224	1	224
Left-Through		0							0				0				0	
Through	1062	2	**531**	2	1064	**532**	38	1132	2	**566**	2	1134	2	**567**	0	1134	2	**567**
Through-Right		0							0				0				0	
Right	150	1	58	0	150	58	4	159	1	63	0	159	1	63	0	159	1	63
Left-Through-Right		0							0				0				0	
Left-Right		0							0				0				0	
WESTBOUND																		
Left	169	1	**169**	20	189	**189**	12	186	1	**186**	20	206	1	**206**	0	206	1	**206**
Left-Through		0							0				0				0	
Through	975	2	407	32	1007	417	64	1069	2	442	32	1101	2	453	0	1101	2	453
Through-Right		1							1				1				1	
Right	245	0	245	0	245	245	6	258	0	258	0	258	0	258	0	258	0	258
Left-Through-Right		0							0				0				0	
Left-Right		0							0				0				0	
CRITICAL VOLUMES	*North-South:*		467	*North-South:*		471	*North-South:*			511	*North-South:*			514	*North-South:*			450
	East-West:		700	*East-West:*		721	*East-West:*			752	*East-West:*			773	*East-West:*			773
	SUM:		1167	*SUM:*		1192	*SUM:*			1263	*SUM:*			1287	*SUM:*			1223
VOLUME/CAPACITY (V/C) RATIO:			0.849			0.867				0.919				0.936				0.889
V/C LESS ATSAC/ATCS ADJUSTMENT:			0.849			0.867				0.919				0.936				0.889
LEVEL OF SERVICE (LOS):			D			D				E				E				D

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project:	0.017	∆*v/c* after mitigation:	-0.030
Significant impacted?	YES	Fully mitigated?	YES

Level of Service Worksheet
(Circular 212 Method)

I/S #:	North-South Street:	Vermont Avenue	Year of Count:	2019	Ambient Growth (%):	1.0	Conducted by:	LLG Engineers	Date:	11/18/2019
7	East-West Street:	161st Street-Alondra Boulevard	Projection Year:	2022	Peak Hour:	AM	Reviewed by:		Project:	Prologis Vermont Avenue and Rec

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

	MOVEMENT	Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	52	0	52	0	52	52	0	54	0	54	0	54	0	54	0	54	0	54
	Left-Through		1							1				1				1	
	Through	639	0	**451**	23	662	**462**	28	686	0	**485**	23	709	0	**496**	0	709	0	**496**
	Through-Right		1							1				1				1	
	Right	54	0	451	0	54	462	11	67	0	485	0	67	0	496	0	67	0	496
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	35	1	**35**	0	35	**35**	34	70	1	**70**	0	70	1	**70**	0	70	1	**70**
	Left-Through		0							0				0				0	
	Through	718	2	257	3	721	258	15	755	2	270	3	758	2	271	0	758	2	271
	Through-Right		1							1				1				1	
	Right	53	0	53	0	53	53	0	55	0	55	0	55	0	55	0	55	0	55
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	47	1	**47**	0	47	**47**	0	48	1	**48**	0	48	1	**48**	0	48	1	**48**
	Left-Through		0							0				0				0	
	Through	241	0	288	0	241	288	0	248	0	297	0	248	0	297	0	248	0	297
	Through-Right		1							1				1				1	
	Right	47	0	0	0	47	0	1	49	0	0	0	49	0	0	0	49	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	64	0	64	0	64	64	4	70	0	70	0	70	0	70	0	70	0	70
	Left-Through		0							0				0				0	
	Through	302	0	**434**	0	302	**434**	0	311	0	**456**	0	311	0	**456**	0	311	0	**456**
	Through-Right		0							0				0				0	
	Right	68	0	0	0	68	0	5	75	0	0	0	75	0	0	0	75	0	0
	Left-Through-Right		1							1				1				1	
	Left-Right		0							0				0				0	
CRITICAL VOLUMES		*North-South:*		486	*North-South:*		497	*North-South:*			555	*North-South:*			566	*North-South:*			566
		East-West:		481	*East-West:*		481	*East-West:*			504	*East-West:*			504	*East-West:*			504
		SUM:		967	*SUM:*		978	*SUM:*			1059	*SUM:*			1070	*SUM:*			1070
VOLUME/CAPACITY *(V/C)* RATIO:				0.645			0.652				0.706				0.713				0.713
V/C LESS ATSAC/ATCS ADJUSTMENT:				0.645			0.652				0.706				0.713				0.713
LEVEL OF SERVICE (LOS):				B			B				C				C				C

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

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

Level of Service Worksheet
(Circular 212 Method)

I/S #:	North-South Street:	Vermont Avenue	Year of Count:	2019	Ambient Growth (%):	1.0	Conducted by:	LLG Engineers	Date:	11/18/2019
7	East-West Street:	161st Street-Alondra Boulevard	Projection Year:	2022	Peak Hour:	PM	Reviewed by:		Project:	Prologis Vermont Avenue and Rec

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

MOVEMENT	EXISTING CONDITION			EXISTING PLUS PROJECT			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT				FUTURE W/ PROJECT W/ MITIGATION			
	Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND																		
Left	55	0	55	0	55	55	1	58	0	58	0	58	0	58	0	58	0	58
Left-Through		1							1				1				1	
Through	786	0	**552**	3	789	**553**	26	836	0	**588**	3	839	0	**590**	0	839	0	**590**
Through-Right		1							1				1				1	
Right	97	0	552	0	97	553	8	108	0	588	0	108	0	590	0	108	0	590
Left-Through-Right		0							0				0				0	
Left-Right		0							0				0				0	
SOUTHBOUND																		
Left	53	1	**53**	0	53	**53**	6	61	1	**61**	0	61	1	**61**	0	61	1	**61**
Left-Through		0							0				0				0	
Through	675	2	236	20	695	243	32	727	2	254	20	747	2	261	0	747	2	261
Through-Right		1							1				1				1	
Right	34	0	34	0	34	34	0	35	0	35	0	35	0	35	0	35	0	35
Left-Through-Right		0							0				0				0	
Left-Right		0							0				0				0	
EASTBOUND																		
Left	55	1	55	0	55	55	0	57	1	57	0	57	1	57	0	57	1	57
Left-Through		0							0				0				0	
Through	373	0	**390**	0	373	**390**	0	384	0	**403**	0	384	0	**403**	0	384	0	**403**
Through-Right		1							1				1				1	
Right	17	0	0	0	17	0	1	19	0	0	0	19	0	0	0	19	0	0
Left-Through-Right		0							0				0				0	
Left-Right		0							0				0				0	
WESTBOUND																		
Left	52	0	**52**	0	52	**52**	12	66	0	**66**	0	66	0	**66**	0	66	0	**66**
Left-Through		0							0				0				0	
Through	216	0	346	0	216	346	0	223	0	405	0	223	0	405	0	223	0	405
Through-Right		0							0				0				0	
Right	78	0	0	0	78	0	36	116	0	0	0	116	0	0	0	116	0	0
Left-Through-Right		1							1				1				1	
Left-Right		0							0				0				0	
CRITICAL VOLUMES	*North-South:*		605	*North-South:*		606	*North-South:*			649	*North-South:*			651	*North-South:*			651
	East-West:		442	*East-West:*		442	*East-West:*			469	*East-West:*			469	*East-West:*			469
	SUM:		1047	*SUM:*		1048	*SUM:*			1118	*SUM:*			1120	*SUM:*			1120
VOLUME/CAPACITY (V/C) RATIO:			0.698			0.699				0.745				0.747				0.747
V/C LESS ATSAC/ATCS ADJUSTMENT:			0.698			0.699				0.745				0.747				0.747
LEVEL OF SERVICE (LOS):			B			B				C				C				C

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

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

Level of Service Worksheet
(Circular 212 Method)

I/S #:	North-South Street:	Orchard Avenue	Year of Count:	2019	Ambient Growth (%):	1.0	Conducted by:	LLG Engineers	Date:	11/18/2019
8	East-West Street:	Redondo Beach Boulevard	Projection Year:	2022	Peak Hour:	AM	Reviewed by:		Project:	Prologis Vermont Avenue and Rec

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

	MOVEMENT	Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	0	0	**0**	0	0	**0**	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**
	Left-Through		0							0				0				0	
	Through	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Through-Right		0							0				0				0	
	Right	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	80	0	80	32	112	112	0	82	0	82	32	114	0	114	0	114	0	114
	Left-Through		0							0				0				0	
	Through	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Through-Right		0							0				0				0	
	Right	46	0	**126**	3	49	**161**	0	47	0	**129**	3	50	0	**164**	0	50	0	**164**
	Left-Through-Right		0							0				0				0	
	Left-Right		1							1				1				1	
EASTBOUND	Left	45	1	**45**	36	81	**81**	0	46	1	46	36	82	1	**82**	0	82	1	**82**
	Left-Through		0							0				0				0	
	Through	1227	2	614	0	1227	614	79	1343	2	**672**	0	1343	2	672	0	1343	2	672
	Through-Right		0							0				0				0	
	Right	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	0	0	0	0	0	0	0	0	0	**0**	0	0	0	0	0	0	0	0
	Left-Through		0							0				0				0	
	Through	1669	2	**592**	51	1720	**674**	47	1767	2	625	51	1818	2	**708**	0	1818	2	**708**
	Through-Right		1							1				1				1	
	Right	106	0	106	197	303	303	0	109	0	109	197	306	0	306	0	306	0	306
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	

CRITICAL VOLUMES	*North-South:*	126	*North-South:*	161	*North-South:*	129	*North-South:*	164	*North-South:*	164
	East-West:	637	*East-West:*	755	*East-West:*	672	*East-West:*	790	*East-West:*	790
	SUM:	763	*SUM:*	916	*SUM:*	801	*SUM:*	954	*SUM:*	954
VOLUME/CAPACITY *(V/C)* RATIO:		0.509		0.611		0.534		0.636		0.636
V/C LESS ATSAC/ATCS ADJUSTMENT:		**0.409**		**0.511**		**0.434**		**0.536**		**0.536**
LEVEL OF SERVICE (LOS):		**A**		**A**		**A**		**A**		**A**

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project:	0.102	∆*v/c* after mitigation:	0.102
Significant impacted?	NO	Fully mitigated?	N/A

Level of Service Worksheet
(Circular 212 Method)

I/S #:	North-South Street:	Orchard Avenue	Year of Count:	2019	Ambient Growth (%):	1.0	Conducted by:	LLG Engineers	Date:	11/18/2019
8	East-West Street:	Redondo Beach Boulevard	Projection Year:	2022	Peak Hour:	PM	Reviewed by:		Project:	Prologis Vermont Avenue and Rec

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

	MOVEMENT	EXISTING CONDITION			EXISTING PLUS PROJECT			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT				FUTURE W/ PROJECT W/ MITIGATION			
		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	0	0	**0**	0	0	**0**	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**
	Left-Through		0							0				0				0	
	Through	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Through-Right		0							0				0				0	
	Right	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	110	0	110	205	315	315	0	113	0	113	205	318	0	318	0	318	0	318
	Left-Through		0							0				0				0	
	Through	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Through-Right		0							0				0				0	
	Right	73	0	**183**	18	91	**406**	0	75	0	**188**	18	93	0	**411**	0	93	0	**411**
	Left-Through-Right		0							0				0				0	
	Left-Right		1							1				1				1	
EASTBOUND	Left	112	1	112	4	116	116	0	115	1	115	4	119	1	119	0	119	1	119
	Left-Through		0							0				0				0	
	Through	1351	2	**676**	0	1351	**676**	51	1443	2	**722**	0	1443	2	**722**	0	1443	2	**722**
	Through-Right		0							0				0				0	
	Right	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	0	0	**0**	0	0	**0**	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**
	Left-Through		0							0				0				0	
	Through	1386	2	481	7	1393	492	81	1509	2	522	7	1516	2	534	0	1516	2	534
	Through-Right		1							1				1				1	
	Right	56	0	56	27	83	83	0	58	0	58	27	85	0	85	0	85	0	85
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
CRITICAL VOLUMES		*North-South:*		183	*North-South:*		406	*North-South:*			188	*North-South:*			411	*North-South:*			411
		East-West:		676	*East-West:*		676	*East-West:*			722	*East-West:*			722	*East-West:*			722
		SUM:		859	*SUM:*		1082	*SUM:*			910	*SUM:*			1133	*SUM:*			1133
VOLUME/CAPACITY (V/C) RATIO:				0.573			0.721				0.607				0.755				0.755
V/C LESS ATSAC/ATCS ADJUSTMENT:				**0.473**			**0.621**				**0.507**				**0.655**				**0.655**
LEVEL OF SERVICE (LOS):				**A**			**B**				**A**				**B**				**B**

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project:	0.148	Δ*v/c* after mitigation:	0.148
Significant impacted?	NO	Fully mitigated?	N/A

Level of Service Worksheet
(Circular 212 Method)

I/S #:	North-South Street:	I-110 Freeway SB Ramps	Year of Count:	2019	Ambient Growth (%):	1.0	Conducted by:	LLG Engineers	Date:	11/18/2019
9	East-West Street:	Redondo Beach Boulevard	Projection Year:	2022	Peak Hour:	AM	Reviewed by:		Project:	Prologis Vermont Avenue and Rec

	EXISTING CONDITION			EXISTING PLUS PROJECT			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT				FUTURE W/ PROJECT W/ MITIGATION			
No. of Phases			0			0			0				0				0	
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?			0			0			0				0				0	
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0		NB-- 0	SB--	0		NB-- 0	SB--	0	
	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0		EB-- 0	WB--	0		EB-- 0	WB--	0	
ATSAC-1 or ATSAC+ATCS-2?			2			2			2				2				2	
Override Capacity			1100			1100			1100				1100				1100	

	MOVEMENT	Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	0	0	**0**	0	0	**0**	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**
	Left-Through		0							0				0				0	
	Through	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Through-Right		0							0				0				0	
	Right	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	453	1	390	0	453	419	52	519	1	424	0	519	1	453	0	519	1	453
	Left-Through		0							0				0				0	
	Through	0	0	**390**	0	0	**419**	0	0	0	**424**	0	0	0	**453**	0	0	0	**453**
	Through-Right		0							0				0				0	
	Right	717	1	0	88	805	0	13	752	1	0	88	840	1	0	0	840	1	0
	Left-Through-Right		1							1				1				1	
	Left-Right		0							0				0				0	
EASTBOUND	Left	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through		0							0				0				0	
	Through	842	2	421	12	854	427	105	973	2	487	12	985	2	493	0	985	2	493
	Through-Right		0							0				0				0	
	Right	510	1	**510**	20	530	**530**	7	532	1	**532**	20	552	1	**552**	0	552	1	**552**
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	243	1	**243**	0	243	**243**	29	279	1	**279**	0	279	1	**279**	0	279	2	**153**
	Left-Through		0							0				0				0	
	Through	1114	3	371	159	1273	424	41	1189	3	396	159	1348	3	449	0	1348	2	674
	Through-Right		0							0				0				0	
	Right	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
CRITICAL VOLUMES		*North-South:*		390	*North-South:*		419	*North-South:*			424	*North-South:*			453	*North-South:*			453
		East-West:		753	*East-West:*		773	*East-West:*			811	*East-West:*			831	*East-West:*			705
		SUM:		1143	*SUM:*		1192	*SUM:*			1235	*SUM:*			1284	*SUM:*			1158
VOLUME/CAPACITY *(V/C)* RATIO:				1.039			1.084				1.123				1.167				1.053
V/C LESS ATSAC/ATCS ADJUSTMENT:				**0.939**			**0.984**				**1.023**				**1.067**				**0.953**
LEVEL OF SERVICE (LOS):				**E**			**E**				**F**				**F**				**E**

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project:	0.044	*Δv/c* after mitigation:	-0.070
Significant impacted?	YES	Fully mitigated?	YES

Level of Service Worksheet
(Circular 212 Method)

I/S #:	North-South Street:	I-110 Freeway SB Ramps	Year of Count:	2019	Ambient Growth (%):	1.0	Conducted by:	LLG Engineers	Date:	11/18/2019
9	East-West Street:	Redondo Beach Boulevard	Projection Year:	2022	Peak Hour:	PM	Reviewed by:		Project:	Prologis Vermont Avenue and Rec

	EXISTING CONDITION			EXISTING PLUS PROJECT			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT				FUTURE W/ PROJECT W/ MITIGATION			
No. of Phases			0			0				0				0				0
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?			0			0				0				0				0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--		0	NB-- 0	SB--		0	NB-- 0	SB--		0
	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--		0	EB-- 0	WB--		0	EB-- 0	WB--		0
ATSAC-1 or ATSAC+ATCS-2?			2			2				2				2				2
Override Capacity			1100			1100				1100				1100				1100

	MOVEMENT	Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	0	0	**0**	0	0	**0**	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**
	Left-Through		0							0				0				0	
	Through	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Through-Right		0							0				0				0	
	Right	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	438	1	338	0	438	342	19	470	1	360	0	470	1	364	0	470	1	364
	Left-Through		0							0				0				0	
	Through	3	0	**338**	0	3	**342**	0	3	0	**360**	0	3	0	**364**	0	3	0	**364**
	Through-Right		0							0				0				0	
	Right	573	1	0	12	585	0	18	608	1	0	12	620	1	0	0	620	1	0
	Left-Through-Right		1							1				1				1	
	Left-Right		0							0				0				0	
EASTBOUND	Left	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through		0							0				0				0	
	Through	1153	2	**577**	79	1232	**616**	48	1236	2	**618**	79	1315	2	**658**	0	1315	2	**658**
	Through-Right		0							0				0				0	
	Right	333	1	333	127	460	460	9	352	1	352	127	479	1	479	0	479	1	479
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	130	1	**130**	0	130	**130**	60	194	1	**194**	0	194	1	**194**	0	194	2	**107**
	Left-Through		0							0				0				0	
	Through	1005	3	335	22	1027	342	97	1132	3	377	22	1154	3	385	0	1154	2	577
	Through-Right		0							0				0				0	
	Right	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
CRITICAL VOLUMES		*North-South:*		338	*North-South:*		342	*North-South:*			360	*North-South:*			364	*North-South:*			364
		East-West:		707	*East-West:*		746	*East-West:*			812	*East-West:*			852	*East-West:*			765
		SUM:		1045	*SUM:*		1088	*SUM:*			1172	*SUM:*			1216	*SUM:*			1129
VOLUME/CAPACITY (V/C) RATIO:				0.950			0.989				1.065				1.105				1.026
V/C LESS ATSAC/ATCS ADJUSTMENT:				**0.850**			**0.889**				**0.965**				**1.005**				**0.926**
LEVEL OF SERVICE (LOS):				**D**			**D**				**E**				**F**				**E**

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project:	0.040	∆*v/c* after mitigation:	-0.039
Significant impacted?	YES	Fully mitigated?	YES

Level of Service Worksheet
(Circular 212 Method)

I/S #:	North-South Street:	I-110 Freeway NB Ramps	Year of Count:	2019	Ambient Growth (%):	1.0	Conducted by:	LLG Engineers	Date:	11/18/2019
10	East-West Street:	Redondo Beach Boulevard	Projection Year:	2022	Peak Hour:	AM	Reviewed by:		Project:	Prologis Vermont Avenue and Rec

No. of Phases				0				0				0				0				0
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?				1				1				1				1				1
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB--	3	SB--	0	NB--	3	SB--	0	NB--	3	SB--	0	NB--	3	SB--	0	NB--	3	SB--	0
	EB--	3	WB--	0	EB--	3	WB--	0	EB--	3	WB--	0	EB--	3	WB--	0	EB--	3	WB--	0
ATSAC-1 or ATSAC+ATCS-2?				2				2				2				2				2
Override Capacity				1100				1100				1100				1100				1100

	MOVEMENT	EXISTING CONDITION			EXISTING PLUS PROJECT			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT				FUTURE W/ PROJECT W/ MITIGATION			
		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	375	1	**193**	143	518	**264**	9	395	1	**203**	143	538	1	**274**	0	538	1	**274**
	Left-Through		1							1				1				1	
	Through	10	0	193	0	10	264	0	10	0	203	0	10	0	274	0	10	0	274
	Through-Right		0							0				0				0	
	Right	323	1	0	0	323	0	61	394	1	0	0	394	1	0	0	394	1	170
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	6	0	6	0	6	6	0	6	0	6	0	6	0	6	0	6	0	6
	Left-Through		1							1				1				1	
	Through	5	0	**11**	0	5	**11**	0	5	0	**11**	0	5	0	**11**	0	5	0	**11**
	Through-Right		0							0				0				0	
	Right	18	1	5	0	18	5	0	19	1	6	0	19	1	6	0	19	1	6
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	26	1	26	0	26	26	0	27	1	27	0	27	1	27	0	27	1	27
	Left-Through		0							0				0				0	
	Through	816	2	**408**	2	818	**409**	105	946	2	**473**	2	948	2	**474**	0	948	2	**474**
	Through-Right		0							0				0				0	
	Right	451	1	258	11	462	198	18	483	1	280	11	494	1	220	0	494	1	220
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	376	1	**376**	0	376	**376**	20	407	1	**407**	0	407	1	**407**	0	407	2	**224**
	Left-Through		0							0				0				0	
	Through	951	2	319	16	967	324	57	1037	2	347	16	1053	2	353	0	1053	1	529
	Through-Right		1							1				1				1	
	Right	5	0	5	0	5	5	0	5	0	5	0	5	0	5	0	5	0	5
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
CRITICAL VOLUMES		*North-South:*		204	*North-South:*		275	*North-South:*			214	*North-South:*			285	*North-South:*			285
		East-West:		784	*East-West:*		785	*East-West:*			880	*East-West:*			881	*East-West:*			698
		SUM:		988	*SUM:*		1060	*SUM:*			1094	*SUM:*			1166	*SUM:*			983
VOLUME/CAPACITY *(V/C)* RATIO:				0.898			0.964				0.995				1.060				0.894
V/C LESS ATSAC/ATCS ADJUSTMENT:				**0.798**			**0.864**				**0.895**				**0.960**				**0.794**
LEVEL OF SERVICE (LOS):				**C**			**D**				**D**				**E**				**C**

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project:	0.065	∆*v/c* after mitigation:	-0.101
Significant impacted?	YES	Fully mitigated?	YES

Level of Service Worksheet
(Circular 212 Method)

I/S #:	North-South Street:	I-110 Freeway NB Ramps	Year of Count:	2019	Ambient Growth (%):	1.0	Conducted by:	LLG Engineers	Date:	11/18/2019
10	East-West Street:	Redondo Beach Boulevard	Projection Year:	2022	Peak Hour:	PM	Reviewed by:		Project:	Prologis Vermont Avenue and Rec

		EXISTING CONDITION			EXISTING PLUS PROJECT			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT				FUTURE W/ PROJECT W/ MITIGATION			
	MOVEMENT	Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
	No. of Phases		0	0		0	0		0	0	0		0	0	0		0	0	0
	Opposed Ø'ing: N/S-1, E/W-2 or Both-3?		1	1		1	1		1	1	1		1	1	1		1	1	1
	Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 3 SB--	0	0	NB-- 3 SB--	0	0	NB-- 3 SB--	0	0	0	NB-- 3 SB--	0	0	0	NB-- 3 SB--	0	0	0
		EB-- 3 WB--	0	0	EB-- 3 WB--	0	0	EB-- 3 WB--	0	0	0	EB-- 3 WB--	0	0	0	EB-- 3 WB--	0	0	0
	ATSAC-1 or ATSAC+ATCS-2?		2	2		2	2		2	2	2		2	2	2		2	2	2
	Override Capacity		1100	1100		1100	1100		1100	1100	1100		1100	1100	1100		1100	1100	1100
NORTHBOUND	Left	302	1	**154**	19	321	**163**	6	317	1	**161**	19	336	1	**171**	0	336	1	**171**
	Left-Through		1							1				1				1	
	Through	5	0	154	0	5	163	0	5	0	161	0	5	0	171	0	5	0	171
	Through-Right		0							0				0				0	
	Right	346	1	6	0	346	6	26	382	1	0	0	382	1	0	0	382	1	161
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	15	0	15	0	15	15	0	15	0	15	0	15	0	15	0	15	0	15
	Left-Through		1							1				1				1	
	Through	12	0	**27**	0	12	**27**	0	12	0	**27**	0	12	0	**27**	0	12	0	**27**
	Through-Right		0							0				0				0	
	Right	29	1	19	0	29	19	0	30	1	19	0	30	1	19	0	30	1	19
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	21	1	21	0	21	21	0	22	1	22	0	22	1	22	0	22	1	22
	Left-Through		0							0				0				0	
	Through	1124	2	**562**	15	1139	**570**	44	1202	2	**601**	15	1217	2	**609**	0	1217	2	**609**
	Through-Right		0							0				0				0	
	Right	499	1	345	65	564	401	17	531	1	370	65	596	1	425	0	596	1	425
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	340	1	**340**	0	340	**340**	52	402	1	**402**	0	402	1	**402**	0	402	2	**221**
	Left-Through		0							0				0				0	
	Through	749	2	252	2	751	252	114	886	2	297	2	888	2	298	0	888	1	447
	Through-Right		1							1				1				1	
	Right	6	0	6	0	6	6	0	6	0	6	0	6	0	6	0	6	0	6
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
	CRITICAL VOLUMES	*North-South:*		181	*North-South:*		190	*North-South:*			188	*North-South:*			198	*North-South:*			198
		East-West:		902	*East-West:*		910	*East-West:*			1003	*East-West:*			1011	*East-West:*			830
		SUM:		1083	*SUM:*		1100	*SUM:*			1191	*SUM:*			1209	*SUM:*			1028
	VOLUME/CAPACITY (V/C) RATIO:			0.985			1.000				1.083				1.099				0.935
	V/C LESS ATSAC/ATCS ADJUSTMENT:			**0.885**			**0.900**				**0.983**				**0.999**				**0.835**
	LEVEL OF SERVICE (LOS):			**D**			**D**				**E**				**E**				**D**

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project:	0.016	∆*v/c* after mitigation:	-0.148
Significant impacted?	YES	Fully mitigated?	YES

Level of Service Worksheet
(Circular 212 Method)

I/S #:	North-South Street:	Figueroa Street	Year of Count:	2019	Ambient Growth (%):	1.0	Conducted by:	LLG Engineers	Date:	11/18/2019
11	East-West Street:	Redondo Beach Boulevard	Projection Year:	2022	Peak Hour:	AM	Reviewed by:		Project:	Prologis Vermont Avenue and Rec

	EXISTING CONDITION			EXISTING PLUS PROJECT			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT				FUTURE W/ PROJECT W/ MITIGATION			
No. of Phases			0			0				0				0				0
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?			0			0				0				0				0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 3	SB--	3	NB-- 3	SB--	3	NB-- 3	SB--	3		NB-- 3	SB--	3		NB-- 3	SB--	3	
	EB-- 3	WB--	3	EB-- 3	WB--	3	EB-- 3	WB--	3		EB-- 3	WB--	3		EB-- 3	WB--	3	
ATSAC-1 or ATSAC+ATCS-2?			2			2				2				2				2
Override Capacity			1100			1100				1100				1100				1100

	MOVEMENT	Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	273	1	**273**	0	273	**273**	56	337	1	**337**	0	337	1	**337**	0	337	1	**337**
	Left-Through		0							0				0				0	
	Through	471	2	236	0	471	236	23	508	2	254	0	508	2	254	0	508	2	254
	Through-Right		0							0				0				0	
	Right	36	1	0	0	36	0	9	46	1	0	0	46	1	0	0	46	1	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	73	1	73	0	73	73	0	75	1	75	0	75	1	75	0	75	1	75
	Left-Through		0							0				0				0	
	Through	543	2	**272**	0	543	**272**	46	605	2	**303**	0	605	2	**303**	0	605	2	**303**
	Through-Right		0							0				0				0	
	Right	125	1	11	0	125	11	1	130	1	4	0	130	1	4	0	130	1	4
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	114	1	**114**	0	114	**114**	9	126	1	**126**	0	126	1	**126**	0	126	1	**126**
	Left-Through		0							0				0				0	
	Through	703	2	352	2	705	353	73	797	2	399	2	799	2	400	0	799	2	400
	Through-Right		0							0				0				0	
	Right	255	1	0	0	255	0	85	348	1	11	0	348	1	11	0	348	1	11
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	83	1	83	0	83	83	9	95	1	95	0	95	1	95	0	95	1	95
	Left-Through		0							0				0				0	
	Through	940	2	**470**	16	956	**478**	19	987	2	**494**	16	1003	2	**502**	0	1003	2	**502**
	Through-Right		0							0				0				0	
	Right	85	1	12	0	85	12	2	90	1	15	0	90	1	15	0	90	1	15
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
CRITICAL VOLUMES		*North-South:*		545	*North-South:*		545	*North-South:*			640	*North-South:*			640	*North-South:*			640
		East-West:		584	*East-West:*		592	*East-West:*			620	*East-West:*			628	*East-West:*			628
		SUM:		1129	*SUM:*		1137	*SUM:*			1260	*SUM:*			1268	*SUM:*			1268
VOLUME/CAPACITY *(V/C)* RATIO:				1.026			1.034				1.145				1.153				1.153
V/C LESS ATSAC/ATCS ADJUSTMENT:				**0.926**			**0.934**				**1.045**				**1.053**				**1.053**
LEVEL OF SERVICE (LOS):				**E**			**E**				**F**				**F**				**F**

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project:	0.008	∆*v/c* after mitigation:	0.008
Significant impacted?	NO	Fully mitigated?	N/A

Level of Service Worksheet
(Circular 212 Method)

I/S #:	North-South Street:	Figueroa Street	Year of Count:	2019	Ambient Growth (%):	1.0	Conducted by:	LLG Engineers	Date:	11/18/2019
11	East-West Street:	Redondo Beach Boulevard	Projection Year:	2022	Peak Hour:	PM	Reviewed by:		Project:	Prologis Vermont Avenue and Rec

No. of Phases			0			0			0			0			0			0
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?			0			0			0			0			0			0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB--	3	SB-- 3	NB--	3	SB-- 3	NB--	3	SB-- 3	NB--	3	SB-- 3	NB--	3	SB-- 3	NB--	3	SB-- 3
	EB--	3	WB-- 3	EB--	3	WB-- 3	EB--	3	WB-- 3	EB--	3	WB-- 3	EB--	3	WB-- 3	EB--	3	WB-- 3
ATSAC-1 or ATSAC+ATCS-2?			2			2			2			2			2			2
Override Capacity			1100			1100			1100			1100			1100			1100

MOVEMENT	EXISTING CONDITION			EXISTING PLUS PROJECT			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT				FUTURE W/ PROJECT W/ MITIGATION			
	Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND																		
Left	218	1	**218**	0	218	**218**	77	302	1	**302**	0	302	1	**302**	0	302	1	**302**
Left-Through		0							0				0				0	
Through	571	2	286	0	571	286	49	637	2	319	0	637	2	319	0	637	2	319
Through-Right		0							0				0				0	
Right	134	1	70	0	134	70	8	146	1	72	0	146	1	72	0	146	1	72
Left-Through-Right		0							0				0				0	
Left-Right		0							0				0				0	
SOUTHBOUND																		
Left	98	1	98	0	98	98	2	103	1	103	0	103	1	103	0	103	1	103
Left-Through		0							0				0				0	
Through	562	2	**281**	0	562	**281**	25	604	2	**302**	0	604	2	**302**	0	604	2	**302**
Through-Right		0							0				0				0	
Right	134	1	28	0	134	28	10	148	1	38	0	148	1	38	0	148	1	38
Left-Through-Right		0							0				0				0	
Left-Right		0							0				0				0	
EASTBOUND																		
Left	106	1	106	0	106	106	1	110	1	110	0	110	1	110	0	110	1	110
Left-Through		0							0				0				0	
Through	1044	2	**522**	15	1059	**530**	20	1096	2	**548**	15	1111	2	**556**	0	1111	2	**556**
Through-Right		0							0				0				0	
Right	223	1	5	0	223	5	48	278	1	0	0	278	1	0	0	278	1	0
Left-Through-Right		0							0				0				0	
Left-Right		0							0				0				0	
WESTBOUND																		
Left	64	1	**64**	0	64	**64**	8	74	1	**74**	0	74	1	**74**	0	74	1	**74**
Left-Through		0							0				0				0	
Through	751	2	376	2	753	377	79	853	2	427	2	855	2	428	0	855	2	428
Through-Right		0							0				0				0	
Right	71	1	0	0	71	0	0	73	1	0	0	73	1	0	0	73	1	0
Left-Through-Right		0							0				0				0	
Left-Right		0							0				0				0	
CRITICAL VOLUMES *North-South:*			499			499				604				604				604
CRITICAL VOLUMES *East-West:*			586			594				622				630				630
CRITICAL VOLUMES *SUM:*			1085			1093				1226				1234				1234
VOLUME/CAPACITY (V/C) RATIO:			0.986			0.994				1.115				1.122				1.122
V/C LESS ATSAC/ATCS ADJUSTMENT:			**0.886**			**0.894**				**1.015**				**1.022**				**1.022**
LEVEL OF SERVICE (LOS):			**D**			**D**				**F**				**F**				**F**

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

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

CITY OF LOS ANGELES VMT CALCULATOR Version 1.2

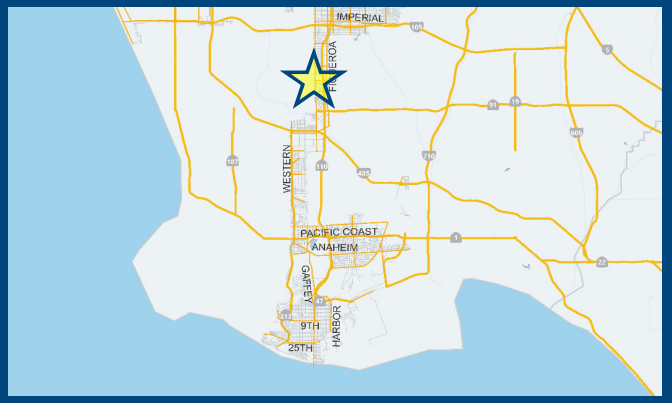
Project Screening Criteria: Is this project required to conduct a vehicle miles traveled analysis?

Project Information

Project: Prologis Vermont Avenue and RBB Industrial Project

Scenario: Proposed Project

Address: 15116 S VERMONT AVE, 90247



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

○ Yes ○ No

Existing Land Use

Land Use Type	Value	Unit
Housing | Single Family		DU

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

Proposed Project Land Use

Land Use Type	Value	Unit
Industrial | Light Industrial	340.298	ksf
Industrial | Light Industrial	340.298	ksf

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

Project Screening Summary

Existing Land Use	Proposed Project
0 Daily Vehicle Trips	1,975 Daily Vehicle Trips
0 Daily VMT	12,800 Daily VMT

Tier 1 Screening Criteria

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

Tier 2 Screening Criteria

The net increase in daily trips < 250 trips	1,975 Net Daily Trips
The net increase in daily VMT ≤ 0	12,800 Net Daily VMT
The proposed project consists of only retail land uses ≤ 50,000 square feet total.	0.000 ksf

The proposed project is required to perform VMT analysis.

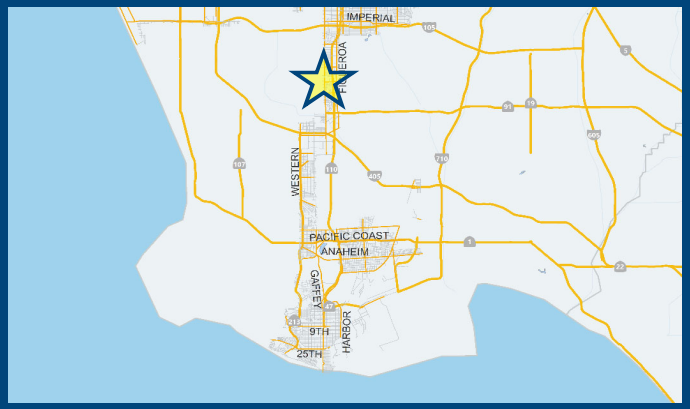
Measuring the Miles

11/15/2019

CITY OF LOS ANGELES VMT CALCULATOR Version 1.2

Project Information

Project: Prologis Vermont Avenue and RBB Industrial Project
Scenario: Proposed Project
Address: 15116 S VERMONT AVE, 90247



Proposed Project Land Use Type	Value	Unit
Industrial | Light Industrial	340.298	ksf

TDM Strategies

Select each section to show individual strategies
Use ☑ to denote if the TDM strategy is part of the proposed project or is a mitigation strategy

	Proposed Project	With Mitigation
Max Home Based TDM Achieved?	**No**	**No**
Max Work Based TDM Achieved?	**No**	**No**

A Parking

Reduce Parking Supply — ☐ Proposed Prj ☐ Mitigation
100 city code parking provision for the project site
74 actual parking provision for the project site

Unbundle Parking — ☐ Proposed Prj ☐ Mitigation
150 monthly parking cost (dollar) for the project site

Parking Cash-Out — ☐ Proposed Prj ☐ Mitigation
50 percent of employees eligible

Price Workplace Parking — ☐ Proposed Prj ☐ Mitigation
6.00 daily parking charge (dollar)
25 percent of employees subject to priced parking

Residential Area Parking Permits — ☐ Proposed Prj ☐ Mitigation
200 cost (dollar) of annual permit

B Transit

C Education & Encouragement

D Commute Trip Reductions

E Shared Mobility

F Bicycle Infrastructure

G Neighborhood Enhancement

Analysis Results

Proposed Project	With Mitigation
1,975 Daily Vehicle Trips	**1,975** Daily Vehicle Trips
12,800 Daily VMT	**12,800** Daily VMT
0.0 Household VMT per Capita	**0.0** Household VMT per Capita
9.7 Work VMT per Employee	**9.7** Work VMT per Employee

Significant VMT Impact?

Proposed Project	With Mitigation
Household: No Threshold = 9.2 15% Below APC	**Household: No** Threshold = 9.2 15% Below APC
Work: No Threshold = 12.3 15% Below APC	**Work: No** Threshold = 12.3 15% Below APC

Measuring the Miles

11/15/2019

CITY OF LOS ANGELES VMT CALCULATOR

Report 1: Project & Analysis Overview

Date: November 15, 2019
Project Name: Prologis Vermont Avenue and RBB Indus
Project Scenario: Proposed Project
Project Address: 15116 S VERMONT AVE, 90247

Version 1.2

Project Information			
Land Use Type		**Value**	**Units**
Housing	*Single Family*	*0*	*DU*
	Multi Family	*0*	*DU*
	Townhouse	*0*	*DU*
	Hotel	*0*	*Rooms*
	Motel	*0*	*Rooms*
Affordable Housing	*Family*	*0*	*DU*
	Senior	*0*	*DU*
	Special Needs	*0*	*DU*
	Permanent Supportive	*0*	*DU*
Retail	*General Retail*	*0.000*	*ksf*
	Furniture Store	*0.000*	*ksf*
	Pharmacy/Drugstore	*0.000*	*ksf*
	Supermarket	*0.000*	*ksf*
	Bank	*0.000*	*ksf*
	Health Club	*0.000*	*ksf*
	High-Turnover Sit-Down Restaurant	*0.000*	*ksf*
	Fast-Food Restaurant	*0.000*	*ksf*
	Quality Restaurant	*0.000*	*ksf*
	Auto Repair	*0.000*	*ksf*
	Home Improvement	*0.000*	*ksf*
	Free-Standing Discount	*0.000*	*ksf*
	Movie Theater	*0*	*Seats*
Office	*General Office*	*0.000*	*ksf*
	Medical Office	*0.000*	*ksf*
Industrial	Light Industrial	340.298	ksf
	Manufacturing	*0.000*	*ksf*
	Warehousing/Self-Storage	*0.000*	*ksf*
School	*University*	*0*	*Students*
	High School	*0*	*Students*
	Middle School	*0*	*Students*
	Elementary	*0*	*Students*
	Private School (K-12)	*0*	*Students*
Other		*0*	*Trips*

CITY OF LOS ANGELES VMT CALCULATOR

Report 1: Project & Analysis Overview

Date: November 15, 2019
Project Name: Prologis Vermont Avenue and RBB Indus
Project Scenario: Proposed Project
Project Address: 15116 S VERMONT AVE, 90247

Version 1.2

Analysis Results			
Total Employees: 340 Total Population: 0			
Proposed Project		***With Mitigation***	
1,975	**Daily Vehicle Trips**	**1,975**	**Daily Vehicle Trips**
12,800	**Daily VMT**	**12,800**	**Daily VMT**
0	**Household VMT per Capita**	**0**	**Household VMT per Capita**
9.7	**Work VMT per Employee**	**9.7**	**Work VMT per Employee**

Significant VMT Impact?			
APC: Harbor			
Impact Threshold: 15% Below APC Average Household = 9.2 Work = 12.3			
Proposed Project		***With Mitigation***	
VMT Threshold	**Impact**	**VMT Threshold**	**Impact**
Household > 9.2	No	Household > 9.2	No
Work > 12.3	No	Work > 12.3	No

CITY OF LOS ANGELES VMT CALCULATOR

Report 2: TDM Inputs

Date: November 15, 2019
Project Name: Prologis Vermont Avenue and RBB Indu
Project Scenario: Proposed Project
Project Address: 15116 S VERMONT AVE, 90247

Version 1.2

TDM Strategy Inputs

Strategy Type		Description	Proposed Project	Mitigations
Parking	*Reduce parking supply*	*City code parking provision (spaces)*	*0*	*0*
		Actual parking provision (spaces)	*0*	*0*
	Unbundle parking	*Monthly cost for parking ($)*	*$0*	*$0*
	Parking cash-out	*Employees eligible (%)*	*0%*	*0%*
	Price workplace parking	*Daily parking charge ($)*	*$0.00*	*$0.00*
		Employees subject to priced parking (%)	*0%*	*0%*
	Residential area parking permits	*Cost of annual permit ($)*	*$0*	*$0*

(cont. on following page)

TDM Strategy Inputs, Cont.

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

(cont. on following page)

TDM Strategy Inputs, Cont.

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

(cont. on following page)

TDM Strategy Inputs, Cont.

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

CITY OF LOS ANGELES VMT CALCULATOR

Report 3: TDM Outputs

Date: November 15, 2019
Project Name: Prologis Vermont Avenue and RBB Industrial Project
Project Scenario: Proposed Project
Project Address: 15116 S VERMONT AVE, 90247

Version 1.2

TDM Adjustments by Trip Purpose & Strategy

Place type: Compact Infill

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

CITY OF LOS ANGELES VMT CALCULATOR

Report 3: TDM Outputs

Date: November 15, 2019
Project Name: Prologis Vermont Avenue and RBB Industrial Project
Project Scenario: Proposed Project
Project Address: 15116 S VERMONT AVE, 90247

Version 1.2

TDM Adjustments by Trip Purpose & Strategy, Cont.

Place type: Compact Infill

		Home Based Work Production		*Home Based Work Attraction*		*Home Based Other Production*		*Home Based Other Attraction*		*Non-Home Based Other Production*		*Non-Home Based Other Attraction*		*Source*
		Proposed	Mitigated	Proposed	Mitigated	Proposed	Mitigated	Proposed	Mitigated	Proposed	Mitigated	Proposed	Mitigated	
Bicycle Infrastructure	Implement/ Improve on-street bicycle facility	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	TDM Strategy Appendix, Bicycle Infrastructure sections 1 - 3
	Include Bike parking per LAMC	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	
	Include secure bike parking and showers	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	
Neighborhood Enhancement	Traffic calming improvements	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	TDM Strategy Appendix, Neighborhood Enhancement sections 1 - 2
	Pedestrian network improvements	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	

Final Combined & Maximum TDM Effect

	Home Based Work Production		*Home Based Work Attraction*		*Home Based Other Production*		*Home Based Other Attraction*		*Non-Home Based Other Production*		*Non-Home Based Other Attraction*	
	Proposed	Mitigated	Proposed	Mitigated	Proposed	Mitigated	Proposed	Mitigated	Proposed	Mitigated	Proposed	Mitigated
COMBINED TOTAL	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*
MAX. TDM EFFECT	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*

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

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

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

CITY OF LOS ANGELES VMT CALCULATOR

Report 4: MXD Methodology

Date: November 15, 2019
Project Name: Prologis Vermont Avenue and RBB Indu
Project Scenario: Proposed Project
Project Address: 15116 S VERMONT AVE, 90247

Version 1.2

MXD Methodology - Project Without TDM

	Unadjusted Trips	MXD Adjustment	MXD Trips	Average Trip Length	Unadjusted VMT	MXD VMT
Home Based Work Production	0	0.0%	0	9.8	0	0
Home Based Other Production	0	0.0%	0	6.7	0	0
Non-Home Based Other Production	470	-9.1%	427	7.7	3,619	3,288
Home-Based Work Attraction	493	-13.0%	429	7.7	3,796	3,303
Home-Based Other Attraction	939	-26.3%	692	4.9	4,601	3,391
Non-Home Based Other Attraction	470	-9.1%	427	6.6	3,102	2,818

MXD Methodology with TDM Measures

	Proposed Project			*Project with Mitigation Measures*		
	TDM Adjustment	Project Trips	Project VMT	TDM Adjustment	Mitigated Trips	Mitigated VMT
Home Based Work Production	0.0%	0	0	0.0%	0	0
Home Based Other Production	0.0%	0	0	0.0%	0	0
Non-Home Based Other Production	0.0%	427	3,288	0.0%	427	3,288
Home-Based Work Attraction	0.0%	429	3,303	0.0%	429	3,303
Home-Based Other Attraction	0.0%	692	3,391	0.0%	692	3,391
Non-Home Based Other Attraction	0.0%	427	2,818	0.0%	427	2,818

MXD VMT Methodology Per Capita & Per Employee

Total Population: 0
Total Employees: 340
APC: Harbor

	Proposed Project	*Project with Mitigation Measures*
Total Home Based Production VMT	**0**	**0**
Total Home Based Work Attraction VMT	**3,303**	**3,303**
Total Home Based VMT Per Capita	**0.0**	**0.0**
Total Work Based VMT Per Employee	**9.7**	**9.7**

VMT Calculator User Agreement

The Los Angeles Department of Transportation (LADOT), in partnership with the Department of City Planning and Fehr & Peers, has developed the City of Los Angeles Vehicle Miles Traveled (VMT) Calculator to estimate project-specific daily household VMT per capita and daily work VMT per employee for land use development projects. This application, the VMT Calculator, has been provided to you, the User, to assess vehicle miles traveled (VMT) outcomes of land use projects within the City of Los Angeles. The term "City" as used below shall refer to the City of Los Angeles. The terms "City" and "Fehr & Peers" as used below shall include their respective affiliates, sub-consultants, employees, and representatives.

The City is pleased to be able to provide this information to the public. The City believes that the public is most effectively served when they are provided access to the technical tools that inform the public review process of private and public land use investments. However, in using the VMT Calculator, You agree to be bound by this VMT Calculator User Agreement (this Agreement).

VMT Calculator Application for the City of Los Angeles. The City's consultant calibrated the VMT Calculator's parameters in 2018 to estimate travel patterns of locations in the City, and validated those outcomes against empirical data. However, this calibration process is limited to locations within the City, and practitioners applying the VMT Calculator outside of the City boundaries should not apply these estimates without further calibration and validation of travel patterns to verify the VMT Calculator's accuracy in estimating VMT in such other locations.

Limited License to Use. This Agreement gives You a limited, non-transferrable, non-assignable, and non-exclusive license to use and execute a copy of the VMT Calculator on a computer system owned, leased or otherwise controlled by You in Your own facilities, as set out below , provided You do not use the VMT Calculator in an unauthorized manner, and that You do not republish, copy, distribute, reverse-engineer, modify, decompile, disassemble, transfer, or sell any part of the VMT Calculator, and provided that You know and follow the terms of this Agreement. Your failure to follow the terms of this Agreement shall automatically terminate this license and Your right to use the VMT Calculator.

Ownership. You understand and acknowledge that the City owns the VMT Calculator, and shall continue to own it through Your use of it, and that no transfer of ownership of any kind is intended in allowing You to use the VMT Calculator.

Warranty Disclaimer. In spite of the efforts of the City and Fehr & Peers, some information on the VMT Calculator may not be accurate. The VMT Calculator, OUTPUTS AND ASSOCIATED DATA ARE PROVIDED "as is" WITHOUT WARRANTY OF ANY KIND, whether expressed , implied , statutory, or otherwise including but not limited to, the implied warranties of merchantability and fitness for a particular purpose.

Limitation of Liability. It is understood that the VMT Calculator is provided without charge. Neither the City nor Fehr & Peers can be responsible or liable for any information derived from its use, or for any delays, inaccuracies, incompleteness, errors or omissions arising out of your use of the VMT Calculator or with respect to the material contained in the VMT Calculator. You understand and agree that Your sole remedy against the City or Fehr & Peers for loss or damage caused by any defect or failure of the

VMT Calculator, regardless of the form of action, whether in contract, tort, including negligence, strict liability or otherwise, shall be the repair or replacement of the VMT Calculator to the extent feasible as determined solely by the City. In no event shall the City or Fehr & Peers be responsible to You or anyone else for, or have liability for any special, indirect, incidental or consequential damages (including, without limitation, damages for loss of business profits or changes to businesses costs) or lost data or downtime, however caused, and on any theory of liability from the use of, or the inability to use, the VMT Calculator, whether the data, and/or formulas contained in the VMT Calculator are provided by the City or Fehr & Peers, or another third party, even if the City or Fehr & Peers have been advised of the possibility of such damages.

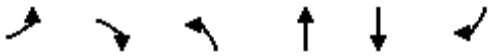
This Agreement and License shall be governed by the laws of the State of California without regard to their conflicts of law provisions, and shall be effective as of the date set forth below and, unless terminated in accordance with the above or extended by written amendment to this Agreement, shall terminate on the earlier of the date that You are not making use of the VMT Calculator or one year after the beginning of Your use of the VMT Calculator.

By using the VMT Calculator, You hereby waive and release all claims, responsibilities, liabilities, actions, damages, costs, and losses, known and unknown, against the City and Fehr & Peers for Your use of the VMT Calculator.

Before making decisions using the information provided in this application, contact City LADOT staff to confirm the validity of the data provided.

Print and sign below, and submit to LADOT along with the transportation assessment Memorandum of Understanding (MOU).

You, the User	
By:	Clare M. Look-Jaeger
Print Name:	Clare M. Look-Jaeger, P.E.
Title:	Principal
Company:	Linscott, Law and Greenspan, Engineers
Address:	600 S. Lake Avenue, Suite 500, Pasadena CA 91106
Phone:	626-796-2322
Email Address:	Look-jaeger@llgengineers.com
Date:	11/13/209



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	146	322	241	696	812	278
Future Volume (vph)	146	322	241	696	812	278
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width	10	11	15	10	12	16
Total Lost time (s)	5.0	5.0	5.0	4.0	5.5	
Lane Util. Factor	1.00	1.00	1.00	0.95	0.91	
Frpb, ped/bikes	1.00	0.98	1.00	1.00	0.98	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	
Frt	1.00	0.85	1.00	1.00	0.96	
Flt Protected	0.95	1.00	0.95	1.00	1.00	
Satd. Flow (prot)	1685	1532	1986	3369	4876	
Flt Permitted	0.95	1.00	0.95	1.00	1.00	
Satd. Flow (perm)	1685	1532	1986	3369	4876	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	146	322	241	696	812	278
RTOR Reduction (vph)	0	279	0	0	38	0
Lane Group Flow (vph)	146	43	241	696	1052	0
Confl. Peds. (#/hr)		2				22
Confl. Bikes (#/hr)		2				1
Turn Type	Prot	Perm	Prot	NA	NA	
Protected Phases	2!		3	Free!	4	
Permitted Phases		2		Free		
Actuated Green, G (s)	16.0	16.0	19.7	120.0	68.8	
Effective Green, g (s)	16.0	16.0	19.7	120.0	68.8	
Actuated g/C Ratio	0.13	0.13	0.16	1.00	0.57	
Clearance Time (s)	5.0	5.0	5.0		5.5	
Vehicle Extension (s)	3.0	3.0	3.0		4.0	
Lane Grp Cap (vph)	224	204	326	6738	2795	
v/s Ratio Prot	c0.09		c0.12	0.10	c0.22	
v/s Ratio Perm		0.03		0.10		
v/c Ratio	0.65	0.21	0.74	0.10	0.38	
Uniform Delay, d1	49.4	46.4	47.7	0.0	13.9	
Progression Factor	1.00	1.00	0.94	1.00	1.00	
Incremental Delay, d2	6.6	0.5	6.1	0.0	0.4	
Delay (s)	56.0	46.9	50.8	0.0	14.3	
Level of Service	E	D	D	A	B	
Approach Delay (s)	49.7			13.1	14.3	
Approach LOS	D			B	B	

Intersection Summary			
HCM 2000 Control Delay	20.5	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.49		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	15.5
Intersection Capacity Utilization	57.5%	ICU Level of Service	B
Analysis Period (min)	15		

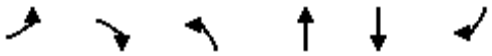
! Phase conflict between lane groups.
c Critical Lane Group



Lane Group	EBL	EBR	NBL	NBT	SBT
Lane Group Flow (vph)	146	322	241	696	1090
v/c Ratio	0.65	0.67	0.74	0.21	0.38
Control Delay	62.3	12.0	54.1	0.1	14.4
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	62.3	12.0	54.1	0.1	14.4
Queue Length 50th (ft)	109	0	117	0	145
Queue Length 95th (ft)	168	82	m255	0	230
Internal Link Dist (ft)	542			719	502
Turn Bay Length (ft)		100	110		
Base Capacity (vph)	379	594	430	3369	2834
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.39	0.54	0.56	0.21	0.38

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	308	258	218	785	704	131
Future Volume (vph)	308	258	218	785	704	131
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width	10	11	15	10	12	16
Total Lost time (s)	5.0	5.0	5.0	4.0	5.5	
Lane Util. Factor	1.00	1.00	1.00	0.95	0.91	
Frpb, ped/bikes	1.00	0.99	1.00	1.00	0.99	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	
Frt	1.00	0.85	1.00	1.00	0.98	
Flt Protected	0.95	1.00	0.95	1.00	1.00	
Satd. Flow (prot)	1685	1538	1986	3369	5021	
Flt Permitted	0.95	1.00	0.95	1.00	1.00	
Satd. Flow (perm)	1685	1538	1986	3369	5021	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	308	258	218	785	704	131
RTOR Reduction (vph)	0	125	0	0	20	0
Lane Group Flow (vph)	308	133	218	785	815	0
Confl. Peds. (#/hr)						11
Confl. Bikes (#/hr)		3				1
Turn Type	Prot	Perm	Prot	NA	NA	
Protected Phases	2!		3	Free!	4	
Permitted Phases		2		Free		
Actuated Green, G (s)	27.5	27.5	18.4	120.0	58.6	
Effective Green, g (s)	27.5	27.5	18.4	120.0	58.6	
Actuated g/C Ratio	0.23	0.23	0.15	1.00	0.49	
Clearance Time (s)	5.0	5.0	5.0		5.5	
Vehicle Extension (s)	3.0	3.0	3.0		4.0	
Lane Grp Cap (vph)	386	352	304	6738	2451	
v/s Ratio Prot	c0.18		c0.11	0.12	c0.16	
v/s Ratio Perm		0.09		0.12		
v/c Ratio	0.80	0.38	0.72	0.12	0.33	
Uniform Delay, d1	43.6	39.0	48.3	0.0	18.8	
Progression Factor	1.00	1.00	0.76	1.00	1.00	
Incremental Delay, d2	10.9	0.7	5.5	0.0	0.4	
Delay (s)	54.6	39.7	42.3	0.0	19.1	
Level of Service	D	D	D	A	B	
Approach Delay (s)	47.8			9.2	19.1	
Approach LOS	D			A	B	

Intersection Summary			
HCM 2000 Control Delay	21.7	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.52		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	15.5
Intersection Capacity Utilization	58.8%	ICU Level of Service	B
Analysis Period (min)	15		

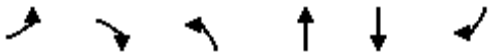
! Phase conflict between lane groups.
c Critical Lane Group



Lane Group	EBL	EBR	NBL	NBT	SBT
Lane Group Flow (vph)	308	258	218	785	835
v/c Ratio	0.80	0.54	0.72	0.23	0.34
Control Delay	58.9	18.6	45.9	0.1	19.9
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	58.9	18.6	45.9	0.1	19.9
Queue Length 50th (ft)	226	61	116	0	134
Queue Length 95th (ft)	306	136	m212	0	206
Internal Link Dist (ft)	542			719	502
Turn Bay Length (ft)		100	110		
Base Capacity (vph)	414	500	430	3369	2527
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.74	0.52	0.51	0.23	0.33

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	146	322	241	702	835	278
Future Volume (vph)	146	322	241	702	835	278
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width	10	11	15	10	12	16
Total Lost time (s)	5.0	5.0	5.0	4.0	5.5	
Lane Util. Factor	1.00	1.00	1.00	0.95	0.91	
Frpb, ped/bikes	1.00	0.98	1.00	1.00	0.98	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	
Frt	1.00	0.85	1.00	1.00	0.96	
Flt Protected	0.95	1.00	0.95	1.00	1.00	
Satd. Flow (prot)	1685	1532	1986	3369	4882	
Flt Permitted	0.95	1.00	0.95	1.00	1.00	
Satd. Flow (perm)	1685	1532	1986	3369	4882	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	146	322	241	702	835	278
RTOR Reduction (vph)	0	279	0	0	37	0
Lane Group Flow (vph)	146	43	241	702	1076	0
Confl. Peds. (#/hr)		2				22
Confl. Bikes (#/hr)		2				1
Turn Type	Prot	Perm	Prot	NA	NA	
Protected Phases	2!		3	Free!	4	
Permitted Phases		2		Free		
Actuated Green, G (s)	16.0	16.0	19.7	120.0	68.8	
Effective Green, g (s)	16.0	16.0	19.7	120.0	68.8	
Actuated g/C Ratio	0.13	0.13	0.16	1.00	0.57	
Clearance Time (s)	5.0	5.0	5.0		5.5	
Vehicle Extension (s)	3.0	3.0	3.0		4.0	
Lane Grp Cap (vph)	224	204	326	6738	2799	
v/s Ratio Prot	c0.09		c0.12	0.10	c0.22	
v/s Ratio Perm		0.03		0.10		
v/c Ratio	0.65	0.21	0.74	0.10	0.38	
Uniform Delay, d1	49.4	46.4	47.7	0.0	14.0	
Progression Factor	1.00	1.00	0.97	1.00	1.00	
Incremental Delay, d2	6.6	0.5	5.6	0.0	0.4	
Delay (s)	56.0	46.9	51.7	0.0	14.4	
Level of Service	E	D	D	A	B	
Approach Delay (s)	49.7			13.2	14.4	
Approach LOS	D			B	B	

Intersection Summary			
HCM 2000 Control Delay	20.5	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.49		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	15.5
Intersection Capacity Utilization	57.9%	ICU Level of Service	B
Analysis Period (min)	15		

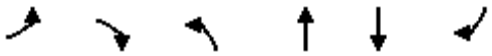
! Phase conflict between lane groups.
c Critical Lane Group



Lane Group	EBL	EBR	NBL	NBT	SBT
Lane Group Flow (vph)	146	322	241	702	1113
v/c Ratio	0.65	0.67	0.74	0.21	0.39
Control Delay	62.3	12.0	54.6	0.1	14.6
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	62.3	12.0	54.6	0.1	14.6
Queue Length 50th (ft)	109	0	117	0	150
Queue Length 95th (ft)	168	82	m241	m0	237
Internal Link Dist (ft)	542			719	502
Turn Bay Length (ft)		100	110		
Base Capacity (vph)	379	594	430	3369	2837
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.39	0.54	0.56	0.21	0.39

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	308	258	218	820	707	131
Future Volume (vph)	308	258	218	820	707	131
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width	10	11	15	10	12	16
Total Lost time (s)	5.0	5.0	5.0	4.0	5.5	
Lane Util. Factor	1.00	1.00	1.00	0.95	0.91	
Frpb, ped/bikes	1.00	0.99	1.00	1.00	0.99	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	
Frt	1.00	0.85	1.00	1.00	0.98	
Flt Protected	0.95	1.00	0.95	1.00	1.00	
Satd. Flow (prot)	1685	1538	1986	3369	5022	
Flt Permitted	0.95	1.00	0.95	1.00	1.00	
Satd. Flow (perm)	1685	1538	1986	3369	5022	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	308	258	218	820	707	131
RTOR Reduction (vph)	0	125	0	0	20	0
Lane Group Flow (vph)	308	133	218	820	818	0
Confl. Peds. (#/hr)						11
Confl. Bikes (#/hr)		3				1
Turn Type	Prot	Perm	Prot	NA	NA	
Protected Phases	2!		3	Free!	4	
Permitted Phases		2		Free		
Actuated Green, G (s)	27.5	27.5	18.4	120.0	58.6	
Effective Green, g (s)	27.5	27.5	18.4	120.0	58.6	
Actuated g/C Ratio	0.23	0.23	0.15	1.00	0.49	
Clearance Time (s)	5.0	5.0	5.0		5.5	
Vehicle Extension (s)	3.0	3.0	3.0		4.0	
Lane Grp Cap (vph)	386	352	304	6738	2452	
v/s Ratio Prot	c0.18		c0.11	0.12	c0.16	
v/s Ratio Perm		0.09		0.12		
v/c Ratio	0.80	0.38	0.72	0.12	0.33	
Uniform Delay, d1	43.6	39.0	48.3	0.0	18.8	
Progression Factor	1.00	1.00	0.78	1.00	1.00	
Incremental Delay, d2	10.9	0.7	5.4	0.0	0.4	
Delay (s)	54.6	39.7	43.3	0.0	19.1	
Level of Service	D	D	D	A	B	
Approach Delay (s)	47.8			9.1	19.1	
Approach LOS	D			A	B	

Intersection Summary			
HCM 2000 Control Delay	21.5	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.52		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	15.5
Intersection Capacity Utilization	58.8%	ICU Level of Service	B
Analysis Period (min)	15		

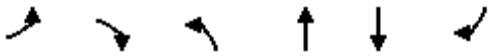
! Phase conflict between lane groups.
c Critical Lane Group



Lane Group	EBL	EBR	NBL	NBT	SBT
Lane Group Flow (vph)	308	258	218	820	838
v/c Ratio	0.80	0.54	0.72	0.24	0.34
Control Delay	58.9	18.6	46.9	0.1	19.9
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	58.9	18.6	46.9	0.1	19.9
Queue Length 50th (ft)	226	61	116	0	134
Queue Length 95th (ft)	306	136	m210	0	206
Internal Link Dist (ft)	542			719	502
Turn Bay Length (ft)		100	110		
Base Capacity (vph)	414	500	430	3369	2529
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.74	0.52	0.51	0.24	0.33

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	152	332	248	750	902	286
Future Volume (vph)	152	332	248	750	902	286
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width	10	11	15	10	12	16
Total Lost time (s)	5.0	5.0	5.0	4.0	5.5	
Lane Util. Factor	1.00	1.00	1.00	0.95	0.91	
Frpb, ped/bikes	1.00	0.98	1.00	1.00	0.98	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	
Frt	1.00	0.85	1.00	1.00	0.96	
Flt Protected	0.95	1.00	0.95	1.00	1.00	
Satd. Flow (prot)	1685	1533	1986	3369	4893	
Flt Permitted	0.95	1.00	0.95	1.00	1.00	
Satd. Flow (perm)	1685	1533	1986	3369	4893	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	152	332	248	750	902	286
RTOR Reduction (vph)	0	287	0	0	36	0
Lane Group Flow (vph)	152	45	248	750	1152	0
Confl. Peds. (#/hr)		2				22
Confl. Bikes (#/hr)		2				1
Turn Type	Prot	Perm	Prot	NA	NA	
Protected Phases	2!		3	Free!	4	
Permitted Phases		2		Free		
Actuated Green, G (s)	16.3	16.3	20.1	120.0	68.1	
Effective Green, g (s)	16.3	16.3	20.1	120.0	68.1	
Actuated g/C Ratio	0.14	0.14	0.17	1.00	0.57	
Clearance Time (s)	5.0	5.0	5.0		5.5	
Vehicle Extension (s)	3.0	3.0	3.0		4.0	
Lane Grp Cap (vph)	228	208	332	6738	2776	
v/s Ratio Prot	c0.09		c0.12	0.11	c0.24	
v/s Ratio Perm		0.03		0.11		
v/c Ratio	0.67	0.22	0.75	0.11	0.41	
Uniform Delay, d1	49.3	46.2	47.5	0.0	14.7	
Progression Factor	1.00	1.00	0.89	1.00	1.00	
Incremental Delay, d2	7.2	0.5	5.8	0.0	0.5	
Delay (s)	56.4	46.7	48.1	0.0	15.1	
Level of Service	E	D	D	A	B	
Approach Delay (s)	49.8			12.0	15.1	
Approach LOS	D			B	B	

Intersection Summary			
HCM 2000 Control Delay	20.2	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.52		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	15.5
Intersection Capacity Utilization	60.1%	ICU Level of Service	B
Analysis Period (min)	15		

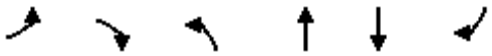
! Phase conflict between lane groups.
c Critical Lane Group



Lane Group	EBL	EBR	NBL	NBT	SBT
Lane Group Flow (vph)	152	332	248	750	1188
v/c Ratio	0.67	0.67	0.74	0.22	0.42
Control Delay	62.7	11.9	50.9	0.1	15.4
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	62.7	11.9	50.9	0.1	15.4
Queue Length 50th (ft)	114	0	102	0	168
Queue Length 95th (ft)	174	82	m238	m0	261
Internal Link Dist (ft)	542			719	502
Turn Bay Length (ft)		100	110		
Base Capacity (vph)	379	602	432	3369	2812
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.40	0.55	0.57	0.22	0.42

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	319	266	225	882	762	138
Future Volume (vph)	319	266	225	882	762	138
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width	10	11	15	10	12	16
Total Lost time (s)	5.0	5.0	5.0	4.0	5.5	
Lane Util. Factor	1.00	1.00	1.00	0.95	0.91	
Frpb, ped/bikes	1.00	0.99	1.00	1.00	0.99	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	
Frt	1.00	0.85	1.00	1.00	0.98	
Flt Protected	0.95	1.00	0.95	1.00	1.00	
Satd. Flow (prot)	1685	1538	1986	3369	5025	
Flt Permitted	0.95	1.00	0.95	1.00	1.00	
Satd. Flow (perm)	1685	1538	1986	3369	5025	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	319	266	225	882	762	138
RTOR Reduction (vph)	0	123	0	0	20	0
Lane Group Flow (vph)	319	143	225	882	880	0
Confl. Peds. (#/hr)						11
Confl. Bikes (#/hr)		3				1
Turn Type	Prot	Perm	Prot	NA	NA	
Protected Phases	2!		3	Free!	4	
Permitted Phases		2		Free		
Actuated Green, G (s)	28.5	28.5	18.8	120.0	57.2	
Effective Green, g (s)	28.5	28.5	18.8	120.0	57.2	
Actuated g/C Ratio	0.24	0.24	0.16	1.00	0.48	
Clearance Time (s)	5.0	5.0	5.0		5.5	
Vehicle Extension (s)	3.0	3.0	3.0		4.0	
Lane Grp Cap (vph)	400	365	311	6738	2395	
v/s Ratio Prot	c0.19		c0.11	0.13	c0.18	
v/s Ratio Perm		0.09		0.13		
v/c Ratio	0.80	0.39	0.72	0.13	0.37	
Uniform Delay, d1	43.0	38.5	48.1	0.0	19.9	
Progression Factor	1.00	1.00	0.80	1.00	1.00	
Incremental Delay, d2	10.6	0.7	4.7	0.0	0.4	
Delay (s)	53.6	39.2	43.3	0.0	20.4	
Level of Service	D	D	D	A	C	
Approach Delay (s)	47.0			8.8	20.4	
Approach LOS	D			A	C	

Intersection Summary			
HCM 2000 Control Delay	21.5	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.55		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	15.5
Intersection Capacity Utilization	61.0%	ICU Level of Service	B
Analysis Period (min)	15		

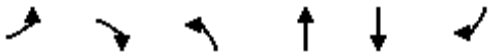
! Phase conflict between lane groups.
c Critical Lane Group



Lane Group	EBL	EBR	NBL	NBT	SBT
Lane Group Flow (vph)	319	266	225	882	900
v/c Ratio	0.80	0.55	0.72	0.26	0.37
Control Delay	57.7	19.0	46.2	0.1	21.2
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	57.7	19.0	46.2	0.1	21.2
Queue Length 50th (ft)	233	67	140	0	151
Queue Length 95th (ft)	316	142	m190	m0	228
Internal Link Dist (ft)	542			719	502
Turn Bay Length (ft)		100	110		
Base Capacity (vph)	422	506	430	3369	2482
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.76	0.53	0.52	0.26	0.36

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	152	332	248	756	925	286
Future Volume (vph)	152	332	248	756	925	286
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width	10	11	15	10	12	16
Total Lost time (s)	5.0	5.0	5.0	4.0	5.5	
Lane Util. Factor	1.00	1.00	1.00	0.95	0.91	
Frpb, ped/bikes	1.00	0.98	1.00	1.00	0.98	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	
Frt	1.00	0.85	1.00	1.00	0.96	
Flt Protected	0.95	1.00	0.95	1.00	1.00	
Satd. Flow (prot)	1685	1533	1986	3369	4898	
Flt Permitted	0.95	1.00	0.95	1.00	1.00	
Satd. Flow (perm)	1685	1533	1986	3369	4898	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	152	332	248	756	925	286
RTOR Reduction (vph)	0	287	0	0	35	0
Lane Group Flow (vph)	152	45	248	756	1176	0
Confl. Peds. (#/hr)		2				22
Confl. Bikes (#/hr)		2				1
Turn Type	Prot	Perm	Prot	NA	NA	
Protected Phases	2!		3	Free!	4	
Permitted Phases		2		Free		
Actuated Green, G (s)	16.3	16.3	20.1	120.0	68.1	
Effective Green, g (s)	16.3	16.3	20.1	120.0	68.1	
Actuated g/C Ratio	0.14	0.14	0.17	1.00	0.57	
Clearance Time (s)	5.0	5.0	5.0		5.5	
Vehicle Extension (s)	3.0	3.0	3.0		4.0	
Lane Grp Cap (vph)	228	208	332	6738	2779	
v/s Ratio Prot	c0.09		c0.12	0.11	c0.24	
v/s Ratio Perm		0.03		0.11		
v/c Ratio	0.67	0.22	0.75	0.11	0.42	
Uniform Delay, d1	49.3	46.2	47.5	0.0	14.8	
Progression Factor	1.00	1.00	0.88	1.00	1.00	
Incremental Delay, d2	7.2	0.5	5.1	0.0	0.5	
Delay (s)	56.4	46.7	47.2	0.0	15.2	
Level of Service	E	D	D	A	B	
Approach Delay (s)	49.8			11.7	15.2	
Approach LOS	D			B	B	

Intersection Summary			
HCM 2000 Control Delay	20.1	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.52		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	15.5
Intersection Capacity Utilization	60.5%	ICU Level of Service	B
Analysis Period (min)	15		

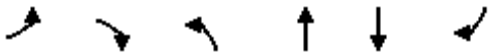
! Phase conflict between lane groups.
c Critical Lane Group



Lane Group	EBL	EBR	NBL	NBT	SBT
Lane Group Flow (vph)	152	332	248	756	1211
v/c Ratio	0.67	0.67	0.74	0.22	0.43
Control Delay	62.7	11.9	49.7	0.1	15.6
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	62.7	11.9	49.7	0.1	15.6
Queue Length 50th (ft)	114	0	103	0	173
Queue Length 95th (ft)	174	82	m221	m0	268
Internal Link Dist (ft)	542			719	502
Turn Bay Length (ft)		100	110		
Base Capacity (vph)	379	602	432	3369	2814
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.40	0.55	0.57	0.22	0.43

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	319	266	225	917	765	138
Future Volume (vph)	319	266	225	917	765	138
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width	10	11	15	10	12	16
Total Lost time (s)	5.0	5.0	5.0	4.0	5.5	
Lane Util. Factor	1.00	1.00	1.00	0.95	0.91	
Frpb, ped/bikes	1.00	0.99	1.00	1.00	0.99	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	
Frt	1.00	0.85	1.00	1.00	0.98	
Flt Protected	0.95	1.00	0.95	1.00	1.00	
Satd. Flow (prot)	1685	1538	1986	3369	5026	
Flt Permitted	0.95	1.00	0.95	1.00	1.00	
Satd. Flow (perm)	1685	1538	1986	3369	5026	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	319	266	225	917	765	138
RTOR Reduction (vph)	0	123	0	0	20	0
Lane Group Flow (vph)	319	143	225	917	883	0
Confl. Peds. (#/hr)						11
Confl. Bikes (#/hr)		3				1
Turn Type	Prot	Perm	Prot	NA	NA	
Protected Phases	2!		3	Free!	4	
Permitted Phases		2		Free		
Actuated Green, G (s)	28.5	28.5	18.8	120.0	57.2	
Effective Green, g (s)	28.5	28.5	18.8	120.0	57.2	
Actuated g/C Ratio	0.24	0.24	0.16	1.00	0.48	
Clearance Time (s)	5.0	5.0	5.0		5.5	
Vehicle Extension (s)	3.0	3.0	3.0		4.0	
Lane Grp Cap (vph)	400	365	311	6738	2395	
v/s Ratio Prot	c0.19		c0.11	0.14	c0.18	
v/s Ratio Perm		0.09		0.14		
v/c Ratio	0.80	0.39	0.72	0.14	0.37	
Uniform Delay, d1	43.0	38.5	48.1	0.0	19.9	
Progression Factor	1.00	1.00	0.80	1.00	1.00	
Incremental Delay, d2	10.6	0.7	4.6	0.0	0.4	
Delay (s)	53.6	39.2	43.3	0.0	20.4	
Level of Service	D	D	D	A	C	
Approach Delay (s)	47.0			8.6	20.4	
Approach LOS	D			A	C	

Intersection Summary			
HCM 2000 Control Delay	21.2	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.55		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	15.5
Intersection Capacity Utilization	61.1%	ICU Level of Service	B
Analysis Period (min)	15		

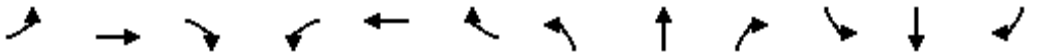
! Phase conflict between lane groups.
c Critical Lane Group



Lane Group	EBL	EBR	NBL	NBT	SBT
Lane Group Flow (vph)	319	266	225	917	903
v/c Ratio	0.80	0.55	0.72	0.27	0.37
Control Delay	57.7	19.0	46.1	0.1	21.2
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	57.7	19.0	46.1	0.1	21.2
Queue Length 50th (ft)	233	67	139	0	152
Queue Length 95th (ft)	316	142	m188	m0	229
Internal Link Dist (ft)	542			719	502
Turn Bay Length (ft)		100	110		
Base Capacity (vph)	422	506	430	3369	2482
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.76	0.53	0.52	0.27	0.36

Intersection Summary

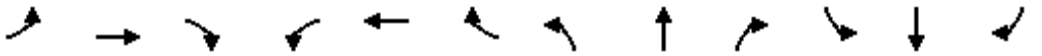
m Volume for 95th percentile queue is metered by upstream signal.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	142	803	123	146	1278	227	199	552	104	331	602	147
Future Volume (veh/h)	142	803	123	146	1278	227	199	552	104	331	602	147
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.99	1.00		0.98	1.00		0.97
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	1900	1900	1900	1900	1900	1976	1900	1900	1976	1900	1900	1976
Adj Flow Rate, veh/h	142	803	123	146	1278	227	199	552	104	331	602	147
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	169	1453	636	174	1795	319	211	716	326	390	1000	313
Arrive On Green	0.09	0.40	0.40	0.03	0.13	0.13	0.12	0.20	0.20	0.04	0.06	0.06
Sat Flow, veh/h	1810	3610	1579	1810	4425	786	1810	3610	1643	3510	5187	1622
Grp Volume(v), veh/h	142	803	123	146	999	506	199	552	104	331	602	147
Grp Sat Flow(s),veh/h/ln	1810	1805	1579	1810	1729	1753	1810	1805	1643	1755	1729	1622
Q Serve(g_s), s	9.3	20.5	6.1	9.6	33.2	33.2	13.1	17.4	6.5	11.2	13.6	10.5
Cycle Q Clear(g_c), s	9.3	20.5	6.1	9.6	33.2	33.2	13.1	17.4	6.5	11.2	13.6	10.5
Prop In Lane	1.00		1.00	1.00		0.45	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	169	1453	636	174	1403	711	211	716	326	390	1000	313
V/C Ratio(X)	0.84	0.55	0.19	0.84	0.71	0.71	0.94	0.77	0.32	0.85	0.60	0.47
Avail Cap(c_a), veh/h	196	1453	636	196	1403	711	211	857	390	439	1275	399
HCM Platoon Ratio	1.00	1.00	1.00	0.33	0.33	0.33	1.00	1.00	1.00	0.33	0.33	0.33
Upstream Filter(I)	1.00	1.00	1.00	0.89	0.89	0.89	1.00	1.00	1.00	0.89	0.89	0.89
Uniform Delay (d), s/veh	53.5	27.5	23.2	57.2	45.3	45.3	52.6	45.5	41.2	56.8	51.7	50.3
Incr Delay (d2), s/veh	21.5	1.5	0.7	19.8	2.8	5.4	45.4	4.1	0.8	10.8	0.7	1.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	8.9	13.9	4.2	9.2	22.0	22.9	13.3	12.7	4.8	9.6	10.3	7.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	75.0	29.1	23.9	77.0	48.0	50.6	98.0	49.7	42.0	67.6	52.4	51.7
LnGrp LOS	E	C	C	E	D	D	F	D	D	E	D	D
Approach Vol, veh/h		1068			1651			855			1080	
Approach Delay, s/veh		34.6			51.4			60.0			57.0	
Approach LOS		C			D			E			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	17.6	54.8	19.0	28.6	17.2	55.2	18.3	29.3
Change Period (Y+Rc), s	6.0	6.5	5.0	5.5	6.0	6.5	5.0	5.5
Max Green Setting (Gmax), s	13.0	40.5	14.0	29.5	13.0	40.5	15.0	28.5
Max Q Clear Time (g_c+I1), s	11.6	22.5	15.1	15.6	11.3	35.2	13.2	19.4
Green Ext Time (p_c), s	0.0	7.5	0.0	5.0	0.0	4.3	0.1	3.4

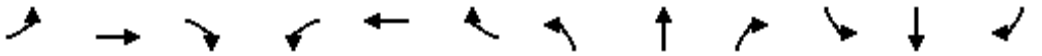
Intersection Summary	
HCM 6th Ctrl Delay	50.4
HCM 6th LOS	D



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	200	1062	150	169	975	245	185	584	124	318	473	126
Future Volume (veh/h)	200	1062	150	169	975	245	185	584	124	318	473	126
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.99	1.00		0.98	1.00		0.98
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	1900	1900	1900	1900	1900	1976	1900	1900	1976	1900	1900	1976
Adj Flow Rate, veh/h	200	1062	150	169	975	245	185	584	124	318	473	126
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	196	1401	608	196	1601	401	211	737	337	378	1013	319
Arrive On Green	0.11	0.39	0.39	0.04	0.13	0.13	0.12	0.20	0.20	0.04	0.06	0.06
Sat Flow, veh/h	1810	3610	1567	1810	4125	1034	1810	3610	1648	3510	5187	1633
Grp Volume(v), veh/h	200	1062	150	169	817	403	185	584	124	318	473	126
Grp Sat Flow(s),veh/h/ln	1810	1805	1567	1810	1729	1701	1810	1805	1648	1755	1729	1633
Q Serve(g_s), s	13.0	30.6	7.8	11.2	26.8	26.9	12.1	18.4	7.8	10.8	10.6	8.9
Cycle Q Clear(g_c), s	13.0	30.6	7.8	11.2	26.8	26.9	12.1	18.4	7.8	10.8	10.6	8.9
Prop In Lane	1.00		1.00	1.00		0.61	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	196	1401	608	196	1342	660	211	737	337	378	1013	319
V/C Ratio(X)	1.02	0.76	0.25	0.86	0.61	0.61	0.88	0.79	0.37	0.84	0.47	0.40
Avail Cap(c_a), veh/h	196	1401	608	196	1342	660	211	918	419	439	1362	429
HCM Platoon Ratio	1.00	1.00	1.00	0.33	0.33	0.33	1.00	1.00	1.00	0.33	0.33	0.33
Upstream Filter(I)	1.00	1.00	1.00	0.93	0.93	0.93	1.00	1.00	1.00	0.93	0.93	0.93
Uniform Delay (d), s/veh	53.5	31.8	24.8	57.0	43.7	43.7	52.1	45.3	41.1	56.9	50.1	49.3
Incr Delay (d2), s/veh	69.6	3.9	1.0	27.6	1.9	3.9	30.2	4.4	1.0	10.2	0.4	1.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	14.9	19.9	5.4	11.0	18.4	18.6	11.5	13.3	5.8	9.3	8.3	7.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	123.1	35.7	25.8	84.5	45.6	47.6	82.4	49.7	42.0	67.0	50.6	50.4
LnGrp LOS	F	D	C	F	D	D	F	D	D	E	D	D
Approach Vol, veh/h		1412			1389			893			917	
Approach Delay, s/veh		47.0			50.9			55.4			56.2	
Approach LOS		D			D			E			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	19.0	53.1	19.0	28.9	19.0	53.1	17.9	30.0
Change Period (Y+Rc), s	6.0	6.5	5.0	5.5	6.0	6.5	5.0	5.5
Max Green Setting (Gmax), s	13.0	38.5	14.0	31.5	13.0	38.5	15.0	30.5
Max Q Clear Time (g_c+I1), s	13.2	32.6	14.1	12.6	15.0	28.9	12.8	20.4
Green Ext Time (p_c), s	0.0	4.2	0.0	4.5	0.0	6.3	0.1	3.9

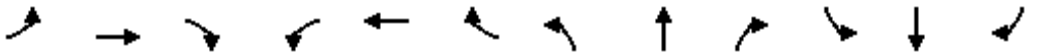
Intersection Summary	
HCM 6th Ctrl Delay	51.7
HCM 6th LOS	D



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	165	816	123	149	1283	227	199	575	104	354	602	147
Future Volume (veh/h)	165	816	123	149	1283	227	199	575	104	354	602	147
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.99	1.00		0.98	1.00		0.97
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	1900	1900	1900	1900	1900	1976	1900	1900	1976	1900	1900	1976
Adj Flow Rate, veh/h	165	816	123	149	1283	227	199	575	104	354	602	147
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	192	1410	617	177	1695	300	211	730	332	412	1053	330
Arrive On Green	0.11	0.39	0.39	0.03	0.13	0.13	0.12	0.20	0.20	0.04	0.07	0.07
Sat Flow, veh/h	1810	3610	1579	1810	4428	783	1810	3610	1644	3510	5187	1625
Grp Volume(v), veh/h	165	816	123	149	1002	508	199	575	104	354	602	147
Grp Sat Flow(s),veh/h/ln	1810	1805	1579	1810	1729	1753	1810	1805	1644	1755	1729	1625
Q Serve(g_s), s	10.8	21.4	6.2	9.8	33.6	33.6	13.1	18.1	6.5	12.0	13.5	10.4
Cycle Q Clear(g_c), s	10.8	21.4	6.2	9.8	33.6	33.6	13.1	18.1	6.5	12.0	13.5	10.4
Prop In Lane	1.00		1.00	1.00		0.45	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	192	1410	617	177	1324	671	211	730	332	412	1053	330
V/C Ratio(X)	0.86	0.58	0.20	0.84	0.76	0.76	0.94	0.79	0.31	0.86	0.57	0.45
Avail Cap(c_a), veh/h	196	1410	617	196	1324	671	211	857	390	439	1275	399
HCM Platoon Ratio	1.00	1.00	1.00	0.33	0.33	0.33	1.00	1.00	1.00	0.33	0.33	0.33
Upstream Filter(I)	1.00	1.00	1.00	0.83	0.83	0.83	1.00	1.00	1.00	0.89	0.89	0.89
Uniform Delay (d), s/veh	52.8	28.8	24.2	57.1	47.0	47.0	52.6	45.4	40.8	56.7	50.9	49.5
Incr Delay (d2), s/veh	28.3	1.7	0.7	19.5	3.4	6.5	45.4	4.7	0.8	12.7	0.6	1.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	10.5	14.5	4.3	9.2	22.2	23.1	13.3	13.2	4.8	10.3	10.2	7.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	81.1	30.5	24.9	76.6	50.4	53.6	98.0	50.2	41.5	69.4	51.5	50.7
LnGrp LOS	F	C	C	E	D	D	F	D	D	E	D	D
Approach Vol, veh/h		1104			1659			878			1103	
Approach Delay, s/veh		37.4			53.8			60.0			57.2	
Approach LOS		D			D			E			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	17.8	53.4	19.0	29.9	18.7	52.4	19.1	29.8
Change Period (Y+Rc), s	6.0	6.5	5.0	5.5	6.0	6.5	5.0	5.5
Max Green Setting (Gmax), s	13.0	40.5	14.0	29.5	13.0	40.5	15.0	28.5
Max Q Clear Time (g_c+I1), s	11.8	23.4	15.1	15.5	12.8	35.6	14.0	20.1
Green Ext Time (p_c), s	0.0	7.5	0.0	5.0	0.0	4.0	0.1	3.3

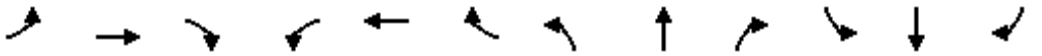
Intersection Summary	
HCM 6th Ctrl Delay	51.9
HCM 6th LOS	D



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	203	1064	150	189	1007	245	185	587	124	321	473	126
Future Volume (veh/h)	203	1064	150	189	1007	245	185	587	124	321	473	126
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.99	1.00		0.98	1.00		0.98
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	1900	1900	1900	1900	1900	1976	1900	1900	1976	1900	1900	1976
Adj Flow Rate, veh/h	203	1064	150	189	1007	245	185	587	124	321	473	126
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	196	1396	606	196	1606	390	211	740	338	381	1020	321
Arrive On Green	0.11	0.39	0.39	0.04	0.13	0.13	0.12	0.20	0.20	0.04	0.06	0.06
Sat Flow, veh/h	1810	3610	1567	1810	4154	1009	1810	3610	1648	3510	5187	1633
Grp Volume(v), veh/h	203	1064	150	189	838	414	185	587	124	321	473	126
Grp Sat Flow(s),veh/h/ln	1810	1805	1567	1810	1729	1705	1810	1805	1648	1755	1729	1633
Q Serve(g_s), s	13.0	30.8	7.8	12.5	27.6	27.6	12.1	18.5	7.8	10.9	10.5	8.9
Cycle Q Clear(g_c), s	13.0	30.8	7.8	12.5	27.6	27.6	12.1	18.5	7.8	10.9	10.5	8.9
Prop In Lane	1.00		1.00	1.00		0.59	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	196	1396	606	196	1337	659	211	740	338	381	1020	321
V/C Ratio(X)	1.04	0.76	0.25	0.96	0.63	0.63	0.88	0.79	0.37	0.84	0.46	0.39
Avail Cap(c_a), veh/h	196	1396	606	196	1337	659	211	918	419	439	1362	429
HCM Platoon Ratio	1.00	1.00	1.00	0.33	0.33	0.33	1.00	1.00	1.00	0.33	0.33	0.33
Upstream Filter(I)	1.00	1.00	1.00	0.89	0.89	0.89	1.00	1.00	1.00	0.93	0.93	0.93
Uniform Delay (d), s/veh	53.5	32.0	25.0	57.6	44.1	44.2	52.1	45.3	41.0	56.8	50.0	49.2
Incr Delay (d2), s/veh	73.9	4.0	1.0	50.0	2.0	4.0	30.2	4.5	0.9	10.4	0.4	1.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	15.2	20.0	5.4	13.4	18.7	19.0	11.5	13.4	5.7	9.4	8.3	7.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	127.4	36.0	25.9	107.7	46.1	48.2	82.4	49.8	42.0	67.3	50.4	50.3
LnGrp LOS	F	D	C	F	D	D	F	D	D	E	D	D
Approach Vol, veh/h		1417			1441			896			920	
Approach Delay, s/veh		48.0			54.8			55.4			56.3	
Approach LOS		D			D			E			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	19.0	52.9	19.0	29.1	19.0	52.9	18.0	30.1
Change Period (Y+Rc), s	6.0	6.5	5.0	5.5	6.0	6.5	5.0	5.5
Max Green Setting (Gmax), s	13.0	38.5	14.0	31.5	13.0	38.5	15.0	30.5
Max Q Clear Time (g_c+I1), s	14.5	32.8	14.1	12.5	15.0	29.6	12.9	20.5
Green Ext Time (p_c), s	0.0	4.1	0.0	4.5	0.0	6.0	0.1	3.9

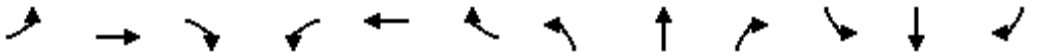
Intersection Summary	
HCM 6th Ctrl Delay	53.2
HCM 6th LOS	D



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	154	889	129	154	1354	240	208	588	118	347	665	164
Future Volume (veh/h)	154	889	129	154	1354	240	208	588	118	347	665	164
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.99	1.00		0.98	1.00		0.97
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	1900	1900	1900	1900	1900	1976	1900	1900	1976	1900	1900	1976
Adj Flow Rate, veh/h	154	889	129	154	1354	240	208	588	118	347	665	164
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	181	1399	612	182	1719	305	211	738	336	406	1055	331
Arrive On Green	0.10	0.39	0.39	0.03	0.13	0.13	0.12	0.20	0.20	0.04	0.07	0.07
Sat Flow, veh/h	1810	3610	1579	1810	4427	784	1810	3610	1644	3510	5187	1625
Grp Volume(v), veh/h	154	889	129	154	1058	536	208	588	118	347	665	164
Grp Sat Flow(s),veh/h/ln	1810	1805	1579	1810	1729	1753	1810	1805	1644	1755	1729	1625
Q Serve(g_s), s	10.0	24.0	6.5	10.2	35.6	35.6	13.8	18.6	7.4	11.8	15.0	11.7
Cycle Q Clear(g_c), s	10.0	24.0	6.5	10.2	35.6	35.6	13.8	18.6	7.4	11.8	15.0	11.7
Prop In Lane	1.00		1.00	1.00		0.45	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	181	1399	612	182	1343	681	211	738	336	406	1055	331
V/C Ratio(X)	0.85	0.64	0.21	0.84	0.79	0.79	0.99	0.80	0.35	0.86	0.63	0.50
Avail Cap(c_a), veh/h	196	1399	612	196	1343	681	211	857	390	439	1275	400
HCM Platoon Ratio	1.00	1.00	1.00	0.33	0.33	0.33	1.00	1.00	1.00	0.33	0.33	0.33
Upstream Filter(I)	1.00	1.00	1.00	0.87	0.87	0.87	1.00	1.00	1.00	0.88	0.88	0.88
Uniform Delay (d), s/veh	53.1	29.9	24.5	57.1	47.5	47.5	52.9	45.4	40.9	56.7	51.6	50.0
Incr Delay (d2), s/veh	25.2	2.2	0.8	21.5	4.1	7.9	57.4	5.1	0.9	12.0	0.9	1.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	9.7	16.0	4.6	9.7	23.6	24.7	14.6	13.5	5.5	10.0	11.1	8.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	78.3	32.1	25.3	78.6	51.7	55.4	110.3	50.5	41.8	68.7	52.4	51.5
LnGrp LOS	E	C	C	E	D	E	F	D	D	E	D	D
Approach Vol, veh/h		1172			1748			914			1176	
Approach Delay, s/veh		37.4			55.2			63.0			57.1	
Approach LOS		D			E			E			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	18.1	53.0	19.0	29.9	18.0	53.1	18.9	30.0
Change Period (Y+Rc), s	6.0	6.5	5.0	5.5	6.0	6.5	5.0	5.5
Max Green Setting (Gmax), s	13.0	40.5	14.0	29.5	13.0	40.5	15.0	28.5
Max Q Clear Time (g_c+I1), s	12.2	26.0	15.8	17.0	12.0	37.6	13.8	20.6
Green Ext Time (p_c), s	0.0	7.3	0.0	5.2	0.0	2.5	0.1	3.3

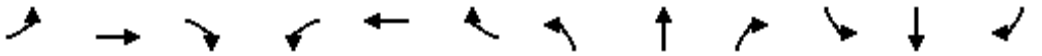
Intersection Summary	
HCM 6th Ctrl Delay	52.9
HCM 6th LOS	D



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	221	1132	159	186	1069	258	193	655	136	333	510	139
Future Volume (veh/h)	221	1132	159	186	1069	258	193	655	136	333	510	139
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.99	1.00		0.98	1.00		0.98
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	1900	1900	1900	1900	1900	1976	1900	1900	1976	1900	1900	1976
Adj Flow Rate, veh/h	221	1132	159	186	1069	258	193	655	136	333	510	139
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	196	1331	577	196	1534	370	211	793	362	392	1113	351
Arrive On Green	0.11	0.37	0.37	0.04	0.12	0.12	0.12	0.22	0.22	0.04	0.07	0.07
Sat Flow, veh/h	1810	3610	1566	1810	4160	1003	1810	3610	1649	3510	5187	1635
Grp Volume(v), veh/h	221	1132	159	186	888	439	193	655	136	333	510	139
Grp Sat Flow(s),veh/h/ln	1810	1805	1566	1810	1729	1706	1810	1805	1649	1755	1729	1635
Q Serve(g_s), s	13.0	34.6	8.6	12.3	29.6	29.6	12.7	20.8	8.4	11.3	11.3	9.8
Cycle Q Clear(g_c), s	13.0	34.6	8.6	12.3	29.6	29.6	12.7	20.8	8.4	11.3	11.3	9.8
Prop In Lane	1.00		1.00	1.00		0.59	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	196	1331	577	196	1275	629	211	793	362	392	1113	351
V/C Ratio(X)	1.13	0.85	0.28	0.95	0.70	0.70	0.91	0.83	0.38	0.85	0.46	0.40
Avail Cap(c_a), veh/h	196	1331	577	196	1275	629	211	918	419	439	1362	429
HCM Platoon Ratio	1.00	1.00	1.00	0.33	0.33	0.33	1.00	1.00	1.00	0.33	0.33	0.33
Upstream Filter(I)	1.00	1.00	1.00	0.92	0.92	0.92	1.00	1.00	1.00	0.92	0.92	0.92
Uniform Delay (d), s/veh	53.5	34.8	26.6	57.5	46.3	46.3	52.4	44.6	39.8	56.8	49.0	48.3
Incr Delay (d2), s/veh	102.7	7.0	1.2	46.8	2.9	5.8	38.4	6.1	0.9	11.3	0.4	0.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	17.8	22.7	6.0	13.1	20.1	20.5	12.5	14.9	6.2	9.7	8.8	7.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	156.2	41.8	27.8	104.3	49.2	52.1	90.8	50.7	40.8	68.1	49.4	49.3
LnGrp LOS	F	D	C	F	D	D	F	D	D	E	D	D
Approach Vol, veh/h		1512			1513			984			982	
Approach Delay, s/veh		57.0			56.8			57.2			55.7	
Approach LOS		E			E			E			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	19.0	50.7	19.0	31.3	19.0	50.7	18.4	31.8
Change Period (Y+Rc), s	6.0	6.5	5.0	5.5	6.0	6.5	5.0	5.5
Max Green Setting (Gmax), s	13.0	38.5	14.0	31.5	13.0	38.5	15.0	30.5
Max Q Clear Time (g_c+I1), s	14.3	36.6	14.7	13.3	15.0	31.6	13.3	22.8
Green Ext Time (p_c), s	0.0	1.5	0.0	4.9	0.0	5.1	0.1	3.6

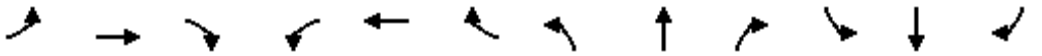
Intersection Summary	
HCM 6th Ctrl Delay	56.7
HCM 6th LOS	E



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	177	902	129	157	1359	240	208	611	118	370	665	164
Future Volume (veh/h)	177	902	129	157	1359	240	208	611	118	370	665	164
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.99	1.00		0.98	1.00		0.97
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	1900	1900	1900	1900	1900	1976	1900	1900	1976	1900	1900	1976
Adj Flow Rate, veh/h	177	902	129	157	1359	240	208	611	118	370	665	164
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	196	1357	593	185	1639	289	211	752	342	427	1106	347
Arrive On Green	0.11	0.38	0.38	0.03	0.12	0.12	0.12	0.21	0.21	0.04	0.07	0.07
Sat Flow, veh/h	1810	3610	1579	1810	4429	782	1810	3610	1644	3510	5187	1627
Grp Volume(v), veh/h	177	902	129	157	1061	538	208	611	118	370	665	164
Grp Sat Flow(s),veh/h/ln	1810	1805	1579	1810	1729	1753	1810	1805	1644	1755	1729	1627
Q Serve(g_s), s	11.6	24.9	6.7	10.4	36.0	36.0	13.8	19.4	7.3	12.6	14.9	11.6
Cycle Q Clear(g_c), s	11.6	24.9	6.7	10.4	36.0	36.0	13.8	19.4	7.3	12.6	14.9	11.6
Prop In Lane	1.00		1.00	1.00		0.45	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	196	1357	593	185	1280	649	211	752	342	427	1106	347
V/C Ratio(X)	0.90	0.66	0.22	0.85	0.83	0.83	0.99	0.81	0.34	0.87	0.60	0.47
Avail Cap(c_a), veh/h	196	1357	593	196	1280	649	211	857	390	439	1275	400
HCM Platoon Ratio	1.00	1.00	1.00	0.33	0.33	0.33	1.00	1.00	1.00	0.33	0.33	0.33
Upstream Filter(I)	1.00	1.00	1.00	0.81	0.81	0.81	1.00	1.00	1.00	0.87	0.87	0.87
Uniform Delay (d), s/veh	52.9	31.1	25.4	57.0	49.0	49.0	52.9	45.3	40.5	56.6	50.8	49.3
Incr Delay (d2), s/veh	37.7	2.6	0.8	21.1	5.2	9.7	57.4	5.9	0.8	13.7	0.7	1.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	11.7	16.6	4.7	9.7	23.7	25.0	14.6	14.0	5.4	10.7	11.0	8.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	90.5	33.7	26.3	78.1	54.1	58.7	110.3	51.1	41.4	70.3	51.5	50.5
LnGrp LOS	F	C	C	E	D	E	F	D	D	E	D	D
Approach Vol, veh/h		1208			1756			937			1199	
Approach Delay, s/veh		41.3			57.7			63.1			57.2	
Approach LOS		D			E			E			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	18.3	51.6	19.0	31.1	19.0	50.9	19.6	30.5
Change Period (Y+Rc), s	6.0	6.5	5.0	5.5	6.0	6.5	5.0	5.5
Max Green Setting (Gmax), s	13.0	40.5	14.0	29.5	13.0	40.5	15.0	28.5
Max Q Clear Time (g_c+I1), s	12.4	26.9	15.8	16.9	13.6	38.0	14.6	21.4
Green Ext Time (p_c), s	0.0	7.1	0.0	5.2	0.0	2.2	0.0	3.1

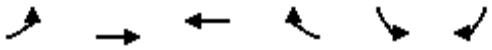
Intersection Summary	
HCM 6th Ctrl Delay	54.7
HCM 6th LOS	D



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	224	1134	159	206	1101	258	193	658	136	336	510	139
Future Volume (veh/h)	224	1134	159	206	1101	258	193	658	136	336	510	139
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.99	1.00		0.98	1.00		0.98
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	1900	1900	1900	1900	1900	1976	1900	1900	1976	1900	1900	1976
Adj Flow Rate, veh/h	224	1134	159	206	1101	258	193	658	136	336	510	139
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	196	1326	575	196	1538	360	211	795	363	395	1121	353
Arrive On Green	0.11	0.37	0.37	0.04	0.12	0.12	0.12	0.22	0.22	0.04	0.07	0.07
Sat Flow, veh/h	1810	3610	1565	1810	4187	981	1810	3610	1649	3510	5187	1635
Grp Volume(v), veh/h	224	1134	159	206	909	450	193	658	136	336	510	139
Grp Sat Flow(s),veh/h/ln	1810	1805	1565	1810	1729	1710	1810	1805	1649	1755	1729	1635
Q Serve(g_s), s	13.0	34.8	8.6	13.0	30.4	30.4	12.7	20.9	8.4	11.4	11.3	9.7
Cycle Q Clear(g_c), s	13.0	34.8	8.6	13.0	30.4	30.4	12.7	20.9	8.4	11.4	11.3	9.7
Prop In Lane	1.00		1.00	1.00		0.57	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	196	1326	575	196	1270	628	211	795	363	395	1121	353
V/C Ratio(X)	1.14	0.86	0.28	1.05	0.72	0.72	0.91	0.83	0.37	0.85	0.46	0.39
Avail Cap(c_a), veh/h	196	1326	575	196	1270	628	211	918	419	439	1362	429
HCM Platoon Ratio	1.00	1.00	1.00	0.33	0.33	0.33	1.00	1.00	1.00	0.33	0.33	0.33
Upstream Filter(I)	1.00	1.00	1.00	0.86	0.86	0.86	1.00	1.00	1.00	0.91	0.91	0.91
Uniform Delay (d), s/veh	53.5	35.0	26.7	57.9	46.7	46.7	52.4	44.6	39.8	56.8	48.9	48.2
Incr Delay (d2), s/veh	107.9	7.2	1.2	73.6	3.0	5.9	38.4	6.1	0.9	11.5	0.4	0.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	18.3	22.8	6.0	15.5	20.4	20.8	12.5	14.9	6.2	9.8	8.8	7.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	161.4	42.3	27.9	131.5	49.7	52.7	90.8	50.8	40.7	68.2	49.3	49.1
LnGrp LOS	F	D	C	F	D	D	F	D	D	E	D	D
Approach Vol, veh/h		1517			1565			987			985	
Approach Delay, s/veh		58.3			61.3			57.2			55.7	
Approach LOS		E			E			E			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	19.0	50.6	19.0	31.4	19.0	50.6	18.5	31.9
Change Period (Y+Rc), s	6.0	6.5	5.0	5.5	6.0	6.5	5.0	5.5
Max Green Setting (Gmax), s	13.0	38.5	14.0	31.5	13.0	38.5	15.0	30.5
Max Q Clear Time (g_c+I1), s	15.0	36.8	14.7	13.3	15.0	32.4	13.4	22.9
Green Ext Time (p_c), s	0.0	1.4	0.0	4.9	0.0	4.7	0.1	3.6

Intersection Summary	
HCM 6th Ctrl Delay	58.5
HCM 6th LOS	E



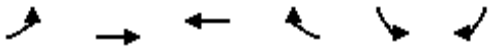
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	45	1227	1669	106	80	46
Future Volume (veh/h)	45	1227	1669	106	80	46
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1976	1976	1976
Adj Flow Rate, veh/h	45	1227	1669	106	80	46
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	0	0	0	0	0	0
Cap, veh/h	284	2966	4095	260	107	62
Arrive On Green	1.00	1.00	1.00	1.00	0.09	0.09
Sat Flow, veh/h	272	3705	5155	316	1131	650
Grp Volume(v), veh/h	45	1227	1158	617	127	0
Grp Sat Flow(s),veh/h/ln	272	1805	1729	1842	1795	0
Q Serve(g_s), s	0.0	0.0	0.0	0.0	8.3	0.0
Cycle Q Clear(g_c), s	0.0	0.0	0.0	0.0	8.3	0.0
Prop In Lane	1.00			0.17	0.63	0.36
Lane Grp Cap(c), veh/h	284	2966	2841	1513	170	0
V/C Ratio(X)	0.16	0.41	0.41	0.41	0.75	0.00
Avail Cap(c_a), veh/h	284	2966	2841	1513	374	0
HCM Platoon Ratio	2.00	2.00	1.33	1.33	1.00	1.00
Upstream Filter(I)	0.73	0.73	0.89	0.89	1.00	0.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	0.0	52.9	0.0
Incr Delay (d2), s/veh	0.9	0.3	0.4	0.7	12.8	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.1	0.2	0.3	0.6	7.8	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	0.9	0.3	0.4	0.7	65.7	0.0
LnGrp LOS	A	A	A	A	E	A
Approach Vol, veh/h		1272	1775		127	
Approach Delay, s/veh		0.3	0.5		65.7	
Approach LOS		A	A		E	

Timer - Assigned Phs	2		4		6
Phs Duration (G+Y+Rc), s	104.1		15.9		104.1
Change Period (Y+Rc), s	5.5		4.5		5.5
Max Green Setting (Gmax), s	85.0		25.0		85.0
Max Q Clear Time (g_c+I1), s	2.0		10.3		2.0
Green Ext Time (p_c), s	37.2		0.6		22.0

Intersection Summary	
HCM 6th Ctrl Delay	3.0
HCM 6th LOS	A

Notes

User approved volume balancing among the lanes for turning movement.



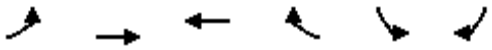
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	112	1351	1386	56	110	73
Future Volume (veh/h)	112	1351	1386	56	110	73
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			0.99	1.00	0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1976	1976	1976
Adj Flow Rate, veh/h	112	1351	1386	56	110	73
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	0	0	0	0	0	0
Cap, veh/h	327	2849	4034	163	136	90
Arrive On Green	1.00	1.00	0.79	0.79	0.13	0.13
Sat Flow, veh/h	376	3705	5282	206	1069	710
Grp Volume(v), veh/h	112	1351	938	504	184	0
Grp Sat Flow(s),veh/h/ln	376	1805	1729	1859	1789	0
Q Serve(g_s), s	5.7	0.0	9.4	9.4	12.0	0.0
Cycle Q Clear(g_c), s	15.1	0.0	9.4	9.4	12.0	0.0
Prop In Lane	1.00			0.11	0.60	0.40
Lane Grp Cap(c), veh/h	327	2849	2729	1468	228	0
V/C Ratio(X)	0.34	0.47	0.34	0.34	0.81	0.00
Avail Cap(c_a), veh/h	327	2849	2729	1468	373	0
HCM Platoon Ratio	2.00	2.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.52	0.52	0.93	0.93	1.00	0.00
Uniform Delay (d), s/veh	0.8	0.0	3.7	3.7	50.9	0.0
Incr Delay (d2), s/veh	1.5	0.3	0.3	0.6	13.3	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.2	0.2	4.5	5.0	10.4	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	2.2	0.3	4.0	4.2	64.2	0.0
LnGrp LOS	A	A	A	A	E	A
Approach Vol, veh/h		1463	1442		184	
Approach Delay, s/veh		0.4	4.1		64.2	
Approach LOS		A	A		E	

Timer - Assigned Phs	2		4		6
Phs Duration (G+Y+Rc), s	100.2		19.8		100.2
Change Period (Y+Rc), s	5.5		4.5		5.5
Max Green Setting (Gmax), s	85.0		25.0		85.0
Max Q Clear Time (g_c+I1), s	11.4		14.0		17.1
Green Ext Time (p_c), s	24.3		0.9		27.5

Intersection Summary	
HCM 6th Ctrl Delay	5.9
HCM 6th LOS	A

Notes

User approved volume balancing among the lanes for turning movement.



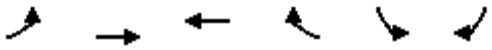
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	81	1227	1720	303	112	49
Future Volume (veh/h)	81	1227	1720	303	112	49
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1976	1976	1976
Adj Flow Rate, veh/h	81	1227	1720	303	112	49
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	0	0	0	0	0	0
Cap, veh/h	232	2897	3563	622	143	63
Arrive On Green	1.00	1.00	1.00	1.00	0.11	0.11
Sat Flow, veh/h	214	3705	4611	775	1251	547
Grp Volume(v), veh/h	81	1227	1336	687	162	0
Grp Sat Flow(s),veh/h/ln	214	1805	1729	1757	1810	0
Q Serve(g_s), s	0.0	0.0	0.0	0.0	10.5	0.0
Cycle Q Clear(g_c), s	0.0	0.0	0.0	0.0	10.5	0.0
Prop In Lane	1.00			0.44	0.69	0.30
Lane Grp Cap(c), veh/h	232	2897	2775	1410	207	0
V/C Ratio(X)	0.35	0.42	0.48	0.49	0.78	0.00
Avail Cap(c_a), veh/h	232	2897	2775	1410	377	0
HCM Platoon Ratio	2.00	2.00	1.33	1.33	1.00	1.00
Upstream Filter(I)	0.70	0.70	0.85	0.85	1.00	0.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	0.0	51.7	0.0
Incr Delay (d2), s/veh	2.9	0.3	0.5	1.0	12.9	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.3	0.2	0.4	0.7	9.4	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	2.9	0.3	0.5	1.0	64.6	0.0
LnGrp LOS	A	A	A	A	E	A
Approach Vol, veh/h		1308	2023		162	
Approach Delay, s/veh		0.5	0.7		64.6	
Approach LOS		A	A		E	

Timer - Assigned Phs	2		4		6
Phs Duration (G+Y+Rc), s	101.8		18.2		101.8
Change Period (Y+Rc), s	5.5		4.5		5.5
Max Green Setting (Gmax), s	85.0		25.0		85.0
Max Q Clear Time (g_c+I1), s	2.0		12.5		2.0
Green Ext Time (p_c), s	47.7		0.8		27.1

Intersection Summary	
HCM 6th Ctrl Delay	3.6
HCM 6th LOS	A

Notes

User approved volume balancing among the lanes for turning movement.



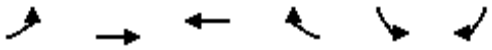
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	116	1351	1393	83	315	91
Future Volume (veh/h)	116	1351	1393	83	315	91
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			0.99	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1976	1976	1976
Adj Flow Rate, veh/h	116	1351	1393	83	315	91
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	0	0	0	0	0	0
Cap, veh/h	255	2400	3324	198	357	103
Arrive On Green	0.66	0.66	0.66	0.66	0.25	0.25
Sat Flow, veh/h	364	3705	5172	298	1416	409
Grp Volume(v), veh/h	116	1351	963	513	407	0
Grp Sat Flow(s),veh/h/ln	364	1805	1729	1841	1830	0
Q Serve(g_s), s	26.1	24.1	15.5	15.5	25.7	0.0
Cycle Q Clear(g_c), s	41.6	24.1	15.5	15.5	25.7	0.0
Prop In Lane	1.00			0.16	0.77	0.22
Lane Grp Cap(c), veh/h	255	2400	2299	1224	461	0
V/C Ratio(X)	0.46	0.56	0.42	0.42	0.88	0.00
Avail Cap(c_a), veh/h	255	2400	2299	1224	625	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.46	0.46	0.92	0.92	1.00	0.00
Uniform Delay (d), s/veh	19.0	10.8	9.3	9.3	43.2	0.0
Incr Delay (d2), s/veh	2.7	0.4	0.5	1.0	14.4	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	3.9	11.9	9.1	9.7	19.5	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	21.7	11.2	9.9	10.3	57.6	0.0
LnGrp LOS	C	B	A	B	E	A
Approach Vol, veh/h		1467	1476		407	
Approach Delay, s/veh		12.1	10.0		57.6	
Approach LOS		B	B		E	

Timer - Assigned Phs	2		4		6
Phs Duration (G+Y+Rc), s	85.3		34.7		85.3
Change Period (Y+Rc), s	5.5		4.5		5.5
Max Green Setting (Gmax), s	69.0		41.0		69.0
Max Q Clear Time (g_c+I1), s	17.5		27.7		43.6
Green Ext Time (p_c), s	22.6		2.6		16.5

Intersection Summary	
HCM 6th Ctrl Delay	16.7
HCM 6th LOS	B

Notes

User approved volume balancing among the lanes for turning movement.



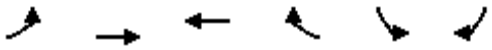
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	46	1343	1767	109	82	47
Future Volume (veh/h)	46	1343	1767	109	82	47
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1976	1976	1976
Adj Flow Rate, veh/h	46	1343	1767	109	82	47
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	0	0	0	0	0	0
Cap, veh/h	262	2960	4095	252	110	63
Arrive On Green	1.00	1.00	1.00	1.00	0.10	0.10
Sat Flow, veh/h	247	3705	5165	308	1132	649
Grp Volume(v), veh/h	46	1343	1223	653	130	0
Grp Sat Flow(s),veh/h/ln	247	1805	1729	1843	1795	0
Q Serve(g_s), s	0.0	0.0	0.0	0.0	8.5	0.0
Cycle Q Clear(g_c), s	0.0	0.0	0.0	0.0	8.5	0.0
Prop In Lane	1.00			0.17	0.63	0.36
Lane Grp Cap(c), veh/h	262	2960	2835	1512	174	0
V/C Ratio(X)	0.18	0.45	0.43	0.43	0.75	0.00
Avail Cap(c_a), veh/h	262	2960	2835	1512	374	0
HCM Platoon Ratio	2.00	2.00	1.33	1.33	1.00	1.00
Upstream Filter(I)	0.66	0.66	0.86	0.86	1.00	0.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	0.0	52.8	0.0
Incr Delay (d2), s/veh	1.0	0.3	0.4	0.8	12.8	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.1	0.2	0.3	0.6	7.9	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	1.0	0.3	0.4	0.8	65.6	0.0
LnGrp LOS	A	A	A	A	E	A
Approach Vol, veh/h		1389	1876		130	
Approach Delay, s/veh		0.4	0.5		65.6	
Approach LOS		A	A		E	

Timer - Assigned Phs		2		4		6
Phs Duration (G+Y+Rc), s		103.9		16.1		103.9
Change Period (Y+Rc), s		5.5		4.5		5.5
Max Green Setting (Gmax), s		85.0		25.0		85.0
Max Q Clear Time (g_c+I1), s		2.0		10.5		2.0
Green Ext Time (p_c), s		41.2		0.6		26.2

Intersection Summary	
HCM 6th Ctrl Delay	3.0
HCM 6th LOS	A

Notes

User approved volume balancing among the lanes for turning movement.



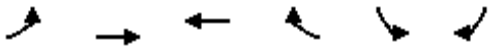
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	115	1443	1509	58	113	75
Future Volume (veh/h)	115	1443	1509	58	113	75
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			0.99	1.00	0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1976	1976	1976
Adj Flow Rate, veh/h	115	1443	1509	58	113	75
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	0	0	0	0	0	0
Cap, veh/h	292	2840	4029	155	139	92
Arrive On Green	1.00	1.00	0.79	0.79	0.13	0.13
Sat Flow, veh/h	333	3705	5293	197	1070	710
Grp Volume(v), veh/h	115	1443	1019	548	189	0
Grp Sat Flow(s),veh/h/ln	333	1805	1729	1861	1789	0
Q Serve(g_s), s	8.4	0.0	10.7	10.7	12.3	0.0
Cycle Q Clear(g_c), s	19.1	0.0	10.7	10.7	12.3	0.0
Prop In Lane	1.00			0.11	0.60	0.40
Lane Grp Cap(c), veh/h	292	2840	2720	1464	233	0
V/C Ratio(X)	0.39	0.51	0.37	0.37	0.81	0.00
Avail Cap(c_a), veh/h	292	2840	2720	1464	373	0
HCM Platoon Ratio	2.00	2.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.37	0.37	0.90	0.90	1.00	0.00
Uniform Delay (d), s/veh	1.1	0.0	3.9	3.9	50.8	0.0
Incr Delay (d2), s/veh	1.5	0.2	0.4	0.7	13.6	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.2	0.2	5.2	5.8	10.6	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	2.5	0.2	4.2	4.5	64.3	0.0
LnGrp LOS	A	A	A	A	E	A
Approach Vol, veh/h		1558	1567		189	
Approach Delay, s/veh		0.4	4.3		64.3	
Approach LOS		A	A		E	

Timer - Assigned Phs	2		4		6
Phs Duration (G+Y+Rc), s	99.9		20.1		99.9
Change Period (Y+Rc), s	5.5		4.5		5.5
Max Green Setting (Gmax), s	85.0		25.0		85.0
Max Q Clear Time (g_c+I1), s	12.7		14.3		21.1
Green Ext Time (p_c), s	28.1		0.9		30.6

Intersection Summary	
HCM 6th Ctrl Delay	5.9
HCM 6th LOS	A

Notes

User approved volume balancing among the lanes for turning movement.



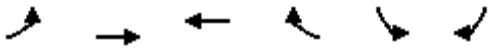
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	82	1343	1818	306	114	50
Future Volume (veh/h)	82	1343	1818	306	114	50
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1976	1976	1976
Adj Flow Rate, veh/h	82	1343	1818	306	114	50
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	0	0	0	0	0	0
Cap, veh/h	215	2891	3585	596	145	64
Arrive On Green	1.00	1.00	1.00	1.00	0.12	0.12
Sat Flow, veh/h	194	3705	4647	745	1250	548
Grp Volume(v), veh/h	82	1343	1400	724	165	0
Grp Sat Flow(s),veh/h/ln	194	1805	1729	1763	1810	0
Q Serve(g_s), s	0.0	0.0	0.0	0.0	10.6	0.0
Cycle Q Clear(g_c), s	0.0	0.0	0.0	0.0	10.6	0.0
Prop In Lane	1.00			0.42	0.69	0.30
Lane Grp Cap(c), veh/h	215	2891	2769	1412	210	0
V/C Ratio(X)	0.38	0.46	0.51	0.51	0.79	0.00
Avail Cap(c_a), veh/h	215	2891	2769	1412	377	0
HCM Platoon Ratio	2.00	2.00	1.33	1.33	1.00	1.00
Upstream Filter(I)	0.63	0.63	0.81	0.81	1.00	0.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	0.0	51.6	0.0
Incr Delay (d2), s/veh	3.2	0.3	0.5	1.1	12.9	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.3	0.2	0.4	0.8	9.5	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	3.2	0.3	0.5	1.1	64.5	0.0
LnGrp LOS	A	A	A	A	E	A
Approach Vol, veh/h		1425	2124		165	
Approach Delay, s/veh		0.5	0.7		64.5	
Approach LOS		A	A		E	

Timer - Assigned Phs		2		4		6
Phs Duration (G+Y+Rc), s		101.6		18.4		101.6
Change Period (Y+Rc), s		5.5		4.5		5.5
Max Green Setting (Gmax), s		85.0		25.0		85.0
Max Q Clear Time (g_c+I1), s		2.0		12.6		2.0
Green Ext Time (p_c), s		51.7		0.8		32.2

Intersection Summary	
HCM 6th Ctrl Delay	3.5
HCM 6th LOS	A

Notes

User approved volume balancing among the lanes for turning movement.



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	119	1443	1516	85	318	93
Future Volume (veh/h)	119	1443	1516	85	318	93
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			0.99	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1976	1976	1976
Adj Flow Rate, veh/h	119	1443	1516	85	318	93
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	0	0	0	0	0	0
Cap, veh/h	226	2390	3324	186	360	105
Arrive On Green	0.66	0.66	0.66	0.66	0.25	0.25
Sat Flow, veh/h	322	3705	5192	281	1412	413
Grp Volume(v), veh/h	119	1443	1044	557	412	0
Grp Sat Flow(s),veh/h/ln	322	1805	1729	1844	1829	0
Q Serve(g_s), s	34.0	27.0	17.5	17.5	26.0	0.0
Cycle Q Clear(g_c), s	51.5	27.0	17.5	17.5	26.0	0.0
Prop In Lane	1.00			0.15	0.77	0.23
Lane Grp Cap(c), veh/h	226	2390	2289	1221	466	0
V/C Ratio(X)	0.53	0.60	0.46	0.46	0.88	0.00
Avail Cap(c_a), veh/h	226	2390	2289	1221	625	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.33	0.33	0.90	0.90	1.00	0.00
Uniform Delay (d), s/veh	22.3	11.4	9.8	9.8	43.0	0.0
Incr Delay (d2), s/veh	2.9	0.4	0.6	1.1	14.6	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	4.1	12.6	9.9	10.7	19.8	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	25.2	11.8	10.4	10.9	57.6	0.0
LnGrp LOS	C	B	B	B	E	A
Approach Vol, veh/h		1562	1601		412	
Approach Delay, s/veh		12.8	10.6		57.6	
Approach LOS		B	B		E	

Timer - Assigned Phs	2	4	6
Phs Duration (G+Y+Rc), s	84.9	35.1	84.9
Change Period (Y+Rc), s	5.5	4.5	5.5
Max Green Setting (Gmax), s	69.0	41.0	69.0
Max Q Clear Time (g_c+I1), s	19.5	28.0	53.5
Green Ext Time (p_c), s	25.1	2.6	12.0

Intersection Summary	
HCM 6th Ctrl Delay	17.0
HCM 6th LOS	B

Notes

User approved volume balancing among the lanes for turning movement.

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INTERSECTION CAPACITY UTILIZATION

Normandie Avenue @ Redondo Beach Boulevard

N-S St: Normandie Avenue
E-W St: Redondo Beach Boulevard
Project: Prologis Vermont Avenue and Redondo Beach Boulevard Industrial Project/1-19-4336-1
File: ICU1

Peak hr: AM
Annual Growth: 1.00%

Date: 12/18/2019
Date of Count: 2019
Projection Year: 2022

	2019 EXISTING TRAFFIC			2019 EXISTING WITH PROJECT				2019 EXISTING W/ PROJECT + MITIGATION				2022 FUTURE PRE-PROJECT					2022 FUTURE WITH PROJECT			
Movement	1 Volume	2 Capacity	V/C Ratio	Added Volume	Total Volume	2 Capacity	V/C Ratio	Added Volume	Total Volume	2 Capacity	V/C Ratio	Added Amb. Grow. Volume	Added Rel. Proj. Volume	Total Volume	2 Capacity	V/C Ratio	Added Volume	Total Volume	2 Capacity	V/C Ratio
NB Left	291	2880	0.101 *	0	291	2880	0.101 *	0	291	2880	0.101 *	9	7	307	2880	0.107 *	0	307	2880	0.107 *
NB Thru	667	3200	0.209	0	667	3200	0.209	0	667	3200	0.209	20	11	698	3200	0.220	0	698	3200	0.220
NB Right	3	0	0.000	0	3	0	0.000	0	3	0	0.000	0	3	6	0	0.000	0	6	0	0.000
SB Left	98	1600	0.061	0	98	1600	0.061	0	98	1600	0.061	3	3	104	1600	0.065	0	104	1600	0.065
SB Thru	642	3200	0.245 *	0	642	3200	0.245 *	0	642	3200	0.245 *	19	5	666	3200	0.256 *	0	666	3200	0.256 *
SB Right	143	0	0.000	0	143	0	0.000	0	143	0	0.000	4	7	154	0	0.000	0	154	0	0.000
EB Left	113	1600	0.071 *	0	113	1600	0.071 *	0	113	1600	0.071 *	3	6	122	1600	0.076 *	0	122	1600	0.076
EB Thru	731	3200	0.228	36	767	3200	0.240	0	767	3200	0.240	22	73	826	3200	0.258	36	862	3200	0.269 *
EB Right	112	1600	0.070	0	112	1600	0.070	0	112	1600	0.070	3	6	121	1600	0.076	0	121	1600	0.076
WB Left	175	1600	0.109	0	175	1600	0.109	0	175	1600	0.109	5	1	181	1600	0.113	0	181	1600	0.113 *
WB Thru	1212	4800	0.288 *	5	1217	4800	0.289 *	0	1217	4800	0.289 *	37	40	1289	4800	0.305 *	5	1294	4800	0.306
WB Right	169	0	0.000	0	169	0	0.000	0	169	0	0.000	5	1	175	0	0.000	0	175	0	0.000
Yellow Allowance			0.100 *				0.100 *				0.100 *					0.100 *				0.100 *
ICU			0.805				0.806				0.806					0.844				0.845
LOS			D				D				D					D				D

** Key conflicting movement as a part of ICU*
1 Counts conducted by: Counts Unlimited
2 Capacity expressed in veh/hour of green

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INTERSECTION CAPACITY UTILIZATION

Normandie Avenue @ Redondo Beach Boulevard

N-S St: Normandie Avenue
E-W St: Redondo Beach Boulevard
Project: Prologis Vermont Avenue and Redondo Beach Boulevard Industrial Project/1-19-4336-1
File: ICU1

Peak hr: PM
Annual Growth: 1.00%

Date: 12/18/2019
Date of Count: 2019
Projection Year: 2022

	2019 EXISTING TRAFFIC			2019 EXISTING WITH PROJECT				2019 EXISTING W/ PROJECT + MITIGATION				2022 FUTURE PRE-PROJECT					2022 FUTURE WITH PROJECT			
Movement	1 Volume	2 Capacity	V/C Ratio	Added Volume	Total Volume	2 Capacity	V/C Ratio	Added Volume	Total Volume	2 Capacity	V/C Ratio	Added Amb. Grow. Volume	Added Rel. Proj. Volume	Total Volume	2 Capacity	V/C Ratio	Added Volume	Total Volume	2 Capacity	V/C Ratio
NB Left	323	2880	0.112 *	0	323	2880	0.112 *	0	323	2880	0.112 *	10	6	339	2880	0.118 *	0	339	2880	0.118 *
NB Thru	671	3200	0.216	0	671	3200	0.216	0	671	3200	0.216	20	9	700	3200	0.226	0	700	3200	0.226
NB Right	21	0	0.000	0	21	0	0.000	0	21	0	0.000	1	1	23	0	0.000	0	23	0	0.000
SB Left	162	1600	0.101	0	162	1600	0.101	0	162	1600	0.101	5	1	168	1600	0.105	0	168	1600	0.105
SB Thru	595	3200	0.236 *	0	595	3200	0.236 *	0	595	3200	0.236 *	18	13	626	3200	0.249 *	0	626	3200	0.249 *
SB Right	160	0	0.000	0	160	0	0.000	0	160	0	0.000	5	6	171	0	0.000	0	171	0	0.000
EB Left	160	1600	0.100	0	160	1600	0.100	0	160	1600	0.100	5	7	172	1600	0.108	0	172	1600	0.108
EB Thru	1090	3200	0.341 *	4	1094	3200	0.342 *	0	1094	3200	0.342 *	33	41	1164	3200	0.364 *	4	1168	3200	0.365 *
EB Right	186	1600	0.116	0	186	1600	0.116	0	186	1600	0.116	6	7	199	1600	0.124	0	199	1600	0.124
WB Left	193	1600	0.121 *	0	193	1600	0.121 *	0	193	1600	0.121 *	6	3	202	1600	0.126 *	0	202	1600	0.126 *
WB Thru	864	4800	0.208	32	896	4800	0.215	0	896	4800	0.215	26	75	965	4800	0.231	32	997	4800	0.237
WB Right	135	0	0.000	0	135	0	0.000	0	135	0	0.000	4	3	142	0	0.000	0	142	0	0.000
Yellow Allowance			0.100 *				0.100 *				0.100 *					0.100 *				0.100 *
ICU			0.909				0.911				0.911					0.957				0.958
LOS			E				E				E					E				E

** Key conflicting movement as a part of ICU*
1 Counts conducted by: Counts Unlimited
2 Capacity expressed in veh/hour of green

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INTERSECTION CAPACITY UTILIZATION

Budlong Avenue @ Redondo Beach Boulevard

N-S St:	Budlong Avenue	Peak hr:	AM	Date:	12/18/2019
E-W St:	Redondo Beach Boulevard	Annual Growth:	1.00%	Date of Count:	2019
Project:	Prologis Vermont Avenue and Redondo Beach Boulevard Industrial Project/1-19-4336-1			Projection Year:	2022
File:	ICU2				

	2019 EXISTING TRAFFIC			2019 EXISTING WITH PROJECT				2019 EXISTING W/ PROJECT + MITIGATION				2022 FUTURE PRE-PROJECT					2022 FUTURE WITH PROJECT			
Movement	1 Volume	2 Capacity	V/C Ratio	Added Volume	Total Volume	2 Capacity	V/C Ratio	Added Volume	Total Volume	2 Capacity	V/C Ratio	Added Amb. Grow. Volume	Added Rel. Proj. Volume	Total Volume	2 Capacity	V/C Ratio	Added Volume	Total Volume	2 Capacity	V/C Ratio
NB Left	18	1600	0.011 *	0	18	1600	0.011 *	0	18	1600	0.011 *	1	3	22	1600	0.014 *	0	22	1600	0.014 *
NB Thru	74	1600	0.076	0	74	1600	0.076	0	74	1600	0.076	2	0	76	1600	0.081	0	76	1600	0.081
NB Right	48	0	0.000	0	48	0	0.000	0	48	0	0.000	1	4	53	0	0.000	0	53	0	0.000
SB Left	102	1600	0.064	0	102	1600	0.064	0	102	1600	0.064	3	0	105	1600	0.066	0	105	1600	0.066
SB Thru	100	1600	0.139 *	0	100	1600	0.139 *	0	100	1600	0.139 *	3	0	103	1600	0.144 *	0	103	1600	0.144 *
SB Right	123	0	0.000	0	123	0	0.000	0	123	0	0.000	4	0	127	0	0.000	0	127	0	0.000
EB Left	94	1600	0.059 *	0	94	1600	0.059 *	0	94	1600	0.059 *	3	0	97	1600	0.061 *	0	97	1600	0.061 *
EB Thru	873	4800	0.185	36	909	4800	0.193	0	909	4800	0.193	26	68	967	4800	0.207	36	1003	4800	0.214
EB Right	15	0	0.000	0	15	0	0.000	0	15	0	0.000	0	10	25	0	0.000	0	25	0	0.000
WB Left	55	1600	0.034	0	55	1600	0.034	0	55	1600	0.034	2	15	72	1600	0.045	0	72	1600	0.045
WB Thru	1347	4800	0.292 *	5	1352	4800	0.293 *	0	1352	4800	0.293 *	41	39	1427	4800	0.309 *	5	1432	4800	0.310 *
WB Right	55	0	0.000	0	55	0	0.000	0	55	0	0.000	2	0	57	0	0.000	0	57	0	0.000
Yellow Allowance			0.100 *				0.100 *				0.100 *					0.100 *				0.100 *
ICU			0.601				0.603				0.603					0.627				0.628
LOS			B				B				B					B				B

** Key conflicting movement as a part of ICU*
1 Counts conducted by: Counts Unlimited
2 Capacity expressed in veh/hour of green

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INTERSECTION CAPACITY UTILIZATION

Budlong Avenue @ Redondo Beach Boulevard

N-S St:	Budlong Avenue	Peak hr:	PM	Date:	12/18/2019
E-W St:	Redondo Beach Boulevard	Annual Growth:	1.00%	Date of Count:	2019
Project:	Prologis Vermont Avenue and Redondo Beach Boulevard Industrial Project/1-19-4336-1			Projection Year:	2022
File:	ICU2				

	2019 EXISTING TRAFFIC			2019 EXISTING WITH PROJECT				2019 EXISTING W/ PROJECT + MITIGATION				2022 FUTURE PRE-PROJECT					2022 FUTURE WITH PROJECT			
Movement	1 Volume	2 Capacity	V/C Ratio	Added Volume	Total Volume	2 Capacity	V/C Ratio	Added Volume	Total Volume	2 Capacity	V/C Ratio	Added Amb. Grow. Volume	Added Rel. Proj. Volume	Total Volume	2 Capacity	V/C Ratio	Added Volume	Total Volume	2 Capacity	V/C Ratio
NB Left	30	1600	0.019	0	30	1600	0.019	0	30	1600	0.019	1	12	43	1600	0.027	0	43	1600	0.027
NB Thru	97	1600	0.128 *	0	97	1600	0.128 *	0	97	1600	0.128 *	3	0	100	1600	0.143 *	0	100	1600	0.143 *
NB Right	108	0	0.000	0	108	0	0.000	0	108	0	0.000	3	17	128	0	0.000	0	128	0	0.000
SB Left	90	1600	0.056 *	0	90	1600	0.056 *	0	90	1600	0.056 *	3	0	93	1600	0.058 *	0	93	1600	0.058 *
SB Thru	86	1600	0.128	0	86	1600	0.128	0	86	1600	0.128	3	0	89	1600	0.132	0	89	1600	0.132
SB Right	118	0	0.000	0	118	0	0.000	0	118	0	0.000	4	0	122	0	0.000	0	122	0	0.000
EB Left	142	1600	0.089 *	0	142	1600	0.089 *	0	142	1600	0.089 *	4	0	146	1600	0.091 *	0	146	1600	0.091 *
EB Thru	1158	4800	0.249	4	1162	4800	0.250	0	1162	4800	0.250	35	39	1232	4800	0.265	4	1236	4800	0.266
EB Right	37	0	0.000	0	37	0	0.000	0	37	0	0.000	1	4	42	0	0.000	0	42	0	0.000
WB Left	75	1600	0.047	0	75	1600	0.047	0	75	1600	0.047	2	7	84	1600	0.053	0	84	1600	0.053
WB Thru	967	4800	0.212 *	32	999	4800	0.219 *	0	999	4800	0.219 *	29	69	1065	4800	0.233 *	32	1097	4800	0.240 *
WB Right	51	0	0.000	0	51	0	0.000	0	51	0	0.000	2	0	53	0	0.000	0	53	0	0.000
Yellow Allowance			0.100 *				0.100 *				0.100 *					0.100 *				0.100 *
ICU			0.585				0.592				0.592					0.625				0.631
LOS			A				A				A					B				B

** Key conflicting movement as a part of ICU*
1 Counts conducted by: Counts Unlimited
2 Capacity expressed in veh/hour of green

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INTERSECTION CAPACITY UTILIZATION

Vermont Avenue @ Rosecrans Avenue

N-S St: Vermont Avenue
E-W St: Rosecrans Avenue
Project: Prologis Vermont Avenue and Redondo Beach Boulevard Industrial Project/1-19-4336-1
File: ICU3

Peak hr: AM
Annual Growth: 1.00%

Date: 12/18/2019
Date of Count: 2019
Projection Year: 2022

	2019 EXISTING TRAFFIC			2019 EXISTING WITH PROJECT				2019 EXISTING W/ PROJECT + MITIGATION				2022 FUTURE PRE-PROJECT					2022 FUTURE WITH PROJECT			
Movement	1 Volume	2 Capacity	V/C Ratio	Added Volume	Total Volume	2 Capacity	V/C Ratio	Added Volume	Total Volume	2 Capacity	V/C Ratio	Added Amb. Grow. Volume	Added Rel. Proj. Volume	Total Volume	2 Capacity	V/C Ratio	Added Volume	Total Volume	2 Capacity	V/C Ratio
NB Left	160	1600	0.100 *	0	160	1600	0.100 *	0	160	1600	0.100 *	5	1	166	1600	0.104 *	0	166	1600	0.104 *
NB Thru	536	4800	0.112	3	539	4800	0.112	0	539	4800	0.112	16	33	585	4800	0.122	3	588	4800	0.123
NB Right	147	1600	0.092	2	149	1600	0.093	0	149	1600	0.093	4	1	152	1600	0.095	2	154	1600	0.096
SB Left	217	1600	0.136	0	217	1600	0.136	0	217	1600	0.136	7	7	231	1600	0.144	0	231	1600	0.144
SB Thru	621	4800	0.153 *	23	644	4800	0.158 *	0	644	4800	0.158 *	19	60	700	4800	0.171 *	23	723	4800	0.176 *
SB Right	112	0	0.000	0	112	0	0.000	0	112	0	0.000	3	8	123	0	0.000	0	123	0	0.000
EB Left	94	1600	0.059 *	0	94	1600	0.059 *	0	94	1600	0.059 *	3	7	104	1600	0.065 *	0	104	1600	0.065 *
EB Thru	1070	4800	0.236	0	1070	4800	0.236	0	1070	4800	0.236	32	9	1111	4800	0.245	0	1111	4800	0.245
EB Right	62	0	0.000	0	62	0	0.000	0	62	0	0.000	2	3	67	0	0.000	0	67	0	0.000
WB Left	168	1600	0.105	0	168	1600	0.105	0	168	1600	0.105	5	3	176	1600	0.110	0	176	1600	0.110
WB Thru	1330	4800	0.302 *	0	1330	4800	0.302 *	0	1330	4800	0.302 *	40	3	1373	4800	0.312 *	0	1373	4800	0.312 *
WB Right	118	0	0.000	0	118	0	0.000	0	118	0	0.000	4	4	126	0	0.000	0	126	0	0.000
Yellow Allowance			0.100 *				0.100 *				0.100 *					0.100 *				0.100 *
ICU			0.713				0.718				0.718					0.753				0.757
LOS			C				C				C					C				C

** Key conflicting movement as a part of ICU*
1 Counts conducted by: Counts Unlimited
2 Capacity expressed in veh/hour of green

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INTERSECTION CAPACITY UTILIZATION

Vermont Avenue @ Rosecrans Avenue

N-S St: Vermont Avenue
E-W St: Rosecrans Avenue
Project: Prologis Vermont Avenue and Redondo Beach Boulevard Industrial Project/1-19-4336-1
File: ICU3

Peak hr: PM
Annual Growth: 1.00%

Date: 12/18/2019
Date of Count: 2019
Projection Year: 2022

	2019 EXISTING TRAFFIC			2019 EXISTING WITH PROJECT				2019 EXISTING W/ PROJECT + MITIGATION				2022 FUTURE PRE-PROJECT					2022 FUTURE WITH PROJECT			
Movement	1 Volume	2 Capacity	V/C Ratio	Added Volume	Total Volume	2 Capacity	V/C Ratio	Added Volume	Total Volume	2 Capacity	V/C Ratio	Added Amb. Grow. Volume	Added Rel. Proj. Volume	Total Volume	2 Capacity	V/C Ratio	Added Volume	Total Volume	2 Capacity	V/C Ratio
NB Left	116	1600	0.073	0	116	1600	0.073	0	116	1600	0.073	4	4	124	1600	0.078	0	124	1600	0.078
NB Thru	670	4800	0.140 *	20	690	4800	0.144 *	0	690	4800	0.144 *	20	68	758	4800	0.158 *	20	778	4800	0.162 *
NB Right	210	1600	0.131	15	225	1600	0.141	0	225	1600	0.141	6	3	219	1600	0.137	15	234	1600	0.146
SB Left	234	1600	0.146 *	0	234	1600	0.146 *	0	234	1600	0.146 *	7	5	246	1600	0.154 *	0	246	1600	0.154 *
SB Thru	623	4800	0.150	3	626	4800	0.151	0	626	4800	0.151	19	37	679	4800	0.164	3	682	4800	0.165
SB Right	98	0	0.000	0	98	0	0.000	0	98	0	0.000	3	9	110	0	0.000	0	110	0	0.000
EB Left	144	1600	0.090	0	144	1600	0.090	0	144	1600	0.090	4	10	158	1600	0.099	0	158	1600	0.099
EB Thru	1228	4800	0.267 *	0	1228	4800	0.267 *	0	1228	4800	0.267 *	37	7	1272	4800	0.277 *	0	1272	4800	0.277 *
EB Right	53	0	0.000	0	53	0	0.000	0	53	0	0.000	2	2	57	0	0.000	0	57	0	0.000
WB Left	163	1600	0.102 *	0	163	1600	0.102 *	0	163	1600	0.102 *	5	1	169	1600	0.106 *	0	169	1600	0.106 *
WB Thru	1008	4800	0.245	0	1008	4800	0.245	0	1008	4800	0.245	31	11	1050	4800	0.256	0	1050	4800	0.256
WB Right	166	0	0.000	0	166	0	0.000	0	166	0	0.000	5	8	179	0	0.000	0	179	0	0.000
Yellow Allowance			0.100 *				0.100 *				0.100 *					0.100 *				0.100 *
ICU			0.755				0.759				0.759					0.794				0.798
LOS			C				C				C					C				C

** Key conflicting movement as a part of ICU*
1 Counts conducted by: Counts Unlimited
2 Capacity expressed in veh/hour of green

LINSCOTT, LAW & GREENSPAN, ENGINEERS
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INTERSECTION CAPACITY UTILIZATION

Vermont Avenue @ 149th Street

N-S St: Vermont Avenue
E-W St: 149th Street
Project: Prologis Vermont Avenue and Redondo Beach Boulevard Industrial Project/1-19-4336-1
File: ICU4

Peak hr: AM
Annual Growth: 1.00%

Date: 12/18/2019
Date of Count: 2019
Projection Year: 2022

	2019 EXISTING TRAFFIC			2019 EXISTING WITH PROJECT				2019 EXISTING W/ PROJECT + MITIGATION				2022 FUTURE PRE-PROJECT					2022 FUTURE WITH PROJECT			
Movement	1 Volume	2 Capacity	V/C Ratio	Added Volume	Total Volume	2 Capacity	V/C Ratio	Added Volume	Total Volume	2 Capacity	V/C Ratio	Added Amb. Grow. Volume	Added Rel. Proj. Volume	Total Volume	2 Capacity	V/C Ratio	Added Volume	Total Volume	2 Capacity	V/C Ratio
NB Left	47	1600	0.029 *	0	47	1600	0.029 *	0	47	1600	0.029 *	1	0	48	1600	0.030 *	0	48	1600	0.030 *
NB Thru	765	4800	0.159	6	771	4800	0.161	0	771	4800	0.161	23	35	823	4800	0.171	6	829	4800	0.173
NB Right	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0	0.000	0	0	0	0.000
SB Left	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0	0.000	0	0	0	0.000
SB Thru	983	4800	0.227 *	23	1006	4800	0.232 *	0	1006	4800	0.232 *	30	65	1078	4800	0.248 *	23	1101	4800	0.253 *
SB Right	108	0	0.000	0	108	0	0.000	0	108	0	0.000	3	0	111	0	0.000	0	111	0	0.000
EB Left	78	0	0.049	0	78	0	0.049	0	78	0	0.049	2	0	80	0	0.050	0	80	0	0.050
EB Thru	0	1600	0.121 *	0	0	1600	0.121 *	0	0	1600	0.121 *	0	0	0	1600	0.125 *	0	0	1600	0.125 *
EB Right	116	0	0.000	0	116	0	0.000	0	116	0	0.000	4	0	120	0	0.000	0	120	0	0.000
WB Left	0	0	0.000 *	0	0	0	0.000 *	0	0	0	0.000 *	0	0	0	0	0.000 *	0	0	0	0.000 *
WB Thru	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0	0.000	0	0	0	0.000
WB Right	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0	0.000	0	0	0	0.000
Yellow Allowance			0.100 *				0.100 *				0.100 *					0.100 *				0.100 *
ICU			0.478				0.483				0.483					0.503				0.508
LOS			A				A				A					A				A

** Key conflicting movement as a part of ICU*
1 Counts conducted by: Counts Unlimited
2 Capacity expressed in veh/hour of green

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INTERSECTION CAPACITY UTILIZATION

Vermont Avenue @ 149th Street

N-S St: Vermont Avenue
E-W St: 149th Street
Project: Prologis Vermont Avenue and Redondo Beach Boulevard Industrial Project/1-19-4336-1
File: ICU4

Peak hr: PM
Annual Growth: 1.00%

Date: 12/18/2019
Date of Count: 2019
Projection Year: 2022

	2019 EXISTING TRAFFIC			2019 EXISTING WITH PROJECT				2019 EXISTING W/ PROJECT + MITIGATION				2022 FUTURE PRE-PROJECT					2022 FUTURE WITH PROJECT			
Movement	1 Volume	2 Capacity	V/C Ratio	Added Volume	Total Volume	2 Capacity	V/C Ratio	Added Volume	Total Volume	2 Capacity	V/C Ratio	Added Amb. Grow. Volume	Added Rel. Proj. Volume	Total Volume	2 Capacity	V/C Ratio	Added Volume	Total Volume	2 Capacity	V/C Ratio
NB Left	35	1600	0.022	0	35	1600	0.022	0	35	1600	0.022	1	0	36	1600	0.023	0	36	1600	0.023
NB Thru	1068	4800	0.223 *	35	1103	4800	0.230 *	0	1103	4800	0.230 *	32	75	1175	4800	0.245 *	35	1210	4800	0.252 *
NB Right	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0	0.000	0	0	0	0.000
SB Left	0	0	0.000 *	0	0	0	0.000 *	0	0	0	0.000 *	0	0	0	0	0.000 *	0	0	0	0.000 *
SB Thru	805	4800	0.179	3	808	4800	0.180	0	808	4800	0.180	24	40	869	4800	0.193	3	872	4800	0.194
SB Right	55	0	0.000	0	55	0	0.000	0	55	0	0.000	2	0	57	0	0.000	0	57	0	0.000
EB Left	78	0	0.049	0	78	0	0.049	0	78	0	0.049	2	0	80	0	0.050	0	80	0	0.050
EB Thru	0	1600	0.072 *	0	0	1600	0.072 *	0	0	1600	0.072 *	0	0	0	1600	0.074 *	0	0	1600	0.074 *
EB Right	37	0	0.000	0	37	0	0.000	0	37	0	0.000	1	0	38	0	0.000	0	38	0	0.000
WB Left	0	0	0.000 *	0	0	0	0.000 *	0	0	0	0.000 *	0	0	0	0	0.000 *	0	0	0	0.000 *
WB Thru	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0	0.000	0	0	0	0.000
WB Right	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0	0.000	0	0	0	0.000
Yellow Allowance			0.100 *				0.100 *				0.100 *					0.100 *				0.100 *
ICU			0.394				0.402				0.402					0.419				0.426
LOS			A				A				A					A				A

** Key conflicting movement as a part of ICU*
1 Counts conducted by: Counts Unlimited
2 Capacity expressed in veh/hour of green

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INTERSECTION CAPACITY UTILIZATION

Vermont Avenue @ Marine Avenue

N-S St: Vermont Avenue
E-W St: Marine Avenue
Project: Prologis Vermont Avenue and Redondo Beach Boulevard Industrial Project/1-19-4336-1
File: ICU5

Peak hr: AM
Annual Growth: 1.00%

Date: 12/18/2019
Date of Count: 2019
Projection Year: 2022

	2019 EXISTING TRAFFIC			2019 EXISTING WITH PROJECT				2019 EXISTING W/ PROJECT + MITIGATION				2022 FUTURE PRE-PROJECT					2022 FUTURE WITH PROJECT			
Movement	1 Volume	2 Capacity	V/C Ratio	Added Volume	Total Volume	2 Capacity	V/C Ratio	Added Volume	Total Volume	2 Capacity	V/C Ratio	Added Amb. Grow. Volume	Added Rel. Proj. Volume	Total Volume	2 Capacity	V/C Ratio	Added Volume	Total Volume	2 Capacity	V/C Ratio
NB Left	241	1600	0.151 *	0	241	1600	0.151 *	0	241	1600	0.151 *	7	0	248	1600	0.155 *	0	248	1600	0.155 *
NB Thru [3]	696	3200	0.218	6	702	3200	0.219	0	702	3200	0.219	21	33	750	3200	0.234	6	756	3200	0.236
NB Right	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0	0.000	0	0	0	0.000
SB Left	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0	0.000	0	0	0	0.000
SB Thru	812	4800	0.227 *	23	835	4800	0.232 *	0	835	4800	0.232 *	25	65	902	4800	0.248 *	23	925	4800	0.252 *
SB Right	278	0	0.000	0	278	0	0.000	0	278	0	0.000	8	0	286	0	0.000	0	286	0	0.000
EB Left	146	1600	0.091	0	146	1600	0.091	0	146	1600	0.091	4	2	152	1600	0.095	0	152	1600	0.095
EB Thru	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0	0.000	0	0	0	0.000
EB Right	322	1600	0.201 *	0	322	1600	0.201 *	0	322	1600	0.201 *	10	0	332	1600	0.208 *	0	332	1600	0.208 *
WB Left	0	0	0.000 *	0	0	0	0.000 *	0	0	0	0.000 *	0	0	0	0	0.000 *	0	0	0	0.000 *
WB Thru	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0	0.000	0	0	0	0.000
WB Right	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0	0.000	0	0	0	0.000
Yellow Allowance			0.100 *				0.100 *				0.100 *					0.100 *				0.100 *
ICU			0.679				0.684				0.684					0.710				0.715
LOS			B				B				B					C				C

** Key conflicting movement as a part of ICU*
1 Counts conducted by: Counts Unlimited
2 Capacity expressed in veh/hour of green
3 Free-flow movements.

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INTERSECTION CAPACITY UTILIZATION

Vermont Avenue @ Marine Avenue

N-S St:	Vermont Avenue	Peak hr:	PM	Date:	12/18/2019
E-W St:	Marine Avenue	Annual Growth:	1.00%	Date of Count:	2019
Project:	Prologis Vermont Avenue and Redondo Beach Boulevard Industrial Project/1-19-4336-1			Projection Year:	2022
File:	ICU5				

	2019 EXISTING TRAFFIC			2019 EXISTING WITH PROJECT				2019 EXISTING W/ PROJECT + MITIGATION				2022 FUTURE PRE-PROJECT					2022 FUTURE WITH PROJECT			
Movement	1 Volume	2 Capacity	V/C Ratio	Added Volume	Total Volume	2 Capacity	V/C Ratio	Added Volume	Total Volume	2 Capacity	V/C Ratio	Added Amb. Grow. Volume	Added Rel. Proj. Volume	Total Volume	2 Capacity	V/C Ratio	Added Volume	Total Volume	2 Capacity	V/C Ratio
NB Left	218	1600	0.136 *	0	218	1600	0.136 *	0	218	1600	0.136 *	7	0	225	1600	0.141 *	0	225	1600	0.141 *
NB Thru [3]	785	3200	0.245	35	820	3200	0.256	0	820	3200	0.256	24	73	882	3200	0.276	35	917	3200	0.287
NB Right	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0	0.000	0	0	0	0.000
SB Left	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0	0.000	0	0	0	0.000
SB Thru	704	4800	0.174 *	3	707	4800	0.175 *	0	707	4800	0.175 *	21	37	762	4800	0.188 *	3	765	4800	0.188 *
SB Right	131	0	0.000	0	131	0	0.000	0	131	0	0.000	4	3	138	0	0.000	0	138	0	0.000
EB Left	308	1600	0.193	0	308	1600	0.193	0	308	1600	0.193	9	2	319	1600	0.199	0	319	1600	0.199
EB Thru	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0	0.000	0	0	0	0.000
EB Right	258	1600	0.161	0	258	1600	0.161	0	258	1600	0.161	8	0	266	1600	0.166	0	266	1600	0.166
WB Left	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0	0.000	0	0	0	0.000
WB Thru	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0	0.000	0	0	0	0.000
WB Right	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0	0.000	0	0	0	0.000
Yellow Allowance			0.100 *				0.100 *				0.100 *					0.100 *				0.100 *
ICU			0.603				0.603				0.603					0.628				0.628
LOS			B				B				B					B				B

** Key conflicting movement as a part of ICU*
1 Counts conducted by: Counts Unlimited
2 Capacity expressed in veh/hour of green
3 Free-flow movements.

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INTERSECTION CAPACITY UTILIZATION

Vermont Avenue @ Redondo Beach Boulevard

N-S St: Vermont Avenue
E-W St: Redondo Beach Boulevard
Project: Prologis Vermont Avenue and Redondo Beach Boulevard Industrial Project/1-19-4336-1
File: ICU6

Peak hr: AM
Annual Growth: 1.00%

Date: 12/18/2019
Date of Count: 2019
Projection Year: 2022

	2019 EXISTING TRAFFIC			2019 EXISTING WITH PROJECT				2019 EXISTING W/ PROJECT + MITIGATION				2022 FUTURE PRE-PROJECT					2022 FUTURE WITH PROJECT			
Movement	1 Volume	2 Capacity	V/C Ratio	Added Volume	Total Volume	2 Capacity	V/C Ratio	Added Volume	Total Volume	2 Capacity	V/C Ratio	Added Amb. Grow. Volume	Added Rel. Proj. Volume	Total Volume	2 Capacity	V/C Ratio	Added Volume	Total Volume	2 Capacity	V/C Ratio
NB Left	199	1600	0.124	0	199	1600	0.124	0	199	1600	0.124	6	3	208	1600	0.130	0	208	1600	0.130
NB Thru	552	3200	0.173 *	23	575	3200	0.180 *	0	575	3200	0.180 *	17	19	588	3200	0.184 *	23	611	3200	0.191 *
NB Right	104	1600	0.065	0	104	1600	0.065	0	104	1600	0.065	3	11	118	1600	0.074	0	118	1600	0.074
SB Left	331	2880	0.115 *	23	354	2880	0.123 *	0	354	2880	0.123 *	10	6	347	2880	0.120 *	23	370	2880	0.128 *
SB Thru	602	4800	0.125	0	602	4800	0.125	0	602	4800	0.125	18	45	665	4800	0.139	0	665	4800	0.139
SB Right	147	1600	0.092	0	147	1600	0.092	0	147	1600	0.092	4	13	164	1600	0.103	0	164	1600	0.103
EB Left	142	1600	0.089 *	23	165	1600	0.103 *	0	165	1600	0.103 *	4	8	154	1600	0.096 *	23	177	1600	0.111 *
EB Thru	803	3200	0.251	13	816	3200	0.255	0	816	3200	0.255	24	62	889	3200	0.278	13	902	3200	0.282
EB Right	123	1600	0.077	0	123	1600	0.077	0	123	1600	0.077	4	2	129	1600	0.081	0	129	1600	0.081
WB Left	146	1600	0.091	3	149	1600	0.093	0	149	1600	0.093	4	4	154	1600	0.096	3	157	1600	0.098
WB Thru	1278	4800	0.314 *	5	1283	4800	0.315 *	0	1283	4800	0.315 *	39	37	1354	4800	0.332 *	5	1359	4800	0.333 *
WB Right	227	0	0.000	0	227	0	0.000	0	227	0	0.000	7	6	240	0	0.000	0	240	0	0.000
Yellow Allowance			0.100 *				0.100 *				0.100 *					0.100 *				0.100 *
ICU			0.790				0.820				0.820					0.833				0.863
LOS			C				D				D					D				D

** Key conflicting movement as a part of ICU*
1 Counts conducted by: Counts Unlimited
2 Capacity expressed in veh/hour of green

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INTERSECTION CAPACITY UTILIZATION

Vermont Avenue @ Redondo Beach Boulevard

N-S St: Vermont Avenue
E-W St: Redondo Beach Boulevard
Project: Prologis Vermont Avenue and Redondo Beach Boulevard Industrial Project/1-19-4336-1
File: ICU6

Peak hr: PM
Annual Growth: 1.00%

Date: 12/18/2019
Date of Count: 2019
Projection Year: 2022

	2019 EXISTING TRAFFIC			2019 EXISTING WITH PROJECT				2019 EXISTING W/ PROJECT + MITIGATION				2022 FUTURE PRE-PROJECT					2022 FUTURE WITH PROJECT			
Movement	1 Volume	2 Capacity	V/C Ratio	Added Volume	Total Volume	2 Capacity	V/C Ratio	Added Volume	Total Volume	2 Capacity	V/C Ratio	Added Amb. Grow. Volume	Added Rel. Proj. Volume	Total Volume	2 Capacity	V/C Ratio	Added Volume	Total Volume	2 Capacity	V/C Ratio
NB Left	185	1600	0.116	0	185	1600	0.116	0	185	1600	0.116	6	2	193	1600	0.121	0	193	1600	0.121
NB Thru	584	3200	0.183 *	3	587	3200	0.183 *	0	587	3200	0.183 *	18	53	655	3200	0.205 *	3	658	3200	0.206 *
NB Right	124	1600	0.078	0	124	1600	0.078	0	124	1600	0.078	4	8	136	1600	0.085	0	136	1600	0.085
SB Left	318	2880	0.110 *	3	321	2880	0.111 *	0	321	2880	0.111 *	10	5	333	2880	0.116 *	3	336	2880	0.117 *
SB Thru	473	4800	0.099	0	473	4800	0.099	0	473	4800	0.099	14	23	510	4800	0.106	0	510	4800	0.106
SB Right	126	1600	0.079	0	126	1600	0.079	0	126	1600	0.079	4	9	139	1600	0.087	0	139	1600	0.087
EB Left	200	1600	0.125	3	203	1600	0.127	0	203	1600	0.127	6	15	221	1600	0.138	3	224	1600	0.140
EB Thru	1062	3200	0.332 *	2	1064	3200	0.333 *	0	1064	3200	0.333 *	32	38	1132	3200	0.354 *	2	1134	3200	0.354 *
EB Right	150	1600	0.094	0	150	1600	0.094	0	150	1600	0.094	5	4	159	1600	0.099	0	159	1600	0.099
WB Left	169	1600	0.106 *	20	189	1600	0.118 *	0	189	1600	0.118 *	5	12	186	1600	0.116 *	20	206	1600	0.129 *
WB Thru	975	4800	0.254	32	1007	4800	0.261	0	1007	4800	0.261	30	64	1069	4800	0.276	32	1101	4800	0.283
WB Right	245	0	0.000	0	245	0	0.000	0	245	0	0.000	7	6	258	0	0.000	0	258	0	0.000
Yellow Allowance			0.100 *				0.100 *				0.100 *					0.100 *				0.100 *
ICU			0.830				0.846				0.846					0.890				0.905
LOS			D				D				D					D				E

** Key conflicting movement as a part of ICU*
1 Counts conducted by: Counts Unlimited
2 Capacity expressed in veh/hour of green

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INTERSECTION CAPACITY UTILIZATION

Vermont Avenue @ 161st Street-Alondra Boulevard

N-S St: Vermont Avenue
E-W St: 161st Street-Alondra Boulevard
Project: Prologis Vermont Avenue and Redondo Beach Boulevard Industrial Project/1-19-4336-1
File: ICU7

Peak hr: AM
Annual Growth: 1.00%

Date: 12/18/2019
Date of Count: 2019
Projection Year: 2022

	2019 EXISTING TRAFFIC			2019 EXISTING WITH PROJECT				2019 EXISTING W/ PROJECT + MITIGATION				2022 FUTURE PRE-PROJECT					2022 FUTURE WITH PROJECT			
Movement	1 Volume	2 Capacity	V/C Ratio	Added Volume	Total Volume	2 Capacity	V/C Ratio	Added Volume	Total Volume	2 Capacity	V/C Ratio	Added Amb. Grow. Volume	Added Rel. Proj. Volume	Total Volume	2 Capacity	V/C Ratio	Added Volume	Total Volume	2 Capacity	V/C Ratio
NB Left	52	0	0.016	0	52	0	0.016	0	52	0	0.016	2	0	54	0	0.017	0	54	0	0.017
NB Thru	639	3200	0.233 *	23	662	3200	0.240 *	0	662	3200	0.240 *	19	28	686	3200	0.252 *	23	709	3200	0.259 *
NB Right	54	0	0.000	0	54	0	0.000	0	54	0	0.000	2	11	67	0	0.000	0	67	0	0.000
SB Left	35	1600	0.022 *	0	35	1600	0.022 *	0	35	1600	0.022 *	1	34	70	1600	0.044 *	0	70	1600	0.044 *
SB Thru	718	4800	0.161	3	721	4800	0.161	0	721	4800	0.161	22	15	755	4800	0.169	3	758	4800	0.169
SB Right	53	0	0.000	0	53	0	0.000	0	53	0	0.000	2	0	55	0	0.000	0	55	0	0.000
EB Left	47	1600	0.029 *	0	47	1600	0.029 *	0	47	1600	0.029 *	1	0	48	1600	0.030 *	0	48	1600	0.030 *
EB Thru	241	1600	0.180	0	241	1600	0.180	0	241	1600	0.180	7	0	248	1600	0.186	0	248	1600	0.186
EB Right	47	0	0.000	0	47	0	0.000	0	47	0	0.000	1	1	49	0	0.000	0	49	0	0.000
WB Left	64	0	0.040	0	64	0	0.040	0	64	0	0.040	2	4	70	0	0.044	0	70	0	0.044
WB Thru	302	1600	0.271 *	0	302	1600	0.271 *	0	302	1600	0.271 *	9	0	311	1600	0.285 *	0	311	1600	0.285 *
WB Right	68	0	0.000	0	68	0	0.000	0	68	0	0.000	2	5	75	0	0.000	0	75	0	0.000
Yellow Allowance			0.100 *				0.100 *				0.100 *					0.100 *				0.100 *
ICU			0.655				0.663				0.663					0.711				0.718
LOS			B				B				B					C				C

** Key conflicting movement as a part of ICU*
1 Counts conducted by: Counts Unlimited
2 Capacity expressed in veh/hour of green

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INTERSECTION CAPACITY UTILIZATION

Vermont Avenue @ 161st Street-Alondra Boulevard

N-S St: Vermont Avenue
E-W St: 161st Street-Alondra Boulevard
Project: Prologis Vermont Avenue and Redondo Beach Boulevard Industrial Project/1-19-4336-1
File: ICU7

Peak hr: PM
Annual Growth: 1.00%

Date: 12/18/2019
Date of Count: 2019
Projection Year: 2022

	2019 EXISTING TRAFFIC			2019 EXISTING WITH PROJECT				2019 EXISTING W/ PROJECT + MITIGATION				2022 FUTURE PRE-PROJECT					2022 FUTURE WITH PROJECT			
Movement	1 Volume	2 Capacity	V/C Ratio	Added Volume	Total Volume	2 Capacity	V/C Ratio	Added Volume	Total Volume	2 Capacity	V/C Ratio	Added Amb. Grow. Volume	Added Rel. Proj. Volume	Total Volume	2 Capacity	V/C Ratio	Added Volume	Total Volume	2 Capacity	V/C Ratio
NB Left	55	0	0.017	0	55	0	0.017	0	55	0	0.017	2	1	58	0	0.018	0	58	0	0.018
NB Thru	786	3200	0.293 *	3	789	3200	0.294 *	0	789	3200	0.294 *	24	26	836	3200	0.313 *	3	839	3200	0.314 *
NB Right	97	0	0.000	0	97	0	0.000	0	97	0	0.000	3	8	108	0	0.000	0	108	0	0.000
SB Left	53	1600	0.033 *	0	53	1600	0.033 *	0	53	1600	0.033 *	2	6	61	1600	0.038 *	0	61	1600	0.038 *
SB Thru	675	4800	0.148	20	695	4800	0.152	0	695	4800	0.152	20	32	727	4800	0.159	20	747	4800	0.163
SB Right	34	0	0.000	0	34	0	0.000	0	34	0	0.000	1	0	35	0	0.000	0	35	0	0.000
EB Left	55	1600	0.034	0	55	1600	0.034	0	55	1600	0.034	2	0	57	1600	0.036	0	57	1600	0.036
EB Thru	373	1600	0.244 *	0	373	1600	0.244 *	0	373	1600	0.244 *	11	0	384	1600	0.252 *	0	384	1600	0.252 *
EB Right	17	0	0.000	0	17	0	0.000	0	17	0	0.000	1	1	19	0	0.000	0	19	0	0.000
WB Left	52	0	0.033 *	0	52	0	0.033 *	0	52	0	0.033 *	2	12	66	0	0.041 *	0	66	0	0.041 *
WB Thru	216	1600	0.216	0	216	1600	0.216	0	216	1600	0.216	7	0	223	1600	0.253	0	223	1600	0.253
WB Right	78	0	0.000	0	78	0	0.000	0	78	0	0.000	2	36	116	0	0.000	0	116	0	0.000
Yellow Allowance			0.100 *				0.100 *				0.100 *					0.100 *				0.100 *
ICU			0.703				0.703				0.703					0.744				0.745
LOS			C				C				C					C				C

** Key conflicting movement as a part of ICU*
1 Counts conducted by: Counts Unlimited
2 Capacity expressed in veh/hour of green

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INTERSECTION CAPACITY UTILIZATION

Figueroa Street @ Redondo Beach Boulevard
Peak hr: AM
0.00%

N-S St: Figueroa Street
E-W St: Redondo Beach Boulevard
Project: Prologis Vermont Avenue and Redondo Beach Boulevard Industrial Project/1-19-4336-1
File: ICU11

Date: 12/18/2019
Date of Count: 2019
Projection Year: 2022

	2019 EXISTING TRAFFIC			2022 WITH PROJECT SITE TRAFFIC				2022 WITH PROJECT MITIGATION				2022 WITH RELATED PROJECTS				2022 WITH REGIONAL MITIGATION			
	1	2	V/C	Added	Total	2	V/C	Added	Total	2	V/C	Added	Total	2	V/C	Added	Total	2	V/C
Movement	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio
NB Left	273	1600	0.171 *	0	273	1600	0.171 *	0	273	1600	0.171 *	56	329	1600	0.206 *	0	329	1600	0.206 *
NB Thru	471	3200	0.147	0	471	3200	0.147	0	471	3200	0.147	23	494	3200	0.154	0	494	3200	0.154
NB Right [3]	36	1600	0.000	0	36	1600	0.000	0	36	1600	0.000	9	45	1600	0.000	0	45	1600	0.000
SB Left	73	1600	0.046	0	73	1600	0.046	0	73	1600	0.046	0	73	1600	0.046	0	73	1600	0.046
SB Thru	543	3200	0.170 *	0	543	3200	0.170 *	0	543	3200	0.170 *	46	589	3200	0.184 *	0	589	3200	0.184 *
SB Right [3]	125	1600	0.007	0	125	1600	0.007	0	125	1600	0.007	1	126	1600	0.002	0	126	1600	0.002
EB Left	114	1600	0.071 *	0	114	1600	0.071 *	0	114	1600	0.071 *	9	123	1600	0.077 *	0	123	1600	0.077 *
EB Thru	703	3200	0.220	2	705	3200	0.220	0	705	3200	0.220	73	778	3200	0.243	0	778	4800	0.233
EB Right [3]	255	1600	0.000	0	255	1600	0.000	0	255	1600	0.000	85	340	1600	0.007	0	340	0	0.000
WB Left	83	1600	0.052	0	83	1600	0.052	0	83	1600	0.052	9	92	1600	0.058	0	92	1600	0.058
WB Thru	940	3200	0.294 *	16	956	3200	0.299 *	0	956	3200	0.299 *	19	975	3200	0.305 *	0	975	4800	0.221 *
WB Right [3]	85	1600	0.008	0	85	1600	0.008	0	85	1600	0.008	2	87	1600	0.009	0	87	0	0.000
Yellow Allowance			0.100 *				0.100 *				0.100 *				0.100 *				0.100 *
ICU			0.805				0.810				0.810				0.871				0.788
LOS			D				D				D				D				C

** Key conflicting movement as a part of ICU*
1 Counts conducted by: Counts Unlimited
2 Capacity expressed in veh/hour of green
3 Overlapping phase

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INTERSECTION CAPACITY UTILIZATION

Figueroa Street @ Redondo Beach Boulevard
Peak hr: PM
0.00%

N-S St: Figueroa Street
E-W St: Redondo Beach Boulevard
Project: Prologis Vermont Avenue and Redondo Beach Boulevard Industrial Project/1-19-4336-1
File: ICU11

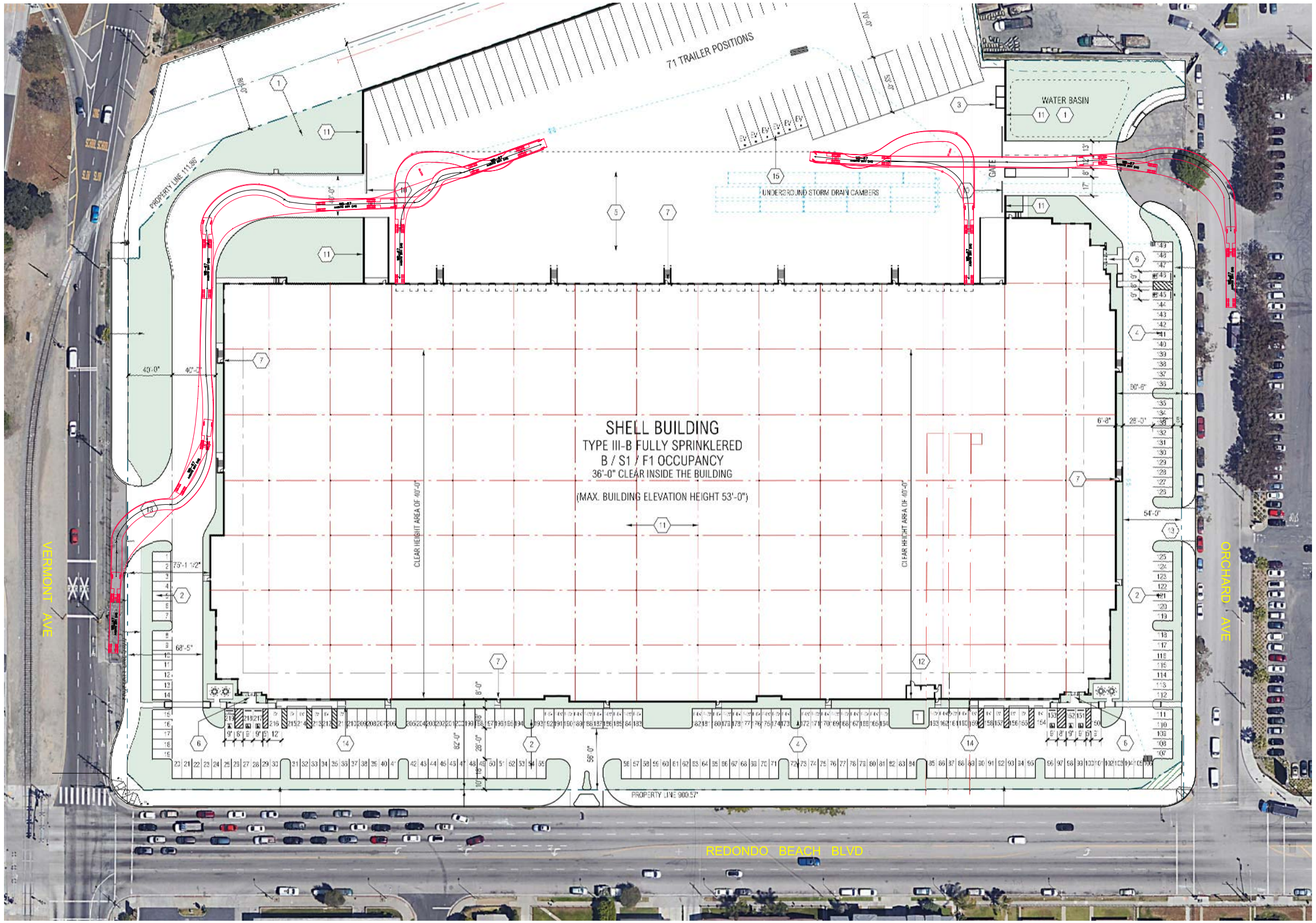
Date: 12/18/2019
Date of Count: 2019
Projection Year: 2022

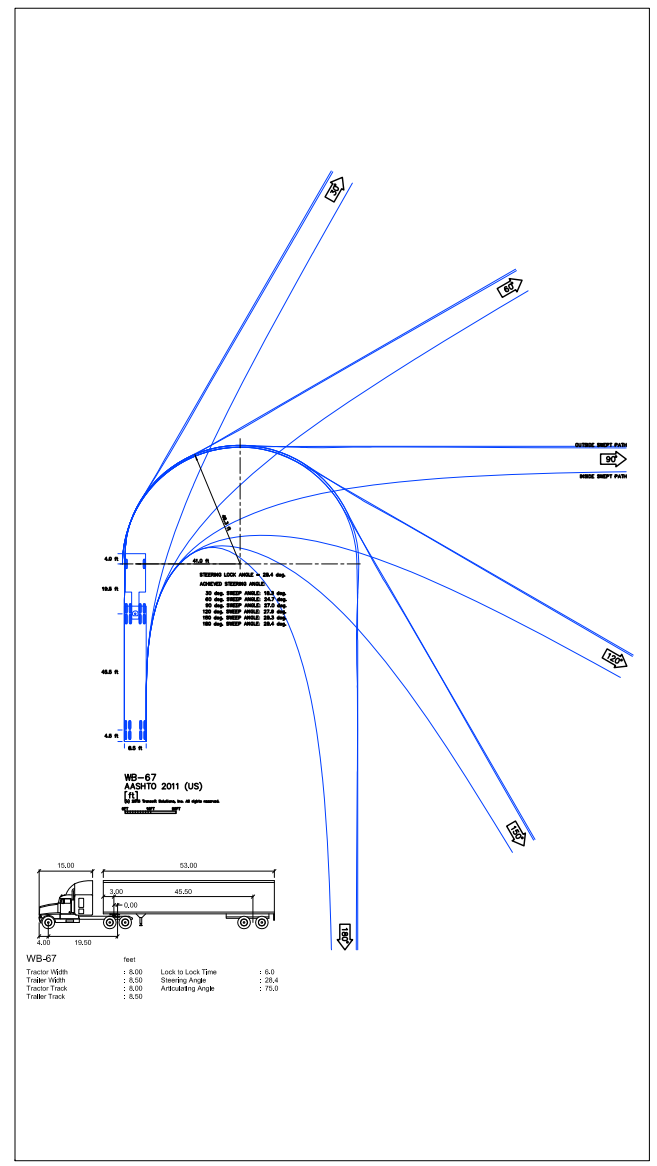
	2019 EXISTING TRAFFIC			2022 WITH PROJECT SITE TRAFFIC				2022 WITH PROJECT MITIGATION				2022 WITH RELATED PROJECTS				2022 WITH REGIONAL MITIGATION			
Movement	1 Volume	2 Capacity	V/C Ratio	Added Volume	Total Volume	2 Capacity	V/C Ratio	Added Volume	Total Volume	2 Capacity	V/C Ratio	Added Volume	Total Volume	2 Capacity	V/C Ratio	Added Volume	Total Volume	2 Capacity	V/C Ratio
NB Left	218	1600	0.136 *	0	218	1600	0.136 *	0	218	1600	0.136 *	77	295	1600	0.184 *	0	295	1600	0.184 *
NB Thru	571	3200	0.178	0	571	3200	0.178	0	571	3200	0.178	49	620	3200	0.194	0	620	3200	0.194
NB Right [3]	134	1600	0.084	0	134	1600	0.084	0	134	1600	0.084	8	142	1600	0.089	0	142	1600	0.089
SB Left	98	1600	0.061	0	98	1600	0.061	0	98	1600	0.061	2	100	1600	0.063	0	100	1600	0.063
SB Thru	562	3200	0.176 *	0	562	3200	0.176 *	0	562	3200	0.176 *	25	587	3200	0.183 *	0	587	3200	0.183 *
SB Right [3]	134	1600	0.084	0	134	1600	0.084	0	134	1600	0.084	10	144	1600	0.090	0	144	1600	0.090
EB Left	106	1600	0.066	0	106	1600	0.066	0	106	1600	0.066	1	107	1600	0.067	0	107	1600	0.067
EB Thru	1044	3200	0.326 *	15	1059	3200	0.331 *	0	1059	3200	0.331 *	20	1079	3200	0.337 *	0	1079	4800	0.281 *
EB Right [3]	223	1600	0.139	0	223	1600	0.139	0	223	1600	0.139	48	271	1600	0.169	0	271	0	0.000
WB Left	64	1600	0.040 *	0	64	1600	0.040 *	0	64	1600	0.040 *	8	72	1600	0.045 *	0	72	1600	0.045 *
WB Thru	751	3200	0.235	2	753	3200	0.235	0	753	3200	0.235	79	832	3200	0.260	0	832	4800	0.188
WB Right [3]	71	1600	0.044	0	71	1600	0.044	0	71	1600	0.044	0	71	1600	0.044	0	71	0	0.000
Yellow Allowance			0.100 *				0.100 *				0.100 *				0.100 *				0.100 *
ICU			0.778				0.783				0.783				0.850				0.794
LOS			C				C				C				D				C

** Key conflicting movement as a part of ICU*
1 Counts conducted by: Counts Unlimited
2 Capacity expressed in veh/hour of green
3 Overlapping phase

APPENDIX D

TRUCK MANEUVERING STUDIES





N

SCALE 1" = 100'

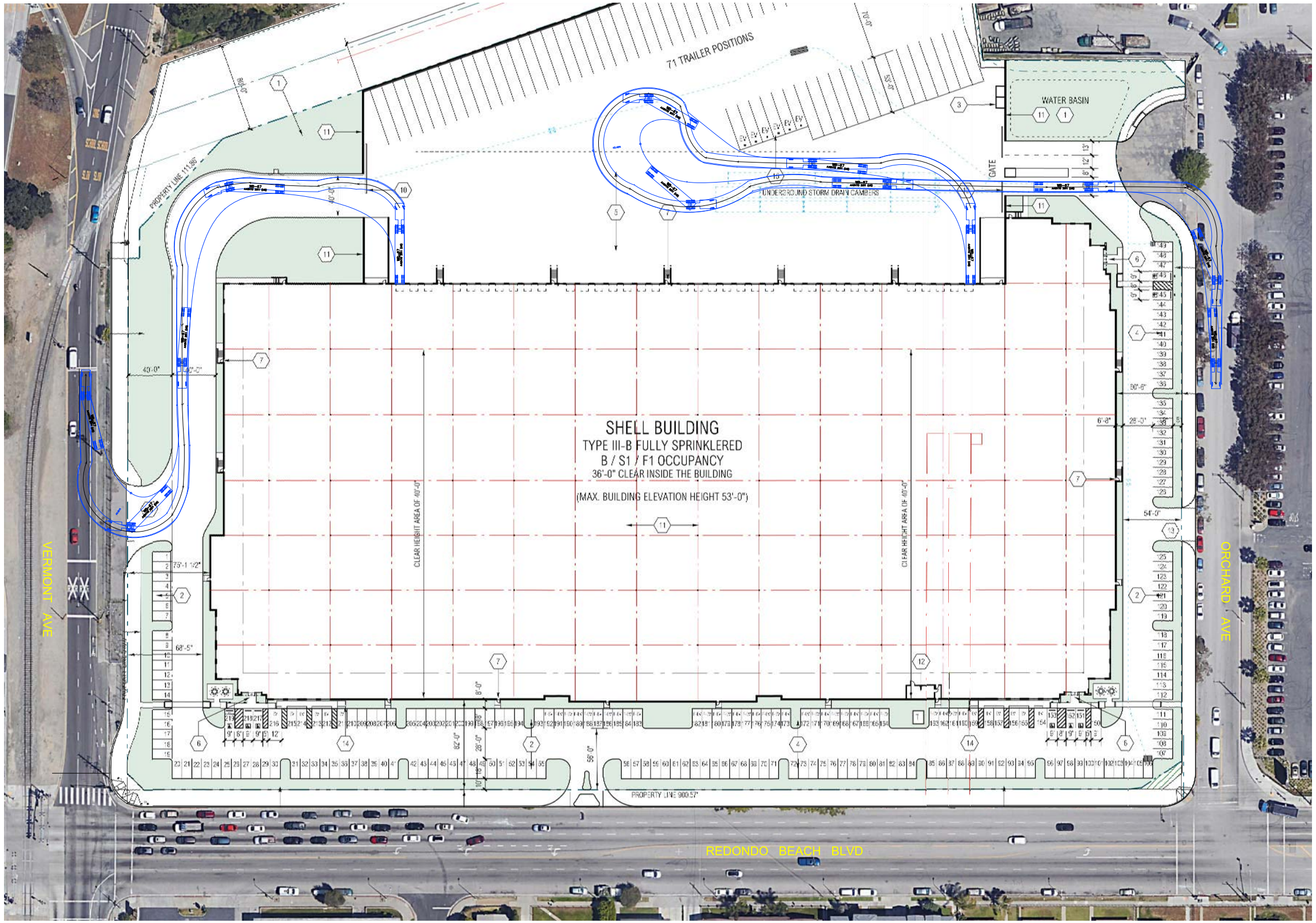
APPENDIX FIGURE D-1
TRUCK MANEUVERING ANALYSIS - INBOUND

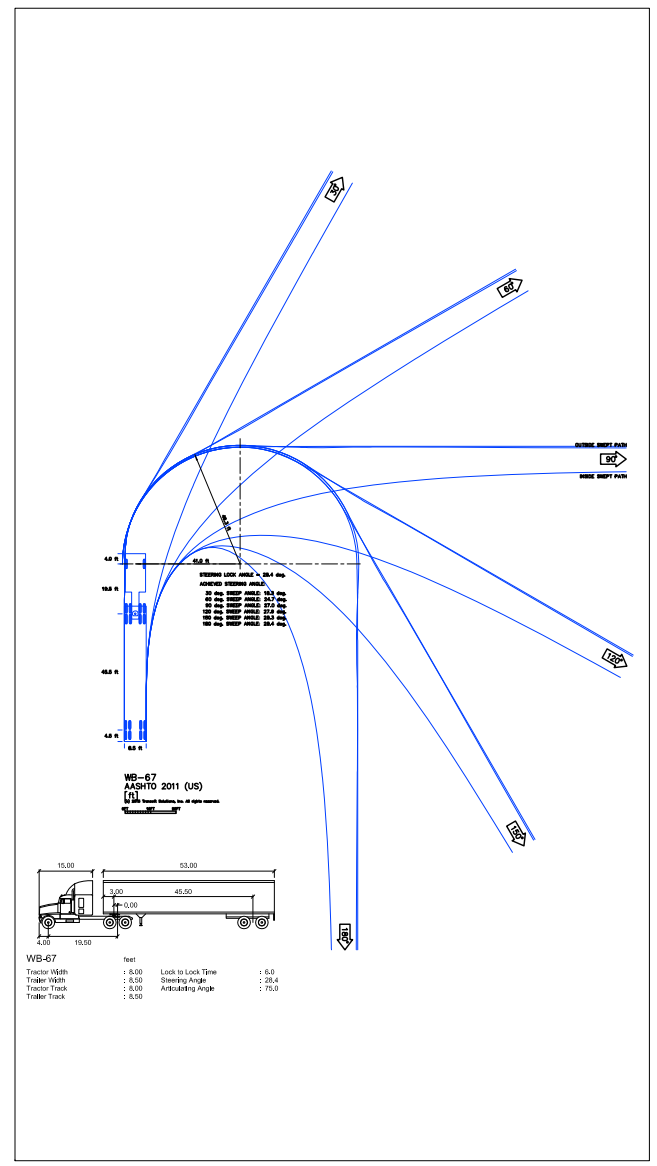
AASHTO (US) WB-67

PROLOGIS VERMONT AVENUE AND REDONDO BEACH BOULEVARD INDUSTRIAL PROJECT

LINSCOTT, LAW & GREENSPAN, engineers

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N

SCALE 1" = 100'

APPENDIX FIGURE D-2
TRUCK MANEUVERING ANALYSIS - OUTBOUND

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PROLOGIS VERMONT AVENUE AND REDONDO BEACH BOULEVARD INDUSTRIAL PROJECT

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APPENDIX E

CALTRANS ANALYSIS

Appendix Table E-1
CALTRANS FREEWAY MAINLINE ANALYSIS [1]
WEEKDAY AM AND PM PEAK HOURS

Freeway Segment	Peak Hour	Dir.	Existing Year 2019					Project Trip Ends [6]	Existing Year 2019 With Project			Density Increase With Project [9]	Future Year 2022 Pre-Project			Project Trip Ends [6]	Future Year 2022 With Project			Density Increase With Project [12]
			Traffic Volumes [2]	Density (pc/mi/ln) [3]	LOS [4]	Speed (mph) [2]	LOS [5]		Traffic Volumes [7]	Density (pc/mi/ln) [3]	LOS [8]		Traffic Volumes [10]	Density (pc/mi/ln) [3]	LOS [8]		Traffic Volumes [11]	Density (pc/mi/ln) [3]	LOS [8]	
I-110 Freeway north of Redondo Beach Boulevard	AM	NB	7,225	30.3	D	60.8	D	55	7,280	30.7	D	0.4	7,444	31.7	D	55	7,499	32.1	D	0.4
		SB	8,117	35.8	E	63.2	D	45	8,162	36.1	E	0.3	8,363	37.8	E	45	8,408	38.1	E	0.3
	PM	NB	6,844	29.7	D	42.9	F	41	6,885	30.0	F	0.3	7,051	31.1	F	41	7,092	31.4	F	0.3
		SB	7,596	32.5	D	41.5	F	50	7,646	32.9	F	0.4	7,826	34.2	F	50	7,876	34.5	F	0.3
I-110 Freeway south of Redondo Beach Boulevard	AM	NB	8,116	26.3	D	50.1	F	143	8,259	27.0	F	0.7	8,362	27.4	F	143	8,505	28.0	F	0.6
		SB	10,487	28.7	D	63.9	D	20	10,507	28.8	D	0.1	10,805	30.0	D	20	10,825	30.0	D	0.0
	PM	NB	7,433	24.2	C	46.8	F	19	7,452	24.3	F	0.1	7,658	25.1	F	19	7,677	25.2	F	0.1
		SB	9,247	26.3	D	62.9	D	127	9,374	26.8	D	0.5	9,527	27.4	D	127	9,654	27.9	D	0.5

[1] Freeway analysis based on the Highway Capacity Manual 6th Edition, operational analysis methodologies, per the Caltrans' *Guide for the Preparation of Traffic Impact Studies* , December 2002.
[2] Source: Caltrans PeMS website, 2019. Data reflects the 85th percentile volumes and associated speeds for weekday AM and PM peak hour conditions based on September and October 2019 data obtained for the northbound I-110 Freeway at postmiles 10.71 and 11.83 and for the southbound I-110 Freeway at postmiles 10.71 and 11.73.
[3] pc/mi/ln: passenger cars per mile per lane. Pursuant to the Highway Capacity Software (HCS) worksheets contained in Appendix X, density values are reported to one decimal place.
[4] Freeway mainline Levels of Service by density were based on the following criteria:

Density (pc/mi/ln)	LOS	Density (pc/mi/ln)	LOS
≤ 11	A	> 26-35	D
> 11-18	B	> 35-45	E
> 18-26	C	> 45	F

[5] Freeway mainline Levels of Service by minimum speeds were based on the following criteria:

Speed (mph)	LOS	Speed (mph)	LOS
≥ 65.0	A	<64.6-59.7	D
≥ 65.0	B	<59.7-52.2	E
<65.0-64.6	C	<52.2	F

[6] Based on the trip generation and trip distribution for the project.
[7] [2] + [6]
[8] For the purpose of this analysis, the worst-case Level of Service based on the calculated density and the existing speeds is reported as the segment Level of Service.
[9] Derived by subtracting the density of the year 2019 existing with project conditions with the year 2019 existing conditions.
[10] Year 2022 future without project traffic volumes were derived by increasing the existing traffic volumes by an ambient growth rate of 1.00% per year to the year 2022.
[11] [9] + [6]
[12] Derived by subtracting the density of the year 2022 future with project conditions with the year 2022 future pre-project conditions.

Appendix Table E-2
CALTRANS INTERSECTION ANALYSIS [a]

NO.	INTERSECTION	PEAK HOUR	[1] YEAR 2019 EXISTING DELAY [b]	[1] YEAR 2019 EXISTING LOS [c]	[2] YEAR 2019 EXISTING W/ PROJECT DELAY [b]	[2] YEAR 2019 EXISTING W/ PROJECT LOS [c]	[3] YEAR 2022 FUTURE PRE-PROJECT W/ AM. GROW. & REL. PROJ. DELAY [b]	[3] YEAR 2022 FUTURE PRE-PROJECT W/ AM. GROW. & REL. PROJ. LOS [c]	[4] YEAR 2022 FUTURE W/ PROJECT DELAY [b]	[4] YEAR 2022 FUTURE W/ PROJECT LOS [c]
9	I-110 Freeway Southbound Ramps/ Redondo Beach Boulevard	AM	54.5	D	62.5	E	60.0	E	70.9	E
		PM	32.1	C	32.1	C	36.6	D	37.5	D
10	I-110 Freeway Northbound Ramps/ Redondo Beach Boulevard	AM	25.0	C	27.6	C	25.3	C	30.1	C
		PM	28.8	C	28.9	C	28.9	C	29.1	C

[a] Intersection analysis based on the Highway Capacity Manual operational analysis methodologies, per the Caltrans' *Guide for the Preparation of Traffic Impact Studies,* December 2002.

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

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

Control Delay (s/veh)	LOS
<= 10	A
> 10-20	B
> 20-35	C
> 35-55	D
> 55-80	E
> 80	F

Appendix Table E-3
SUMMARY OF OFF-RAMP VEHICLE QUEUING ANALYSIS [1]
WEEKDAY AM AND PM PEAK HOURS

NO.	INTERSECTION	PEAK HOUR	85th PERCENTILE AVAILABLE STORAGE [1] (FEET)	EXISTING YEAR 2019		EXISTING YEAR 2019 WITH PROJECT		FUTURE YEAR 2022 WITHOUT PROJECT		FUTURE YEAR 2022 WITH PROJECT	
				95th PERCENTILE QUEUE [2] (FEET)	EXCEEDS 85th PERCENTILE STORAGE? (YES/NO)	95th PERCENTILE QUEUE [2] (FEET)	EXCEEDS 85th PERCENTILE STORAGE? (YES/NO)	95th PERCENTILE QUEUE [2] (FEET)	EXCEEDS 85th PERCENTILE STORAGE? (YES/NO)	95th PERCENTILE QUEUE [2] (FEET)	EXCEEDS 85th PERCENTILE STORAGE? (YES/NO)
9	I-110 Freeway Southbound Ramps/ Redondo Beach Boulevard	AM	1,340	1,035	No	1,228	No	1,223	No	1,428	Yes
		PM	1,340	833	No	850	No	918	No	940	No
10	I-110 Freeway Northbound Ramps/ Redondo Beach Boulevard										
	- Northbound All Lanes (Off-Ramp)	AM	1,970	518	No	618	No	583	No	685	No
		PM	1,970	500	No	510	No	525	No	535	No
	- Eastbound Right-Turn Lane	AM	320	395	Yes	400	Yes	443	Yes	488	Yes
		PM	320	470	Yes	535	Yes	500	Yes	563	Yes

[1] Available storage represents 85 percent of storage space, as measured via Google Earth, 2019.

[2] The 95th percentile queue is the maximum back of queue with 95th percentile traffic volumes. An average vehicle length of 25 feet (including vehicle separation) was assumed for analysis purposes.

HCS7 Basic Freeway Report

Project Information

Analyst	GT	Date	10/28/2019
Agency	LLG Engineers	Analysis Year	2019
Jurisdiction	Caltrans	Time Period Analyzed	Existing AM
Project Description	Prologis South Bay Distribution Center #24 Project/1-19-4336-1	Unit	United States Customary

Geometric Data

Number of Lanes, ln	4	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	75.4	Total Ramp Density (TRD), ramps/mi	2.50
Lane Width, ft	12	Free-Flow Speed (FFS), mi/h	68.4
Right-Side Lateral Clearance, ft	9		

Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Weather Type	Non-Severe Weather	Final Capacity Adjustment Factor (CAF)	1.000
Incident Type	No Incident	Demand Adjustment Factor (DAF)	1.000

Demand and Capacity

Demand Volume veh/h	7225	Heavy Vehicle Adjustment Factor (f_{HV})	0.962
Peak Hour Factor	0.98	Flow Rate (V_p), pc/h/ln	1916
Total Trucks, %	4.00	Capacity (c), pc/h/ln	2384
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	2384
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.80
Passenger Car Equivalent (E_T)	2.000		

Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	63.2
Right-Side Lateral Clearance Adj. (f_{RLC})	0.0	Density (D), pc/mi/ln	30.3
Total Ramp Density Adjustment	7.0	Level of Service (LOS)	D
Adjusted Free-Flow Speed (FFS_{adj}), mi/h	68.4		

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HCS7 Basic Freeway Report

Project Information

Analyst	GT	Date	10/28/2019
Agency	LLG Engineers	Analysis Year	2019
Jurisdiction	Caltrans	Time Period Analyzed	Existing AM
Project Description	Prologis South Bay Distribution Center #24 Project/1-19-4336-1	Unit	United States Customary

Geometric Data

Number of Lanes, ln	4	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	75.4	Total Ramp Density (TRD), ramps/mi	2.17
Lane Width, ft	12	Free-Flow Speed (FFS), mi/h	69.2
Right-Side Lateral Clearance, ft	10		

Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Weather Type	Non-Severe Weather	Final Capacity Adjustment Factor (CAF)	1.000
Incident Type	No Incident	Demand Adjustment Factor (DAF)	1.000

Demand and Capacity

Demand Volume veh/h	8117	Heavy Vehicle Adjustment Factor (f_{HV})	0.962
Peak Hour Factor	0.99	Flow Rate (V_p), pc/h/ln	2131
Total Trucks, %	4.00	Capacity (c), pc/h/ln	2392
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	2392
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.89
Passenger Car Equivalent (E_T)	2.000		

Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	59.6
Right-Side Lateral Clearance Adj. (f_{RLC})	0.0	Density (D), pc/mi/ln	35.8
Total Ramp Density Adjustment	6.2	Level of Service (LOS)	E
Adjusted Free-Flow Speed (FFS_{adj}), mi/h	69.2		

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HCS7 Basic Freeway Report

Project Information

Analyst	GT	Date	10/28/2019
Agency	LLG Engineers	Analysis Year	2019
Jurisdiction	Caltrans	Time Period Analyzed	Existing PM
Project Description	Prologis South Bay Distribution Center #24 Project/1-19-4336-1	Unit	United States Customary

Geometric Data

Number of Lanes, ln	4	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	75.4	Total Ramp Density (TRD), ramps/mi	2.50
Lane Width, ft	12	Free-Flow Speed (FFS), mi/h	68.4
Right-Side Lateral Clearance, ft	9		

Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Weather Type	Non-Severe Weather	Final Capacity Adjustment Factor (CAF)	1.000
Incident Type	No Incident	Demand Adjustment Factor (DAF)	1.000

Demand and Capacity

Demand Volume veh/h	6844	Heavy Vehicle Adjustment Factor (f_{HV})	0.962
Peak Hour Factor	0.94	Flow Rate (V_p), pc/h/ln	1892
Total Trucks, %	4.00	Capacity (c), pc/h/ln	2384
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	2384
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.79
Passenger Car Equivalent (E_T)	2.000		

Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	63.6
Right-Side Lateral Clearance Adj. (f_{RLC})	0.0	Density (D), pc/mi/ln	29.7
Total Ramp Density Adjustment	7.0	Level of Service (LOS)	D
Adjusted Free-Flow Speed (FFS_{adj}), mi/h	68.4		

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HCS7 Basic Freeway Report

Project Information

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Jurisdiction	Caltrans	Time Period Analyzed	Existing PM
Project Description	Prologis South Bay Distribution Center #24 Project/1-19-4336-1	Unit	United States Customary

Geometric Data

Number of Lanes, ln	4	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	75.4	Total Ramp Density (TRD), ramps/mi	2.17
Lane Width, ft	12	Free-Flow Speed (FFS), mi/h	69.2
Right-Side Lateral Clearance, ft	10		

Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Weather Type	Non-Severe Weather	Final Capacity Adjustment Factor (CAF)	1.000
Incident Type	No Incident	Demand Adjustment Factor (DAF)	1.000

Demand and Capacity

Demand Volume veh/h	7596	Heavy Vehicle Adjustment Factor (f_{HV})	0.962
Peak Hour Factor	0.98	Flow Rate (V_p), pc/h/ln	2014
Total Trucks, %	4.00	Capacity (c), pc/h/ln	2392
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	2392
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.84
Passenger Car Equivalent (E_T)	2.000		

Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	61.9
Right-Side Lateral Clearance Adj. (f_{RLC})	0.0	Density (D), pc/mi/ln	32.5
Total Ramp Density Adjustment	6.2	Level of Service (LOS)	D
Adjusted Free-Flow Speed (FFS_{adj}), mi/h	69.2		

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HCS7 Basic Freeway Report

Project Information

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Jurisdiction	Caltrans	Time Period Analyzed	Existing with Project AM
Project Description	Prologis South Bay Distribution Center #24 Project/1-19-4336-1	Unit	United States Customary

Geometric Data

Number of Lanes, ln	4	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	75.4	Total Ramp Density (TRD), ramps/mi	2.50
Lane Width, ft	12	Free-Flow Speed (FFS), mi/h	68.4
Right-Side Lateral Clearance, ft	9		

Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Weather Type	Non-Severe Weather	Final Capacity Adjustment Factor (CAF)	1.000
Incident Type	No Incident	Demand Adjustment Factor (DAF)	1.000

Demand and Capacity

Demand Volume veh/h	7280	Heavy Vehicle Adjustment Factor (f_{HV})	0.962
Peak Hour Factor	0.98	Flow Rate (V_p), pc/h/ln	1930
Total Trucks, %	4.00	Capacity (c), pc/h/ln	2384
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	2384
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.81
Passenger Car Equivalent (E_T)	2.000		

Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	62.9
Right-Side Lateral Clearance Adj. (f_{RLC})	0.0	Density (D), pc/mi/ln	30.7
Total Ramp Density Adjustment	7.0	Level of Service (LOS)	D
Adjusted Free-Flow Speed (FFS_{adj}), mi/h	68.4		

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HCS7 Basic Freeway Report

Project Information

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Project Description	Prologis South Bay Distribution Center #24 Project/1-19-4336-1	Unit	United States Customary

Geometric Data

Number of Lanes, ln	4	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	75.4	Total Ramp Density (TRD), ramps/mi	2.17
Lane Width, ft	12	Free-Flow Speed (FFS), mi/h	69.2
Right-Side Lateral Clearance, ft	10		

Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Weather Type	Non-Severe Weather	Final Capacity Adjustment Factor (CAF)	1.000
Incident Type	No Incident	Demand Adjustment Factor (DAF)	1.000

Demand and Capacity

Demand Volume veh/h	8162	Heavy Vehicle Adjustment Factor (f_{HV})	0.962
Peak Hour Factor	0.99	Flow Rate (V_p), pc/h/ln	2142
Total Trucks, %	4.00	Capacity (c), pc/h/ln	2392
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	2392
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.90
Passenger Car Equivalent (E_T)	2.000		

Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	59.3
Right-Side Lateral Clearance Adj. (f_{RLC})	0.0	Density (D), pc/mi/ln	36.1
Total Ramp Density Adjustment	6.2	Level of Service (LOS)	E
Adjusted Free-Flow Speed (FFS_{adj}), mi/h	69.2		

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HCS7 Basic Freeway Report

Project Information

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Jurisdiction	Caltrans	Time Period Analyzed	Existing with Project PM
Project Description	Prologis South Bay Distribution Center #24 Project/1-19-4336-1	Unit	United States Customary

Geometric Data

Number of Lanes, ln	4	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	75.4	Total Ramp Density (TRD), ramps/mi	2.50
Lane Width, ft	12	Free-Flow Speed (FFS), mi/h	68.4
Right-Side Lateral Clearance, ft	9		

Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Weather Type	Non-Severe Weather	Final Capacity Adjustment Factor (CAF)	1.000
Incident Type	No Incident	Demand Adjustment Factor (DAF)	1.000

Demand and Capacity

Demand Volume veh/h	6885	Heavy Vehicle Adjustment Factor (f_{HV})	0.962
Peak Hour Factor	0.94	Flow Rate (V_p), pc/h/ln	1904
Total Trucks, %	4.00	Capacity (c), pc/h/ln	2384
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	2384
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.80
Passenger Car Equivalent (E_T)	2.000		

Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	63.4
Right-Side Lateral Clearance Adj. (f_{RLC})	0.0	Density (D), pc/mi/ln	30.0
Total Ramp Density Adjustment	7.0	Level of Service (LOS)	D
Adjusted Free-Flow Speed (FFS_{adj}), mi/h	68.4		

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Project Information

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Agency	LLG Engineers	Analysis Year	2019
Jurisdiction	Caltrans	Time Period Analyzed	Existing with Project PM
Project Description	Prologis South Bay Distribution Center #24 Project/1-19-4336-1	Unit	United States Customary

Geometric Data

Number of Lanes, ln	4	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	75.4	Total Ramp Density (TRD), ramps/mi	2.17
Lane Width, ft	12	Free-Flow Speed (FFS), mi/h	69.2
Right-Side Lateral Clearance, ft	10		

Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Weather Type	Non-Severe Weather	Final Capacity Adjustment Factor (CAF)	1.000
Incident Type	No Incident	Demand Adjustment Factor (DAF)	1.000

Demand and Capacity

Demand Volume veh/h	7646	Heavy Vehicle Adjustment Factor (f_{HV})	0.962
Peak Hour Factor	0.98	Flow Rate (V_p), pc/h/ln	2028
Total Trucks, %	4.00	Capacity (c), pc/h/ln	2392
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	2392
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.85
Passenger Car Equivalent (E_T)	2.000		

Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	61.6
Right-Side Lateral Clearance Adj. (f_{RLC})	0.0	Density (D), pc/mi/ln	32.9
Total Ramp Density Adjustment	6.2	Level of Service (LOS)	D
Adjusted Free-Flow Speed (FFS_{adj}), mi/h	69.2		

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HCS7 Basic Freeway Report

Project Information

Analyst	GT	Date	10/29/2019
Agency	LLG Engineers	Analysis Year	2022
Jurisdiction	Caltrans	Time Period Analyzed	Future Pre-Project AM
Project Description	Prologis South Bay Distribution Center #24 Project/1-19-4336-1	Unit	United States Customary

Geometric Data

Number of Lanes, ln	4	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	75.4	Total Ramp Density (TRD), ramps/mi	2.50
Lane Width, ft	12	Free-Flow Speed (FFS), mi/h	68.4
Right-Side Lateral Clearance, ft	9		

Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Weather Type	Non-Severe Weather	Final Capacity Adjustment Factor (CAF)	1.000
Incident Type	No Incident	Demand Adjustment Factor (DAF)	1.000

Demand and Capacity

Demand Volume veh/h	7444	Heavy Vehicle Adjustment Factor (f_{HV})	0.962
Peak Hour Factor	0.98	Flow Rate (V_p), pc/h/ln	1974
Total Trucks, %	4.00	Capacity (c), pc/h/ln	2384
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	2384
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.83
Passenger Car Equivalent (E_T)	2.000		

Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	62.2
Right-Side Lateral Clearance Adj. (f_{RLC})	0.0	Density (D), pc/mi/ln	31.7
Total Ramp Density Adjustment	7.0	Level of Service (LOS)	D
Adjusted Free-Flow Speed (FFS_{adj}), mi/h	68.4		

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HCS7 Basic Freeway Report

Project Information

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Jurisdiction	Caltrans	Time Period Analyzed	Future Pre-Project AM
Project Description	Prologis South Bay Distribution Center #24 Project/1-19-4336-1	Unit	United States Customary

Geometric Data

Number of Lanes, ln	4	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	75.4	Total Ramp Density (TRD), ramps/mi	2.17
Lane Width, ft	12	Free-Flow Speed (FFS), mi/h	69.2
Right-Side Lateral Clearance, ft	10		

Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Weather Type	Non-Severe Weather	Final Capacity Adjustment Factor (CAF)	1.000
Incident Type	No Incident	Demand Adjustment Factor (DAF)	1.000

Demand and Capacity

Demand Volume veh/h	8363	Heavy Vehicle Adjustment Factor (f_{HV})	0.962
Peak Hour Factor	0.99	Flow Rate (V_p), pc/h/ln	2195
Total Trucks, %	4.00	Capacity (c), pc/h/ln	2392
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	2392
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.92
Passenger Car Equivalent (E_T)	2.000		

Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	58.1
Right-Side Lateral Clearance Adj. (f_{RLC})	0.0	Density (D), pc/mi/ln	37.8
Total Ramp Density Adjustment	6.2	Level of Service (LOS)	E
Adjusted Free-Flow Speed (FFS_{adj}), mi/h	69.2		

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HCS7 Basic Freeway Report

Project Information

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Agency	LLG Engineers	Analysis Year	2022
Jurisdiction	Caltrans	Time Period Analyzed	Future Pre-Project PM
Project Description	Prologis South Bay Distribution Center #24 Project/1-19-4336-1	Unit	United States Customary

Geometric Data

Number of Lanes, ln	4	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	75.4	Total Ramp Density (TRD), ramps/mi	2.50
Lane Width, ft	12	Free-Flow Speed (FFS), mi/h	68.4
Right-Side Lateral Clearance, ft	9		

Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Weather Type	Non-Severe Weather	Final Capacity Adjustment Factor (CAF)	1.000
Incident Type	No Incident	Demand Adjustment Factor (DAF)	1.000

Demand and Capacity

Demand Volume veh/h	7051	Heavy Vehicle Adjustment Factor (f_{HV})	0.962
Peak Hour Factor	0.94	Flow Rate (V_p), pc/h/ln	1949
Total Trucks, %	4.00	Capacity (c), pc/h/ln	2384
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	2384
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.82
Passenger Car Equivalent (E_T)	2.000		

Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	62.6
Right-Side Lateral Clearance Adj. (f_{RLC})	0.0	Density (D), pc/mi/ln	31.1
Total Ramp Density Adjustment	7.0	Level of Service (LOS)	D
Adjusted Free-Flow Speed (FFS_{adj}), mi/h	68.4		

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Project Description	Prologis South Bay Distribution Center #24 Project/1-19-4336-1	Unit	United States Customary

Geometric Data

Number of Lanes, ln	4	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	75.4	Total Ramp Density (TRD), ramps/mi	2.17
Lane Width, ft	12	Free-Flow Speed (FFS), mi/h	69.2
Right-Side Lateral Clearance, ft	10		

Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Weather Type	Non-Severe Weather	Final Capacity Adjustment Factor (CAF)	1.000
Incident Type	No Incident	Demand Adjustment Factor (DAF)	1.000

Demand and Capacity

Demand Volume veh/h	7826	Heavy Vehicle Adjustment Factor (f_{HV})	0.962
Peak Hour Factor	0.98	Flow Rate (V_p), pc/h/ln	2075
Total Trucks, %	4.00	Capacity (c), pc/h/ln	2392
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	2392
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.87
Passenger Car Equivalent (E_T)	2.000		

Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	60.7
Right-Side Lateral Clearance Adj. (f_{RLC})	0.0	Density (D), pc/mi/ln	34.2
Total Ramp Density Adjustment	6.2	Level of Service (LOS)	D
Adjusted Free-Flow Speed (FFS_{adj}), mi/h	69.2		

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Project Information

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Project Description	Prologis South Bay Distribution Center #24 Project/1-19-4336-1	Unit	United States Customary

Geometric Data

Number of Lanes, ln	4	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	75.4	Total Ramp Density (TRD), ramps/mi	2.50
Lane Width, ft	12	Free-Flow Speed (FFS), mi/h	68.4
Right-Side Lateral Clearance, ft	9		

Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Weather Type	Non-Severe Weather	Final Capacity Adjustment Factor (CAF)	1.000
Incident Type	No Incident	Demand Adjustment Factor (DAF)	1.000

Demand and Capacity

Demand Volume veh/h	7499	Heavy Vehicle Adjustment Factor (f_{HV})	0.962
Peak Hour Factor	0.98	Flow Rate (V_p), pc/h/ln	1988
Total Trucks, %	4.00	Capacity (c), pc/h/ln	2384
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	2384
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.83
Passenger Car Equivalent (E_T)	2.000		

Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	62.0
Right-Side Lateral Clearance Adj. (f_{RLC})	0.0	Density (D), pc/mi/ln	32.1
Total Ramp Density Adjustment	7.0	Level of Service (LOS)	D
Adjusted Free-Flow Speed (FFS_{adj}), mi/h	68.4		

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Project Description	Prologis South Bay Distribution Center #24 Project/1-19-4336-1	Unit	United States Customary

Geometric Data

Number of Lanes, ln	4	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	75.4	Total Ramp Density (TRD), ramps/mi	2.17
Lane Width, ft	12	Free-Flow Speed (FFS), mi/h	69.2
Right-Side Lateral Clearance, ft	10		

Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Weather Type	Non-Severe Weather	Final Capacity Adjustment Factor (CAF)	1.000
Incident Type	No Incident	Demand Adjustment Factor (DAF)	1.000

Demand and Capacity

Demand Volume veh/h	8408	Heavy Vehicle Adjustment Factor (f_{HV})	0.962
Peak Hour Factor	0.99	Flow Rate (V_p), pc/h/ln	2207
Total Trucks, %	4.00	Capacity (c), pc/h/ln	2392
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	2392
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.92
Passenger Car Equivalent (E_T)	2.000		

Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	57.9
Right-Side Lateral Clearance Adj. (f_{RLC})	0.0	Density (D), pc/mi/ln	38.1
Total Ramp Density Adjustment	6.2	Level of Service (LOS)	E
Adjusted Free-Flow Speed (FFS_{adj}), mi/h	69.2		

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Geometric Data

Number of Lanes, ln	4	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	75.4	Total Ramp Density (TRD), ramps/mi	2.50
Lane Width, ft	12	Free-Flow Speed (FFS), mi/h	68.4
Right-Side Lateral Clearance, ft	9		

Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Weather Type	Non-Severe Weather	Final Capacity Adjustment Factor (CAF)	1.000
Incident Type	No Incident	Demand Adjustment Factor (DAF)	1.000

Demand and Capacity

Demand Volume veh/h	7092	Heavy Vehicle Adjustment Factor (f_{HV})	0.962
Peak Hour Factor	0.94	Flow Rate (V_p), pc/h/ln	1961
Total Trucks, %	4.00	Capacity (c), pc/h/ln	2384
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	2384
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.82
Passenger Car Equivalent (E_T)	2.000		

Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	62.4
Right-Side Lateral Clearance Adj. (f_{RLC})	0.0	Density (D), pc/mi/ln	31.4
Total Ramp Density Adjustment	7.0	Level of Service (LOS)	D
Adjusted Free-Flow Speed (FFS_{adj}), mi/h	68.4		

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Project Description	Prologis South Bay Distribution Center #24 Project/1-19-4336-1	Unit	United States Customary

Geometric Data

Number of Lanes, ln	4	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	75.4	Total Ramp Density (TRD), ramps/mi	2.17
Lane Width, ft	12	Free-Flow Speed (FFS), mi/h	69.2
Right-Side Lateral Clearance, ft	10		

Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Weather Type	Non-Severe Weather	Final Capacity Adjustment Factor (CAF)	1.000
Incident Type	No Incident	Demand Adjustment Factor (DAF)	1.000

Demand and Capacity

Demand Volume veh/h	7876	Heavy Vehicle Adjustment Factor (f_{HV})	0.962
Peak Hour Factor	0.98	Flow Rate (V_p), pc/h/ln	2088
Total Trucks, %	4.00	Capacity (c), pc/h/ln	2392
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	2392
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.87
Passenger Car Equivalent (E_T)	2.000		

Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	60.5
Right-Side Lateral Clearance Adj. (f_{RLC})	0.0	Density (D), pc/mi/ln	34.5
Total Ramp Density Adjustment	6.2	Level of Service (LOS)	D
Adjusted Free-Flow Speed (FFS_{adj}), mi/h	69.2		

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HCS7 Basic Freeway Report

Project Information

Analyst	GT	Date	10/28/2019
Agency	LLG Engineers	Analysis Year	2019
Jurisdiction	Caltrans	Time Period Analyzed	Existing AM
Project Description	Prologis South Bay Distribution Center #24 Project/1-19-4336-1	Unit	United States Customary

Geometric Data

Number of Lanes, ln	5	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	75.4	Total Ramp Density (TRD), ramps/mi	2.83
Lane Width, ft	12	Free-Flow Speed (FFS), mi/h	67.7
Right-Side Lateral Clearance, ft	10		

Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Weather Type	Non-Severe Weather	Final Capacity Adjustment Factor (CAF)	1.000
Incident Type	No Incident	Demand Adjustment Factor (DAF)	1.000

Demand and Capacity

Demand Volume veh/h	8116	Heavy Vehicle Adjustment Factor (f_{HV})	0.962
Peak Hour Factor	0.98	Flow Rate (V_p), pc/h/ln	1722
Total Trucks, %	4.00	Capacity (c), pc/h/ln	2377
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	2377
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.72
Passenger Car Equivalent (E_T)	2.000		

Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	65.4
Right-Side Lateral Clearance Adj. (f_{RLC})	0.0	Density (D), pc/mi/ln	26.3
Total Ramp Density Adjustment	7.7	Level of Service (LOS)	D
Adjusted Free-Flow Speed (FFS_{adj}), mi/h	67.7		

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Project Information

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Project Description	Prologis South Bay Distribution Center #24 Project/1-19-4336-1	Unit	United States Customary

Geometric Data

Number of Lanes, ln	6	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	75.4	Total Ramp Density (TRD), ramps/mi	2.17
Lane Width, ft	12	Free-Flow Speed (FFS), mi/h	69.2
Right-Side Lateral Clearance, ft	10		

Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Weather Type	Non-Severe Weather	Final Capacity Adjustment Factor (CAF)	1.000
Incident Type	No Incident	Demand Adjustment Factor (DAF)	1.000

Demand and Capacity

Demand Volume veh/h	10487	Heavy Vehicle Adjustment Factor (f_{HV})	0.962
Peak Hour Factor	0.98	Flow Rate (V_p), pc/h/ln	1854
Total Trucks, %	4.00	Capacity (c), pc/h/ln	2392
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	2392
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.78
Passenger Car Equivalent (E_T)	2.000		

Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	64.6
Right-Side Lateral Clearance Adj. (f_{RLC})	0.0	Density (D), pc/mi/ln	28.7
Total Ramp Density Adjustment	6.2	Level of Service (LOS)	D
Adjusted Free-Flow Speed (FFS_{adj}), mi/h	69.2		

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Project Information

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Agency	LLG Engineers	Analysis Year	2019
Jurisdiction	Caltrans	Time Period Analyzed	Existing PM
Project Description	Prologis South Bay Distribution Center #24 Project/1-19-4336-1	Unit	United States Customary

Geometric Data

Number of Lanes, ln	5	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	75.4	Total Ramp Density (TRD), ramps/mi	2.83
Lane Width, ft	12	Free-Flow Speed (FFS), mi/h	67.7
Right-Side Lateral Clearance, ft	10		

Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Weather Type	Non-Severe Weather	Final Capacity Adjustment Factor (CAF)	1.000
Incident Type	No Incident	Demand Adjustment Factor (DAF)	1.000

Demand and Capacity

Demand Volume veh/h	7433	Heavy Vehicle Adjustment Factor (f_{HV})	0.962
Peak Hour Factor	0.96	Flow Rate (V_p), pc/h/ln	1610
Total Trucks, %	4.00	Capacity (c), pc/h/ln	2377
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	2377
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.68
Passenger Car Equivalent (E_T)	2.000		

Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	66.4
Right-Side Lateral Clearance Adj. (f_{RLC})	0.0	Density (D), pc/mi/ln	24.2
Total Ramp Density Adjustment	7.7	Level of Service (LOS)	C
Adjusted Free-Flow Speed (FFS_{adj}), mi/h	67.7		

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Project Information

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Project Description	Prologis South Bay Distribution Center #24 Project/1-19-4336-1	Unit	United States Customary

Geometric Data

Number of Lanes, ln	6	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	75.4	Total Ramp Density (TRD), ramps/mi	2.17
Lane Width, ft	12	Free-Flow Speed (FFS), mi/h	69.2
Right-Side Lateral Clearance, ft	10		

Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Weather Type	Non-Severe Weather	Final Capacity Adjustment Factor (CAF)	1.000
Incident Type	No Incident	Demand Adjustment Factor (DAF)	1.000

Demand and Capacity

Demand Volume veh/h	9247	Heavy Vehicle Adjustment Factor (f_{HV})	0.962
Peak Hour Factor	0.92	Flow Rate (V_p), pc/h/ln	1741
Total Trucks, %	4.00	Capacity (c), pc/h/ln	2392
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	2392
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.73
Passenger Car Equivalent (E_T)	2.000		

Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	66.1
Right-Side Lateral Clearance Adj. (f_{RLC})	0.0	Density (D), pc/mi/ln	26.3
Total Ramp Density Adjustment	6.2	Level of Service (LOS)	D
Adjusted Free-Flow Speed (FFS_{adj}), mi/h	69.2		

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HCS7 Basic Freeway Report

Project Information

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Jurisdiction	Caltrans	Time Period Analyzed	Existing with Project AM
Project Description	Prologis South Bay Distribution Center #24 Project/1-19-4336-1	Unit	United States Customary

Geometric Data

Number of Lanes, ln	5	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	75.4	Total Ramp Density (TRD), ramps/mi	2.83
Lane Width, ft	12	Free-Flow Speed (FFS), mi/h	67.7
Right-Side Lateral Clearance, ft	10		

Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Weather Type	Non-Severe Weather	Final Capacity Adjustment Factor (CAF)	1.000
Incident Type	No Incident	Demand Adjustment Factor (DAF)	1.000

Demand and Capacity

Demand Volume veh/h	8259	Heavy Vehicle Adjustment Factor (f_{HV})	0.962
Peak Hour Factor	0.98	Flow Rate (V_p), pc/h/ln	1752
Total Trucks, %	4.00	Capacity (c), pc/h/ln	2377
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	2377
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.74
Passenger Car Equivalent (E_T)	2.000		

Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	65.0
Right-Side Lateral Clearance Adj. (f_{RLC})	0.0	Density (D), pc/mi/ln	27.0
Total Ramp Density Adjustment	7.7	Level of Service (LOS)	D
Adjusted Free-Flow Speed (FFS_{adj}), mi/h	67.7		

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Project Information

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Jurisdiction	Caltrans	Time Period Analyzed	Existing with Project AM
Project Description	Prologis South Bay Distribution Center #24 Project/1-19-4336-1	Unit	United States Customary

Geometric Data

Number of Lanes, ln	6	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	75.4	Total Ramp Density (TRD), ramps/mi	2.17
Lane Width, ft	12	Free-Flow Speed (FFS), mi/h	69.2
Right-Side Lateral Clearance, ft	10		

Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Weather Type	Non-Severe Weather	Final Capacity Adjustment Factor (CAF)	1.000
Incident Type	No Incident	Demand Adjustment Factor (DAF)	1.000

Demand and Capacity

Demand Volume veh/h	10507	Heavy Vehicle Adjustment Factor (f_{HV})	0.962
Peak Hour Factor	0.98	Flow Rate (V_p), pc/h/ln	1858
Total Trucks, %	4.00	Capacity (c), pc/h/ln	2392
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	2392
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.78
Passenger Car Equivalent (E_T)	2.000		

Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	64.5
Right-Side Lateral Clearance Adj. (f_{RLC})	0.0	Density (D), pc/mi/ln	28.8
Total Ramp Density Adjustment	6.2	Level of Service (LOS)	D
Adjusted Free-Flow Speed (FFS_{adj}), mi/h	69.2		

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Project Information

Analyst	GT	Date	10/29/2019
Agency	LLG Engineers	Analysis Year	2019
Jurisdiction	Caltrans	Time Period Analyzed	Existing with Project PM
Project Description	Prologis South Bay Distribution Center #24 Project/1-19-4336-1	Unit	United States Customary

Geometric Data

Number of Lanes, ln	5	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	75.4	Total Ramp Density (TRD), ramps/mi	2.83
Lane Width, ft	12	Free-Flow Speed (FFS), mi/h	67.7
Right-Side Lateral Clearance, ft	10		

Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Weather Type	Non-Severe Weather	Final Capacity Adjustment Factor (CAF)	1.000
Incident Type	No Incident	Demand Adjustment Factor (DAF)	1.000

Demand and Capacity

Demand Volume veh/h	7452	Heavy Vehicle Adjustment Factor (f_{HV})	0.962
Peak Hour Factor	0.96	Flow Rate (V_p), pc/h/ln	1614
Total Trucks, %	4.00	Capacity (c), pc/h/ln	2377
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	2377
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.68
Passenger Car Equivalent (E_T)	2.000		

Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	66.4
Right-Side Lateral Clearance Adj. (f_{RLC})	0.0	Density (D), pc/mi/ln	24.3
Total Ramp Density Adjustment	7.7	Level of Service (LOS)	C
Adjusted Free-Flow Speed (FFS_{adj}), mi/h	67.7		

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Project Information

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Agency	LLG Engineers	Analysis Year	2019
Jurisdiction	Caltrans	Time Period Analyzed	Existing with Project PM
Project Description	Prologis South Bay Distribution Center #24 Project/1-19-4336-1	Unit	United States Customary

Geometric Data

Number of Lanes, ln	6	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	75.4	Total Ramp Density (TRD), ramps/mi	2.17
Lane Width, ft	12	Free-Flow Speed (FFS), mi/h	69.2
Right-Side Lateral Clearance, ft	10		

Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Weather Type	Non-Severe Weather	Final Capacity Adjustment Factor (CAF)	1.000
Incident Type	No Incident	Demand Adjustment Factor (DAF)	1.000

Demand and Capacity

Demand Volume veh/h	9374	Heavy Vehicle Adjustment Factor (f_{HV})	0.962
Peak Hour Factor	0.92	Flow Rate (V_p), pc/h/ln	1765
Total Trucks, %	4.00	Capacity (c), pc/h/ln	2392
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	2392
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.74
Passenger Car Equivalent (E_T)	2.000		

Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	65.8
Right-Side Lateral Clearance Adj. (f_{RLC})	0.0	Density (D), pc/mi/ln	26.8
Total Ramp Density Adjustment	6.2	Level of Service (LOS)	D
Adjusted Free-Flow Speed (FFS_{adj}), mi/h	69.2		

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HCS7 Basic Freeway Report

Project Information

Analyst	GT	Date	10/29/2019
Agency	LLG Engineers	Analysis Year	2022
Jurisdiction	Caltrans	Time Period Analyzed	Future Pre-Project AM
Project Description	Prologis South Bay Distribution Center #24 Project/1-19-4336-1	Unit	United States Customary

Geometric Data

Number of Lanes, ln	5	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	75.4	Total Ramp Density (TRD), ramps/mi	2.83
Lane Width, ft	12	Free-Flow Speed (FFS), mi/h	67.7
Right-Side Lateral Clearance, ft	10		

Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Weather Type	Non-Severe Weather	Final Capacity Adjustment Factor (CAF)	1.000
Incident Type	No Incident	Demand Adjustment Factor (DAF)	1.000

Demand and Capacity

Demand Volume veh/h	8362	Heavy Vehicle Adjustment Factor (f_{HV})	0.962
Peak Hour Factor	0.98	Flow Rate (V_p), pc/h/ln	1774
Total Trucks, %	4.00	Capacity (c), pc/h/ln	2377
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	2377
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.75
Passenger Car Equivalent (E_T)	2.000		

Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	64.8
Right-Side Lateral Clearance Adj. (f_{RLC})	0.0	Density (D), pc/mi/ln	27.4
Total Ramp Density Adjustment	7.7	Level of Service (LOS)	D
Adjusted Free-Flow Speed (FFS_{adj}), mi/h	67.7		

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Project Information

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Project Description	Prologis South Bay Distribution Center #24 Project/1-19-4336-1	Unit	United States Customary

Geometric Data

Number of Lanes, ln	6	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	75.4	Total Ramp Density (TRD), ramps/mi	2.17
Lane Width, ft	12	Free-Flow Speed (FFS), mi/h	69.2
Right-Side Lateral Clearance, ft	10		

Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Weather Type	Non-Severe Weather	Final Capacity Adjustment Factor (CAF)	1.000
Incident Type	No Incident	Demand Adjustment Factor (DAF)	1.000

Demand and Capacity

Demand Volume veh/h	10805	Heavy Vehicle Adjustment Factor (f_{HV})	0.962
Peak Hour Factor	0.98	Flow Rate (V_p), pc/h/ln	1910
Total Trucks, %	4.00	Capacity (c), pc/h/ln	2392
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	2392
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.80
Passenger Car Equivalent (E_T)	2.000		

Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	63.7
Right-Side Lateral Clearance Adj. (f_{RLC})	0.0	Density (D), pc/mi/ln	30.0
Total Ramp Density Adjustment	6.2	Level of Service (LOS)	D
Adjusted Free-Flow Speed (FFS_{adj}), mi/h	69.2		

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Project Information

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Project Description	Prologis South Bay Distribution Center #24 Project/1-19-4336-1	Unit	United States Customary

Geometric Data

Number of Lanes, ln	5	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	75.4	Total Ramp Density (TRD), ramps/mi	2.83
Lane Width, ft	12	Free-Flow Speed (FFS), mi/h	67.7
Right-Side Lateral Clearance, ft	10		

Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Weather Type	Non-Severe Weather	Final Capacity Adjustment Factor (CAF)	1.000
Incident Type	No Incident	Demand Adjustment Factor (DAF)	1.000

Demand and Capacity

Demand Volume veh/h	7658	Heavy Vehicle Adjustment Factor (f_{HV})	0.962
Peak Hour Factor	0.96	Flow Rate (V_p), pc/h/ln	1658
Total Trucks, %	4.00	Capacity (c), pc/h/ln	2377
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	2377
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.70
Passenger Car Equivalent (E_T)	2.000		

Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	66.0
Right-Side Lateral Clearance Adj. (f_{RLC})	0.0	Density (D), pc/mi/ln	25.1
Total Ramp Density Adjustment	7.7	Level of Service (LOS)	C
Adjusted Free-Flow Speed (FFS_{adj}), mi/h	67.7		

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Project Description	Prologis South Bay Distribution Center #24 Project/1-19-4336-1	Unit	United States Customary

Geometric Data

Number of Lanes, ln	6	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	75.4	Total Ramp Density (TRD), ramps/mi	2.17
Lane Width, ft	12	Free-Flow Speed (FFS), mi/h	69.2
Right-Side Lateral Clearance, ft	10		

Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Weather Type	Non-Severe Weather	Final Capacity Adjustment Factor (CAF)	1.000
Incident Type	No Incident	Demand Adjustment Factor (DAF)	1.000

Demand and Capacity

Demand Volume veh/h	9527	Heavy Vehicle Adjustment Factor (f_{HV})	0.962
Peak Hour Factor	0.92	Flow Rate (V_p), pc/h/ln	1794
Total Trucks, %	4.00	Capacity (c), pc/h/ln	2392
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	2392
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.75
Passenger Car Equivalent (E_T)	2.000		

Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	65.4
Right-Side Lateral Clearance Adj. (f_{RLC})	0.0	Density (D), pc/mi/ln	27.4
Total Ramp Density Adjustment	6.2	Level of Service (LOS)	D
Adjusted Free-Flow Speed (FFS_{adj}), mi/h	69.2		

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Geometric Data

Number of Lanes, ln	5	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	75.4	Total Ramp Density (TRD), ramps/mi	2.83
Lane Width, ft	12	Free-Flow Speed (FFS), mi/h	67.7
Right-Side Lateral Clearance, ft	10		

Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Weather Type	Non-Severe Weather	Final Capacity Adjustment Factor (CAF)	1.000
Incident Type	No Incident	Demand Adjustment Factor (DAF)	1.000

Demand and Capacity

Demand Volume veh/h	8505	Heavy Vehicle Adjustment Factor (f_{HV})	0.962
Peak Hour Factor	0.98	Flow Rate (V_p), pc/h/ln	1804
Total Trucks, %	4.00	Capacity (c), pc/h/ln	2377
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	2377
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.76
Passenger Car Equivalent (E_T)	2.000		

Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	64.4
Right-Side Lateral Clearance Adj. (f_{RLC})	0.0	Density (D), pc/mi/ln	28.0
Total Ramp Density Adjustment	7.7	Level of Service (LOS)	D
Adjusted Free-Flow Speed (FFS_{adj}), mi/h	67.7		

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Project Information

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Agency	LLG Engineers	Analysis Year	2022
Jurisdiction	Caltrans	Time Period Analyzed	Future with Project AM
Project Description	Prologis South Bay Distribution Center #24 Project/1-19-4336-1	Unit	United States Customary

Geometric Data

Number of Lanes, ln	6	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	75.4	Total Ramp Density (TRD), ramps/mi	2.17
Lane Width, ft	12	Free-Flow Speed (FFS), mi/h	69.2
Right-Side Lateral Clearance, ft	10		

Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Weather Type	Non-Severe Weather	Final Capacity Adjustment Factor (CAF)	1.000
Incident Type	No Incident	Demand Adjustment Factor (DAF)	1.000

Demand and Capacity

Demand Volume veh/h	10825	Heavy Vehicle Adjustment Factor (f_{HV})	0.962
Peak Hour Factor	0.98	Flow Rate (V_p), pc/h/ln	1914
Total Trucks, %	4.00	Capacity (c), pc/h/ln	2392
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	2392
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.80
Passenger Car Equivalent (E_T)	2.000		

Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	63.7
Right-Side Lateral Clearance Adj. (f_{RLC})	0.0	Density (D), pc/mi/ln	30.0
Total Ramp Density Adjustment	6.2	Level of Service (LOS)	D
Adjusted Free-Flow Speed (FFS_{adj}), mi/h	69.2		

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HCS7 Basic Freeway Report

Project Information

Analyst	GT	Date	10/29/2019
Agency	LLG Engineers	Analysis Year	2022
Jurisdiction	Caltrans	Time Period Analyzed	Future with Project PM
Project Description	Prologis South Bay Distribution Center #24 Project/1-19-4336-1	Unit	United States Customary

Geometric Data

Number of Lanes, ln	5	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	75.4	Total Ramp Density (TRD), ramps/mi	2.83
Lane Width, ft	12	Free-Flow Speed (FFS), mi/h	67.7
Right-Side Lateral Clearance, ft	10		

Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Weather Type	Non-Severe Weather	Final Capacity Adjustment Factor (CAF)	1.000
Incident Type	No Incident	Demand Adjustment Factor (DAF)	1.000

Demand and Capacity

Demand Volume veh/h	7677	Heavy Vehicle Adjustment Factor (f_{HV})	0.962
Peak Hour Factor	0.96	Flow Rate (V_p), pc/h/ln	1663
Total Trucks, %	4.00	Capacity (c), pc/h/ln	2377
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	2377
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.70
Passenger Car Equivalent (E_T)	2.000		

Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	66.0
Right-Side Lateral Clearance Adj. (f_{RLC})	0.0	Density (D), pc/mi/ln	25.2
Total Ramp Density Adjustment	7.7	Level of Service (LOS)	C
Adjusted Free-Flow Speed (FFS_{adj}), mi/h	67.7		

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HCS7 Basic Freeway Report

Project Information

Analyst	GT	Date	10/29/2019
Agency	LLG Engineers	Analysis Year	2022
Jurisdiction	Caltrans	Time Period Analyzed	Future with Project PM
Project Description	Prologis South Bay Distribution Center #24 Project/1-19-4336-1	Unit	United States Customary

Geometric Data

Number of Lanes, ln	6	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	75.4	Total Ramp Density (TRD), ramps/mi	2.17
Lane Width, ft	12	Free-Flow Speed (FFS), mi/h	69.2
Right-Side Lateral Clearance, ft	10		

Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Weather Type	Non-Severe Weather	Final Capacity Adjustment Factor (CAF)	1.000
Incident Type	No Incident	Demand Adjustment Factor (DAF)	1.000

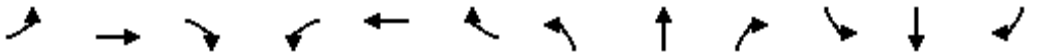
Demand and Capacity

Demand Volume veh/h	9654	Heavy Vehicle Adjustment Factor (f_{HV})	0.962
Peak Hour Factor	0.92	Flow Rate (V_p), pc/h/ln	1818
Total Trucks, %	4.00	Capacity (c), pc/h/ln	2392
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	2392
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.76
Passenger Car Equivalent (E_T)	2.000		

Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	65.1
Right-Side Lateral Clearance Adj. (f_{RLC})	0.0	Density (D), pc/mi/ln	27.9
Total Ramp Density Adjustment	6.2	Level of Service (LOS)	D
Adjusted Free-Flow Speed (FFS_{adj}), mi/h	69.2		

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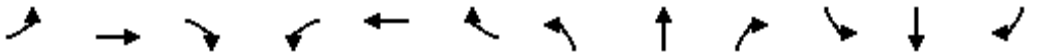
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	842	510	243	1114	0	0	0	0	453	0	717
Future Volume (veh/h)	0	842	510	243	1114	0	0	0	0	453	0	717
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1900	1976	1900	1900	0				1900	1900	1900
Adj Flow Rate, veh/h	0	842	510	243	1114	0				302	0	879
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Percent Heavy Veh, %	0	0	0	0	0	0				0	0	0
Cap, veh/h	0	1708	778	290	3458	0				445	0	791
Arrive On Green	0.00	0.16	0.16	0.05	0.22	0.00				0.25	0.00	0.25
Sat Flow, veh/h	0	3705	1645	1810	5358	0				1810	0	3216
Grp Volume(v), veh/h	0	842	510	243	1114	0				302	0	879
Grp Sat Flow(s),veh/h/ln	0	1805	1645	1810	1729	0				1810	0	1608
Q Serve(g_s), s	0.0	25.6	35.0	16.0	21.6	0.0				18.1	0.0	29.5
Cycle Q Clear(g_c), s	0.0	25.6	35.0	16.0	21.6	0.0				18.1	0.0	29.5
Prop In Lane	0.00		1.00	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	1708	778	290	3458	0				445	0	791
V/C Ratio(X)	0.00	0.49	0.66	0.84	0.32	0.00				0.68	0.00	1.11
Avail Cap(c_a), veh/h	0	1708	778	467	3458	0				445	0	791
HCM Platoon Ratio	1.00	0.33	0.33	0.33	0.33	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	0.90	0.90	0.94	0.94	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	37.5	41.4	55.3	24.0	0.0				41.0	0.0	45.3
Incr Delay (d2), s/veh	0.0	0.9	3.9	12.5	0.2	0.0				6.6	0.0	67.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.0	18.1	22.5	13.5	15.0	0.0				13.7	0.0	27.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	38.4	45.3	67.8	24.3	0.0				47.6	0.0	112.4
LnGrp LOS	A	D	D	E	C	A				D	A	F
Approach Vol, veh/h		1352			1357						1181	
Approach Delay, s/veh		41.0			32.1						95.9	
Approach LOS		D			C						F	

Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	23.2	62.3		34.5		85.5
Change Period (Y+Rc), s	4.0	5.5		5.0		5.5
Max Green Setting (Gmax), s	31.0	45.0		29.5		80.0
Max Q Clear Time (g_c+I1), s	18.0	37.0		31.5		23.6
Green Ext Time (p_c), s	1.3	5.7		0.0		16.4

Intersection Summary	
HCM 6th Ctrl Delay	54.5
HCM 6th LOS	D

Notes

User approved volume balancing among the lanes for turning movement.



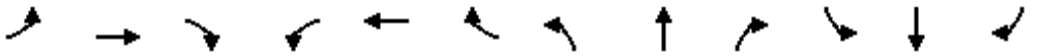
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	1153	333	130	1005	0	0	0	0	438	3	573
Future Volume (veh/h)	0	1153	333	130	1005	0	0	0	0	438	3	573
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1900	1976	1900	1900	0				1900	1900	1900
Adj Flow Rate, veh/h	0	1153	333	130	1005	0				638	0	360
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Percent Heavy Veh, %	0	0	0	0	0	0				0	0	0
Cap, veh/h	0	1961	897	168	3472	0				880	0	391
Arrive On Green	0.00	0.54	0.54	0.03	0.22	0.00				0.24	0.00	0.24
Sat Flow, veh/h	0	3705	1651	1810	5358	0				3619	0	1608
Grp Volume(v), veh/h	0	1153	333	130	1005	0				638	0	360
Grp Sat Flow(s),veh/h/ln	0	1805	1651	1810	1729	0				1810	0	1608
Q Serve(g_s), s	0.0	25.7	13.8	8.6	19.4	0.0				19.4	0.0	26.2
Cycle Q Clear(g_c), s	0.0	25.7	13.8	8.6	19.4	0.0				19.4	0.0	26.2
Prop In Lane	0.00		1.00	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	1961	897	168	3472	0				880	0	391
V/C Ratio(X)	0.00	0.59	0.37	0.77	0.29	0.00				0.73	0.00	0.92
Avail Cap(c_a), veh/h	0	1961	897	467	3472	0				890	0	395
HCM Platoon Ratio	1.00	1.00	1.00	0.33	0.33	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	0.85	0.85	0.97	0.97	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	18.4	15.7	56.9	23.0	0.0				41.7	0.0	44.3
Incr Delay (d2), s/veh	0.0	1.1	1.0	14.5	0.2	0.0				4.3	0.0	28.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.0	15.2	8.6	8.2	13.8	0.0				14.0	0.0	19.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	19.5	16.7	71.4	23.2	0.0				46.1	0.0	72.6
LnGrp LOS	A	B	B	E	C	A				D	A	E
Approach Vol, veh/h		1486			1135						998	
Approach Delay, s/veh		18.9			28.7						55.6	
Approach LOS		B			C						E	

Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	15.1	70.7		34.2		85.8
Change Period (Y+Rc), s	4.0	5.5		5.0		5.5
Max Green Setting (Gmax), s	31.0	45.0		29.5		80.0
Max Q Clear Time (g_c+I1), s	10.6	27.7		28.2		21.4
Green Ext Time (p_c), s	0.7	11.5		1.0		14.2

Intersection Summary	
HCM 6th Ctrl Delay	32.1
HCM 6th LOS	C

Notes

User approved volume balancing among the lanes for turning movement.



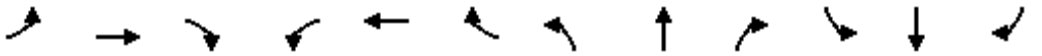
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	854	530	243	1273	0	0	0	0	453	0	805
Future Volume (veh/h)	0	854	530	243	1273	0	0	0	0	453	0	805
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1900	1976	1900	1900	0				1900	1900	1900
Adj Flow Rate, veh/h	0	854	530	243	1273	0				302	0	967
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Percent Heavy Veh, %	0	0	0	0	0	0				0	0	0
Cap, veh/h	0	1712	780	288	3458	0				445	0	791
Arrive On Green	0.00	0.16	0.16	0.11	0.45	0.00				0.25	0.00	0.25
Sat Flow, veh/h	0	3705	1645	1810	5358	0				1810	0	3216
Grp Volume(v), veh/h	0	854	530	243	1273	0				302	0	967
Grp Sat Flow(s),veh/h/ln	0	1805	1645	1810	1729	0				1810	0	1608
Q Serve(g_s), s	0.0	26.0	36.5	15.8	19.5	0.0				18.1	0.0	29.5
Cycle Q Clear(g_c), s	0.0	26.0	36.5	15.8	19.5	0.0				18.1	0.0	29.5
Prop In Lane	0.00		1.00	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	1712	780	288	3458	0				445	0	791
V/C Ratio(X)	0.00	0.50	0.68	0.84	0.37	0.00				0.68	0.00	1.22
Avail Cap(c_a), veh/h	0	1712	780	467	3458	0				445	0	791
HCM Platoon Ratio	1.00	0.33	0.33	0.67	0.67	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	0.88	0.88	0.92	0.92	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	37.6	42.0	52.1	16.5	0.0				41.0	0.0	45.3
Incr Delay (d2), s/veh	0.0	0.9	4.2	12.8	0.3	0.0				6.6	0.0	111.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.0	18.2	23.3	12.9	12.9	0.0				13.7	0.0	35.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	38.5	46.2	64.9	16.7	0.0				47.6	0.0	156.8
LnGrp LOS	A	D	D	E	B	A				D	A	F
Approach Vol, veh/h		1384			1516						1269	
Approach Delay, s/veh		41.4			24.5						130.8	
Approach LOS		D			C						F	

Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	23.1	62.4		34.5		85.5
Change Period (Y+Rc), s	4.0	5.5		5.0		5.5
Max Green Setting (Gmax), s	31.0	45.0		29.5		80.0
Max Q Clear Time (g_c+I1), s	17.8	38.5		31.5		21.5
Green Ext Time (p_c), s	1.3	4.8		0.0		20.3

Intersection Summary	
HCM 6th Ctrl Delay	62.5
HCM 6th LOS	E

Notes

User approved volume balancing among the lanes for turning movement.



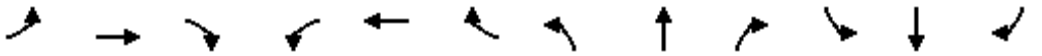
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	1232	460	130	1027	0	0	0	0	438	3	585
Future Volume (veh/h)	0	1232	460	130	1027	0	0	0	0	438	3	585
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1900	1976	1900	1900	0				1900	1900	1900
Adj Flow Rate, veh/h	0	1232	460	130	1027	0				644	0	366
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Percent Heavy Veh, %	0	0	0	0	0	0				0	0	0
Cap, veh/h	0	1957	895	168	3466	0				884	0	393
Arrive On Green	0.00	0.54	0.54	0.03	0.22	0.00				0.24	0.00	0.24
Sat Flow, veh/h	0	3705	1651	1810	5358	0				3619	0	1608
Grp Volume(v), veh/h	0	1232	460	130	1027	0				644	0	366
Grp Sat Flow(s),veh/h/ln	0	1805	1651	1810	1729	0				1810	0	1608
Q Serve(g_s), s	0.0	28.5	21.2	8.6	19.8	0.0				19.6	0.0	26.7
Cycle Q Clear(g_c), s	0.0	28.5	21.2	8.6	19.8	0.0				19.6	0.0	26.7
Prop In Lane	0.00		1.00	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	1957	895	168	3466	0				884	0	393
V/C Ratio(X)	0.00	0.63	0.51	0.77	0.30	0.00				0.73	0.00	0.93
Avail Cap(c_a), veh/h	0	1957	895	467	3466	0				890	0	395
HCM Platoon Ratio	1.00	1.00	1.00	0.33	0.33	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	0.74	0.74	0.96	0.96	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	19.1	17.4	56.9	23.2	0.0				41.7	0.0	44.4
Incr Delay (d2), s/veh	0.0	1.1	1.6	14.3	0.2	0.0				4.4	0.0	30.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.0	16.2	12.0	8.2	14.1	0.0				14.2	0.0	19.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	20.2	19.0	71.2	23.4	0.0				46.1	0.0	74.5
LnGrp LOS	A	C	B	E	C	A				D	A	E
Approach Vol, veh/h		1692			1157						1010	
Approach Delay, s/veh		19.9			28.8						56.4	
Approach LOS		B			C						E	

Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	15.1	70.6		34.3		85.7
Change Period (Y+Rc), s	4.0	5.5		5.0		5.5
Max Green Setting (Gmax), s	31.0	45.0		29.5		80.0
Max Q Clear Time (g_c+I1), s	10.6	30.5		28.7		21.8
Green Ext Time (p_c), s	0.7	11.0		0.6		14.6

Intersection Summary	
HCM 6th Ctrl Delay	32.1
HCM 6th LOS	C

Notes

User approved volume balancing among the lanes for turning movement.



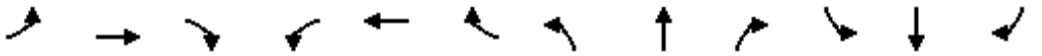
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	973	532	279	1189	0	0	0	0	519	0	752
Future Volume (veh/h)	0	973	532	279	1189	0	0	0	0	519	0	752
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1900	1976	1900	1900	0				1900	1900	1900
Adj Flow Rate, veh/h	0	973	532	279	1189	0				346	0	937
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Percent Heavy Veh, %	0	0	0	0	0	0				0	0	0
Cap, veh/h	0	1640	747	324	3458	0				445	0	791
Arrive On Green	0.00	0.15	0.15	0.12	0.45	0.00				0.25	0.00	0.25
Sat Flow, veh/h	0	3705	1644	1810	5358	0				1810	0	3216
Grp Volume(v), veh/h	0	973	532	279	1189	0				346	0	937
Grp Sat Flow(s),veh/h/ln	0	1805	1644	1810	1729	0				1810	0	1608
Q Serve(g_s), s	0.0	30.2	37.0	18.2	18.0	0.0				21.4	0.0	29.5
Cycle Q Clear(g_c), s	0.0	30.2	37.0	18.2	18.0	0.0				21.4	0.0	29.5
Prop In Lane	0.00		1.00	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	1640	747	324	3458	0				445	0	791
V/C Ratio(X)	0.00	0.59	0.71	0.86	0.34	0.00				0.78	0.00	1.19
Avail Cap(c_a), veh/h	0	1640	747	467	3458	0				445	0	791
HCM Platoon Ratio	1.00	0.33	0.33	0.67	0.67	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	0.87	0.87	0.93	0.93	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	40.7	43.6	51.3	16.0	0.0				42.2	0.0	45.3
Incr Delay (d2), s/veh	0.0	1.4	5.0	14.6	0.3	0.0				11.1	0.0	95.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.0	20.8	23.6	14.7	12.1	0.0				16.2	0.0	32.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	42.1	48.6	66.0	16.3	0.0				53.3	0.0	141.2
LnGrp LOS	A	D	D	E	B	A				D	A	F
Approach Vol, veh/h		1505			1468						1283	
Approach Delay, s/veh		44.4			25.7						117.5	
Approach LOS		D			C						F	

Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	25.5	60.0		34.5		85.5
Change Period (Y+Rc), s	4.0	5.5		5.0		5.5
Max Green Setting (Gmax), s	31.0	45.0		29.5		80.0
Max Q Clear Time (g_c+I1), s	20.2	39.0		31.5		20.0
Green Ext Time (p_c), s	1.3	4.8		0.0		18.4

Intersection Summary	
HCM 6th Ctrl Delay	60.0
HCM 6th LOS	E

Notes

User approved volume balancing among the lanes for turning movement.



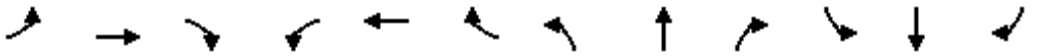
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	1236	352	194	1132	0	0	0	0	470	3	608
Future Volume (veh/h)	0	1236	352	194	1132	0	0	0	0	470	3	608
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1900	1976	1900	1900	0				1900	1900	1900
Adj Flow Rate, veh/h	0	1236	352	194	1132	0				682	0	383
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Percent Heavy Veh, %	0	0	0	0	0	0				0	0	0
Cap, veh/h	0	1814	830	237	3458	0				890	0	395
Arrive On Green	0.00	0.34	0.34	0.09	0.45	0.00				0.25	0.00	0.25
Sat Flow, veh/h	0	3705	1651	1810	5358	0				3619	0	1608
Grp Volume(v), veh/h	0	1236	352	194	1132	0				682	0	383
Grp Sat Flow(s),veh/h/ln	0	1805	1651	1810	1729	0				1810	0	1608
Q Serve(g_s), s	0.0	35.4	19.8	12.6	17.0	0.0				21.0	0.0	28.3
Cycle Q Clear(g_c), s	0.0	35.4	19.8	12.6	17.0	0.0				21.0	0.0	28.3
Prop In Lane	0.00		1.00	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	1814	830	237	3458	0				890	0	395
V/C Ratio(X)	0.00	0.68	0.42	0.82	0.33	0.00				0.77	0.00	0.97
Avail Cap(c_a), veh/h	0	1814	830	467	3458	0				890	0	395
HCM Platoon Ratio	1.00	0.67	0.67	0.67	0.67	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	0.82	0.82	0.95	0.95	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	31.5	26.4	53.4	15.8	0.0				42.1	0.0	44.8
Incr Delay (d2), s/veh	0.0	1.7	1.3	13.1	0.2	0.0				5.4	0.0	37.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.0	22.4	12.8	10.9	11.5	0.0				15.1	0.0	21.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	33.2	27.7	66.4	16.0	0.0				47.5	0.0	82.5
LnGrp LOS	A	C	C	E	B	A				D	A	F
Approach Vol, veh/h		1588			1326						1065	
Approach Delay, s/veh		32.0			23.4						60.1	
Approach LOS		C			C						E	

Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	19.7	65.8		34.5		85.5
Change Period (Y+Rc), s	4.0	5.5		5.0		5.5
Max Green Setting (Gmax), s	31.0	45.0		29.5		80.0
Max Q Clear Time (g_c+I1), s	14.6	37.4		30.3		19.0
Green Ext Time (p_c), s	1.1	6.2		0.0		17.1

Intersection Summary	
HCM 6th Ctrl Delay	36.6
HCM 6th LOS	D

Notes

User approved volume balancing among the lanes for turning movement.



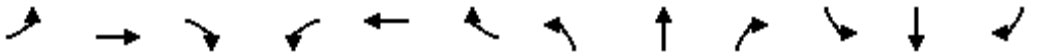
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	985	552	279	1348	0	0	0	0	519	0	840
Future Volume (veh/h)	0	985	552	279	1348	0	0	0	0	519	0	840
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1900	1976	1900	1900	0				1900	1900	1900
Adj Flow Rate, veh/h	0	985	552	279	1348	0				346	0	1025
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Percent Heavy Veh, %	0	0	0	0	0	0				0	0	0
Cap, veh/h	0	1640	747	324	3458	0				445	0	791
Arrive On Green	0.00	0.15	0.15	0.12	0.45	0.00				0.25	0.00	0.25
Sat Flow, veh/h	0	3705	1644	1810	5358	0				1810	0	3216
Grp Volume(v), veh/h	0	985	552	279	1348	0				346	0	1025
Grp Sat Flow(s),veh/h/ln	0	1805	1644	1810	1729	0				1810	0	1608
Q Serve(g_s), s	0.0	30.6	38.5	18.2	20.9	0.0				21.4	0.0	29.5
Cycle Q Clear(g_c), s	0.0	30.6	38.5	18.2	20.9	0.0				21.4	0.0	29.5
Prop In Lane	0.00		1.00	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	1640	747	324	3458	0				445	0	791
V/C Ratio(X)	0.00	0.60	0.74	0.86	0.39	0.00				0.78	0.00	1.30
Avail Cap(c_a), veh/h	0	1640	747	467	3458	0				445	0	791
HCM Platoon Ratio	1.00	0.33	0.33	0.67	0.67	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	0.86	0.86	0.90	0.90	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	40.8	44.2	51.3	16.8	0.0				42.2	0.0	45.3
Incr Delay (d2), s/veh	0.0	1.4	5.6	14.2	0.3	0.0				11.1	0.0	142.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.0	21.0	24.6	14.6	13.6	0.0				16.2	0.0	40.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	42.3	49.8	65.6	17.1	0.0				53.3	0.0	187.9
LnGrp LOS	A	D	D	E	B	A				D	A	F
Approach Vol, veh/h		1537			1627						1371	
Approach Delay, s/veh		45.0			25.4						153.9	
Approach LOS		D			C						F	

Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	25.5	60.0		34.5		85.5
Change Period (Y+Rc), s	4.0	5.5		5.0		5.5
Max Green Setting (Gmax), s	31.0	45.0		29.5		80.0
Max Q Clear Time (g_c+I1), s	20.2	40.5		31.5		22.9
Green Ext Time (p_c), s	1.3	3.7		0.0		22.1

Intersection Summary	
HCM 6th Ctrl Delay	70.9
HCM 6th LOS	E

Notes

User approved volume balancing among the lanes for turning movement.



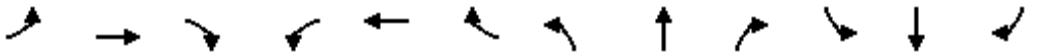
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	1315	479	194	1154	0	0	0	0	470	3	620
Future Volume (veh/h)	0	1315	479	194	1154	0	0	0	0	470	3	620
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1900	1976	1900	1900	0				1900	1900	1900
Adj Flow Rate, veh/h	0	1315	479	194	1154	0				687	0	389
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Percent Heavy Veh, %	0	0	0	0	0	0				0	0	0
Cap, veh/h	0	1814	830	237	3458	0				890	0	395
Arrive On Green	0.00	0.34	0.34	0.09	0.45	0.00				0.25	0.00	0.25
Sat Flow, veh/h	0	3705	1651	1810	5358	0				3619	0	1608
Grp Volume(v), veh/h	0	1315	479	194	1154	0				687	0	389
Grp Sat Flow(s),veh/h/ln	0	1805	1651	1810	1729	0				1810	0	1608
Q Serve(g_s), s	0.0	38.4	28.7	12.6	17.4	0.0				21.2	0.0	28.9
Cycle Q Clear(g_c), s	0.0	38.4	28.7	12.6	17.4	0.0				21.2	0.0	28.9
Prop In Lane	0.00		1.00	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	1814	830	237	3458	0				890	0	395
V/C Ratio(X)	0.00	0.72	0.58	0.82	0.33	0.00				0.77	0.00	0.98
Avail Cap(c_a), veh/h	0	1814	830	467	3458	0				890	0	395
HCM Platoon Ratio	1.00	0.67	0.67	0.67	0.67	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	0.70	0.70	0.95	0.95	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	32.5	29.3	53.4	15.9	0.0				42.1	0.0	45.0
Incr Delay (d2), s/veh	0.0	1.8	2.1	13.1	0.2	0.0				5.6	0.0	41.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.0	23.5	17.1	10.9	11.8	0.0				15.2	0.0	22.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	34.3	31.4	66.4	16.1	0.0				47.7	0.0	86.2
LnGrp LOS	A	C	C	E	B	A				D	A	F
Approach Vol, veh/h		1794			1348						1076	
Approach Delay, s/veh		33.5			23.4						61.7	
Approach LOS		C			C						E	

Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	19.7	65.8		34.5		85.5
Change Period (Y+Rc), s	4.0	5.5		5.0		5.5
Max Green Setting (Gmax), s	31.0	45.0		29.5		80.0
Max Q Clear Time (g_c+I1), s	14.6	40.4		30.9		19.4
Green Ext Time (p_c), s	1.1	4.1		0.0		17.6

Intersection Summary	
HCM 6th Ctrl Delay	37.5
HCM 6th LOS	D

Notes

User approved volume balancing among the lanes for turning movement.



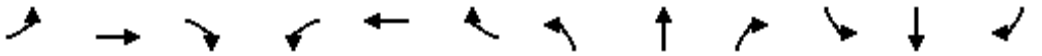
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	26	816	451	376	951	5	375	10	323	6	5	18
Future Volume (veh/h)	26	816	451	376	951	5	375	10	323	6	5	18
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		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	1900	1900	1976	1900	1900	1976	1900	1900	1976	1900	1900	1900
Adj Flow Rate, veh/h	26	859	422	376	951	5	382	0	323	6	5	18
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	44	1605	976	401	3299	17	608	0	652	26	22	42
Arrive On Green	0.02	0.28	0.28	0.44	1.00	1.00	0.17	0.00	0.17	0.03	0.03	0.03
Sat Flow, veh/h	1810	3800	1645	1810	5324	28	3619	0	1675	1009	841	1610
Grp Volume(v), veh/h	26	859	422	376	618	338	382	0	323	11	0	18
Grp Sat Flow(s),veh/h/ln	1810	1900	1645	1810	1729	1894	1810	0	1675	1850	0	1610
Q Serve(g_s), s	1.7	22.9	18.9	23.8	0.0	0.0	11.8	0.0	17.5	0.7	0.0	1.3
Cycle Q Clear(g_c), s	1.7	22.9	18.9	23.8	0.0	0.0	11.8	0.0	17.5	0.7	0.0	1.3
Prop In Lane	1.00		1.00	1.00		0.01	1.00		1.00	0.55		1.00
Lane Grp Cap(c), veh/h	44	1605	976	401	2143	1174	608	0	652	48	0	42
V/C Ratio(X)	0.59	0.54	0.43	0.94	0.29	0.29	0.63	0.00	0.50	0.23	0.00	0.43
Avail Cap(c_a), veh/h	392	1605	976	437	2143	1174	633	0	664	154	0	134
HCM Platoon Ratio	0.67	0.67	0.67	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.67	0.67	0.67	0.24	0.24	0.24	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	58.4	33.1	17.3	32.7	0.0	0.0	46.4	0.0	27.7	57.3	0.0	57.6
Incr Delay (d2), s/veh	8.4	0.9	0.9	10.2	0.1	0.1	2.2	0.0	0.8	2.4	0.0	7.0
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	1.6	15.7	15.8	11.2	0.0	0.1	9.3	0.0	11.4	0.7	0.0	1.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	66.8	33.9	18.2	42.9	0.1	0.1	48.7	0.0	28.6	59.7	0.0	64.5
LnGrp LOS	E	C	B	D	A	A	D	A	C	E	A	E
Approach Vol, veh/h		1307			1332			705			29	
Approach Delay, s/veh		29.5			12.2			39.5			62.7	
Approach LOS		C			B			D			E	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	31.6	55.2		8.1	7.9	78.9		25.1				
Change Period (Y+Rc), s	5.0	4.5		5.0	5.0	4.5		5.0				
Max Green Setting (Gmax), s	29.0	40.5		10.0	26.0	43.5		21.0				
Max Q Clear Time (g_c+I1), s	25.8	24.9		3.3	3.7	2.0		19.5				
Green Ext Time (p_c), s	0.8	0.9		0.0	0.0	1.0		0.6				

Intersection Summary												
HCM 6th Ctrl Delay			25.0									
HCM 6th LOS			C									

Notes

User approved volume balancing among the lanes for turning movement.



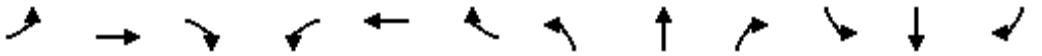
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	21	1124	499	340	749	6	302	5	346	15	12	29
Future Volume (veh/h)	21	1124	499	340	749	6	302	5	346	15	12	29
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.97	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	1900	1900	1976	1900	1900	1976	1900	1900	1976	1900	1900	1900
Adj Flow Rate, veh/h	21	1124	499	340	749	6	306	0	346	15	12	29
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	38	1609	991	369	3217	26	633	0	635	36	29	57
Arrive On Green	0.01	0.28	0.28	0.41	1.00	1.00	0.17	0.00	0.17	0.04	0.04	0.04
Sat Flow, veh/h	1810	3800	1648	1810	5306	42	3619	0	1675	1027	822	1610
Grp Volume(v), veh/h	21	1124	499	340	488	267	306	0	346	27	0	29
Grp Sat Flow(s),veh/h/ln	1810	1900	1648	1810	1729	1891	1810	0	1675	1849	0	1610
Q Serve(g_s), s	1.4	31.7	22.7	21.4	0.0	0.0	9.1	0.0	19.4	1.7	0.0	2.1
Cycle Q Clear(g_c), s	1.4	31.7	22.7	21.4	0.0	0.0	9.1	0.0	19.4	1.7	0.0	2.1
Prop In Lane	1.00		1.00	1.00		0.02	1.00		1.00	0.56		1.00
Lane Grp Cap(c), veh/h	38	1609	991	369	2097	1146	633	0	635	65	0	57
V/C Ratio(X)	0.55	0.70	0.50	0.92	0.23	0.23	0.48	0.00	0.55	0.41	0.00	0.51
Avail Cap(c_a), veh/h	392	1609	991	437	2097	1146	633	0	635	154	0	134
HCM Platoon Ratio	0.67	0.67	0.67	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.65	0.65	0.65	0.61	0.61	0.61	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	58.6	36.1	17.7	34.6	0.0	0.0	44.6	0.0	29.2	56.7	0.0	56.9
Incr Delay (d2), s/veh	7.9	1.7	1.2	17.7	0.2	0.3	0.8	0.0	1.3	4.2	0.0	7.0
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	1.3	20.8	18.8	12.7	0.1	0.2	7.5	0.0	12.5	1.6	0.0	1.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	66.5	37.8	18.9	52.3	0.2	0.3	45.4	0.0	30.4	60.8	0.0	63.8
LnGrp LOS	E	D	B	D	A	A	D	A	C	E	A	E
Approach Vol, veh/h		1644			1095			652			56	
Approach Delay, s/veh		32.4			16.4			37.5			62.4	
Approach LOS		C			B			D			E	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	29.5	55.3		9.2	7.5	77.3		26.0				
Change Period (Y+Rc), s	5.0	4.5		5.0	5.0	4.5		5.0				
Max Green Setting (Gmax), s	29.0	40.5		10.0	26.0	43.5		21.0				
Max Q Clear Time (g_c+I1), s	23.4	33.7		4.1	3.4	2.0		21.4				
Green Ext Time (p_c), s	1.1	1.1		0.1	0.0	0.8		0.0				

Intersection Summary	
HCM 6th Ctrl Delay	28.8
HCM 6th LOS	C

Notes

User approved volume balancing among the lanes for turning movement.



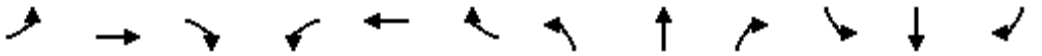
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	26	818	462	376	967	5	518	10	323	6	5	18
Future Volume (veh/h)	26	818	462	376	967	5	518	10	323	6	5	18
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		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	1900	1900	1976	1900	1900	1976	1900	1900	1976	1900	1900	1900
Adj Flow Rate, veh/h	26	871	427	376	967	5	525	0	323	6	5	18
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	44	1602	976	401	3295	17	611	0	653	26	22	42
Arrive On Green	0.02	0.28	0.28	0.44	1.00	1.00	0.17	0.00	0.17	0.03	0.03	0.03
Sat Flow, veh/h	1810	3800	1645	1810	5325	28	3619	0	1675	1009	841	1610
Grp Volume(v), veh/h	26	871	427	376	628	344	525	0	323	11	0	18
Grp Sat Flow(s),veh/h/ln	1810	1900	1645	1810	1729	1894	1810	0	1675	1850	0	1610
Q Serve(g_s), s	1.7	23.3	19.2	23.8	0.0	0.0	16.9	0.0	17.5	0.7	0.0	1.3
Cycle Q Clear(g_c), s	1.7	23.3	19.2	23.8	0.0	0.0	16.9	0.0	17.5	0.7	0.0	1.3
Prop In Lane	1.00		1.00	1.00		0.01	1.00		1.00	0.55		1.00
Lane Grp Cap(c), veh/h	44	1602	976	401	2140	1172	611	0	653	48	0	42
V/C Ratio(X)	0.59	0.54	0.44	0.94	0.29	0.29	0.86	0.00	0.49	0.23	0.00	0.43
Avail Cap(c_a), veh/h	392	1602	976	437	2140	1172	633	0	664	154	0	134
HCM Platoon Ratio	0.67	0.67	0.67	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.66	0.66	0.66	0.22	0.22	0.22	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	58.4	33.3	17.4	32.7	0.0	0.0	48.5	0.0	27.7	57.3	0.0	57.6
Incr Delay (d2), s/veh	8.3	0.9	0.9	9.6	0.1	0.1	11.6	0.0	0.8	2.4	0.0	7.0
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	1.6	15.8	16.0	11.0	0.0	0.1	13.3	0.0	11.4	0.7	0.0	1.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	66.7	34.1	18.3	42.2	0.1	0.1	60.1	0.0	28.5	59.7	0.0	64.5
LnGrp LOS	E	C	B	D	A	A	E	A	C	E	A	E
Approach Vol, veh/h		1324			1348			848			29	
Approach Delay, s/veh		29.7			11.8			48.1			62.7	
Approach LOS		C			B			D			E	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	31.6	55.1		8.1	7.9	78.8		25.3				
Change Period (Y+Rc), s	5.0	4.5		5.0	5.0	4.5		5.0				
Max Green Setting (Gmax), s	29.0	40.5		10.0	26.0	43.5		21.0				
Max Q Clear Time (g_c+I1), s	25.8	25.3		3.3	3.7	2.0		19.5				
Green Ext Time (p_c), s	0.8	0.9		0.0	0.0	1.0		0.8				

Intersection Summary		
HCM 6th Ctrl Delay		27.6
HCM 6th LOS		C

Notes

User approved volume balancing among the lanes for turning movement.



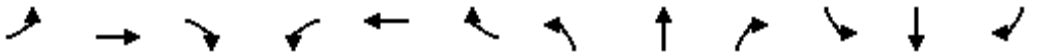
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	21	1139	564	340	751	6	321	5	346	15	12	29
Future Volume (veh/h)	21	1139	564	340	751	6	321	5	346	15	12	29
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.97	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	1900	1900	1976	1900	1900	1976	1900	1900	1976	1900	1900	1900
Adj Flow Rate, veh/h	21	1139	564	340	751	6	325	0	346	15	12	29
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	38	1609	991	369	3217	26	633	0	635	36	29	57
Arrive On Green	0.01	0.28	0.28	0.41	1.00	1.00	0.17	0.00	0.17	0.04	0.04	0.04
Sat Flow, veh/h	1810	3800	1648	1810	5307	42	3619	0	1675	1027	822	1610
Grp Volume(v), veh/h	21	1139	564	340	489	268	325	0	346	27	0	29
Grp Sat Flow(s),veh/h/ln	1810	1900	1648	1810	1729	1891	1810	0	1675	1849	0	1610
Q Serve(g_s), s	1.4	32.2	26.6	21.4	0.0	0.0	9.8	0.0	19.4	1.7	0.0	2.1
Cycle Q Clear(g_c), s	1.4	32.2	26.6	21.4	0.0	0.0	9.8	0.0	19.4	1.7	0.0	2.1
Prop In Lane	1.00		1.00	1.00		0.02	1.00		1.00	0.56		1.00
Lane Grp Cap(c), veh/h	38	1609	991	369	2097	1147	633	0	635	65	0	57
V/C Ratio(X)	0.55	0.71	0.57	0.92	0.23	0.23	0.51	0.00	0.55	0.41	0.00	0.51
Avail Cap(c_a), veh/h	392	1609	991	437	2097	1147	633	0	635	154	0	134
HCM Platoon Ratio	0.67	0.67	0.67	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.60	0.60	0.60	0.60	0.60	0.60	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	58.6	36.3	18.7	34.6	0.0	0.0	44.9	0.0	29.2	56.7	0.0	56.9
Incr Delay (d2), s/veh	7.3	1.6	1.4	17.4	0.2	0.3	1.0	0.0	1.3	4.2	0.0	7.0
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	1.3	20.8	21.4	12.7	0.1	0.2	7.9	0.0	12.5	1.6	0.0	1.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	65.9	37.9	20.1	52.1	0.2	0.3	45.8	0.0	30.4	60.8	0.0	63.8
LnGrp LOS	E	D	C	D	A	A	D	A	C	E	A	E
Approach Vol, veh/h		1724			1097			671			56	
Approach Delay, s/veh		32.4			16.3			37.9			62.4	
Approach LOS		C			B			D			E	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	29.5	55.3		9.2	7.5	77.3		26.0				
Change Period (Y+Rc), s	5.0	4.5		5.0	5.0	4.5		5.0				
Max Green Setting (Gmax), s	29.0	40.5		10.0	26.0	43.5		21.0				
Max Q Clear Time (g_c+I1), s	23.4	34.2		4.1	3.4	2.0		21.4				
Green Ext Time (p_c), s	1.1	1.1		0.1	0.0	0.8		0.0				

Intersection Summary												
HCM 6th Ctrl Delay			28.9									
HCM 6th LOS			C									

Notes

User approved volume balancing among the lanes for turning movement.



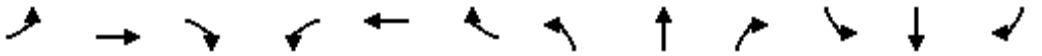
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	27	946	483	407	1037	5	395	10	394	6	5	19
Future Volume (veh/h)	27	946	483	407	1037	5	395	10	394	6	5	19
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		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	1900	1900	1976	1900	1900	1976	1900	1900	1976	1900	1900	1900
Adj Flow Rate, veh/h	27	956	476	407	1037	5	402	0	394	6	5	19
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	45	1523	952	426	3257	16	633	0	687	27	22	42
Arrive On Green	0.02	0.27	0.27	0.47	1.00	1.00	0.17	0.00	0.17	0.03	0.03	0.03
Sat Flow, veh/h	1810	3800	1645	1810	5327	26	3619	0	1675	1009	841	1610
Grp Volume(v), veh/h	27	956	476	407	673	369	402	0	394	11	0	19
Grp Sat Flow(s),veh/h/ln	1810	1900	1645	1810	1729	1895	1810	0	1675	1850	0	1610
Q Serve(g_s), s	1.8	26.6	22.3	26.0	0.0	0.0	12.4	0.0	21.0	0.7	0.0	1.4
Cycle Q Clear(g_c), s	1.8	26.6	22.3	26.0	0.0	0.0	12.4	0.0	21.0	0.7	0.0	1.4
Prop In Lane	1.00		1.00	1.00		0.01	1.00		1.00	0.55		1.00
Lane Grp Cap(c), veh/h	45	1523	952	426	2114	1158	633	0	687	49	0	42
V/C Ratio(X)	0.60	0.63	0.50	0.96	0.32	0.32	0.63	0.00	0.57	0.23	0.00	0.45
Avail Cap(c_a), veh/h	392	1523	952	437	2114	1158	633	0	687	154	0	134
HCM Platoon Ratio	0.67	0.67	0.67	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.52	0.52	0.52	0.09	0.09	0.09	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	58.4	36.0	19.0	31.1	0.0	0.0	45.9	0.0	27.3	57.2	0.0	57.6
Incr Delay (d2), s/veh	6.6	1.0	1.0	5.8	0.0	0.1	2.4	0.0	1.4	2.3	0.0	7.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	1.6	17.2	17.7	10.2	0.0	0.0	9.6	0.0	13.7	0.6	0.0	1.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	65.1	37.1	19.9	36.9	0.0	0.1	48.3	0.0	28.7	59.5	0.0	64.8
LnGrp LOS	E	D	B	D	A	A	D	A	C	E	A	E
Approach Vol, veh/h		1459			1449			796			30	
Approach Delay, s/veh		32.0			10.4			38.6			62.9	
Approach LOS		C			B			D			E	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	33.3	52.6		8.2	8.0	77.9		26.0				
Change Period (Y+Rc), s	5.0	4.5		5.0	5.0	4.5		5.0				
Max Green Setting (Gmax), s	29.0	40.5		10.0	26.0	43.5		21.0				
Max Q Clear Time (g_c+I1), s	28.0	28.6		3.4	3.8	2.0		23.0				
Green Ext Time (p_c), s	0.3	1.0		0.0	0.0	1.1		0.0				

Intersection Summary		
HCM 6th Ctrl Delay		25.3
HCM 6th LOS		C

Notes

User approved volume balancing among the lanes for turning movement.



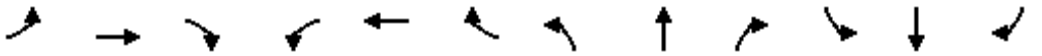
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	22	1202	531	402	886	6	317	5	382	15	12	30
Future Volume (veh/h)	22	1202	531	402	886	6	317	5	382	15	12	30
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.97	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	1900	1900	1976	1900	1900	1976	1900	1900	1976	1900	1900	1900
Adj Flow Rate, veh/h	22	1202	531	402	886	6	321	0	382	15	12	30
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	39	1496	942	422	3217	22	633	0	684	36	29	57
Arrive On Green	0.01	0.26	0.26	0.47	1.00	1.00	0.17	0.00	0.17	0.04	0.04	0.04
Sat Flow, veh/h	1810	3800	1647	1810	5314	36	3619	0	1675	1027	822	1610
Grp Volume(v), veh/h	22	1202	531	402	576	316	321	0	382	27	0	30
Grp Sat Flow(s),veh/h/ln	1810	1900	1647	1810	1729	1892	1810	0	1675	1849	0	1610
Q Serve(g_s), s	1.4	35.5	25.8	25.6	0.0	0.0	9.6	0.0	21.0	1.7	0.0	2.2
Cycle Q Clear(g_c), s	1.4	35.5	25.8	25.6	0.0	0.0	9.6	0.0	21.0	1.7	0.0	2.2
Prop In Lane	1.00		1.00	1.00		0.02	1.00		1.00	0.56		1.00
Lane Grp Cap(c), veh/h	39	1496	942	422	2094	1146	633	0	684	66	0	57
V/C Ratio(X)	0.56	0.80	0.56	0.95	0.28	0.28	0.51	0.00	0.56	0.41	0.00	0.53
Avail Cap(c_a), veh/h	392	1496	942	437	2094	1146	633	0	684	154	0	134
HCM Platoon Ratio	0.67	0.67	0.67	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.50	0.50	0.50	0.22	0.22	0.22	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	58.6	39.8	20.3	31.4	0.0	0.0	44.8	0.0	27.2	56.7	0.0	56.9
Incr Delay (d2), s/veh	6.2	2.4	1.2	11.2	0.1	0.1	0.9	0.0	1.3	4.1	0.0	7.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	1.3	22.4	20.0	11.7	0.0	0.1	7.8	0.0	13.2	1.6	0.0	1.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	64.7	42.2	21.5	42.6	0.1	0.1	45.7	0.0	28.5	60.8	0.0	64.2
LnGrp LOS	E	D	C	D	A	A	D	A	C	E	A	E
Approach Vol, veh/h		1755			1294			703			57	
Approach Delay, s/veh		36.2			13.3			36.4			62.6	
Approach LOS		D			B			D			E	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	33.0	51.8		9.3	7.6	77.1		26.0				
Change Period (Y+Rc), s	5.0	4.5		5.0	5.0	4.5		5.0				
Max Green Setting (Gmax), s	29.0	40.5		10.0	26.0	43.5		21.0				
Max Q Clear Time (g_c+I1), s	27.6	37.5		4.2	3.4	2.0		23.0				
Green Ext Time (p_c), s	0.4	0.8		0.1	0.0	0.9		0.0				

Intersection Summary		
HCM 6th Ctrl Delay		28.9
HCM 6th LOS		C

Notes

User approved volume balancing among the lanes for turning movement.



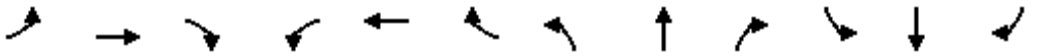
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	27	948	494	407	1053	5	538	10	394	6	5	19
Future Volume (veh/h)	27	948	494	407	1053	5	538	10	394	6	5	19
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		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	1900	1900	1976	1900	1900	1976	1900	1900	1976	1900	1900	1900
Adj Flow Rate, veh/h	27	968	481	407	1053	5	545	0	394	6	5	19
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	45	1523	952	426	3257	15	633	0	687	27	22	42
Arrive On Green	0.01	0.13	0.13	0.47	1.00	1.00	0.17	0.00	0.17	0.03	0.03	0.03
Sat Flow, veh/h	1810	3800	1645	1810	5327	25	3619	0	1675	1009	841	1610
Grp Volume(v), veh/h	27	968	481	407	683	375	545	0	394	11	0	19
Grp Sat Flow(s),veh/h/ln	1810	1900	1645	1810	1729	1895	1810	0	1675	1850	0	1610
Q Serve(g_s), s	1.8	29.0	23.9	26.0	0.0	0.0	17.6	0.0	21.0	0.7	0.0	1.4
Cycle Q Clear(g_c), s	1.8	29.0	23.9	26.0	0.0	0.0	17.6	0.0	21.0	0.7	0.0	1.4
Prop In Lane	1.00		1.00	1.00		0.01	1.00		1.00	0.55		1.00
Lane Grp Cap(c), veh/h	45	1523	952	426	2114	1158	633	0	687	49	0	42
V/C Ratio(X)	0.60	0.64	0.51	0.96	0.32	0.32	0.86	0.00	0.57	0.23	0.00	0.45
Avail Cap(c_a), veh/h	392	1523	952	437	2114	1158	633	0	687	154	0	134
HCM Platoon Ratio	0.33	0.33	0.33	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.48	0.48	0.48	0.09	0.09	0.09	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	58.9	43.8	23.0	31.1	0.0	0.0	48.1	0.0	27.3	57.2	0.0	57.6
Incr Delay (d2), s/veh	6.1	1.0	0.9	5.8	0.0	0.1	11.9	0.0	1.4	2.3	0.0	7.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	1.6	19.3	19.5	10.2	0.0	0.0	13.7	0.0	13.7	0.6	0.0	1.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	65.1	44.8	23.9	36.9	0.0	0.1	60.0	0.0	28.7	59.5	0.0	64.8
LnGrp LOS	E	D	C	D	A	A	E	A	C	E	A	E
Approach Vol, veh/h		1476			1465			939			30	
Approach Delay, s/veh		38.3			10.3			46.8			62.9	
Approach LOS		D			B			D			E	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	33.3	52.6		8.2	8.0	77.9		26.0				
Change Period (Y+Rc), s	5.0	4.5		5.0	5.0	4.5		5.0				
Max Green Setting (Gmax), s	29.0	40.5		10.0	26.0	43.5		21.0				
Max Q Clear Time (g_c+I1), s	28.0	31.0		3.4	3.8	2.0		23.0				
Green Ext Time (p_c), s	0.3	1.0		0.0	0.0	1.1		0.0				

Intersection Summary												
HCM 6th Ctrl Delay			30.1									
HCM 6th LOS			C									

Notes

User approved volume balancing among the lanes for turning movement.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	22	1217	596	402	888	6	336	5	382	15	12	30
Future Volume (veh/h)	22	1217	596	402	888	6	336	5	382	15	12	30
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.97	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	1900	1900	1976	1900	1900	1976	1900	1900	1976	1900	1900	1900
Adj Flow Rate, veh/h	22	1217	596	402	888	6	340	0	382	15	12	30
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	39	1496	942	422	3217	22	633	0	684	36	29	57
Arrive On Green	0.01	0.26	0.26	0.47	1.00	1.00	0.17	0.00	0.17	0.04	0.04	0.04
Sat Flow, veh/h	1810	3800	1647	1810	5314	36	3619	0	1675	1027	822	1610
Grp Volume(v), veh/h	22	1217	596	402	578	316	340	0	382	27	0	30
Grp Sat Flow(s),veh/h/ln	1810	1900	1647	1810	1729	1892	1810	0	1675	1849	0	1610
Q Serve(g_s), s	1.4	36.0	30.0	25.6	0.0	0.0	10.3	0.0	21.0	1.7	0.0	2.2
Cycle Q Clear(g_c), s	1.4	36.0	30.0	25.6	0.0	0.0	10.3	0.0	21.0	1.7	0.0	2.2
Prop In Lane	1.00		1.00	1.00		0.02	1.00		1.00	0.56		1.00
Lane Grp Cap(c), veh/h	39	1496	942	422	2094	1146	633	0	684	66	0	57
V/C Ratio(X)	0.56	0.81	0.63	0.95	0.28	0.28	0.54	0.00	0.56	0.41	0.00	0.53
Avail Cap(c_a), veh/h	392	1496	942	437	2094	1146	633	0	684	154	0	134
HCM Platoon Ratio	0.67	0.67	0.67	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.43	0.43	0.43	0.22	0.22	0.22	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	58.6	40.0	21.4	31.4	0.0	0.0	45.1	0.0	27.2	56.7	0.0	56.9
Incr Delay (d2), s/veh	5.3	2.2	1.4	11.2	0.1	0.1	1.2	0.0	1.3	4.1	0.0	7.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	1.3	22.3	22.5	11.7	0.0	0.1	8.2	0.0	13.2	1.6	0.0	1.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	63.9	42.2	22.8	42.6	0.1	0.1	46.2	0.0	28.5	60.8	0.0	64.2
LnGrp LOS	E	D	C	D	A	A	D	A	C	E	A	E
Approach Vol, veh/h		1835			1296			722			57	
Approach Delay, s/veh		36.2			13.3			36.9			62.6	
Approach LOS		D			B			D			E	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	33.0	51.8		9.3	7.6	77.1		26.0				
Change Period (Y+Rc), s	5.0	4.5		5.0	5.0	4.5		5.0				
Max Green Setting (Gmax), s	29.0	40.5		10.0	26.0	43.5		21.0				
Max Q Clear Time (g_c+I1), s	27.6	38.0		4.2	3.4	2.0		23.0				
Green Ext Time (p_c), s	0.4	0.7		0.1	0.0	0.9		0.0				

Intersection Summary		
HCM 6th Ctrl Delay	29.1	
HCM 6th LOS	C	

Notes

User approved volume balancing among the lanes for turning movement.